US Army Corps of Engineers®

ROD-SOF for DA Permit SAJ-2009-03221

Attachment A - Public Notice Comments

353 Pages

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Commenter/Organization	Comment	Response
USEPA/Water Protection Division	The Environmental Protection Agency, Region 4, has reviewed the information found in each of the four public notices' (PNs) and supplemental material in the Draft Area-wide Environmental Impact Statement on Phosphate Mining in the Central Florida Phosphate District (AEIS). The EPA is a cooperating agency with the U.S. Army Corps of Engineers, Jacksonville District (District) to develop an AEIS consistent with the requirements of the National Environmental Policy Act of 1969, as amended. The EPA has been involved in numerous meetings and discussions regarding the four referenced permits and the AEIS going back more than two years. As discussed below, the freshwater forested and herbaceous emergent wetlands and open waters that make up the creeks, rivers, sloughs, seeps, domes and depressions in the area covered by the AEIS are considered aquatic resources of national importance. We appreciate the opportunity to participate in the AEIS process and believe it has been beneficial in adding to the body of knowledge regarding phosphate mining in central Florida.	• Comment acknowledged.
USEPA/Water Protection Division	We have three specific interests about these proposed projects both collectively and individually. Some of these concerns are related to the draft status of the AEIS and outstanding comments the EPA has on the draft AEIS. As noted, the AEIS process has made great progress in identifying and reviewing information related to the mining process in this area of Florida and the EPA appreciates all the work that the District, stakeholders and the permit applicants have put into this process. However, certain issues remain. These are the requested permit durations, avoidance of waters of the U.S. considered to be ecologically significant, and the proposed compensatory mitigation.	• Comment acknowledged.
USEPA/Water Protection Division	The applicants requested different durations for their various permits, as listed below. CF Industries, South Pasture Mine. Expansion 20 years; Mosaic Fertilizer, Desoto Mine 22 years; Mosaic Fertilizer, Westgate East Mine 34 years; and Mosaic Fertilizer, Ona Mine 45 years. Given the difficulty in projecting environmental impacts two decades or more into the future, it would appear to us to be prudent to award a permit for this length of time only if there is a clear ability to monitor progress on mitigation and adaptively manage where appropriate. We believe there are opportunities to lessen this concern and we are prepared to discuss these during efforts to develop permit specific compensatory mitigation plans consistent with the Section 404(b)(l) Guidelines and the 2008 Mitigation Rule (33 C.F.R. Parts 230 and 332; 40 C.F.R. Part 230).	• The Corps has provided a draft permit, which includes permit conditions related to periodic compliance reviews and adaptive management, to USEPA in accordance with the 404(q) coordination process, along with a compensatory mitigation plan for this project.
USEPA/Water Protection Division	The PNs reference avoidance of some waters of the U.S. These modifications are excellent and reflect historic concerns voiced by the EPA and others related to the uncertainty and risk for created forested and herbaceous emergent aquatic habitats. The EPA believes that additional avoidance is warranted where mature bay swamps, heads and/or seepage slopes exist. There are specific recommendations that can address this interest once the District has approved the federal jurisdictional determinations.	• Section 1.4.1(iii) of the decision document for the Wingate East project explains that additional wetlands and streams have been avoided since the June 1, 2012 public notice. In addition, Section 5.4 of the decision document explains how the Corps considered onsite minimization alternatives in its review. • Section 5.4 of the Final AEIS describes the mitigation framework that the Corps, EPA, and FDEP developed to address the concerns about avoidance of specific resource categories.
USEPA/Water Protection Division	Additional interests relate to the conceptual nature of the proposed compensatory mitigation. The compensatory mitigation, as discussed in the PNs, proposes one acre created for every one acre to be impacted; and one linear foot of stream will be created for every stream linear foot impacted. These created habitats will be on-site and completed at various times in the future. We would like to see the applicant's provisional compensatory mitigation consider ratios beyond an acre for acre/foot for foot due to temporal losses and risk associated with the mitigation time frames and establishing forested aquatic habitats. Therefore, off-site compensatory mitigation should play a larger role in the final plans to account for the temporal losses and uncertainty of successful restoration following phosphate mining. Finally, there is currently insufficient compensatory mitigation information to complete our review, as was noted in the draft AEIS. The draft AEIS states that the initial permit applications only provided preliminary information because there are no approved federal jurisdictional determinations on the four mine sites and as of the date of the PNs, the applicants had yet to submit federal Section 404 compensatory mitigation plans. We would welcome a collaborative effort with the District and the applicants to address these questions.	• Section 8 of the decision document, and the attached approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources. The Corps considered temporal loss and risk in its evaluation of the mitigation.
USEPA/Water Protection Division	As summarized above, the information and comments being collected for the AEIS on Phosphate Mining in the Central Florida Phosphate District will be vital for our review and providing project specific comments and recommendations. Therefore, based on the information available, the EPA believes that the projects as currently proposed may not comply with the Section 404(b)(l) Guidelines and may have substantial and unacceptable adverse impacts on aquatic resources of national importance. This letter follows the field-level procedures outlined in the August 1992 Memorandum of Agreement between the EPA	• The Corps has provided a draft decision document and draft permit to USEPA in accordance with the 404(q) coordination process, along with a compensatory mitigation plan for this project and a 3(c) letter

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	and the Department of the Army, Part IV, paragraph 3(a) regarding Section 404(q) of the Clean Water Act.	explaining how EPA's concerns have been addressed.
USEPA/Water Protection Division	I want to thank you and your staff for your cooperation and willingness to address our issues. We look forward to working closely with you and the applicant to resolve the concerns outlined above. If you have any questions, please call me at (404) 562-9345 or Duncan Powell of my staff at (404) 562-9258.	• Comment acknowledged.
Gwendolyn Keyes Fleming, Regional Administrator/EPA Region 4	This letter follows our previous letter dated July 30, 2012 (enclosed) and the field-level procedures outlined in the August 1992 Memorandum of Agreement between the U.S. Environmental Protection Agency and the Department of the Army, Part IV, paragraph 3(b), regarding Section 404(q) of the Clean Water Act. Our opinion is that the discharges will have a substantial and unacceptable impact on aquatic resources of national importance (ARNI), as currently proposed. The ARNIs and our three specific interests (requested permit durations, avoidance of the ARNIs and the proposed compensatory mitigation) that are the basis of our opinion, were stated in our July 30, 2012, letter and are still currently being discussed among the agencies and the companies. The EPA is confident that these interests will be addressed in the U.S. Army Corps of Engineers Jacksonville District's permitting process and the processes to finalize the Area-wide Environmental Impact Statement on Phosphate Mining in the Central Florida Phosphate District. We believe there are solutions to our concerns and see positive steps being taken to address them. I want to thank you and your staff for your cooperation. We look forward to working with you and the applicants to resolve our concerns. If you have any questions, please call Mr. Duncan Powell of my staff at (404) 562-9258.	• The Corps has provided a draft decision document and draft permit to USEPA in accordance with the 404(q) coordination process, along with a compensatory mitigation plan for this project and a 3(c) letter explaining how EPA's concerns have been addressed.
NMFS-Habitat Conservation Division	NOAA's National Marine Fisheries Service (NMFS), Habitat Conservation Division, has reviewed the public notice regarding Department of the Army File Number SAJ-2010-03680 and the associated Draft Area Wide Environmental Impact Statement (AEIS) for Phosphate Mining in the Central Florida Phosphate District dated June 28, 2012. Your office has received four applications for permits under Section 404 of the Clean Water Act from Mosaic Fertilizer, LLC, and CF Industries, Incorporated, for four proposed phosphate mining projects. The specific projects in the AEIS include: (1) Mosaic's new Desoto Mine; (2) Mosaic's new Ona Mine; (3) Mosaic's extension to the existing Wingate Creek Mine; and (4) CF Industries' extension to the South Pasture Mine in Central and Southwest Florida.	• Comment acknowledged.
NMFS-Habitat Conservation Division	According to information provided in the AEIS, the proposed projects could reduce freshwater inflows in the Myakka and Peace Rivers by as much as two percent. The AIES does not specifically identify or address potential secondary or cumulative effects of the reduced freshwater inflows on essential fish habitat (EFH) or commercially and recreationally valuable fish and invertebrate species within the lower Myakka and Peace rivers and Charlotte Harbor estuary. The role of freshwater inflows to sustain and maintain the ecologic health and diversity of estuarine ecosystems is widely documented and the impacts of reduced inflows should be thoroughly addressed in the Final AEIS. Estuarine habitats in the lower Peace and Myakka Rivers and Charlotte Harbor are designated as EFH as identified in the 2005 generic amendment of the Fishery Management Plans for the Gulf of Mexico. The generic amendment was prepared by the Gulf of Mexico Fishery Management Council as required by the 1996 amendment to the Magnuson Stevens Fishery Conservation and Management Act. Federal agencies that permit activities potentially impacting EFH are required to consult with NMFS and, as a part of the consultation process, prepare an EFH assessment. Contents of an EFH assessment should include: 1. An analysis of the effects, including secondary and cumulative effects, of reduced freshwater inflows from the proposed mining activities on EFH, federally managed fish and invertebrate species, and prey within the Myakka and Peace river estuaries and Charlotte Harbor; 2. The USACE's views regarding the effects of these activities on EFH; and, 3. Proposed mitigation or adaptive EFH and fishery resources would result from these activities.	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively, including the project's effects on downstream water flow and ecological resources. • The Corps sent an EFH assessment dated February 27, 2014, to NMFS Habitat Conservation Division (NMFS-HCD). In a December 10, 2015, e-mail, the Corps requested that NMFS-HCD review the four proposed phosphate mine projects based on that EFH assessment and the Corps applications. In an e-mail dated December 16, 2015, the NMFS Habitat Conservation Division (NMFS-HCD) stated that they anticipated any adverse effects associated with the proposed projects that might occur on marine and anadromous fishery resources would be minimal and, therefore, they did not object to issuance of a permit.
NMFS-Habitat Conservation Division	Finally, the project area is within the known distribution limits of a federally listed threatened species under purview of NMFS. In accordance with the Endangered Species Act of 1973, as amended, it is your responsibility to review this proposal and identify actions potentially affecting endangered or threatened species. Determinations involving listed species should be reported to our Protected Resources Division (PRD) at the letterhead address. If it is determined the activities may adversely affect any species listed as endangered or threatened under PRD purview, consultation must be initiated.	• The Corps conducted a separate coordination with the National Marines Fisheries Service Protected Resource Division (NMFS-PRD) for the smalltooth sawfish. As described in Section 10.1 of the decision document, the result of a November 6, 2013, discussion of the project with the NMFS-PRD was a determination by the Corps that the proposed

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		mines would have no effect on the smalltooth sawfish.
NMFS-Habitat Conservation Division	If you have questions regarding NMFS' review of this project, please contact Mr. Mark Sramek at the letterhead address, by telephone at (727) 824-5311, or e-mail at Mark.Sramek@noaa.gov.	• Comment acknowledged.
Seminole Tribe of Florida's Tr bal Historic Preservation Office	The Seminole Tribe of Florida's Tribal Historic Preservation Office (STOF-THPO) has received the Jacksonville Corps of Engineers correspondence regarding the above mentioned project. The STOF-THPO has no objection to your proposal at this time. However, the STOF-THPO would like to be informed if cultural resources that are potentially ancestral or historically relevant to the Seminole Tribe of Florida are inadvertently discovered during the construction process. We thank you for the opportunity to review the information that has been sent to date regarding this project. Please reference THPO-010097 in any future documentation about this project.	• Comment acknowledged.
Deputy State Historic Preservation Officer, Division Of Historical Resources, Florida Department Of State	This office received and reviewed the above referenced project applications in accordance with Section 106 of the National Historic Preservation Act of 1966 (Public Law 89-665), as amended in 1992; 36 C.F.R., Part 800: Protection of Historic Properties for assessment of possible adverse impact to cultural resources (any prehistoric or historic district, site; building, structure, or object) listed, or eligible for listing, in the National Register of Historic Places. Our review of the Florida Master Site File indicates that no historical properties are recorded within the project areas. Furthermore, because of the location and/or nature of the project it is unlikely that historic properties will be affected.	• Comment acknowledged.
Beverly Griffiths/Sierra Club Phosphate Committee	I am writing on behalf of the Sierra Club Florida Phosphate Committee to request an extension of time to respond to your notice of permitting for the above-referenced mine until after completion of the Phosphate AEIS which your agency is currently preparing. The permit application requires completion of an environmental impact statement to guide permitting, as your notice recognizes. That AEIS must also be available to the public in order to provide comments on this and future permits. Proceeding with the public input process for this permit before preparation of an EIS is premature and improper and deprives the public of the information necessary to submit comments.	• The Notice of Availability for the Final AEIS was published in the Federal Register on May 3, 2013. On June 22, 2017, the Corps provided a second public notice and 30-day opportunity for public comment for Wingate East. During the intervening four years, the Corps continued to accept public comments on Wingate East and the AEIS, and make those comments a part of the public record. The Corps also provided opportunities for public comment in advance of scoping for the AEIS, during the AEIS scoping period, on the Draft AEIS, and on the AEIS Addendum.
Beverly Griffiths/Sierra Club Phosphate Committee	You issued four notices of permitting on June 1, for the CF Industries South Pasture Extension and the Mosaic Wingate East, Ona and Desoto mines. We note that all of the notices you have issued are extremely sparse, omitting important information such as the nature of reclamation and the form of mitigation. The need for additional time and information in order to comment is reinforced by the limited nature of the information available.	• The Corps prepared the 2012 public notice for Wingate East in accordance with 33 C.F.R. § 325.3. The Corps published the June 22, 2017, public notice to provide additional information about Wingate East.
Beverly Griffiths/Sierra Club Phosphate Committee	Please note additionally that the address for commenting on the Ona mine appears to refer to the Wingate East mine. We assume your reference is incorrect.	• Comment acknowledged.
Beverly Griffiths/Sierra Club Phosphate Committee	It is clear that there is broad public interest in the pending AEIS and the permits which will depend on it. At this time we object to the proposed permit, request an extension of time for comment until a reasonable time after issuance of the pending AEIS, and ask that the Corps conduct a public hearing on this permit to consider the actual mining, reclamation and mitigation involved, and to consider the permit in light of the AEIS.	• The Notice of Availability for the Final AEIS was published in the Federal Register on May 3, 2013. On June 22, 2017, the Corps provided a second public notice and 30-day opportunity for public comment for Wingate East. During the intervening four years, the Corps continued to accept public comments on Wingate East and the AEIS, and make those comments a part of the public record. The Corps also provided opportunities for public comment in advance of scoping for the AEIS, during the AEIS scoping period, on the Draft AEIS, and on the AEIS Addendum.

		• The Corps has provided a separate, written response to the request for a public hearing.
Beverly Griffiths/Sierra Club Phosphate Committee	Please acknowledge receipt of this message to bevgriffiths@verizon.net Thank you for your service and your concern for our environment.	• Comment acknowledged.
Sandra Ripberger/ Manatee Conservation Committee/ Manatee-Sarasota Sierra Group	The application to mine the Wingate East area, formerly known as the Texaco tract is premature and we urge you to extend the comment period for this application until the AEIS is complete. It is clear from the draft of the AEIS that the study includes this mine and the three others currently posted on your site, and that decisions about permitting will consider the findings of the study.	• The referenced comment period for Wingate East was extended to 60 days. The Notice of Availability for the Final AEIS was published in the Federal Register on May 3, 2013. On June 22, 2017, the Corps provided a second public notice and 30-day opportunity for public comment for Wingate East. During the intervening four years, the Corps continued to accept public comments on Wingate East and the AEIS, and make those comments a part of the public record. The Corps also provided opportunities for public comment in advance of scoping for the AEIS, during the AEIS scoping period, on the Draft AEIS, and on the AEIS Addendum.
Sandra Ripberger/ Manatee Conservation Committee/ Manatee-Sarasota Sierra Group	The AEIS draft states: "The over-arching goal of this AEIS is to inform agencies, other stakeholders, and the public of the impacts of and alternatives to the four similar permit applications for phosphate mines. The AEIS is to support regulatory decisions to be made by the USACE and other agencies regarding the four specific proposed mine projects. A secondary function is to inform USACE regulatory decisions regarding future phosphate mining permit applications. The information compiled in this AEIS will be used by the USACE to determine whether to issue, issue with modifications or conditions, or deny Section 404 CWA permits for the four similar permit applications. The Applicants' proposed actions could impact approximately 10,000 acres of waters of the United States, including wetlands, through filling, land clearing, and other activities associated with phosphate mining operations if all pending applications are approved." Since the AEIS is not finished, it would be contrary to its stated purpose for the Corps to issue approvals before it is published.	• The Corps did not reach any permit decisions on the four similar proposed phosphate mines considered in the AEIS prior to the AEIS's publication. • The Corps published the June 22, 2017, public notice to provide additional information about Wingate East and provide an additional opportunity for public comment. • Section 2.d of the Wingate East Supplemental EA listed changes to the proposed work since the 2011 DA application and Final EIS.
Sandra Ripberger/ Manatee Conservation Committee/ Manatee-Sarasota Sierra Group	There are representations in the Mosaic application that appear to be contrary to previous applications and contracts by Mosaic, specifically the escrow of wetlands on the Wingate East tract until the wetlands on the Altman tract are reclaimed.	• The decision document provides the Corps' final determinations for Wingate East.
Sandra Ripberger/ Manatee Conservation Committee/ Manatee-Sarasota Sierra Group	The Wingate East tract includes jurisdictional wetlands of high value to the Myakka Watershed and to ground water recharge.	• Comment acknowledged. The Corps issued an approved jurisdictional determination for the project on February 16, 2012.
Sandra Ripberger/ Manatee Conservation Committee/ Manatee-Sarasota Sierra Group	We request that a public hearing be held to consider this application. Please acknowledge receipt of this comment. Thank you for your consideration of the public's interests.	• The Corps has provided a separate, written response to the request for a public hearing.
Helen King/Protect Our Watersheds, Inc.	The permit application requires completion of an environmental impact statement to guide permitting, as your notice recognizes. That AEIS must also be available to the public in order to provide comments on this and future permits. Proceeding with the public input process for this permit before preparation of an EIS is premature and improper and deprives the public of the information necessary to submit comments.	• The Notice of Availability for the Final AEIS was published in the Federal Register on May 3, 2013. On June 22, 2017, the Corps provided a second public notice and 30-day opportunity for public comment for Wingate East. During the intervening four years, the Corps continued to accept public comments on Wingate East and the AEIS, and make those comments a part of the public record. The Corps also provided opportunities for public comment in advance of scoping for the AEIS, during the AEIS scoping period, on the Draft

		AEIS, and on the AEIS Addendum.
Helen King/Protect Our Watersheds, Inc.	You issued four notices of permitting on June 1, for the CF South Pasture Extension and the Mosaic Wingate East, Ona and Desoto mines. We note that all of the notices you have issued are extremely sparse, omitting important information such as the nature of reclamation and the form of mitigation. The need for additional time and information in order to comment is reinforced by the limited nature of the information available.	• The Corps prepared the 2012 public notice for Wingate East in accordance with 33 C.F.R. § 325.3. The Corps published the June 22, 2017, public notice to provide additional information about Wingate East.
Helen King/Protect Our Watersheds, Inc.	It is clear that there is broad public interest in the pending AEIS and the permits which will depend on it. At this time we object to the proposed permit, request an extension of time for comment until a reasonable time after issuance of the pending AEIS, and ask that the Corps conduct a public hearing on this permit to consider the actual mining, reclamation and mitigation involved, and to consider the permit in light of the AEIS. Specifically, POW wants to ensure the best possible protections for our water, our environmental systems, the health of Charlotte Harbor and its fisheries during and after mining.	• The Notice of Availability for the Final AEIS was published in the Federal Register on May 3, 2013. On June 22, 2017, the Corps provided a second public notice and 30-day opportunity for public comment for Wingate East. During the intervening four years, the Corps continued to accept public comments on Wingate East and the AEIS, and make those comments a part of the public record. The Corps also provided opportunities for public comment in advance of scoping for the AEIS, during the AEIS scoping period, on the Draft AEIS, and on the AEIS Addendum • The Corps has provided a separate, written response to the request for a public hearing. • In a letter from the Charlotte Harbor National Estuary Program (CHNEP) dated September 9, 2016, the Director noted that on-site and off-site mitigation have been designed to support implementation of the CHNEP's Comprehensive Conservation and Management Plan.
Helen King/Protect Our Watersheds, Inc.	Specifically, POW wants to ensure the best possible protections for our water, our environmental systems, the health of Charlotte Harbor and its fisheries during and after mining.	• Comment acknowledged.
Dennis Mader/3PR	1. Pursuant to Section 404 of the Clean Water Act. , People for Protecting Peace River, Inc. (hereinafter, 3PR) formally requests a public hearing concerning Mosaic Fertilizer, LLC Permit Application No. SAJ-2009-03221(IP-KDS).	• The Corps has provided a separate, written response to the request for a public hearing.
Dennis Mader/3PR	During the permit decision process, the Corps must evaluate the project in relation to the public interest. The public benefits and detriments of all factors relevant to each case are to be carefully evaluated and balanced. Relevant factors may include conservation, economics, esthetics, wetlands, cultural values, fish and wildlife values, water supply, water quality, and any other factors judged important.	• Section 7 of the decision document describes the Corps' evaluation of the public interest review factors pursuant to 33 C.F.R. § 320.4 and RGL 84-09.
Dennis Mader/3PR	Additionally, 3PR strongly recommends the Army Corps of Engineers (ACOE) deny Permit Application No. SAJ-2009-03221(IP-KDS) and find the project Environmentally Unsatisfactory. The initial ACOE review of the project has identified adverse environmental impacts that are of sufficient magnitude that the proposed action must not proceed as proposed.	• The decision document provides the Corps' final determinations for Wingate East.
Dennis Mader/3PR	PARTIES 2. 3PR is a public interest environmental protection organization which is a Florida not-for-profit corporation and a citizen of the State of Florida whose address is: 3PR, P.O. Box 155, Wauchula, FL 33873. The corporate purposes of 3PR include the protection and preservation of water quality and wildlife habitat in and around Hardee County, Florida. 3PR is a citizen of the State of Florida pursuant to section 403.412(5), Florida Statutes. 3PR and its members will be substantially and adversely affected by the conditions and activity, which will result if this permit is issued. 3. State of Florida, Department of Environmental Protection (hereinafter, "DEP") is an affected State permitting agency, whose address is: DEP, 8407 Laurel Fair Circle, Tampa, Florida 33610-7355. 4. Department of the Army is an affected federal permitting agency, whose address is: Department of the Army, Jacksonville District Corps of Engineers, Tampa Regulatory Office, 10117 Princess Palm Drive Suite 120, Tampa, Florida 33610-8300.	• Comment acknowledged.

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	5. The Applicant is Mosaic Fertilizer, LLC, 13830 Circa Crossing Drive, Lithia, FL, 33547 RECEIPT OF NOTICE 6. 3PR first received notice of Permit Application No. No. SAJ-2009-03221(IP-KDS) by email on June 2, 2012.	
Dennis Mader/3PR	GENERAL FACTS 7. The direct impacts of Applicant's proposed project will result in unpermittable adverse conditions Section 404 of the Clean Water Act and will be contrary to the public's interest.	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively.
Dennis Mader/3PR	8. There will be significant unpermittable foreseeable adverse cumulative impacts on water quality, and conservation and protection of fish and wildlife resulting from the extraction of phosphate ore.	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively. • Section 4.12 of the Final AEIS describes the cumulative effects of phosphate mining, including Wingate East.
Dennis Mader/3PR	9. There will be unpermittable foreseeable adverse secondary impacts from the proposed extraction of phosphate ore.	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively, including secondary or indirect effects.
Dennis Mader/3PR	10. The Department of the Army has permitting authority over Applicant's proposed dredging activities pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344).	• Comment acknowledged.
Dennis Mader/3PR	11. The U.S. Army Corps of Engineers (Corps) has determined the proposed project may affect, the Audubon's crested caracara (Caracara cheriway) and the Florida panther (Puma concolor coryi). Additionally, the Corps has determined the proposal may affect the Eastern indigo snake (Drymarchon couperi), wood stork (Mycteria americana), and the Florida grasshopper sparrow (Ammodramus savannarum floridanus).	• Section 10.1 of the decision document describes the Corps' final determinations for Wingate East pursuant to Section 7 of the Endangered Species Act.
Dennis Mader/3PR	12. The mitigation proposed by the Applicant is inadequate and will most l kely not be viable for some time after construction activities.	• Section 8 of the decision document, and the attached approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources. • The Corps considered temporal loss and risk in its evaluation of the mitigation.
Dennis Mader/3PR	13. 3PR alleges the following disputed issues of law and material fact for determination of Permit Application No. SAJ-2009-03221(IP-KDS). (a) Whether Applicant has provided reasonable assurances that the applicable state and federal water quality standards will not be violated as a result of the proposed extraction of phosphate ore; (b) Whether Applicant has provided reasonable assurances that the proposed extraction of phosphate ore is in compliance with EPA approved water quality standards with regard to Section 404 of the Clean Water Act;	• As stated in Section 10.5 of the decision document, the FDEP issued a water quality certification on November 16, 2015, as part of their ERP. This constitutes water quality certification under Section 401 of the Clean Water Act.
Dennis Mader/3PR	(c) Whether Applicant has provided reasonable assurances that the proposed activity is not contrary to the public interest as set forth in Section 404(b) of the Clean Water Act;	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively.
Dennis Mader/3PR	(d) Whether Applicant has provided reasonable assurances that the cumulative impacts of the proposed project, including applicable past, present and foreseeable cumulative impacts, will not cause violations of any state or federal standard;	• Section 4.12 of the Final AEIS describes the cumulative effects of phosphate mining, including Wingate East. The Corps' review of the project impacts, as described in the decision document, is limited to those impacts within the Corps' regulatory authority.
Dennis Mader/3PR	(e) Whether Applicant has provided reasonable assurances that the proposed project is consistent with Florida' s Coastal Zone Management Program;	• As stated in Section 10.6 of the decision document, the FDEP issued a coastal zone management consistency determination on November 16, 2015, as part of their ERP.
Dennis Mader/3PR	(f) Whether Applicant has provided reasonable assurances that permanent impacts associated with the disturbance of 480.1 acres jurisdictional wetlands and 35.0 acres of non-jurisdictional wetlands does not violate any state or federal standard;	• The Corps' review of the project impacts, as described in the decision document, is limited to those impacts within the Corps' regulatory authority.

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Dennis Mader/3PR	(g) Whether Applicant has provided reasonable assurances that the proposed extraction of phosphate ore is in compliance with Section 7 of the Endangered Species Act for the protection of the Audubon's crested caracara (Caracara cheriway), the Florida panther (Puma concolor coryi), the Eastern indigo snake (Drymarchon couperi), the wood stork (Mycteria americana), and the Florida grasshopper sparrow (Ammodramus savannarum floridanus).	• Section 10.1 of the decision document describes the Corps' final determinations for Wingate East pursuant to Section 7 of the Endangered Species Act.
Dennis Mader/3PR	APPLICABLE LAWS AND STATUTES 14. Federal Laws and Statutes: -Section 404 of the Clean Water Act (33 U.S.C. 1344), -Section 404(b) of the Clean Water Act, -Coastal Zone Management Act and the National Environmental Policy Act., -Section 7 of the Endangered Species Act. 15. Florida Laws and Statutes: -Section 62-302 F.S. - Surface Water Quality Standards, -Section 62-302.530 F.S. - Table: Criteria for Surface Water Quality Classifications, -Sections 62-4.242, 62-4.243, 62-4.244, and 62-4.246 F.S. - antidegradation permitting requirements.	• The Corps' review of the project impacts, as described in the decision document, is limited to those impacts within the Corps' regulatory authority.
Dennis Mader/3PR	WHEREFORE, People for Protecting Peace River, Inc., formally requests that ACOE hold a public hearing concerning Mosaic Fertilizers, LLC Permit Application SAJ-2009-03221(IP-KDS) Mosaic Wingate East Phosphate Strip Mine. Respectfully submitted this 18th day of June 2012.	• The Corps has provided a separate, written response to the request for a public hearing.
Lisa Beever/CHNEP	Thank you for the opportunity to review and comment on Permit Application No. SAJ-2009-03221(IPKDS), Wingate East Mine. The Charlotte Harbor National Estuary Program (CHNEP) was created in 1995 pursuant to Section 320 of the Clean Water Act and is guided by our Comprehensive Conservation and Management Plan (CCMP) as required by the Act. This letter documents the interest of CHNEP regarding this permit. The letter was developed according to our adopted Advocacy and Review Procedures, which serve to implement Executive Order 12372, dated September 17, 1983. This letter primarily implements CCMP Action SG-P: Incorporate into federal, state and local permits and public works improved standard practices that better protect estuaries and watersheds. We thank Mosaic for participating in our Management Conference as a partner. Desirable Outcomes In our comments concerning the May 2012 Draft Areawide Environmental Impact Statement (DAEIS), CHNEP outlined desirable outcomes that apply to this permit. These desirable outcomes will help to implement the CCMP and include:	• Comment acknowledged.
Lisa Beever/CHNEP	Improve downstream ambient water quality. Parameters include dissolved oxygen, chlorophyll a, total dissolved solids, pH, sulfate, iron, phosphorus, nitrogen and fecal coliform. We anticipate that one or more of these parameters may improve based on the land use change. If those can be improved and other more challenging parameters are not degraded in the ambient environment, a desirable outcome is met.	• Section 4.4.5 of the Final EIS describes the predicted effects of Wingate East Mine on surface water quality. Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively, including water quality.
Lisa Beever/CHNEP	Establish a more natural seasonal variation in freshwater flows for the Peace and Myakka Rivers. Peace River Integrated Modeling Project. Southwest Florida Water Management District Minimum Flows and Levels documentation for the Lower Myakka and Lower Peace can be used to identify natural seasonal variations.	• Section 4.2.4 of the Final AEIS describes the predicted effects of the Wingate East Mine project on surface water flows within the Peace and Myakka River, Upper Myakka River, and Horse Creek. Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively, including surface water hydrology.
Lisa Beever/CHNEP	Improve historic watershed boundaries. CHNEP contracted to develop geographic information systems data to identify historic watershed boundaries. Restoring watershed boundaries can be a component of mitigation.	• The approved compensatory mitigation plan describes the permittee's watershed approach to compensatory mitigation.
Lisa Beever/CHNEP	Improve to more natural historic conditions, waterbodies that are affected by artificially created structures. This outcome can be completed by minimizing containment in the mining landscape. In addition, mitigation options include removal of artificial structures and restoring old mining containment areas to return flows to natural waterbodies.	• The approved compensatory mitigation plan describes how the permittee included restoration and enhancement of previously impacted areas in the overall plan.
Lisa Beever/CHNEP	Protect and restore habitats freshwater wetlands, as well as native upland communities vital to the ecological function of the system. This outcome can be implemented with avoidance within the mines with special reference to the Critical Land and Water Identification Project (CLIP) priority 1 and priority 2 areas, as well as the Integrated Habitat Network.	• Section 5.4 of the decision document for the Wingate East project explains how the Corps considered onsite alternatives in its review, including the application of the Mitigation Framework described in Section 5.4 of the Final AEIS. The

		approved compensatory mitigation plan describes how the permittee incorporated the preservation and enhancement of key landscape systems, including upland and wetland areas, into the mitigation.
Lisa Beever/CHNEP	Create landscape level habitat connections. These connections include major and minor riparian corridors such as the Myakka River, Peace River, Horse Creek, West Fork Horse Creek, Brushy Creek, Lettis Creek, Oak Creek, Hickory Creek, Buzzards Roost Branch, Brandy Branch and other tributary systems. Riparian corridors include riparian wetlands as well as associated uplands such as oak scrub.	• The approved compensatory mitigation plan describes how the permittee incorporated the preservation and enhancement of key landscape systems, including upland and wetland areas, into the mitigation.
Lisa Beever/CHNEP	Increase Conservation Lands within the Peace and Myakka River basins. In the past conservation areas were protected under deed restrictions, which have little public enforceability. In recent permits, FDEP has required transfer of easement or title. This applies to avoidance areas, restoration areas and off-site mitigation areas.	• The approved compensatory mitigation plan describes how the permittee incorporated the preservation and enhancement of key landscape systems, including upland and wetland areas, into the mitigation, and how the permittee will preserve all onsite and offsite compensatory mitigation areas under legally-sufficient conservation easements in favor of FDEP.
Lisa Beever/CHNEP	Though Mosaic would not provide a shapefile of the proposed “no mine” areas, the company did provide an encrypted PDF, which cannot be added to the body of this letter, but will be forwarded with the mine permit review letter(s) as a separate exh bit. For use as a graphic in this letter, we prepared a map that shows the relationship between Mine boundaries; and the named waterbodies from the National Hydrologic Database (NHD), Integrated Habitat Network (IHN), and CLIP Priority 1 and 2 areas.	• Comment acknowledged.
Lisa Beever/CHNEP	CHNEP is concerned regarding the level of protection for the Myakka River and headwater wetlands and native upland buffers in the southwestern portion of the project boundary and requests that these areas be evaluated as additional “No Mine” areas.	• Section 5.4 of the decision document for the Wingate East project explains how the Corps considered onsite alternatives in its review, including the application of the Mitigation Framework described in Section 5.4 of the Final AEIS.
Lisa Beever/CHNEP	CHNEP may submit additional comments concerning this permit. If you have any questions or need additional information, please do not hesitate to contact me.	• Comment acknowledged.
Mike Coates/Peace River Manasota Regional Water Supply Authority	The Peace River Manasota Regional Water Supply Authority (Authority) is an existing legal permittee utilizing water harvested from the Peace River in DeSoto County, Florida for public water supply. The Authority's Water Use Permit (SWFWMD WUP No. 20010420.008) establishes a withdrawal schedule from the Peace River based on combined daily flows of the Peace River (USGS gage 02296750), Horse Creek (USGS gage 02297310) and Joshua Creek (USGS gage 02297100). The USEPA also completed an EIS (904/9-03-001, January 2003) on the Peace River Facility and withdrawal from the Peace River for public water supply. The Authority has invested over $300,000,000 in new infrastructure over about the past decade, including construction of a 6 billion gallon off-stream raw-water reservoir, 21-well aquifer storage/recovery wellfield, water treatment plant expansion, and transmission pipelines. This investment of public dollars is to insure reliable, high-quality, affordable drinking water supply to serve the four county region of the Authority as required by state statute. Authority drinking water supply facilities presently include: • 48 Million gallon per day (MGD) conventional surface water treatment plant • 120 MGD intake on the Peace River • 6.52 BG off-stream, raw water storage • 6.3 BG (21-well) treated water Aquifer Storage and Recovery System • About 50 miles of drinking water transmission pipelines in service These facilities provide drinking water to Authority customers including Charlotte, DeSoto and Sarasota Counties, and the City of North Port for distribution to residents in their retail service areas. The Authority's current contractual delivery obligation is 32.7 MGD (average day). During the 12-month period ending June 30, 2012 the Peace River Facility supplied over 75% of the drinking water used by the aforementioned four Customers.	• Comment acknowledged.
Mike Coates/Peace River Manasota Regional Water Supply Authority	Quantity, timing and quality flow in the Peace River watershed, including Horse Creek and Joshua Creek are critical to the operation of the Peace River Facilities. Impacts to any of these three elements (flow, timing, quality) from a single or combination of mine operations could compromise the ability of the Authority to meet public drinking water needs and contractual obligations, and adversely impact the financial investment of public funds in infrastructure constructed to provide public water supply. Our concerns regarding the four	• Section 4.4.5 of the Final EIS describes the predicted effects of Wingate East on surface water quality. • Section 4.2.4 of the Final AEIS describes the predicted effects of the Wingate East project on

	permit applications and potential mine-related (both separate and cumulative) impacts are listed below	surface water flows within the Peace River and Myakka River. Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively, including water quality and surface water hydrology.
Mike Coates/Peace River Manasota Regional Water Supply Authority	1. Quantity & Timing of River Flow A major issue relative to the Authority's regional drinking water supply operations on the Peace River relates directly to how potential reductions in stream flows are assessed in the applications. Flow-related impacts affecting Peace River Facility withdrawals and the Authority's drinking water system reliability will be masked by use of techniques that consider the annual or long-term average changes in flow impacts from mining. "Averaging" tends to mask impacts on water supply availability during dry conditions by combining dry weather flows with high volume wet season flows. An "average" condition typically provides adequate flow to meet water supply needs, however, conditions are rarely average, and in the past 12 years have tended to be very dry for extended periods. Analysis of mine related impacts on river flow should include evaluation of all potential mine-related impacts over a full range of actual historical river flows so that impacts to permitted water supply facilities such as ours can be discerned. Reduced supply availability and water system reliability could necessitate any or all of the following costly actions: • Installation for more pumping capacity on the river, •Construction of more water storage capacity, • Implementation of alternative treatment methods (such as membranes) and/or, • Development of new sources.	• Section 4.2.4 of the Final AEIS describes the predicted effects of the Wingate East project on surface water flows within the Peace River and Myakka River. Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively, including surface water hydrology.
Mike Coates/Peace River Manasota Regional Water Supply Authority	2. Surface Water Quality The Peace River Water Treatment Plant is a conventional surface water treatment facility using aluminum sulfate as a coagulant primarily for color removal. The treatment facility does not (and cannot) reduce dissolved solids (such as sulfate, chloride, sodium, etc.), which are regulated drinking water parameters in Florida. Although average water quality data from mine discharges are somewhat informative, they don't tell much about potential worse case impacts, which are caused by specific events and not averages. The evaluation should consider what the maximum observed parameter/constituent values were, the number of observations available, and the number that were above water quality standards to aid in assessment of impacts to drinking water supplies.	• Section 4.4.5 of the Final EIS describes the predicted effects of Wingate East on surface water quality. • Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively, including water quality.
Mike Coates/Peace River Manasota Regional Water Supply Authority	In addition, a related and very important water quality issue is that of impacts from mining related facilities such as processing plants, and phosphogypsum stacks. The protracted and ongoing USAC phosphogypsum stack closure which discharges high TDS water into Whidden Creek which outfalls to the Peace River clearly shows that such facilities can affect water quality in the river, and by extension could adversely affect public drinking water supplies relying on surface water in the Peace River Basin. Are such facilities proposed to support these mine operations? Where would such facilities be located, when would they be constructed and ultimately closed, and what are the projected impacts of these facilities current surface water quality in the Peace Basin?	• Section 4.12 of the Final AEIS describes the cumulative effects of phosphate mining, including Wingate East. • The Corps determined that Wingate East has independent utility from the Applicant's fertilizer plants, including any associated phosphogypsum stacks. The cumulative impact analysis for Wingate East, however, included consideration of the plants and phosphogypsum stacks for certain resources, as appropriate.
Mike Coates/Peace River Manasota Regional Water Supply Authority	The Authority appreciates the opportunity to comment on the referenced permit applications. We request a thorough analysis of the potential impacts to our drinking water source be undertaken as part of the USACE permitting process for each individual permit application as well as the cumulative impact of all four.	• Section 4.12 of the Final AEIS describes the cumulative effects of phosphate mining, including Wingate East. • Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively, including water quality and surface water hydrology.
Glenn Compton, Chairman, ManaSota-88	1. Pursuant to Section 404 of the Clean Water Act. , Manasota-88, Inc. formally requests a public hearing concerning Mosaic Fertilizer, LLC Permit Application No. SAJ-2009-03221 (IP-KDS).	• The Corps has provided a separate, written response to the request for a public hearing.
Glenn Compton, Chairman, ManaSota-88	During the permit process, the Corps must evaluate the project in relation to the project interest. The public benefits and detriments of all factors relevant to each case are to be carefully evaluated and balanced. Relevant factors may include conservation, economics, esthetics, wetlands, cultural values, fish and wildlife values, water supply, water quality, and any other factors judged important.	• Section 7 of the decision document describes the Corps' evaluation of the public interest review factors pursuant to 33 C.F.R. § 320.4 and RGL 84-09.

Glenn Compton, Chairman, ManaSota-88	Additionally, ManaSota-88, Inc. strongly recommends the Army Corps of Engineers (ACOE) deny DA permit application SAJ-2009-03221(KDS) and find the project Environmentally Unsatisfactory. The initial ACOE review of the project has identified adverse environmental impacts that are of sufficient magnitude that the proposed action must not proceed as proposed.	• The decision document provides the Corps' final determinations for Wingate East.
Glenn Compton, Chairman, ManaSota-88	PARTIES 2. ManaSota-88, Inc. (hereinafter, "ManaSota-88"), is a public interest conservation and environmental protection organization which is a Florida not-for-profit corporation and a citizen of the State of Florida whose address is: ManaSota~88, P.O. Box 1728, Nokomis, Florida 3427 4. The corporate purposes of ManaSota-88 include the protection and preservation of water quality and wildlife habitat in Manatee and Sarasota Counties. ManaSota-88 is a citizen of the State of Florida pursuant to section 403.412(5), Florida Statutes. ManaSota-88 and its members will be substantially and adversely affected by the conditions and activity which will result if this permit is issued. 3. State of Florida, Department of Environmental Protection (hereinafter, "DEP") is an affected State permitting agency, whose address is: DEP, 8407 Laurel Fair Circle, Tampa, Florida 33610-7355. 4. Department of the Army is an affected federal permitting agency, whose address is: Department of the Army, Jacksonville District Corps of Engineers, Tampa Regulatory Office, 10117 Princess Palm Drive Suite 120, Tampa, Florida 33610-8300. 5. The Applicant is Mosaic Fertilizer, LLC, Post Office Box 2000, Mu berry, Florida 33860. RECEIPT OF NOTICE 6. ManaSota-88, first received notice of Permit Application No. No. SAJ-2009-03221(IP-KDS) by email on June 2, 2012.	• Comment acknowledged.
Glenn Compton, Chairman, ManaSota-88	GENERAL FACTS 7. The direct impacts of Applicant's proposed project will result in unpermittable adverse conditions Section 404 of the Clean Water Act and will be contrary to the public's interest.	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively.
Glenn Compton, Chairman, ManaSota-88	8. There will be significant unpermittable foreseeable adverse cumulative impacts on water quality, and conservation and protection of fish and wildlife resulting from the extraction of phosphate ore.	• Section 4.12 of the Final AEIS describes the cumulative effects of phosphate mining, including Wingate East.
Glenn Compton, Chairman, ManaSota-88	9. There will be unpermittable foreseeable adverse secondary impacts from the proposed extraction of phosphate ore.	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively, including secondary or indirect effects.
Glenn Compton, Chairman, ManaSota-88	10. The Department of the Army has permitting authority over Applicant's proposed dredging activities pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344).	• Comment acknowledged.
Glenn Compton, Chairman, ManaSota-88	11. The Army Corps of Engineers has initially determined that the proposed project The U.S. Army Corps of Engineers (Corps) has determined the proposed project may affect, the Audubon's crested caracara (Caracara cheriway) and the Florida panther (Puma concolor coryi). Additionally, the Corps has determined the proposal may affect the Eastern indigo snake (Drymarchon couperi), wood stork (Mycteria americana), and the Florida grasshopper sparrow (Ammodramus savannarum floridanus).	• Section 10.1 of the decision document describes the Corps' final determinations for Wingate East pursuant to Section 7 of the Endangered Species Act.
Glenn Compton, Chairman, ManaSota-88	12. The mitigation proposed by the Applicant is inadequate and will most l kely not be viable for some time after construction activities.	• Section 8 of the decision document, and the attached approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources. The Corps considered temporal loss and risk in its evaluation of the mitigation.
Glenn Compton, Chairman, ManaSota-88	DISPUTED ISSUES OF LAW AND FACTS 13. ManaSota-88, alleges the following disputed issues of law and material fact for determination of Permit Application No. SAJ-2009-03221 (IP-KDS). (a) Whether Applicant has provided reasonable assurances that the applicable state and federal water quality standards will not be violated as a result of the proposed extraction of phosphate ore; (b) Whether Applicant has provided reasonable assurances that the proposed extraction of phosphate ore is in compliance with EPA approved water quality standards with regard to Section 404 of the Clean Water Act;	• As stated in Section 10.5 of the decision document, the FDEP issued a water quality certification on November 16, 2015, as part of their ERP. This constitutes water quality certification under Section 401 of the Clean Water Act.
Glenn Compton, Chairman, ManaSota-88	(c) Whether Applicant has provided reasonable assurances that the proposed activity is not contrary to the public interest as set forth in Section 404(b) of the Clean Water Act;	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively.

Glenn Compton, Chairman, ManaSota-88	(d) Whether Applicant has provided reasonable assurances that the cumulative impacts of the proposed project, including applicable past, present and foreseeable cumulative impacts, will not cause violations of any state or federal standard;	• Section 4.12 of the Final AEIS describes the cumulative effects of phosphate mining, including Wingate East. The Corps' review of the project impacts, as described in the decision document, is limited to those impacts within the Corps' regulatory authority.
Glenn Compton, Chairman, ManaSota-88	(e) Whether Applicant has provided reasonable 'assurances that the proposed project is consistent with Florida' s Coastal Zone Management Program;	• As stated in Section 10.6 of the decision document, the FDEP issued a coastal zone management consistency determination on November 16, 2015, as part of their ERP.
Glenn Compton, Chairman, ManaSota-88	(f) Whether Applicant has provided reasonable assurances that permanent impacts associated with the disturbance of 480.1 acres jurisdictional wetlands and 35.0 acres of non-jurisdictional wetlands does not violate any state or federal standard;	• The Corps' review of the project impacts, as described in the decision document, is limited to those impacts within the Corps' regulatory authority.
Glenn Compton, Chairman, ManaSota-88	(g) Whether Applicant has provided reasonable assurances that the proposed extraction of phosphate. ore is in compliance with Section 7 of the Endangered Species Act for the protection of the Audubon's crested caracara (Caracara cheriway), the Florida panther (Puma concolor coryi), the Eastern indigo snake (Drymarchon couperi), the wood stork (Mycteria americana), and the Florida grasshopper sparrow (Ammodramus savannarum floridanus).	• Section 10.1 of the decision document describes the Corps' final determinations for Wingate East pursuant to Section 7 of the Endangered Species Act.
Glenn Compton, Chairman, ManaSota-88	APPLICABLE LAWS AND STATUTES 14. Federal Laws and Statutes: -Section 404 of the Clean Water Act(33 U.S.C. 1344), -Section 404(b) of the Clean Water Act, -Coastal Zone Management Act and the National Environmental Policy Act., -Section 7 of the Endangered Species Act. 15. Florida Laws and Statutes: -Section 62-302 F.S. - Surface Water Quality Standards, -Section 62-302.530 F.S. - Table: Criteria for Surface Water Quality Classifications, -Sections 62-4.242, 62-4.243, 62-4.244, and 62-4.246 F.S. - antidegradation permitting requirements.	• The Corps' review of the project impacts, as described in the decision document, is limited to those impacts within the Corps' regulatory authority.
Glenn Compton, Chairman, ManaSota-88	WHEREFORE, ManaSota-88, Inc., formally requests that ACOE hold a public hearing concerning Mosaic Fertilizers, LLC Permit Application SAJ-2009-03221(1P-KDS) Mosaic Wingate East Phosphate Strip Mine.	• The Corps has provided a separate, written response to the request for a public hearing.
Manatee County	On June 1, 2012, the public notice for the above-referenced mine was published along with the public notice for the other three proposed actions tied to the Area-wide Environmental Impact Statement (AEIS) for the Central Florida Phosphate District. Manatee County suggests that the posting of these public notices was premature because the AEIS is still in draft form and no recommendations have been issued. Also, based on staff communication with the United States Army Corps of Engineers (USACE) staff and the presentation given by John Fellows, AEIS Project Manager, at the June 21, 2012 AEIS public comment meeting, the comment period for this permit application will remain open until 30 days after the Final AEIS is published. Manatee County reserves the right to submit additional comments on the permit application until that time. Notwithstanding the previous conditions, County staff has reviewed the dredge and fill permit application for Wingate East Mine and has the following initial comments.	• Comment acknowledged.
Manatee County	1) A complete avoidance and minimization analysis has not been performed. In accordance with Section 404 of the Clean Water Act (CWA), wetland impacts must be avoided and minimized to the extent appropriate and practicable prior to an evaluation of compensatory mitigation. As the applicant states in the first paragraph of Section 1.5 of the application, avoided areas (i.e., preserved areas) are primarily the result of setbacks from offsite properties (required by Ordinance 04-39, Manatee County Phosphate Code) or logistical constraints. It appears that the 25-year floodplain will be avoided (refer to Maps 50 and 51), however, Ordinance 04-39 also requires avoidance and minimization of wetlands and perennial streams that are functionally integrated with the 25-year floodplain. With the understanding that practicable dredge and fill under Section 404 (CWA) must be balanced with the irrevocable loss of valuable aquatic resources, County staff requests that the USACE give full consideration to avoidance and minimization of all moderate to high quality wetlands and perennial streams as an alternative.	• Section 5.4 of the decision document for the Wingate East explains how the Corps considered onsite minimization alternatives in its review, including the application of the Mitigation Framework described in Section 5.4 of the Final AEIS.
Manatee County	2) Section 1.5.4.3 Clay Settling Areas (CSAs) -The footprint of the CSAs WE-1 and WE-2 extend beyond the project boundary to the west, to other Mosaic property known as Wingate Extension. We recommend that the entire footprint of the CSAs be evaluated under Section 404 of the Clean Water Act in order to look at complete pre-mining versus post-mining subbasins and cumulative impacts.	• Section 5.6 of the decision document descr bes how Mosaic will utilize extra capacity of two existing clay settling areas on an adjacent mine. As a result, only one clay settling area will be constructed at Wingate East,

		occupying less than 20 percent of the mine site.
Manatee County	3) Furthermore, Wingate Extension has been permitted for phosphate extraction activities at the County and State level. However, no agency has permitted the placement of a clay settling area in this location. The approval of WE-1 and WE-2 in their current configurations is inconsistent with the existing Master Mining Plan (R-12-01) and Operating Permit (R-12-080) for Wingate Extension.	• Comment acknowledged.
Manatee County	4) Section 1.5.4.3 CSAs - A statement is made in this section that the two new proposed CSAs (WE-1 and WE-2) will be used to balance clays between Manatee and Hardee Counties. Please note that Manatee County only allows equivalent clays produced in the County to be stored in the County. Clays produced in other counties are not to be permanently disposed of in Manatee County. It is our understanding that other counties could have similar restrictions.	• The current plan calls for one clay settling area to be constructed at Wingate East, occupying less than 20 percent of the mine site.
Manatee County	5) In Manatee County Ordinance 08-20, FM-1 and FM-2 were permitted to store the equivalent of 16 million tons of clays extracted from Four Comers Southeast Tract. A small portion of Southeast Tract was not mined as planned, therefore, a limited amount of storage is available. However, any clays extracted as part of Wingate East will require new CSAs to be constructed. Additional clays are projected to be extracted under activities which are not under Corps jurisdiction (e.g., Wingate Extension and Wingate Creek Amendment). Currently projected clays for all three projects exceed the capacity available in FM-1, FM-2, WE-1 and WE-2.	• Comment acknowledged.
Manatee County	6) Manatee County Comprehensive Plan Comprehensive Plan Policy 3.3.1.1 states: "Proh bit removal, alteration, or encroachment within wetlands except in cases where no other practical alternatives exist that will permit a reasonable use of the land or where there is an overriding public benefit. Such determination will require completion of impact avoidance and minimization analyses which clearly demonstrate the necessity of the proposed impact." Phosphate mining is not exempt from this policy. Each mining project is reviewed on a case-by-case basis with consideration given to quality and location of the wetlands, various alternatives, and public benefits in addition to the recovery of phosphate ore.	• Section 5.3 of the decision document for Wingate East explains the criteria used by the Corps in evaluating onsite minimization alternatives and in making its determination of the LEDPA.
Manatee County	7) There was no engineering documentation supporting the proposal to construct CSAs on areas created by the disposition of dredge spoils. Since this is the first proposal of its kind, it is important to have a thorough engineering evaluation of this operation.	• Comment acknowledged.
Manatee County	8) Manatee County Ordinance 08-32, Condition E(3) requires specific wetland systems on Wingate East (approximately 597 acres) not to be mined until proof that successful wetland reclamation has occurred on Altman Parcel No. 4. Although this stipulation does not preclude proceeding with permitting activities, the timing of release of these areas may cause delay or alterations to the Mine Plan (Map 100) which may under-evaluate environmental consequences of the proposed plan.	• Comment acknowledged.
Manatee County	9) Mine Plan (Map 100) - This Mine Plan is inconsistent with the existing Master Mining Plan (R-12-01) and Operating Permit (R-12-080) for Wingate Extension. It does not correspond with the depicted utility corridors, dredge routes, and anticipated mining sequence of Wingate Extension.	• The approved mining plan is consistent with the other referenced permit/plan
Manatee County	10) Section 1.5.5.3.1, Avoided Lands -Manatee County recommends all high quality habitats in the Integrated Habitat Network be avoided. Also, greater consideration should be given to maintaining habitat connectivity to offsite conservation and preservation areas. Additional areas for avoidance were discussed in Item 5 above.	• Section 5.4 of the Final AEIS. The approved compensatory mitigation plan describes how the permittee incorporated the preservation and enhancement of key landscape systems, including upland and wetland areas, into the mitigation.
Manatee County	11) Section 7 of the Endangered Species Act requires Federal agencies to ensure that any action authorized, funded or carried out by them is not likely to jeopardize the continued existence of listed species or modify their critical habitat. The coverage of wildlife survey transects, surveyed in 2006 and depicted on Map 27, is inadequate to locate all protected species that may inhabit Wingate East. The transects provide wildlife data for xeric upland habitat only. Wetland habitat, upland habitat other then xeric, and pasture areas within Wingate East have not been surveyed. Surveys should be conducted according to United States Fish and Wildlife Service and Florida Fish and Wildlife Conservation Commission protocol and timelines.	• Section 10.1 of the decision document describes the Corps' final determinations for Wingate East pursuant to Section 7 of the Endangered Species Act.
Manatee County	We appreciate the opportunity to provide these initial comments to the USACE. Please contact Rob Brown with Manatee County Natural Resources Department at (941) 742-5980 ext. 1870 or via email at: rob .brown @m y manatee .org if you have any questions.	• Comment acknowledged.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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JUL 30 2012

Colonel Alan M. Dodd
District Engineer
Department of the Army
Jacksonville District Corps of Engineers
701 San Marco Boulevard, Room 372
Jacksonville, Florida 32207-0019

Subject: Four Individual Permit Public Notices
Mosaic Fertilizer LLC., Wingate East Mine, SAJ-2009-3221(IP-KDS)
Mosaic Fertilizer LLC., Ona Mine, SAJ-2011-1869(IP-JPF)
Mosaic Fertilizer LLC., Desoto Mine, SAJ-2011-1968(IP-MEP)
CF Industries, Inc., South Pasture Mine Extension SAJ-1993-1395(IP-ACR)

Dear Colonel Dodd:

The Environmental Protection Agency, Region 4, has reviewed the information found in each of the four public notices[1] (PNs) and supplemental material in the Draft Area-wide Environmental Impact Statement on Phosphate Mining in the Central Florida Phosphate District (AEIS)[2]. The EPA is a cooperating agency with the U.S. Army Corps of Engineers, Jacksonville District (District) to develop an AEIS consistent with the requirements of the National Environmental Policy Act of 1969, as amended. The EPA has been involved in numerous meetings and discussions regarding the four referenced permits and the AEIS going back more than two years. As discussed below, the freshwater forested and herbaceous emergent wetlands and open waters that make up the creeks, rivers, sloughs, seeps, domes and depressions in the area covered by the AEIS are considered aquatic resources of national importance. We appreciate the opportunity to participate in the AEIS process and believe it has been beneficial in adding to the body of knowledge regarding phosphate mining in central Florida.

We have three specific interests about these proposed projects both collectively and individually. Some of these concerns are related to the draft status of the AEIS and outstanding comments the EPA has on the draft AEIS. As noted, the AEIS process has made great progress in identifying and reviewing information related to the mining process in this area of Florida and the EPA appreciates all the work that the District, stakeholders and the permit applicants have put into this process. However, certain issues remain. These are the requested permit durations, avoidance of waters of the U.S. considered to be ecologically significant, and the proposed compensatory mitigation. The applicants requested different durations for their various permits, as listed below. CF Industries, South Pasture Mine Expansion 20 years; Mosaic Fertilizer, Desoto Mine 22 years; Mosaic Fertilizer, Westgate East Mine 34 years and Mosaic Fertilizer, Ona Mine 45 years. Given the difficulty in projecting environmental impacts two decades or more into the future, it would appear to us to be prudent to award a permit for this length of time only if there is a clear ability to monitor progress on mitigation and adaptively

[1] http://www.saj.usace.army.mil/Divisions/Regulatory/publicnotices_Florida.html, as viewed between June 1, 2012 and July 27, 2012.
[2] http://www.phosphateaeis.org/doc_draft_aeis.html, as viewed between June 1, 2012 and July 27, 2012.

manage where appropriate. We believe there are opportunities to lessen this concern and we are prepared to discuss these during efforts to develop permit specific compensatory mitigation plans consistent with the Section 404(b)(1) Guidelines and the 2008 Mitigation Rule (33 C.F.R. Parts 230 and 332; 40 C.F.R. Part 230).

The PNs reference avoidance of some waters of the U.S. These modifications are excellent and reflect historic concerns voiced by the EPA and others related to the uncertainty and risk for created forested and herbaceous emergent aquatic habitats. The EPA believes that additional avoidance is warranted where mature bay swamps, heads and/or seepage slopes exist. There are specific recommendations that can address this interest once the District has approved the federal jurisdictional determinations.

Additional interests relate to the conceptual nature of the proposed compensatory mitigation. The compensatory mitigation, as discussed in the PNs, proposes one acre created for every one acre to be impacted; and one linear foot of stream will be created for every stream linear foot impacted. These created habitats will be on-site and completed at various times in the future. We would like to see the applicants provisional compensatory mitigation consider ratios beyond an acre for acre/foot for foot due to temporal losses and risk associated with the mitigation time frames and establishing forested aquatic habitats. Therefore, off-site compensatory mitigation should play a larger role in the final plans to account for the temporal losses and uncertainty of successful restoration following phosphate mining. Finally, there is currently insufficient compensatory mitigation information to complete our review, as was noted in the draft AEIS[3]. The draft AEIS states that the initial permit applications only provided preliminary information because there are no approved federal jurisdictional determinations on the four mine sites and as of the date of the PNs, the applicants had yet to submit federal Section 404 compensatory mitigation plans. We would welcome a collaborative effort with the District and the applicants to address these questions.

As summarized above, the information and comments being collected for the AEIS on Phosphate Mining in the Central Florida Phosphate District will be vital for our review and providing project specific comments and recommendations. Therefore, based on the information available, the EPA believes that the projects as currently proposed may not comply with the Section 404(b)(1) Guidelines and may have substantial and unacceptable adverse impacts on aquatic resources of national importance. This letter follows the field-level procedures outlined in the August 1992 Memorandum of Agreement between the EPA and the Department of the Army, Part IV, paragraph 3(a) regarding Section 404(q) of the Clean Water Act.

[3] http://www.phosphateaeis.org/doc_draft_aeis.html, Chapter 5.6 Mitigation Plans for Currently Proposed Mines, page 5-18 as viewed between June 1, 2012 and July 27, 2012.

I want to thank you and your staff for your cooperation and willingness to address our issues. We look forward to working closely with you and the applicant to resolve the concerns outlined above. If you have any questions, please call me at (404) 562-9345 or Duncan Powell of my staff at (404) 562-9258.

Sincerely,

for James D. Giattina
Director
Water Protection Division

cc: Fish and Wildlife Service, Vero Beach, Florida (Begazio)
National Marine Fisheries Service, St. Petersburg, Florida (Sramek)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
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AUG 23 2012

Colonel Alan M. Dodd
District Engineer
Department of the Army
Jacksonville District Corps of Engineers
701 San Marco Boulevard, Room 372
Jacksonville, Florida 32207-0019

Subject: Four Individual Permit Public Notices
Mosaic Fertilizer LLC., Wingate East Mine, SAJ-2009-3221(IP-KDS)
Mosaic Fertilizer LLC., Ota Mine, SAJ-2011-1869(IP-JPF)
Mosaic Fertilizer LLC., Desoto Mine, SAJ-2011-1968(IP-MEP)
CF Industries, Inc., South Pasture Mine Extension SAJ-1993-1395(IP-ACR)

Dear Colonel Dodd:

This letter follows our previous letter dated July 30, 2012 (enclosed) and the field-level procedures outlined in the August 1992 Memorandum of Agreement between the U.S. Environmental Protection Agency and the Department of the Army, Part IV, paragraph 3(b), regarding Section 404(q) of the Clean Water Act. Our opinion is that the discharges will have a substantial and unacceptable impact on aquatic resources of national importance (ARNI), as currently proposed. The ARNIs and our three specific interests (requested permit durations, avoidance of the ARNIs and the proposed compensatory mitigation) that are the basis of our opinion, were stated in our July 30, 2012, letter and are still currently being discussed among the agencies and the companies.

The EPA is confident that these interests will be addressed in the U.S. Army Corps of Engineers Jacksonville District's permitting process and the processes to finalize the Area-wide Environmental Impact Statement on Phosphate Mining in the Central Florida Phosphate District. We believe there are solutions to our concerns and see positive steps being taken to address them.

I want to thank you and your staff for your cooperation. We look forward to working with you and the applicants to resolve our concerns. If you have any questions, please call Mr. Duncan Powell of my staff at (404) 562-9258.

Sincerely,

Gwendolyn Keyes Fleming
Regional Administrator

Enclosure

cc: Mr. Alfredo Begazo, Fish and Wildlife Service
Mr. Mark Sramek, National Marine Fisheries Service

RECEIVED
AUG 0 2 2012
Ft. Myers Reg. Office

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701-5505
(727) 824-5317; FAX 824-5300
http://sero.nmfs.noaa.gov

JUL 3 1 2012

F/SER46:MS/rs

Colonel Alan M. Dodd
District Commander, Jacksonville District
Department of the Army, Corps of Engineers
Attn: Regulatory Division
South Permits Branch/Fort Myers Section
1520 Royal Palm Square Boulevard – Suite 310
Fort Myers, Florida 33919-1036

Dear Colonel Dodd:

NOAA's National Marine Fisheries Service (NMFS), Habitat Conservation Division, has reviewed the public notice regarding Department of the Army File Number SAJ-2010-03680 and the associated Draft Area Wide Environmental Impact Statement (AEIS) for Phosphate Mining in the Central Florida Phosphate District dated June 28, 2012. Your office has received four applications for permits under Section 404 of the Clean Water Act from Mosaic Fertilizer, LLC, and CF Industries, Incorporated, for four proposed phosphate mining projects. The specific projects in the AEIS include: (1) Mosaic's new Desoto Mine; (2) Mosaic's new Ona Mine; (3) Mosaic's extension to the existing Wingate Creek Mine; and (4) CF Industries' extension to the South Pasture Mine in Central and Southwest Florida.

According to information provided in the AEIS, the proposed projects could reduce freshwater inflows in the Myakka and Peace Rivers by as much as two percent. The AIES does not specifically identify or address potential secondary or cumulative effects of the reduced freshwater inflows on essential fish habitat (EFH) or commercially and recreationally valuable fish and invertebrate species within the lower Myakka and Peace rivers and Charlotte Harbor estuary. The role of freshwater inflows to sustain and maintain the ecologic health and diversity of estuarine ecosystems is widely documented and the impacts of reduced inflows should be thoroughly addressed in the Final AEIS.

Estuarine habitats in the lower Peace and Myakka Rivers and Charlotte Harbor are designated as EFH as identified in the 2005 generic amendment of the Fishery Management Plans for the Gulf of Mexico. The generic amendment was prepared by the Gulf of Mexico Fishery Management Council as required by the 1996 amendment to the Magnuson Stevens Fishery Conservation and Management Act. Federal agencies that permit activities potentially impacting EFH are required to consult with NMFS and, as a part of the consultation process, prepare an EFH assessment. Contents of an EFH assessment should include:

1. An analysis of the effects, including secondary and cumulative effects, of reduced freshwater inflows from the proposed mining activities on EFH, federally managed fish and invertebrate species, and prey within the Myakka and Peace river estuaries and Charlotte Harbor;

2. The USACE's views regarding the effects of these activities on EFH; and,

3. Proposed mitigation or adaptive management strategies, if a demonstrated adverse impact to EFH and fishery resources would result from these activities.

EFH consultation can be initiated independent of other project review tasks or can be incorporated in environmental planning documents, such as the Final AEIS. Upon review of the EFH assessment, NMFS will determine if it is necessary to provide EFH conservation recommendations on the project.

Finally, the project area is within the known distribution limits of a federally listed threatened species under purview of NMFS. In accordance with the Endangered Species Act of 1973, as amended, it is your responsibility to review this proposal and identify actions potentially affecting endangered or threatened species. Determinations involving listed species should be reported to our Protected Resources Division (PRD) at the letterhead address. If it is determined the activities may adversely affect any species listed as endangered or threatened under PRD purview, consultation must be initiated.

If you have questions regarding NMFS' review of this project, please contact Mr. Mark Sramek at the letterhead address, by telephone at (727) 824-5311, or e-mail at Mark.Sramek@noaa.gov.

Sincerely,

Miles M. Croom

Miles M. Croom
Acting Assistant Regional Administrator
Habitat Conservation Division

Cc:
F/SER3

Krista D. Sabin
Department of the Army
Jacksonville District Corps of Engineers
4400 PGA Boulevard, Suite 500
Palm Beach Gardens, Florida 33410

THPO#: 010097
Project #: SAJ-2009-03221

July 3, 2012

Subject: Assessment of Effects for the Proposed Mosaic Fertilizer LLC, Wingate East Mine, Manatee County, Florida

Dear Ms. Sabin,

The Seminole Tribe of Florida's Tribal Historic Preservation Office (STOF-THPO) has received the Jacksonville Corps of Engineers correspondence regarding the above mentioned project. The STOF-THPO has no objection to your proposal at this time. However, the STOF-THPO would like to be informed if cultural resources that are potentially ancestral or historically relevant to the Seminole Tribe of Florida are inadvertently discovered during the construction process.

We thank you for the opportunity to review the information that has been sent to date regarding this project. Please reference *THPO-010097* in any future documentation about this project.

Sincerely,

Direct routine inquiries to:

Paul N. Backhouse, Ph.D.
Acting Tribal Historic Preservation Officer
Seminole Tribe of Florida

Anne Mullins
Compliance Review Supervisor
annemullins@semtribe.com

AES:am:pb

RECEIVED
JUN 21 2012
PALM BCH GRDNS. REGULATORY OFFICE
JAX DISTRICT, USACE

FLORIDA DEPARTMENT of STATE

RICK SCOTT
Governor

KEN DETZNER
Secretary of State

Palm Beach Regulatory Office
Jacksonville USACE
4400 PGA Boulevard, Suite 500
Palm Beach Gardens, Florida 33410

June 14, 2012

Re: Projects Reviewed by the Florida State Historic Preservation Office
No Historic Properties Likely Affected - **See Attached List**
Date Received – June 5- June 12, 2012

To Whom It May Concern:

This office received and reviewed the above referenced project applications in accordance with Section 106 of the National Historic Preservation Act of 1966 (Public Law 89-665), as amended in 1992; 36 C.F.R., Part 800: Protection of Historic Properties for assessment of possible adverse impact to cultural resources (any prehistoric or historic district, site, building, structure, or object) listed, or eligible for listing, in the National Register of Historic Places.

Our review of the Florida Master Site File indicates that no historical properties are recorded within the project areas. Furthermore, because of the location and/or nature of the project it is unlikely that historic properties will be affected.

If you have any questions concerning our comments, please contact Michael Hart, Historic Sites Specialist, by phone at 850.245.6333, or by electronic mail at Michael.Hart@dos.myflorida.com. Your continued interest in protecting Florida's historic properties is appreciated.

Sincerely,

Laura A. Kammerer

Laura A. Kammerer
Deputy State Historic Preservation Officer
For Review and Compliance

DIVISION OF HISTORICAL RESOURCES
R. A. Gray Building • 500 South Bronough Street • Tallahassee, Florida 32399-0250
Telephone: 850.245.6300 • Facsimile: 850.245.6436 • www.flheritage.com
Commemorating 500 years of Florida history www.fla500.com

VIVA FLORIDA 500.

DHR NO.	*App. No.*	*Project Name*	*County*
2012-02555	SAJ-2012-01357 (LP-DWP)	Gustavo Suarez & Ornella Indonie/ Install Support Piles and Boat Lift	Broward
2012-02556	SAJ-2012-01366 (LP-DWP)	Carmencita Porras/ Dock Removal and Replacement	Broward
2012-02557	SAJ-2012-01358 (LP-DWP)	Jeff Gomez/ Dock Installation	Broward
2012-02563	SAJ-2009-03221 (IP-KDS)	Mosaic Fertilizer, LLC/ Extract Phosphate Ore	Manatee
2012-02572	SAJ-2012-01462 (LP-KDS)	Tom Pettibone/ Dock Extension	Palm Beach
2012-02587	SAJ-2010-02688 (LP-SLR)	R.L. Busby/ Terminal Platform	Palm Beach
2012-02588	SAJ-2012-00836 (LP-CF)	Barbara Anderson/ Remove and Replace Dock	Palm Beach
2012-02618	SAJ-2012-01465 (LP-LCK)	William Norris/ Install Pilings and Boatlift	Palm Beach
2012-02643	SAJ-2008-02273 (IP-KDS)	Star Ranch Enterprises, Inc./ Aggregate Mining	Palm Beach

Sabin, Krista D SAJ

From: BEVERLY GRIFFITHS [bevgriffiths@verizon.net]
Sent: Friday, June 15, 2012 5:59 PM
To: pn.comment.wingate.east
Subject: Public Notice Comments-Wingate East Mine

June 15, 2012

Department of the Army
Jacksonville District Corps of Engineers
10117 Princess Palm Avenue, Suite 120
Tampa, FL 33610

Re: Wingate East Mine, Permit Application No. SAJ-2009-03221 (IP-KDS), Notice Date June 1, 2012

Dear Sirs;

I am writing on behalf of the Sierra Club Florida Phosphate Committee to request an extension of time to respond to your notice of permitting for the above-referenced mine until after completion of the Phosphate AEIS which your agency is currently preparing.

The permit application requires completion of an environmental impact statement to guide permitting, as your notice recognizes. That AEIS must also be available to the public in order to provide comments on this and future permits. Proceeding with the public input process for this permit before preparation of an EIS is premature and improper and deprives the public of the information necessary to submit comments.

You issued four notices of permitting on June 1, for the CF Industries South Pasture Extension and the Mosaic Wingate East, Ona and Desoto mines. We note that all of the notices you have issued are extremely sparse, omitting important information such as the nature of reclamation and the form of mitigation. The need for additional time and information in order to comment is reinforced by the limited nature of the information available.

Please note additionally that the address for commenting on the Ona mine appears to refer to the Wingate East mine. We assume your reference is incorrect.

It is clear that there is broad public interest in the pending AEIS and the permits which will depend on it. At this time we object to the proposed permit, request an extension of time for comment until a reasonable time after issuance of the pending AEIS, and ask that the Corps conduct a public hearing on this permit to consider the actual mining, reclamation and mitigation involved, and to consider the permit in light of the AEIS.

Please acknowledge receipt of this message to bevgriffiths@verizon.net

Thank you for your service and your concern for our environment.

Beverly Griffiths, on behalf of the Sierra Club Florida Phosphate Committee

SIERRA CLUB
FOUNDED 1892

Manatee-Sarasota
GROUP
PO Box 3485 Sarasota FL 34236-3485

RECEIVED
JUL 02 2012
PALM BCH GRDNS. REGULATORY OFFICE
JAX DISTRICT, USACE

Re: Permit Application No. SAJ-2009-03221 June 25, 2012
To: D.W. Kinard
Jacksonville District Corps of Engineers, Regulatory Division
Palm Beach Gardens Section
4400 PGA Blvd. Suite 5000
Palm Beach Gardens, FL 33410

The application to mine the Wingate East area, formerly known as the Texaco tract is premature and we urge you to extend the comment period for this application until the AEIS is complete. It is clear from the draft of the AEIS that the study includes this mine and the three others currently posted on your site, and that decisions about permitting will consider the findings of the study.

The AEIS draft states:
"The over-arching goal of this AEIS is to inform agencies, other stakeholders, and the public of the impacts of and alternatives to the four similar permit applications for phosphate mines. The AEIS is to support
regulatory decisions to be made by the USACE and other agencies regarding the four specific proposed mine projects. A secondary function is to inform USACE regulatory decisions regarding future phosphate mining permit applications.

The information compiled in this AEIS will be used by the USACE to determine whether to issue, issue with modifications or conditions, or deny Section 404 CWA permits for the four similar permit applications.
The Applicants' proposed actions could impact approximately 10,000 acres of waters of the United States, including wetlands, through filling, land clearing, and other activities associated with phosphate mining operations if all pending applications are approved."

Since the AEIS is not finished, it would be contrary to its stated purpose for the Corps to issue approvals before it is published.

There are representations in the Mosaic application that appear to be contrary to previous applications and contracts by Mosaic, specifically the escrow of wetlands on the Wingate East tract until the wetlands on the Altman tract are reclaimed.

The Wingate East tract includes jurisdictional wetlands of high value to the Myakka Watershed and to ground water recharge. We request that a public hearing be held to consider this application.

Please acknowledge receipt of this comment. Thank you for your consideration of the public's interests.

Yours truly,
Sandra Ripberger

Sandra Ripberger
Chair, Manatee Conservation Committee
Manatee-Sarasota Sierra Group
7412 Riverview Drive
Bradenton, Fl 34209
941-794-3878

Explore, Enjoy and Protect the Planet

Sabin, Krista D SAJ

From: Helen King [thekingsom@gmail.com]
Sent: Saturday, June 16, 2012 11:05 AM
To: pn.comment.wingate.east
Subject: Comment on Wingate East mine
Attachments: Permit Extension letter for 4 mines.doc

Project Name: Mosaic Fertilizer LLC/Wingate East Mine #
20120601-SAJ-2009-03221

Notice Date: June 1, 2012

To: District Engineer, Department of the Army
Regulatory Division, Tampa Section

Dear Sir:
Please see the attached letter for this mine.

Sincerely,
Helen Jelks King, O.D.,
POW, Inc.

Dear Sir;

I am writing on behalf of Protect Our Watersheds, Inc. (POW) to request an extension of time to respond to your notice of permitting for the above-referenced mine until after completion of the Phosphate AEIS which your agency is currently preparing.

The permit application requires completion of an environmental impact statement to guide permitting, as your notice recognizes. That AEIS must also be available to the public in order to provide comments on this and future permits. Proceeding with the public input process for this permit before preparation of an EIS is premature and improper and deprives the public of the information necessary to submit comments.

You issued four notices of permitting on June 1, for the CF South Pasture Extension and the Mosaic Wingate East, Ona and Desoto mines. We note that all of the notices you have issued are extremely sparse, omitting important information such as the nature of reclamation and the form of mitigation. The need for additional time and information in order to comment is reinforced by the limited nature of the information available.

It is clear that there is broad public interest in the pending AEIS and the permits which will depend on it. At this time we object to the proposed permit, request an extension of time for comment until a reasonable time after issuance of the pending AEIS, and ask that the Corps conduct a public hearing on this permit to consider the actual mining, reclamation and mitigation involved, and to consider the permit in light of the AEIS.

Specifically, POW wants to ensure the best possible protections for our water, our environmental systems, the health of Charlotte Harbor and its fisheries during and after mining.

Thank you for your service and your concern for our environment.

Helen Jelks King, O.D., on behalf of Protect Our Watersheds, Inc. (POW)

From:	Dennis Mader
To:	pn.comment.wingate.east
Subject:	Public Hearing Request for Permit Application No. SAJ-2009-03221(IP-KDS) Mosaic Wingate East Phosphate Strip Mine
Date:	Monday, June 18, 2012 10:45:59 PM
Attachments:	Request for Public Hearing Wingate East.docx

Attached please find a MS Word copy of this email with signature.

Please notify me by return email that you have received this request and that it will be entered into the record.

Thank You,

Dennis Mader

3PR

Re: Public Hearing Request for Permit Application No. SAJ-2009-03221(IP-KDS) Mosaic Wingate East Phosphate Strip Mine

1. Pursuant to Section 404 of the Clean Water Act. , People for Protecting Peace River, Inc. (hereinafter, 3PR) formally requests a public hearing concerning Mosaic Fertilizer, LLC Permit Application No. SAJ-2009-03221(IP-KDS).

During the permit decision process, the Corps must evaluate the project in relation to the public interest. The public benefits and detriments of all factors relevant to each case are to be carefully evaluated and balanced. Relevant factors may include conservation, economics, esthetics, wetlands, cultural values, fish and wildlife values, water supply, water quality, and any other factors judged

important .

Additionally, 3PR strongly recommends the Army Corps of Engineers (ACOE) deny Permit Application No. SAJ-2009-03221(IP-KDS) and find the project Environmentally Unsatisfactory. The initial ACOE review of the project has identified adverse environmental impacts that are of sufficient magnitude that the proposed action must not proceed as proposed.

PARTIES

2. 3PR is a public interest environmental protection organization which is a Florida not-for-profit corporation and a citizen of the State of Florida whose address is: 3PR, P.O. Box 155, Wauchula, FL 33873. The corporate purposes of 3PR include the protection and preservation of water quality and wildlife habitat in and around Hardee County, Florida. 3PR is a citizen of the State of Florida pursuant to section 403.412(5), Florida Statutes. 3PR and its members will be substantially and adversely affected by the conditions and activity, which will result if this permit is issued.

3. State of Florida, Department of Environmental Protection (hereinafter, “DEP”) is an affected State permitting agency, whose address is: DEP, 8407 Laurel Fair Circle, Tampa, Florida 33610-7355.

4. Department of the Army is an affected federal permitting agency, whose address is: Department of the Army, Jacksonville District Corps of Engineers, Tampa Regulatory Office, 10117 Princess Palm Drive Suite 120, Tampa, Florida 33610-8300.

5. The Applicant is Mosaic Fertilizer, LLC, 13830 Circa Crossing Drive, Lithia, FL, 33547

RECEIPT OF NOTICE

6. 3PR first received notice of Permit Application No. No. SAJ-2009-03221(IP-KDS) by email on June 2, 2012.

GENERAL FACTS

7. The direct impacts of Applicant's proposed project will result in unpermittable adverse conditions Section 404 of the Clean Water Act and will be contrary to the public's interest.

8. There will be significant unpermittable foreseeable adverse cumulative impacts on water quality, and conservation and protection of fish and wildlife resulting from the extraction of phosphate ore .

9. There will be unpermittable foreseeable adverse secondary impacts from the proposed extraction of phosphate ore .

10. The Department of the Army has permitting authority over Applicant's proposed dredging activities pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344).

11. The Army Corps of Engineers has initially determined that the proposed project The U.S. Army Corps of Engineers (Corps) has determined the proposed project may affect, the Audubon's crested caracara (Caracara cheriway) and the Florida panther (Puma concolor coryi).

Additionally, the Corps has determined the proposal may affect the Eastern indigo snake (Drymarchon couperi), wood stork (Mycteria americana), and the Florida grasshopper sparrow (Ammodramus savannarum floridanus).

12. The mitigation proposed by the Applicant is inadequate and will most likely not be viable for sometime after construction activities.

DISPUTED ISSUES OF LAW AND FACTS

13. 3PR alleges the following disputed issues of law and material fact for determination of Permit Application No. SAJ-2009-03221(IP-KDS).

(a) Whether Applicant has provided reasonable assurances that the applicable state and federal water quality standards will not be violated as a result of the proposed extraction of phosphate ore;

(b) Whether Applicant has provided reasonable assurances that the proposed extraction of phosphate ore is in compliance with EPA approved water quality standards with regard to Section 404 of the Clean Water Act;

(c) Whether Applicant has provided reasonable assurances that the proposed activity is not contrary to the public interest as set forth in Section 404(b) of the Clean Water Act ;

(d) Whether Applicant has provided reasonable assurances that the cumulative impacts of the proposed project, including applicable past, present and foreseeable cumulative impacts, will not cause violations of any state or federal standard;

(e) Whether Applicant has provided reasonable assurances that the proposed project is consistent with Florida' s Coastal Zone Management Program;

(f) Whether Applicant has provided reasonable assurances that permanent impacts associated with the disturbance of 480.1 acres jurisdictional wetlands and 35.0 acres of non-jurisdictional wetlands does not violate any state or federal standard;

(g) Whether Applicant has provided reasonable assurances that the proposed extraction of phosphate ore is in compliance with Section 7 of the Endangered Species Act for the protection of the Audubon's crested caracara (Caracara cheriway), the Florida panther (Puma concolor coryi), the Eastern indigo snake (Drymarchon couperi), the wood stork (Mycteria americana), and the Florida grasshopper sparrow (Ammodramus savannarum floridanus).

APPLICABLE LAWS AND STATUTES

14. Federal Laws and Statutes:

-Section 404 of the Clean Water Act (33 U.S.C. 1344),

-Section 404(b) of the Clean Water Act,

-Coastal Zone Management Act and the National Environmental Policy Act.,

-Section 7 of the Endangered Species Act.

15. Florida Laws and Statutes:

-Section 62-302 F.S. - Surface Water Quality Standards,

-Section 62-302.530 F.S. - Table: Criteria for Surface Water Quality Classifications,

-Sections 62-4.242, 62-4.243, 62-4.244, and 62-4.246 F.S.- antidegradation permitting requirements.

WHEREFORE, People for Protecting Peace River, Inc., formally requests that ACOE hold a public hearing concerning Mosaic Fertilizers, LLC Permit Application SAJ-2009-03221(IP-KDS) Mosaic Wingate East Phosphate Strip Mine.

Respectfully submitted this 18th day of June 2012. .

BY ____

Dennis Mader

Executive Director 3PR

P.O. Box 155

Wauchula, FL

33873

Re: Public Hearing Request for Permit Application No. SAJ-2009-03221(IP-KDS) Mosaic Wingate East Phosphate Strip Mine

1. Pursuant to Section 404 of the Clean Water Act. , People for Protecting Peace River, Inc. (hereinafter, 3PR) formally requests a public hearing concerning Mosaic Fertilizer, LLC Permit Application No. SAJ-2009-03221(IP-KDS).

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Additionally, 3PR strongly recommends the Army Corps of Engineers (ACOE) ***deny*** Permit Application No. SAJ-2009-03221(IP-KDS) and find the project *Environmentally Unsatisfactory.* The initial ACOE review of the project has identified adverse environmental impacts that are of sufficient magnitude that the proposed action must not proceed as proposed.

PARTIES

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Tampa Regulatory Office, 10117 Princess Palm Drive Suite 120, Tampa, Florida 33610-8300.

5. The Applicant is Mosaic Fertilizer, LLC, 13830 Circa Crossing Drive, Lithia, FL, 33547

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Additionally, the Corps has determined the proposal may affect the Eastern indigo snake (Drymarchon couperi), wood stork (Mycteria americana), and the Florida grasshopper sparrow (Ammodramus savannarum floridanus).

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DISPUTED ISSUES OF LAW AND FACTS

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(a) Whether Applicant has provided reasonable assurances that the applicable state and federal water quality standards will not be violated as a result of the proposed extraction of phosphate ore;

(b) Whether Applicant has provided reasonable assurances that the proposed extraction of phosphate ore is in compliance with EPA approved water quality standards with regard to Section 404 of the Clean Water Act;

(c) Whether Applicant has provided reasonable assurances that the proposed activity is not contrary to the public interest as set forth in Section 404(b) of the Clean Water Act ;

(d) Whether Applicant has provided reasonable assurances that the cumulative impacts of the proposed project, including applicable past, present and foreseeable cumulative impacts, will not cause violations of any state or federal standard;

(e) Whether Applicant has provided reasonable assurances that the proposed project is consistent with Florida' s Coastal Zone Management Program;

(f) Whether Applicant has provided reasonable assurances that permanent impacts associated with the disturbance of 480.1 acres jurisdictional wetlands and 35.0 acres of non-jurisdictional wetlands does not violate any state or federal standard;

(g) Whether Applicant has provided reasonable assurances that the proposed extraction of phosphate ore is in compliance with Section 7 of the Endangered Species Act for the protection of the Audubon's crested caracara (Caracara cheriway), the Florida panther (Puma concolor coryi), the Eastern indigo snake (Drymarchon couperi), the wood stork (Mycteria americana), and the Florida grasshopper sparrow (Ammodramus savannarum floridanus).

APPLICABLE LAWS AND STATUTES

14. Federal Laws and Statutes:

-Section 404 of the Clean Water Act (33 U.S.C. 1344),
-Section 404(b) of the Clean Water Act,
-Coastal Zone Management Act and the National Environmental Policy Act.,
-Section 7 of the Endangered Species Act.

15. Florida Laws and Statutes:

-Section 62-302 F.S. - Surface Water Quality Standards,
-Section 62-302.530 F.S. - Table: Criteria for Surface Water Quality Classifications,
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WHEREFORE, People for Protecting Peace River, Inc., formally requests that ACOE hold a public hearing concerning Mosaic Fertilizers, LLC Permit Application SAJ-2009-03221(IP-KDS) Mosaic Wingate East Phosphate Strip Mine.

Respectfully submitted this 18th day of June 2012. .

BY ____

Dennis Mader
Executive Director 3PR
P.O. Box 155
Wauchula, FL
33873

CHARLOTTE HARBOR NATIONAL ESTUARY PROGRAM
1926 Victoria Avenue, Fort Myers, Florida 33901
239/338-2556, Fax 239/338-2560, www.chnep.org

July 31, 2012

John Fellows, AEIS Project Manager
U.S. Army Corps of Engineers
10117 Princess Palm Avenue, Suite 120
Tampa, Florida 33610-8302

Re: Permit Application No. SAJ-2009-03221(IP-KDS), Mosaic Wingate East Mine

Dear Mr. Fellows:

Thank you for the opportunity to review and comment on Permit Application No. SAJ-2009-03221(IP-KDS), Wingate East Mine. The Charlotte Harbor National Estuary Program (CHNEP) was created in 1995 pursuant to Section 320 of the Clean Water Act and is guided by our *Comprehensive Conservation and Management Plan* (CCMP) as required by the Act. This letter documents the interest of CHNEP regarding this permit.

The letter was developed according to our adopted Advocacy and Review Procedures, which serve to implement Executive Order 12372, dated September 17, 1983. This letter primarily implements CCMP Action SG-P: Incorporate into federal, state and local permits and public works improved standard practices that better protect estuaries and watersheds.

We thank Mosaic for participating in our Management Conference as a partner.

Desirable Outcomes

In our comments concerning the May 2012 Draft Areawide Environmental Impact Statement (DAEIS), CHNEP outlined desirable outcomes that apply to this permit. These desirable outcomes will help to implement the CCMP and include:

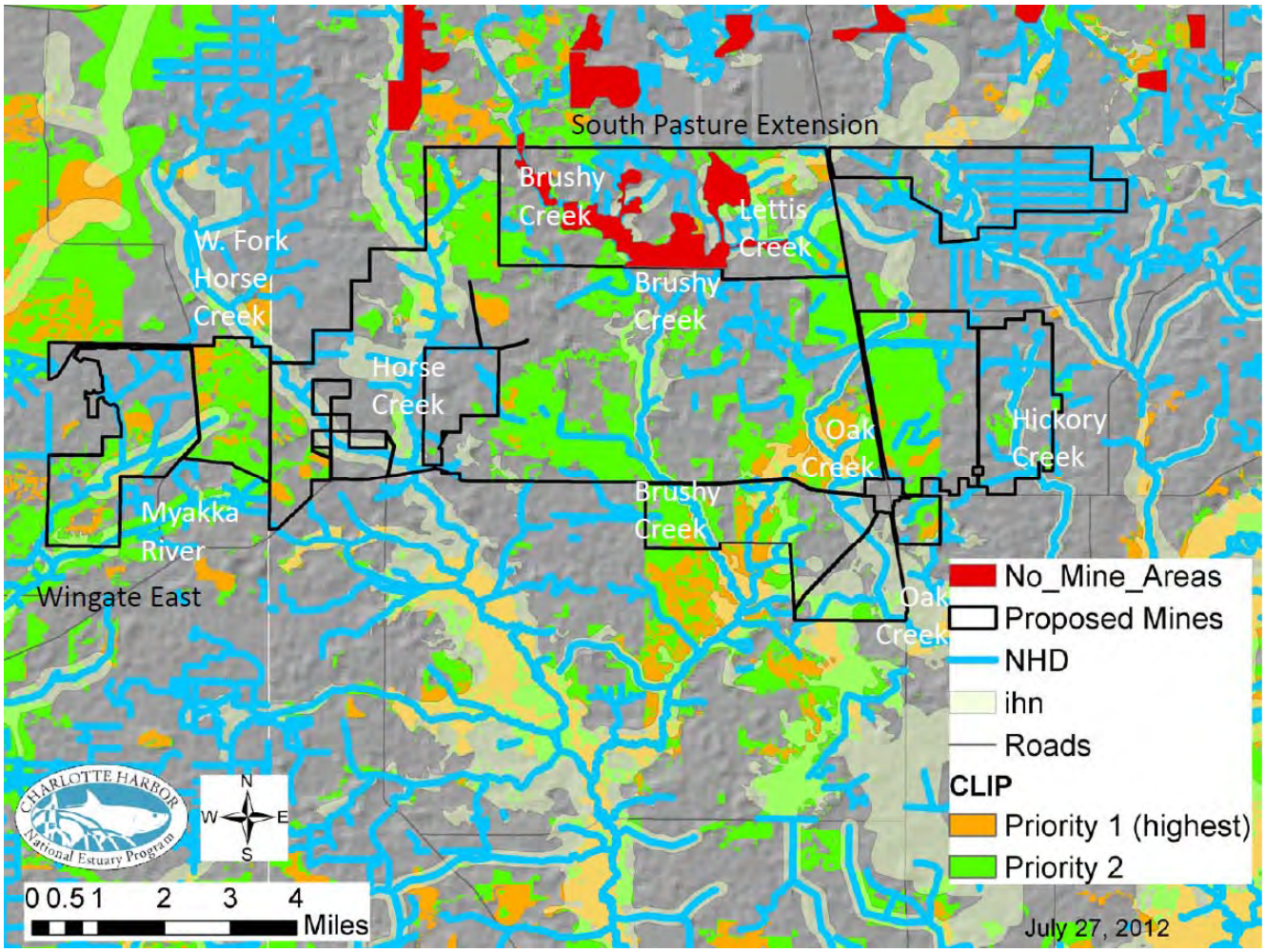
- Improve downstream ambient water quality. Parameters include dissolved oxygen, chlorophyll a, total dissolved solids, pH, sulfate, iron, phosphorus, nitrogen and fecal coliform. We anticipate that one or more of these parameters may improve based on the land use change. If those can be improved and other more challenging parameters are not degraded in the ambient environment, a desirable outcome is met.
- Establish a more natural seasonal variation in freshwater flows for the Peace and Myakka Rivers. Peace River Integrated Modeling Project. Southwest Florida Water Management District Minimum Flows and Levels documentation for the Lower Myakka and Lower Peace can be used to identify natural seasonal variations.
- Improve historic watershed boundaries. CHNEP contracted to develop geographic information systems data to identify historic watershed boundaries. Restoring watershed boundaries can be a component of mitigation.
- Improve to more natural historic conditions, waterbodies that are affected by artificially created

structures. This outcome can be completed by minimizing containment in the mining landscape. In addition, mitigation options include removal of artificial structures and restoring old mining containment areas to return flows to natural waterbodies.

- Protect and restore habitats freshwater wetlands, as well as native upland communities vital to the ecological function of the system. This outcome can be implemented with avoidance within the mines with special reference to the Critical Land and Water Identification Project (CLIP) priority 1 and priority 2 areas, as well as the Integrated Habitat Network.
- Create landscape level habitat connections. These connections include major and minor riparian corridors such as the Myakka River, Peace River, Horse Creek, West Fork Horse Creek, Brushy Creek, Lettis Creek, Oak Creek, Hickory Creek, Buzzards Roost Branch, Brandy Branch and other tributary systems. Riparian corridors include riparian wetlands as well as associated uplands such as oak scrub.
- Increase Conservation Lands within the Peace and Myakka River basins. In the past conservation areas were protected under deed restrictions, which have little public enforceability. In recent permits, FDEP has required transfer of easement or title. This applies to avoidance areas, restoration areas and off-site mitigation areas.

Though Mosaic would not provide a shapefile of the proposed "no mine" areas, the company did provide an encrypted PDF, which cannot be added to the body of this letter, but will be forwarded with the mine permit review letter(s) as a separate exhibit. For use as a graphic in this letter, we prepared a map that shows the relationship between

- Mine boundaries; and
- the named waterbodies from the National Hydrologic Database (NHD),
- Integrated Habitat Network (IHN), and
- CLIP Priority 1 and 2 areas.



CHNEP is concerned regarding the level of protection for the Myakka River and headwater wetlands and native upland buffers in the southwestern portion of the project boundary and requests that these areas be evaluated as additional "No Mine" areas.

CHNEP may submit additional comments concerning this permit.

If you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,

Lisa B. Beever, PhD, AICP
Director

PEACE RIVER MANASOTA REGIONAL WATER SUPPLY AUTHORITY

HON. ROBERT SKIDMORE
CHARLOTTE COUNTY

HON. ELTON A. LANGFORD
DESOTO COUNTY

HON. JOHN R. CHAPPIE
MANATEE COUNTY

HON. JON THAXTON
SARASOTA COUNTY

PATRICK J. LEHMAN, P.E., EXECUTIVE DIRECTOR

July 30, 2012

RECEIVED
JUL 3 1 2012
Tampa Regulatory Office

Mr. John Fellows
US Army Corps of Engineers
10117 Princess Palm Avenue, Suite 120
Tampa, Florida, 33610-8301

RE: Comments on Permit Applications:

USACE Permit Application # SAJ-2011-01968
USACE Permit Application # SAJ-2010-03680
USACE Permit Application # SAJ-1993-01395
USACE Permit Application # SAJ-2009-03221

Dear Mr. Fellows:

The Peace River Manasota Regional Water Supply Authority (Authority) is an existing legal permittee utilizing water harvested from the Peace River in DeSoto County, Florida for public water supply. The Authority's Water Use Permit (SWFWMD WUP No. 20010420.008) establishes a withdrawal schedule from the Peace River based on combined daily flows of the Peace River (USGS gage 02296750), Horse Creek (USGS gage 02297310) and Joshua Creek (USGS gage 02297100). The USEPA also completed an EIS (904/9-03-001, January 2003) on the Peace River Facility and withdrawal from the Peace River for public water supply.

The Authority has invested over $300,000,000 in new infrastructure over about the past decade, including construction of a 6 billion gallon off-stream raw-water reservoir, 21-well aquifer storage/recovery wellfield, water treatment plant expansion, and transmission pipelines. This investment of public dollars is to insure reliable, high-quality, affordable drinking water supply to serve the four county region of the Authority as required by state statute. Authority drinking water supply facilities presently include:

- 48 Million gallon per day (MGD) conventional surface water treatment plant
- 120 MGD intake on the Peace River
- 6.52 BG off-stream, raw water storage
- 6.3 BG (21-well) treated water Aquifer Storage and Recovery System
- About 50 miles of drinking water transmission pipelines in service

These facilities provide drinking water to Authority customers including Charlotte, DeSoto and Sarasota Counties, and the City of North Port for distribution to residents in their retail service areas. The Authority's current contractual delivery obligation is 32.7 MGD (average day). During the 12-month period ending June 30, 2012 the Peace River Facility supplied over 75% of the drinking water used by the aforementioned four Customers.

9415 TOWN CENTER PKWY ◆ LAKEWOOD RANCH, FLORIDA 34202 ◆ TEL (941) 316-1776 ◆ FAX (941) 316-1772 ◆ WWW.REGIONALWATER.ORG

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Quantity, timing and quality flow in the Peace River watershed, including Horse Creek and Joshua Creek are critical to the operation of the Peace River Facilities. Impacts to any of these three elements (flow, timing, quality) from a single or combination of mine operations could compromise the ability of the Authority to meet public drinking water needs and contractual obligations, and adversely impact the financial investment of public funds in infrastructure constructed to provide public water supply.

Our concerns regarding the four permit applications and potential mine-related (both separate and cumulative) impacts are listed below

1. Quantity & Timing of River Flow

A major issue relative to the Authority's regional drinking water supply operations on the Peace River relates directly to how potential reductions in stream flows are assessed in the applications. Flow-related impacts affecting Peace River Facility withdrawals and the Authority's drinking water system reliability will be masked by use of techniques that consider the annual or long-term average changes in flow impacts from mining. "Averaging" tends to mask impacts on water supply availability during dry conditions by combining dry weather flows with high volume wet season flows. An "average" condition typically provides adequate flow to meet water supply needs, however, conditions are rarely average, and in the past 12 years have tended to be very dry for extended periods.

Analysis of mine related impacts on river flow should include evaluation of all potential mine-related impacts over a full range of actual historical river flows so that impacts to permitted water supply facilities such as ours can be discerned. Reduced supply availability and water system reliability could necessitate any or all of the following costly actions:

- Installation for more pumping capacity on the river,
- Construction of more water storage capacity,
- Implementation of alternative treatment methods (such as membranes) and/or,
- Development of new sources.

2. Surface Water Quality

The Peace River Water Treatment Plant is a conventional surface water treatment facility using aluminum sulfate as a coagulant primarily for color removal. The treatment facility does not (and cannot) reduce dissolved solids (such as sulfate, chloride, sodium, etc.), which are regulated drinking water parameters in Florida. Although average water quality data from mine discharges are somewhat informative, they don't tell much about potential worse case impacts, which are caused by specific events and not averages.

The evaluation should consider what the maximum observed parameter/constituent values were, the number of observations available, and the number that were above water quality standards to aid in assessment of impacts to drinking water supplies.

In addition, a related and very important water quality issue is that of impacts from mining related facilities such as processing plants, and phosphogypsum stacks. The protracted and ongoing USAC phosphogypsum stack closure which discharges high TDS water into Whidden Creek which outfalls to the Peace River clearly shows that such facilities can affect water quality in the river, and by extension could adversely affect public drinking water supplies relying on surface water in the Peace River Basin. Are such facilities proposed to support these mine operations? Where would such facilities be located, when would they be constructed and ultimately closed, and what are the projected impacts of these facilities current surface water quality in the Peace Basin?

The Authority appreciates the opportunity to comment on the referenced permit applications. We request a thorough analysis of the potential impacts to our drinking water source be undertaken as part of the USACE permitting process for each individual permit application as well as the cumulative impact of all four.

Sincerely,

Mike Coates, P.G.
Deputy Director

cc: Doug Manson

MANASOTA – 88

A Project for Environmental Quality 1968 - 2088

RECEIVED
JUN 06 2012
PALM BCH GRDNS. REGULATORY OFFICE
JAX DISTRICT, USACE

District Engineer
Department of the Army
Jacksonville District Corps of Engineers
4400 PGA Boulevard, Suite 500
Palm Beach Gardens, Florida 33410

Re: Public Hearing Request for Permit Application No. SAJ-2009-03221(IP-KDS) Mosaic Wingate East Phosphate Strip Mine

Directors

Glenn Compton

Mary Compton

Barbara Hines

Mary Jelks, M.D.

Greg Nowaski

Betsy Roberts

Doris Schember

Susan Schoettle

Janet Smith

1. Pursuant to Section 404 of the Clean Water Act. , ManaSota-88, Inc. formally requests a public hearing concerning Mosaic Fertilizer, LLC Permit Application No. SAJ-2009-03221(IP-KDS).

   During the permit decision process, the Corps must evaluate the project in relation to the public interest. The public benefits and detriments of all factors relevant to each case are to be carefully evaluated and balanced. Relevant factors may include conservation, economics, esthetics, wetlands, cultural values, fish and wildlife values, water supply, water quality, and any other factors judged important .

   Additionally, ManaSota-88, Inc. strongly recommends the Army Corps of Engineers (ACOE) ***deny*** Permit Application No. SAJ-2009-03221(IP-KDS) and find the project *Environmentally Unsatisfactory*. The initial ACOE review of the project has identified adverse environmental impacts that are of sufficient magnitude that the proposed action must not proceed as proposed.

PARTIES

2. ManaSota-88, Inc. (hereinafter, "ManaSota-88") is a public interest environmental protection organization which is a Florida not-for-profit corporation and a citizen of the State of Florida whose address is: ManaSota-88, P.O. Box 1728, Nokomis, Florida 34274. The corporate purposes of ManaSota-88 include the protection and preservation of water quality and wildlife habitat in Manatee and Sarasota Counties. ManaSota-88 is a citizen of the State of Florida pursuant to section 403.412(5), Florida Statutes. ManaSota-88 and its members will be substantially and adversely affected by the conditions and activity, which will result if this

Information
P.O. Box 1728
Nokomis, FL 34274
(941) 966-6256
FAX (941) 966-0659
www.manasota88.org

permit is issued.

3. State of Florida, Department of Environmental Protection (hereinafter, "DEP") is an affected State permitting agency, whose address is: DEP, 8407 Laurel Fair Circle, Tampa, Florida 33610-7355.

4. Department of the Army is an affected federal permitting agency, whose address is: Department of the Army, Jacksonville District Corps of Engineers, Tampa Regulatory Office, 10117 Princess Palm Drive Suite 120, Tampa, Florida 33610-8300.

5. The Applicant is Mosaic Fertilizer, LLC, Post Office Box 2000, Mulberry, Florida 33860.

RECEIPT OF NOTICE

6. ManaSota-88, first received notice of Permit Application No. No. SAJ-2009-03221(IP-KDS) by email on June 2, 2012.

GENERAL FACTS

7. The direct impacts of Applicant's proposed project will result in unpermittable adverse conditions Section 404 of the Clean Water Act and will be contrary to the public's interest.

8. There will be significant unpermittable foreseeable adverse cumulative impacts on water quality, and conservation and protection of fish and wildlife resulting from the extraction of phosphate ore .

9. There will be unpermittable foreseeable adverse secondary impacts from the proposed extraction of phosphate ore .

10. The Department of the Army has permitting authority over Applicant's proposed dredging activities pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344).

11. The Army Corps of Engineers has initially determined that the proposed project The U.S. Army Corps of Engineers (Corps) has determined the proposed project may affect, the Audubon's crested caracara (Caracara cheriway) and the Florida panther (Puma concolor coryi).

    Additionally, the Corps has determined the proposal may affect the Eastern indigo snake (Drymarchon couperi), wood stork (Mycteria americana), and the Florida grasshopper sparrow (Ammodramus savannarum floridanus).

12. The mitigation proposed by the Applicant is inadequate and will most likely not be viable for sometime after construction activities.

DISPUTED ISSUES OF LAW AND FACTS

13. ManaSota-88, alleges the following disputed issues of law and material fact for determination of Permit Application No. SAJ-2009-03221(IP-KDS).

    (a) Whether Applicant has provided reasonable assurances that the applicable state and federal water quality standards will not be violated as a result of the proposed extraction of phosphate ore;

    (b) Whether Applicant has provided reasonable assurances that the proposed extraction of phosphate ore is in compliance with EPA approved water quality standards with regard to Section 404 of the Clean Water Act;

    (c) Whether Applicant has provided reasonable assurances that the proposed activity is not contrary to the public interest as set forth in Section 404(b) of the Clean Water Act ;

    (d) Whether Applicant has provided reasonable assurances that the cumulative impacts of the proposed project, including applicable past, present and foreseeable cumulative impacts, will not cause violations of any state or federal standard;

    (e) Whether Applicant has provided reasonable assurances that the proposed project is consistent with Florida' s Coastal Zone Management Program;

    (f) Whether Applicant has provided reasonable assurances that permanent impacts associated with the disturbance of 480.1 acres jurisdictional wetlands and 35.0 acres of non-jurisdictional wetlands does not violate any state or federal standard;

    (g) Whether Applicant has provided reasonable assurances that the proposed extraction of phosphate ore is in compliance with Section 7 of the Endangered Species Act for the protection of the Audubon's crested caracara (Caracara cheriway), the Florida panther (Puma concolor coryi), the Eastern indigo snake (Drymarchon couperi), the wood stork (Mycteria americana), and the Florida grasshopper sparrow (Ammodramus savannarum floridanus).

APPLICABLE LAWS AND STATUTES

14. Federal Laws and Statutes:

-Section 404 of the Clean Water Act (33 U.S.C. 1344),
-Section 404(b) of the Clean Water Act,
-Coastal Zone Management Act and the National Environmental Policy Act.,
-Section 7 of the Endangered Species Act.

15. Florida Laws and Statutes:

-Section 62-302 F.S. - Surface Water Quality Standards,
-Section 62-302.530 F.S. - Table: Criteria for Surface Water Quality Classifications,
-Sections 62-4.242, 62-4.243, 62-4.244, and 62-4.246 F.S.- antidegradation permitting requirements.

WHEREFORE, ManaSota-88, Inc., formally requests that ACOE hold a public hearing concerning Mosaic Fertilizers, LLC Permit Application SAJ-2009-03221(IP-KDS) Mosaic Wingate East Phosphate Strip Mine.

Respectfully submitted this 3rd day of June 2012. .

BY Glenn Compton

Glenn Compton
Chairman, ManaSota-88
P.O. Box 1728
Nokomis, Florida 34274
(941) 966-6256

ATTACHMENT A - SECTION 2 COMMENTS RECEIVED IN RESPONSE TO JUNE 22 2017, PUBLIC NOTICE – Page 1

Comments from Center for Biological Diversity (CBD) 7,390 comments were received including 1,837 individual comments received directly by the Corps, and 5,553 comments compiled by CBD and received by the Corps as a package. Comments from CBD are based on 5 standard letters (attached). In some cases, commenters have added and/or deleted language from the standard language letter.

Letter Type/Number of Comments	Comment	Response
7,390 commenters - All 5 CBD Standard Language Letter types	I am writing to let you know that I do not want one more square inch of Florida's precious land dug up and poisoned by phosphate strip mining. The state's already home to the world's largest phosphate mine	• Comment acknowledged.
3,682 commenters - CBD Type 1 Standard Language Letter	And Mosaic seeks to mine an additional 50,000 acres. I urge you to do everything in your power to stop this destructive industry.	• Comment acknowledged.
367 commenters - CBD Type 2 Standard Language Letter	And now an application being reviewed by the U.S. Army Corps of Engineers seeks to mine 7,500 additional acres in the Peace River watershed as part of a plan to mine 52,000 acres in the region. I urge you to do everything in your power to stop this plan.	• Comment acknowledged.
7 commenters - CBD Type 3 Standard Language Letter	And now an application being reviewed by the U.S. Army Corps of Engineers (from the company Mosaic) seeks to mine 52,000 additional acres in the Myakka and Peace river watersheds. I urge you to do everything in your power to stop this plan.	• Comment acknowledged.
1,494 commenters - CBD Type 4 Standard Language Letter	And now an application being reviewed by the U.S. Army Corps of Engineers seeks to mine 7,500 additional acres in the Peace River watersheds. I urge you to do everything in your power to stop this plan.	• Comment acknowledged.
1,836 commenters - CBD Type 5 Standard Language Letter	But now the industry seeks to mine 3,635 additional acres in eastern Manatee County, threatening the Myakka and Peace River watersheds.	• Comment acknowledged.
4,049 commenters – CBD Type 1 & Type 2 Standard Language Letters	Phosphate strip mining is not in the public interest.	• Section 7 of the decision document addresses the Corps' public interest review for Wingate East.
3,682 commenters – CBD Type 1 Standard Language Letter	It completely destroys landscapes and wildlife habitat, including wetlands, forests and streams needed by endangered species.	• Section 5 of the decision document describes how the Corps considered project alternatives to avoid and minimize adverse impacts to waters of the United States in its review of Wingate East. • Section 8 of the decision document, and the attached approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources. • Section 10.1 of the decision document describes the Corps' final determinations for Wingate East pursuant to Section 7 of the Endangered Species Act.
367 commenters – CBD Type 2 Standard Language Letter	It completely destroys landscapes and wildlife habitat, including wetlands, forests and streams.	
367 commenters – CBD Type 2 Standard Language Letter	It destroys thousands of acres of natural ecosystems, including wetlands, forests, streams and vital habitat for endangered plants and animals, resulting in a loss of genetic diversity, with no possibility of returning it to its pre-mining condition.	
3,364 commenters – CBD Type 3, Type 4 & Type 5 Standard Language Letters	Phosphate strip mining completely destroys landscapes and wildlife habitat, including wetlands, forests and streams.	
1,836 commenters – CBD Type 5 Standard Language Letter	The so-called reclamation required by the state and authorized by the Corps has never been proven by anyone outside the industry to replace land that is lost.	• The Corps permit does not "authorize" reclamation. • Section 5.7 of the Final AEIS describes reclamation as required by FDEP. • Section 8 of the decision document, and the approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources.
3,682 commenters – CBD Type 1 Standard Language Letter	It uses exorbitant amounts of precious groundwater, jeopardizing future water supplies and depriving wetlands, streams and rivers of water.	• Section 4 3 5 of the Final AEIS describes Wingate East's effects on groundwater. • Appendix F of the Final AEIS describes the development and application of a groundwater flow model to evaluate direct, indirect, and cumulative effects of phosphate mining on surficial, intermediate (2), and Floridan aquifer levels. This modeling was completed on a regional level. The Corps considered local-scale modeling that compares pre-mining and post-mining hydrologic conditions, especially in relation to surface water flows and levels. The water use permit issued by SWFWMD includes permit conditions that protect adjacent water users, the affected aquifers, and onsite and adjacent aquatic resources. In addition, Section 7.0(l) of the decision document describes how the Corps updated the groundwater effects analysis to consider project changes since the Final AEIS.
367 commenters – CBD Type 2 Standard Language Letter	It can use an average of 69 million gallons of groundwater a day, jeopardizing future water supply and depriving wetlands, streams and rivers of water.	
1,501 commenters – CBD Type 3 & Type 4 Standard Language Letters	It can use an average of 69 million gallons of groundwater a day.	
1,836 commenters – CBD Type 5 Standard Language Letter	Phosphate mining has already damaged the Peace and Myakka River basins. In some areas of the upper Peace River basin, the surficial aquifer does not even exist because phosphate mining has removed the surface sediments.	
1,836 commenters – CBD Type 5 Standard Language Letter	The mining and fertilizer process put the Floridan aquifer, and the 10 million people who depend on it, at risk.	
3,682 commenters – CBD Type 1 Standard Language Letter	And it creates approximately 30 million tons of radioactive byproduct each year that must be stored in 200-foot-tall phosphogypsum stacks and toxic waste ponds called "clay settling areas," which are slime ponds that will permanently cover approximately 40 percent of an average mine site. These are the largest repositories of hazardous waste in the nation.	• Section 3.1.4 of the Final AEIS describes the role of clay settling areas in phosphate mining. • As explained in Section 1.3.1 of the Final AEIS, phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants. • Section 1.4.1(iv) of the decision document describes how Mosaic will utilize extra capacity of two existing clay settling areas on an adjacent mine. As a result, only one clay settling area will be constructed at Wingate East, occupying less than 20 percent of the mine site.
367 commenters – CBD Type 2 Standard Language Letter	And it creates approximately 30 million tons of radioactive byproduct each year that must be stored in 200-foot-tall gypstacks and toxic waste ponds called "clay settling areas," which are slime ponds that will permanently cover approximately 40 percent of an average mine site. These are the largest repositories of hazardous waste in the nation.	
1,501 commenters – CBD Type 3 & Type 4 Standard Language Letters	And it creates approximately 30 million tons of radioactive byproduct each year that must be stored in 200-foot-tall gypstacks and toxic waste ponds called "clay settling areas." These are the largest repositories of hazardous waste in the nation.	
1,836 commenters – CBD Type 5 Standard Language Letter	Not only does phosphate mining contaminate precious water resources, it also creates approximately 30 million tons of radioactive byproduct each year. This byproduct, phosphogypsum, is stored in 200-foot-tall stacks. The mining also results in the creation of clay settling or "slime" ponds, which make up a significant portion of the mined-out landscape and may also contain dangerous chemicals.	
3682 commenters – CBD Type 1 Standard Language Letter	With Florida's phosphate a finite resource, the few mining jobs gained in the short term do not justify the permanent loss of agricultural and ranching jobs, the negative health effects or the profound environmental damage.	• Section 4.1 8 of the Final AEIS addresses several of the issues related to community health, safety, and quality of life. • Section 4 6.4 of the Final AEIS describes the economic effects of Wingate East. In addition, Section 7 0(p) of the decision document describes how the Corps updated the economic analysis to consider project changes since the Final AEIS.
1,868 commenters – Type 2, Type 3, & Type 4 Standard Language Letters	With Florida's phosphate projected to be depleted by 2035, the few mining jobs gained in the short term do not justify the permanent loss of agricultural and ranching jobs, the negative health effects or the profound environmental damage.	
1,836 commenters - Type 5 Standard Language Letter	With Florida's phosphate projected to be depleted by 2035, the few mining jobs maintained in the short term do not justify the permanent loss of agricultural and ranching jobs, potential negative health effects, or the substantial risks to Florida's top economic earner: tourism.	
3682 commenters – CBD Type 1 Standard Language Letter	Please -- lend your support to the growing movement to end phosphate strip mining and protect Floridians' health, lands and wildlife.	• Comment acknowledged.
1,868 commenters – Type 2, Type 3, & Type 4 Standard Language Letters	Please -- lend your support to the growing movement to stop this project, end phosphate strip mining, and protect Florida's lands.	• Comment acknowledged.
1,836 commenters - Type 5 Standard Language Letter	Please protect Florida's natural environment and don't allow this industry to take one more inch.	• Comment acknowledged.

ATTACHMENT A - SECTION 2 COMMENTS RECEIVED IN RESPONSE TO JUNE 22 2017, PUBLIC NOTICE – Page 2

The following 31 comments are variations of the CBD Type 4 "Standard Language" letter.		
Vic Anderson	Added the following to the Type 4 standard language letter: (expletive deleted) Here the law to EFFECT Phosphate Mining PROHIBITION : 1972 Clean Water Act - "33 U.S. Code § 1251 - Congressional declaration of goals and policy: (a) Restoration and maintenance of chemical, physical and biological integrity of Nation's waters; national goals for achievement of objective. The objective of this chapter is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. In order to achieve this objective it is hereby declared that, consistent with the provisions of this chapter - (1) it is the national goal that the discharge of pollutants into the navigable waters be ELIM NATED by 1985."	• The decision document describes how the Corps' review of the application for Wingate East complied with all relevant federal regulations, including Section 404 of the Clean Water Act.
Brooks Armstrong	Added the following to the Type 4 standard language letter: Please realize that we do not need Mosaic to feed the world by strip mining. This unsustainable practice is totally not necessary, except for this company to make huge profits.	• Section 2 2 6 2 of the Final AEIS explains why avoiding the use of phosphate fertilizers is not a feasible alternative to mining phosphate.
Brooks Armstrong	Please see my comments attached below as a word document, as well as these other references for your review. Thank you, Brooks Armstrong.	• Acknowledged (documents attached)
Marcia Bailey	Added the following to the Type 4 standard language letter: I CAN'T SAY THIS BETTER. FOR THE ENVIRONMENT AND THE PEOPLE, PLEASE WORK AGAINST THIS.	• Comment acknowledged.
Barry Benjamin	Added the following to the Type 4 standard language letter: As a former resident of West Palm Beach, Florida, I am aware of and have seen the destruction of Florida lands and wildlife from this destructive form of mining. Please support our efforts to stop this kind of destruction for short term goals and profits.	• Comment acknowledged.
LeeAnn Bennett	Added the following to the Type 4 standard language letter: American taxpayers don't want to pay for the cleanup for yet another project. -We already have how many tens of thousands of Superfund sites to clean up, why would we want another one? We need to find an alternative to all this strip mining and do something with all this hazardous waste.	• Section 4.1 8 8 of the Final AEIS describes how the Corps considered waste in its review of phosphate mining.
Ruth Cassidy	Added the following to the Type 4 standard language letter: This area is already being Poisoned by the releases from Lake Okeechobee!! ENOUGH ! I Urge you to do everything in your power-- and MORE-- to STOP this plan.	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively.
Kate Ellison	Added the following to the Type 4 standard language letter: If you think about it, this new mine on the Peace River will not be the last. Even now there is a proposed strip mine in Bradford and Union Counties. My area is next. When will this destruction end? Where will it end?	• Comment acknowledged.
Jan Freyburgher	Added the following to the Type 4 standard language letter: We have to STOP putting profit before people and environment!! I live in Florida and I'd like for my voice to count -- I do not want one more square inch of Florida's precious land dug up.	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively.
Cynthia Gefvert	Added the following to the Type 4 standard language letter: As your constituent and a licensed, professional geologist	• Comment acknowledged.
Paul Groh	Added the following to the Type 4 standard language letter: First and foremost stand up for your taxpaying constituency! DO NOT be a finger puppet or lackey for big business, PERIOD!! Do the right thing for the people!! If you don't I say VOTE OUT ALL NCUMBENTS!! REELECT NO ONE!	• Comment acknowledged.
Cheryl Gross	Added the following to the Type 4 standard language letter: The fertilizer produced provides few of the vital elements needed for nutritious food crops, so it's benefits are limited.	• Section 1 2.1.1 of the Final AEIS describes the need for phosphate rock as a source of phosphorus in fertilizer.
JM Hague	Added the following to the Type 4 standard language letter: PLEASE ACT RESPONSIBLY: NO MORE RADIOACTIVE WASTE, TOXIC WATER, MURDERING THE INTERCONNECTED WEB OF L FE. YOUR CONSTITUENCY-- INNOCENT CH LDREN, FAM L ES, VETERANS, THE ELDERLY-- SHOULD COME BEFORE CORPORATIONS OF GREEDY, SHORT-SIGHTED, CONSC ENCELESS USERS AND ABUSERS OF OUR AMERICA. THANK YOU FOR BE NG A GOOD PERSON AND NOT AN IGNORANT FOLLOWER OF SELFISHNESS AND DECEIT.	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively.
Steve & Mary Hampton	Added the following to the Type 4 standard language letter: HPS company is hoping to establish new phosphate mining opportunities. We STRONGLY OPPOSE phosphate mining in Florida. As our elected official, we expect you to represent our opposition to phosphate mining in Florida. We look forward to learning of your actions to OPPOSE phosphate mining in Florida. Feel free to write to us to tell us that you OPPOSE phosphate mining in Florida....on our behalf.	• Comment acknowledged.
Sue Hayden	Added the following to the Type 4 standard language letter: I know the governor is in favor of completely destroying the state of Florida for his own gain BUT surely someone in government must realize that Florida depends on tourism, not to mention the concern for quality of life of its residents. While the rest of the world is taking on the challenge of undoing much of the great harm that humans have done to this planet, is Florida going to stand up and be one of the black marks? Do you want to go down in history as being one of the politicians that continued to insist on destroying the planet its creatures and human quality of life all for the sake of greed??	• Comment acknowledged.
Leo Thomas Johnson	Added the following to the Type 4 standard language letter: As a voting Floridian resident .. I'm asking you, if you have not taken the time yet to truly reflect upon your position, please at this time, I urge you to do so, do everything in your power can be applied, to stop this very destructive environmental plan, from receiving final approval by the state government. Specifically, I am asking whether you can personally commit to lend your support to the growing movement to stop this project, end phosphate strip mining, and protect Florida's lands.	• Comment acknowledged.
Alfred Jonas	Added the following to the Type 4 standard language letter: And furthermore, could it really be possible that the state that is the center of phosphate mining for fertilizer production, is also in the midst of an environmental crisis from excess fertilizer run-off? You have to be an idiot, and breathtakingly short-sighted, to want to damage the terrain further to get more phosphate to make more fertilizer.	• Section 1.7 of the decision document explains the Corps-defined statement of purpose and need for the proposed project. The use and effects of chemical fertilizers is outside the scope of the proposed actions analyzed in the AEIS and the individual project reviews.
Samuel Kendall	Added the following to the Type 4 standard language letter: The area is full of beautiful wetlands and farmlands--cherished by people and used by wildlife. Fertilizer is easily and safely produced by composting organic materials. This natural procedure should be encouraged perhaps even with legislation. Organic farming could provide jobs at the same high rate that solar energy installations do now.	• Section 2 2 6 2 of the Final AEIS explains why avoiding the use of phosphate fertilizers is not a feasible alternative to mining phosphate.
Chelsea Lauber	Added the following to the Type 4 standard language letter: This industry threatens the beauty and unique biodiversity which draws millions or tourists and draws millions of investment dollars from "snowbirds" to our state every year. This doesn't take into account the absolutely necessary agricultural and ranching businesses which this mining threatens.	• Section 4 6 5 of the Final AEIS describes the economic effects of Wingate East. In addition, Section 7 0(p) of the decision document describes how the Corps updated the economic analysis to consider project changes since the Final AEIS.
Chelsea Lauber	Added the following to the Type 4 standard language letter: Please don't let Florida become known for its toxic waste - what a horrible billboard that would make.	• Comment acknowledged.
Tammy Lettieri	Added the following to the Type 4 standard language letter: STOP DESTROYING OUR PRECIOUS LAND.	• Comment acknowledged.
Linda MacLeman	Added the following to the Type 4 standard language letter: The Army Corps of Engineers nearly destroyed the everglades. Please don't let them continue to allow destruction of the fragile Florida ecosystem!	• Comment acknowledged.
Sandra Mathes	Added the following to the Type 4 standard language letter: "Earth provides enough to satisfy every man's needs, but not every man's greed." Mahatma Gandhi "Increasingly, the world around us looks as if we hated it." Alan Watts The ultimate test of a moral society is the kind of world that it leaves to its children." Dietrich Bonhoeffer	• Comment acknowledged.
Martin Osborne	Added the following to the Type 4 standard language letter: Lets start protecting the environment. The toxic blooms from Lake O are because you have all ignored reality and the will of the people of Florida. Start looking out for your constituents first and foremost.	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review respectively.
Marian Linda Perry	Added the following to the Type 4 standard language letter: As one who grew up in a phosphate mining town, I am writing to let you know that I do not want one more square inch of Florida's precious land dug up and poisoned by phosphate strip mining. We lived with phosphate dust, a stench and ravaged land.	• Comment acknowledged.
Lavonne Roberts	Added the following to the Type 4 standard language letter: STOP GIVING AWAY FLOR DA TO THE CORPORATIONS !!!!!!!!!! -HERNANDO COUNTY HAS BEEN RUINED BY THIS !!!!!!!!!!!!!!	• Comment acknowledged.
Iris Schmalenberger	Added the following to the Type 4 standard language letter: Not really worried how Steve will vote and I trust Thad will vote the same.	• Comment acknowledged.
Bobbi Segal	Added the following to the Type 4 standard language letter: This blight must end NOW. We have to evolve into responsible people.	• Comment acknowledged.
James Sorrells	Added the following to the Type 4 standard language letter: Typically, aside from Senator Nelson, the ongoing lack of leadership on the environmental and wildlife from is a disgrace. Especially being 3rd generation Floridians, the	• Comment acknowledged.

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	conservation of the state and all its natural places and wildlife are a top priority for us. Please consider moving proactively and with a sense or urgency instead of ignoring the impending crisis that is looming large in our great state. "If your actions inspire others dream more, to learn more, to do more and become more, then you area leaker." --John Quincy Adams	
Daniel Staples	Added the following to the Type 4 standard language letter: I believe Rick Scott stole money from the people of Florida he should be put in jail.	• Comment acknowledged.
Charles Trowbridge	The Corps must deny the permit. It has absolute authority to do so. I further urge that he Corps host a public hearing somewhere in or near the Bone Valley. And i am concerned with the high levels of radon gas left behind by these mining industries!!	• Section 3 3.7 of the Final AEIS provides information on the possibility of increased indoor radon concentrations, mining practices that reduce the potential for public exposure, and other radiation-related public health concerns. • Section 4 8 2 of the Final AEIS describes the expected effects of phosphate mining, including those associated with Wingate East, on radiation levels. • The Corps has provided a separate, written response to the request for a public hearing.
Sandy Wilson	Added the following to the Type 4 standard language letter: The elimination of strip mining for phosphate can really help the habitat recover from years of abuse.	• Section 5 of the decision document describes how the Corps considered project alternatives to avoid and minimize adverse impacts to waters of the United States in its review of Wingate East, including the preservation of as much of the higher-quality habitats as was practicable. • Section 8 of the decision document, and the attached approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources.
Marianne Amnn	Added the following to the Type 4 standard language letter: Florida exists only because of tourism. The anti-environmental practices Florida is pursuing will ultimately bring destruction to the state. Money. You won't extend Medicaid to help give medical care to your citizens but you'll let companies destroy large areas that ultimately cost us all money oh except the companies that get rich off it.	• Comment acknowledged.
Sarah Hollenhorst	In addition to the Type 4 standard language letter, submitted two documents: "3 Big Myths About Modern Agriculture", and "Evaluation of Constructed Wetlands on Phosphate Mined Lands in Florida. Volume II: Hydrology, Soils, Water Quality, & Aquatic Fauna".	• Acknowledged (documents attached)
The Following 43 comments are variations of the CBD Type 1 "Standard Language" letter.		
Jennifer Nitz	Added the following to the Type 1 standard language letter: I oppose any more of Florida's precious land dug up and poisoned by phosphate strip mining.	• Comment acknowledged.
Sandy Koi	Added the following to the Type 1 standard language letter: I am a scientist and am writing to let you know that I do not want one more square inch of Florida's precious land dug up and poisoned by phosphate strip mining.	• Comment acknowledged.
Bonnie MacRaith	Added the following to the Type 1 standard language letter: We MUST end phosphate strip mining! It is a danger to the health of everyone!	• Section 4.1 8 of the Final AEIS addresses several of the issues related to community health, safety, and quality of life.
Anthony Albert	Added the following to the Type 1 standard language letter: Corporate profits over people's welfare must stop!	• Section 7 of the decision document addresses the Corps' public interest review for Wingate East.
Paul Palla	Added the following to the Type 1 standard language letter: I HAVE AN DEA: F A PRODUCT OR COMPANY DESTROYS THE ENV RONMENT, THEN IT'S ILLEGAL. WORKS FOR ME!	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review respectively.
Maggie Frazier	Added the following to the Type 1 standard language letter: I very much agree with the enclosed letter! Yes STOP this horrible destruction of the environment that is taking place all across our country! STOP these greedy profit-driven industries that care nothing about what they are doing to this earth - only what they can remove from it! STOP!!	• Section 5 of the decision document describes how the Corps considered project alternatives to avoid and minimize adverse impacts to waters of the United States in its review of Wingate East. • Section 8 of the decision document, and the attached approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources.
Robert Hyer II	Added the following to the Type 1 standard language letter: You are literally destroying Florida. You have no conscience. I am a real print journalist and Vietnam War veteran. This is criminal and someone's going to prison for intentionally poisoning children and lying about it. Get a lawyer.	• Section 5 of the decision document describes how the Corps considered project alternatives to avoid and minimize adverse impacts to waters of the United States in its review of Wingate East. • Section 8 of the decision document, and the attached approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources. • Section 4.1 8 of the Final AEIS addresses several of the issues related to community health, safety, and quality of life.
Jan Peterson	Added the following to the Type 1 standard language letter: Since I have relatives in Florida, I urge you to do everything in your power to stop this destructive industry.	• Comment acknowledged.
Elizabeth Henry	Added the following to the Type 1 standard language letter: Who ARE these people? Are they completely ignorant of the fact that what they do (or do NOT do) to protect our environment harms us all? This is ridiculous. Horrifying. Greedy. Please stop this, or beautiful Florida will be no more.	• Comment acknowledged.
Pat Wolff	Added the following to the Type 1 standard language letter: I don't care what a strip mine is getting, I don't want any of it!	• Comment acknowledged.
M. K. Russell	Added the following to the Type 1 standard language letter: What is WRONG with you people?? DO YOUR JOB and PROTECT THE CITIZENS THAT YOU TOOK AN OATH TO PROTECT. Stop taking kickbacks from the mining industry and DO YOUR PLEDGED DUTY for the citizens of Florida and the United States. Yes, we are furious with your collective terrible track record on this profoundly important issue.	• Comment acknowledged.
Thelma Armenteros	Added the following to the Type 1 standard language letter: I am incredibly OUTRAGED that politicians continue to take the side of multi-million dollar planet raping companies! Please, PLEASE stop thinking old and ally yourselves with the innovative companies. Taxpayers are fed up hearing about one disastrous project after another where our lands are destroyed and blood suckers get rich. I'm usually not so blatant but this taxpayer is sick and tired of this and if you want me to go vote; do something worthy of it!!!	• Comment acknowledged.
Barry Fass-Holmes	Added the following to the Type 1 standard language letter: I strongly oppose Florida's precious land being dug up and poisoned by phosphate strip mining.	• Comment acknowledged.
Sharon Morris	Added the following to the Type 1 standard language letter: Please do not continue to permit Florida's land to continue being poisoned by phosphate strip mining. The state currently has the world's largest phosphate mine. Mosaic seeks to mine an additional 50,000 acres. Please use your power to stop this destructive industry.	• Section 4.1 8 8 of the Final AEIS describes how the Corps considered waste in its review of phosphate mining.
Dianne Ensign	Added the following to the Type 1 standard language letter: Protecting the environment is my highest priority issue.	• Comment acknowledged.
Kevin Crupi	Added the following to the Type 1 standard language letter: As a former resident of Fort Walton Beach, I'm writing to urge Florida to end the environmentally destructive practice of phosphate strip mining.	• Comment acknowledged.
Roger A. Barthelson	Added the following to the Type 1 standard language letter: I grew up in Miami and have family and friends that live in Florida. I still consider Florida my home	• Comment acknowledged.
Anne Lindenberg	Added the following to the Type 1 standard language letter: My sister, her kids, and their kids all live in Florida. I want them and the environment that they love there to be safe.	• Comment acknowledged.
Jane Nicholson	Added the following to the Type 1 standard language letter: Step up and be stewards of Florida's glorious natural resources, Does anyone actually believe that we need to foul our air, soil, and water? Let's put health and safety above profit.	• Comment acknowledged.

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Katherine Rogers	Added the following to the Type 1 standard language letter: I am for the environment over profit.	• Comment acknowledged.
Diana Denniston	Added the following to the Type 1 standard language letter: Having once lived on Amelia Island (Fernandina Beach), finished my degree at UNF and seen first hand how development detracts from the tourist sought natural beauty of Florida,	• Comment acknowledged.
Bonnie MacRaith	Added the following to the Type 1 standard language letter: Phosphate mining is dangerous, poisonous and outdated!	• Section 4.1 8 of the Final AEIS addresses several of the issues related to community health, safety, and quality of life. • Section 1 2.1.1 of the Final AEIS describes the need for phosphate rock as a source of phosphorus in fertilizer.
Sandra J Stowell	Added the following to the Type 1 standard language letter: Florida has changed so rapidly, and the natural environment has suffered enough: please stop the phosphate mining that is so very destructive! I lived in Florida for 15 years: high school & college years. I have family in Florida, and I visit.	• Section 5 of the decision document describes how the Corps considered project alternatives to avoid and minimize adverse impacts to waters of the United States in its review of Wingate East. • Section 8 of the decision document, and the attached approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources.
Lucinda & Donald Joel Wingard	Added the following to the Type 1 standard language letter: Florida's precious land is being dug up and poisoned by phosphate strip mining.	• Section 4.1 8 of the Final AEIS addresses several of the issues related to community health, safety, and quality of life.
Jen Andreani	Added the following to the Type 1 standard language letter: I just spent the weekend at one of Florida's unique and beautiful springs, and I want myself and other residents to be able to enjoy them for years to come.	• Comment acknowledged.
Jessica Dickson	Added the following to the Type 1 standard language letter: THAT's NOT FAIR FOR THE ANIMALS THAT LIVE THERE!	• Chapter 4 of the Final EIS describes the Wingate East's potential impacts on threatened or endangered species, fish, crustaceans, mollusks, and other aquatic organisms, and other wildlife.
Ross Bullard	Added the following to the Type 1 standard language letter: I AM A REAL PERSON WHO VOTES AND I APPROVE THIS MESSAGE!	• Comment acknowledged.
Marck Oconnell	Added the following to the Type 1 standard language letter: MOSAIC IS ONE OF THE MOST EV L COMPANIES IN THE WORLD!	• Comment acknowledged.
Anne Jackson	Added the following to the Type 1 standard language letter: HOW CAN THIS DEA OF MINING PHOSPHATE IN FLORIDA BE ANYTH NG OTHER THAN A VERY SICK JOKE !! ... WE LIVE IN TIMES OF ENVIRONMENTAL PROTECTION, NOT DESTRUCTION !!!!	• Comment acknowledged.
Christian Edwards	Added the following to the Type 1 standard language letter: Phosphate mining is bad for all of us.	• Section 7 of the decision document addresses the Corps' public interest review for Wingate East.
Ralph Shannon	Added the following to the Type 1 standard language letter: t has become even more obvious that the State of Florida can or will not regulate and enforce laws designed to protect the public. The government has failed yet again and was complicity in covering up this threat to public health and safety.	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively.
Rebecca R Leas	Added the following to the Type 1 standard language letter: I moved here to escape mining that I faced first in PA and then in SD. If you want Florida to be a paradise - this baloney must stop. It is unethical and downright stupid! I am a career health professional and scientist and I find it deplorable how big corporate mining entities are RYINING THIS COUNTRY!	• Comment acknowledged.
Dale Sloat	Added the following to the Type 1 standard language letter: Phosphate mining is one of the most destructive practices on Earth -- a brutal process that completely destroys landscapes and leaves behind 200-foot-tall, radioactive waste piles, which put people and wildlife at risk. On Aug. 27, 2016, a sinkhole opened under one of these waste piles, causing more than 200 MILLION GALLONS OF CONTAMINATED WASTEWATER to enter the Floridan Aquifer. It's not the first time the state's main source of drinking water has been imperiled by the phosphate industry, but we need you to make it the last. Mosaic wants to dig up an additional 50,000 acres of Florida's beautiful, biodiverse lands, creating more radioactive waste. But this incident shows that MOSAIC CAN'T EVEN HANDLE THE RADIOACTIVE WASTE IT CURRENTLY GENERATES. Letting it proceed in raping this land and screwing the population is nothing but insane, or ... someone's on the take from them. Corporations are draining the life out of our planet's resources (and, by extension, humans) worldwide, and their for-profit greed ALWAYS politically overwhelms public interest. You MUST support the growing movement to end phosphate strip mining and protect Floridians' health, lands and wildlife - and you MUST do everything in your power to stop this destructive industry.	• Section 1 3.1 of the Final AEIS explained that phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants. • Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively. These analyses include consideration of ecological resources, wildlife, and groundwater. • Section 4 8 2 of the Final AEIS describes the expected effects of phosphate mining, including those associated with Wingate East, on radiation levels.
Tami Calliope	Added the following to the Type 1 standard language letter: On Aug. 27, 2016 the Mosaic phosphate mining company created a 200-foot tall radioactive waste pile near Tampa, Florida, under which a sinkhole opened, spilling over 200 MILLION GALLONS OF RADIOACTIVE CONTAMINATED WASTEWATER INTO THE FLORIDAN AQUIFER, THE STATE'S MA N SOURCE OF DRINKING WATER FOR BOTH HUMANS AND ANIMALS. Yet Mosaic wants to dig up 50,000 more acres of Florida's biodiverse lands, leaving them stagnant, rotten, hazardous forever: 50,000 more acres of radioactive wasteland and poisoned waters.	• Section 1 3.1 of the Final AEIS explained that phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants. • Section 4 8 2 of the Final AEIS describes the expected effects of phosphate mining, including those associated with Wingate East, on radiation levels. • Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively. These analyses include consideration of ecological resources, wildlife, and groundwater.
Doug Morse	Added the following to the Type 1 standard language letter: Added the following to the standard language letter: as you know, a massive sinkhole below a phosphate strip mine near Tampa has been releasing radioactive waste into Florida's aquifer for weeks, threatening millions of people's drinking water. The mine's owner, Mosaic, and state officials reportedly knew about the problem since it began but "failed" to go public. Meanwhile, Mosaic seeks to mine an additional 50,000 acres.	• Section 1 3.1 of the Final AEIS explained that phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants.
M Walters	Added the following to the Type 1 standard language letter: And now, irresponsible strip mining in Florida has irreparably damaged the aquifer and threatened the health and safety of millions of people living in Florida.	• Appendix F of the Final AEIS describes the development and application of a groundwater flow model to evaluate direct, indirect, and cumulative effects of phosphate mining on surficial, intermediate (2), and Floridan aquifer levels. • Section 4.1 8 of the Final AEIS addresses several of the issues related to community health, safety, and quality of life.
Corinna Bechko	Added the following to the Type 1 standard language letter: I grew up in Florida. I love Florida, and consider it my first home. I visit often, and spend my tourist dollars there... Because of the wildlife!	• Comment acknowledged.
Gary L Pastre	Added the following to the Type 1 standard language letter: I have read much about Florida's natural life preserves, and that is the main attraction I would have to travel and spend time there. Even as a Californian, I value Florida's natural heritage as part of our U.S. legacy to Earth, and hope you will protect this precious heritage and all that it means to our National bird and amphibian life. We are rapidly losing salamanders, frogs and those creatures who depend on them here in California, due to profligate chemical usage. Don't count on CA to provide refuge. You may be the last hope.	• Comment acknowledged.

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Sandra Webb	Added the following to the Type 1 standard language letter: If they took care of the waste in the settling ponds, it might be different, but they don't – no one forces them to. The radioactive piles of phosphogypsum are not taken care of ether. People have had court battles over them blowing around. This is neither right nor fair. Then, to top things off, the radioactivity infiltrates the Floridan aquifer, which is already pulling in seawater due to too much pumping water out by the mines themselves and by the Water Management Districts for drinking water (60% of which goes to water lawns).	• Section 3.1.4 of the Final AEIS describes the role of clay settling areas in phosphate mining. The Corps considered the effects of clay settling areas in the analyses of the effects of all alternatives in Chapter 4 of the Final AEIS, including Wingate East. • Section 4 8 2 of the Final AEIS describes the expected effects of phosphate mining, including those associated with Wingate East, on radiation levels. • As explained in Section 1.3.1 of the Final AEIS, phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants.
Shelby Brenden	Added the following to the Type 1 standard language letter: We want to educate the world on how we can recycle Phosphorous & minimize the mining of it. We need to help preserve healthy parts of our planet and sustain better living environments. What's the point of digging up all of our land to get things that help keep us alive if we end up having nowhere to live? Consumption must be lowered!!!	• Comment acknowledged.
Sharon & Richard Tamm	Added the following to the Type 1 standard language letter: As a wildlife naturalist I have deep concern particularly for the life of the watersheds impacted by this toxic slurry.	• Comment acknowledged.
Laurel Gress	Added the following to the Type 1 standard language letter: I had no idea this was going on. With the dangerous sinkholes that keep cropping up in Florida, taking homes, property and even lives, more mining in the state is definitely not in the best interests of its citizens.	• Section 7 of the decision document addresses the Corps' public interest review for Wingate East.
Michael Salgado	Added the following to the Type 1 standard language letter: End the ongoing trend of not including our physical landscape as a priority. Development is NOT ALWAYS EQUAL TO PROGRESS	• Comment acknowledged.
The Following comment is a variations of the CBD Type 2 "Standard Language" letter.		
Lisa Modola	Added the following to the Type 2 standard language letter: Not in Bradford and Union County in the New River and Santa Fe River watersheds. Not in the Peace River watershed. Fly over the Phosphate Mine tailing ponds in Polk County sometime and see the miles of destruction they have caused.	• Comment acknowledged.
The Following 45 comments are variations of the CBD Type 5 "Standard Language" letter.		
Amber Born	Added the following to the Type 5 standard language letter: Please remember, we are on the verge of not being able to recuperate natural ecosystems. The domino effect of unforeseeable disaster created by imbalance will reverberate through generations. There is still so much to learn and gain from natural systems. Also, we have only learned to protect ourselves from predictable occurrences in an environment we know. Why push past that limit?	• Section 4.12 of the Final AEIS describes the cumulative effects of phosphate mining, including Wingate East. • Section 8 of the decision document, and the attached approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources.
Allie Tennant	Added the following to the Type 5 standard language letter: THIS COULD VERY POSSIBLY KILL US ALL BY POISONING OUR WATER. I CAN'T BELIEVE THE CORPS IS EVEN TH NK NG ABOUT OKAYING THIS PLAN.	• Section 4.1 8 of the Final AEIS addresses several of the issues related to community health, safety, and quality of life. • Section 4.4 of the Final AEIS describes the direct and indirect effects of phosphate mining on water quality.
Ann Saunders	Added the following to the Type 5 standard language letter: Are you serious? Enough is enough. Keep your polluter hands OUT.	• Comment acknowledged.
Bob Schilling	Added the following to the Type 5 standard language letter: Enough destruction. There is no way you can justify this destruction of our land and water supplies. Please stop this now. Don't let the Phosphate industry buy off your good judgment and our welfare.	• Section 4.1 8 of the Final AEIS addresses several of the issues related to community health, safety, and quality of life. • Section 4.4 of the Final AEIS describes the direct and indirect effects of phosphate mining on water quality.
Bobbi Segal	Added the following to the Type 5 standard language letter: Wealth is not success but an addiction and must be stopped killing this planet and all life on it. With the warming of our climate Florida is already dealing with the many problems of high water we don't need to be dealing with the destruction of this act.	• Section 4.1 8 3 of the Final AEIS describes how the Corps considered Climate and Sea Level Rise in its review of phosphate mining.
Carolyn Swan	Added the following to the Type 5 standard language letter: Wingate vs. Manatees, no way! We want the Beautiful precious Manatees...Please STOP the mine extension now!	• Section 10.1 of the decision document describes the Corps' final determinations for Wingate East pursuant to Section 7 of the Endangered Species Act, including Manatees.
Colleen Meegan	Added the following to the Type 5 standard language letter: Did you learn nothing when you dumped all that poisonous algae on the east coast? Remember, beaches had to be closed, clean-up had to be done, businesses lost money, etc. Do you really want to repeat that mistake?	• Section 4.4 of the Final AEIS describes the direct and indirect effects of phosphate mining on water quality. • Section 4.12 of the Final AEIS describes the cumulative effects of phosphate mining, including Wingate East.
Cynthia Brennan-Jones	Added the following to the Type 5 standard language letter: Please protect Florida's natural environment and our aquifer.	• Comment acknowledged.
David Lindsey	Added the following to the Type 5 standard language letter: t was about 40 years as a recent graduate of USF in Botany and working for a private consulting firm called Environmental Science and Engineering (ESE) that I found myself working on a Florida Institute of Phosphate Research (FIPR) project mapping the wetlands of a FIPR property northwest of Arcadia. I remember collection data along a vegetation over a mile long and wading across one of the most beautiful sections of a creek that was called Horse creek. Wading birds, fish and frogs and aquatic and emergent plants were abundant in these undisturbed upper reaches of the creek. And the mixed hardwood swamp at the eastern end of the transect was breathtakingly beautiful. I could not believe I was being paid to map these areas. Nor did I appreciate the fact that I was working as a consultant for a company that would someday remove these beautiful ecosystems to a depth of 60 ft., utterly a completely destroying them not unlike a nuclear weapon would do. My...our beautiful, peaceful wetland and upland habitats would someday be gone forever. I am a 5th generation native Floridian.	• Section 5 of the decision document describes how the Corps considered project alternatives to avoid and minimize adverse impacts to waters of the United States in its review of Wingate East, including the preservation of as much of the higher-quality habitats as was practicable. • Section 8 of the decision document, and the attached approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources.
Diane Desenberg	Added the following to the Type 5 standard language letter: And let's not forget sinkholes. Florida is prone to sinkholes. By pilng heavy material on top of our cavern-laden limestone, the potential for sinkholes increases. Where there are phosphate tailings and retention ponds, such radioactive material gets flushed down a sinkhole into the aquifer. The recent sinkhole in Mulberry dumped millions of gallons of radioactive acidic water. There was no cleanup, because they couldn't even determine where the waste went. Paying a fine does not clean up our aquifer or our land. Neighbors were not notified in a timely fashion. Instead, they pumped water out of the aquifer hoping that this might help. We do not have the capability/will to prevent or cleanup such disasters. Therefore no more phosphate mining should be allowed in Florida.	• Section 3.1.4 of the Final AEIS describes the role of clay settling areas in phosphate mining. The Corps considered the effects of clay settling areas in the analyses of the effects of all alternatives in Chapter 4 of the Final AEIS, including Wingate East. • As explained in Section 1.3.1 of the Final AEIS, phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants.
Donna Perry	Added the following to the Type 5 standard language letter: My personal statement: I personally know farmers who *will* lose their livelihood if this happens, because it will cause them to lose their organic certification. Also, this action goes against existing statues that exist to PRESERVE what is left.	• Comment acknowledged. The Corps' review of the project impacts, as described in the decision document, is limited to those impacts within the Corps' regulatory authority.
Kate Ellison	Added the following to the Type 5 standard language letter: Where does it end? They want to mine Bradford and Union Counties too. Will they keep it up until every interior county is destroyed?	• Comment acknowledged.
Kathleen Collins	Added the following to the Type 5 standard language letter: As FDEP has said "Today phosphate mining occurs primarily in the central Florida area (Polk, Hillsborough, Manatee, and Hardee counties). The central Florida phosphate-mining region covers approximately 1.3 million acres of land known as the "Bone Valley." One phosphate mining company operates in North Florida (Hamilton County)" In addition, FDEP states that "There are 27 phosphate mines covering more than 491,900 acres. The smallest phosphate mine is approximately 5,000 acres with the largest approximately 100,000 acres. Of the commodities mined in Florida, phosphate mining is the	• Comment acknowledged.

	most land intensive, disturbing between 5,000 to 6,000 acres annually; approximately 25 to 30% of these lands are isolated wetlands or wetlands connected to waters of the state." Because this addition did not occur before 1996, the following rule applies: "Phosphate mines that were not included in a conceptual reclamation plan or modification application prior to July 1, 1996, are required to have an Environmental Resource Permit. This permit governs the construction, alteration, operation, maintenance, repair, abandonment, and removal of stormwater management systems, dams, impoundments, reservoirs, appurtenant works, and works including docks, piers, structures, dredging, and filling located in, on or over wetlands or other surface waters. The regulatory rules used to implement the ERP are authorized under Chapter 373, Florida Statutes. Chapter 403, Florida Statutes, is used to govern activities which may pollute Florida's ground and surface waters, including wetlands." If FDEP did, indeed, issue an Environmental Resource Permit for the additional acreage, it did so against its own rulings. If not, this action cannot be undertaken. Mosaic Company claims that it will preserve areas including wetlands and a creek and river, neither of which include the Peace River, a very important river for the population and the environment. Preserving wetlands does not guarantee that those wetlands will not be polluted. Finally, the claim that they will reclaim the land from each and every mine does not say how long from now that will be. Ten years, 20 years, more? During all of that time, another polluting, ugly set of mines will be destroying wildlife habitat and polluting nearby watersheds.	
Nancy Linder	Added the following to the Type 5 standard language letter: I live between Myakka and the Peace River. I am in great danger of any more phosphate mining. Our environment must come first in Florida. Our environment is the largest source of our economy! As a Florida resident, and more specifically a resident between the Myakka River and Peace River, I deserve our water to be preserved. We don't have much clean fresh water left.	• Section 4 2.4 of the Final AEIS describes the predicted effects of the Wingate East project on surface water flows within the Peace River and Myakka River.
Nancy Thompson	Added the following to the Type 5 standard language letter: I happen to live near a super fund phosphate site that was a horrible mess near Tarpon Springs. The land cannot be used now. It destroyed many, many years of Native American History as this site was right on top of a well known area for the Tocobago Indians. It was next to a river that emptied into the Gulf of Mexico and while I can't prove that this was responsible, there are a lot of people here dying from cancer. It makes me wonder how long I have. This needs to stop. You need to stop killing our environment, polluting our water and making us sick just to make a buck.	• Section 4.1 8 8 of the Final AEIS describes how the Corps considered waste in its review of phosphate mining. • Section 4 8 2 of the Final AEIS describes the expected effects of phosphate mining. • Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively, including water quality and surface water hydrology.
John and Norma Killebrew	Added the following to the Type 5 standard language letter: I am sure you know that the mining removing the hard pan and putting back soft sand changes the flow of the water significantly as research on mined land has indicated. That is one example of mining.. secondly the disruption of underground streams further play a part... My ranch has suffered years of lowered water table.. and we lost a number of springs; 3) the proprietory chemicals used to separate product from sand is unknown to residents and only hinted at from government; 3) Water consumption by mining is monitored by the fox and self reported...I read the submission from the mines to Mr. Oros re how water is calculated and there is a lot of fuzzy math of water in and water out that is not clear;4) Further, I found (see Killebrew vs. Mosaic Fl Adm. Hearings) that the mining company attempted to utilize a well by claiming the well was utilized by an agri- business so it could be renewed to be used in mining without being on Mosaic's ticket....see my filed report. 5) and wetlands whether used and destroyed and "mitigated" elsewhere has serious consequences...i.e. Mined wetlands was ripped out up river from my ranch and YEARS later artificially restored down river.. this contributed to loss of flow in the Little Manatee River... exacerbating a drought in a designated swuca area causing us to lose half our herd and suffer economic costs to support our remaining herd and this comment goes for our neighbors as well;6) We suffered ongoing health issues as well as my husband has been disabled for twenty years with COPD and particulates flowed over and through our property and house confining him to a mask and oxygen...and now he has atypical TB.. also exacerbated by particulates and your county did/does nothing about this whatsoever;7) I have not approached the thousands of acres sprayed by glyphosate from helicopters all around my property, nor have I addressed the arsenic problem in local wells, nor have I addressed the radiation levels on mined lands...btw almost none of my family have functioning thyroids....these are just a little of what has happened to us and what we see actually living in this area....The local arm of the environmental protection agency, when asked to come down and observe what was happening, stated (Ms. Hart) that the county was unaware of all the springs on our property...I thought some inventory of streams and springs was done prior to mining...such was not the case.. and btw our land ownership predates mining...we were here first.... I will vigorously fight to ensure that others do not suffer as we have. The EIS hearings were to read submitted comments and complaints and base their ruling on such. There has been no evidence thus far that the mission statement of the EIS has been followed to date...	• Section 4 2 of the Final AEIS describes the direct and indirect effects of phosphate mining on surface water hydrology. • Section 4 3.4 of the Final AEIS describes Wingate East's effects on groundwater. • Appendix F of the Final AEIS describes the development and application of a groundwater flow model to evaluate direct, indirect, and cumulative effects of phosphate mining on surficial, intermediate (2), and Floridan aquifer levels. This modeling was completed on a regional level. Additionally, the Corps considered local-scale modeling that compares pre-mining and post-mining hydrologic conditions, especially in relation to surface water flows and levels. Finally, the water use permit issued by SWFWMD includes permit conditions that protect adjacent water users, the affected aquifers, and onsite and adjacent aquatic resources. • Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively, including water quality and surface water hydrology.
Pat Helmer	Added the following to the Type 5 standard language letter: Florida is already over populated. Our fresh water resources are stretched thin. As global warming raises the salt water levels and encroaches on Florida's shoreline, existing space inland becomes more important to people and wildlife. That land needs to be protected so it is safe for habitation. It should not be polluted by mining operations. Mining companies promise cleanup, but that never happens. The truth is no one knows how to remove radioactive waste stacks safely. That should be obvious from the Piney Point debacle. If there was a way to clean up the mess from mining, Piney Point would be no longer a problem Manatee County's hearing produced overwhelming negative reaction to Mosaic expansion. Volumes of scientific data against expansion of mining was presented and ignored by the commissioners. Please force Mosaic to clean up the land they have already destroyed. Please live up to your mission statement, and stop additional mining of Florida. As current permits expire please force the clean-up process and refuse to allow extensions of any kind.	• Section 4 2 of the Final AEIS describes the direct and indirect effects of phosphate mining on surface water hydrology. • Section 4 3 of the Final AEIS describes the direct and indirect effects of phosphate mining on groundwater. • Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively, including water quality and surface water hydrology. • Section 5.7 of the Final AEIS describes reclamation as required by FDEP. • The DA permit will include a permit condition requiring Mosaic to provide yearly compliance reports on the status of the authorized activities, the FDEP-required reclamation, and the Corps required mitigation. The permit also includes a condition requiring a comprehensive compliance review every five years.
Samuel Kendall	Added the following to the Type 5 standard language letter: Phosphate mining in Florida leaves a residue that looks similar to what I've seen after the tar sands mining up in Canada. The so-called Great Boreal Forest is starting to look like an extended waste pit. The trees that are so necessary to drawdown greenhouse gases have been ripped away and we have ponds just like the phosphate pits. When has land and habitat restoration ever been successful in Florida? I understand that the phosphate miners are eager to keep up their source of income but when do we say the earth can't take anymore: the aquifer is in danger, the supply of untainted water will cease to exist.	• Section 4.12 of the Final AEIS describes the cumulative effects of phosphate mining, including on ecological resources. • Section 8 of the decision document, and the attached approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources.
Cybele Knowles	Added the following to the Type 5 standard language letter: This byproduct, phosphogypsum, is stored in 200-foot-tall stacks, which may be the largest repositories of hazardous waste in the United States. This byproduct, phosphogypsum, is stored in 200-foot-tall stacks. This is scandalously problematic!	• Section 1 3.1 of the Final AEIS, explains why phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants.
D S	Added the following to the Type 5 standard language letter: This is unacceptable, as water is our most precious and essential resource to sustain life.	• Section 4 2 of the Final AEIS describes the direct and indirect effects of phosphate mining on surface water hydrology. • Section 4 3 of the Final AEIS describes the direct and indirect effects of phosphate mining on groundwater. • Section 7 0(l) of the decision document describes how the Corps updated the

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		groundwater effects analysis to consider project changes since the Final AEIS.
Diana Roginski-Harvey	Added the following to the Type 5 standard language letter: I am a resident of Sarasota county but with my husband, jointly own several properties in Manatee County. We have raised two sons, who as adults, reside in our great state of Florida.	• Comment acknowledged.
Diane Winks	Added the following to the Type 5 standard language letter: Military wife of 30 years here and I am sick and tired of this country ruining the land and water for greed. I sacrificed so men can make $ and ruin everything for everyone else? NO!	• Comment acknowledged.
Geraldine Swormstedt	Added the following to the Type 5 standard language letter: There is nothing "temporary" about this mining. The residue of gypsum is with us forever, as are the slime ponds.	• Section 1 3.1 of the Final AEIS, explains why phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants. • Final AEIS describes the role of clay settling areas in phosphate mining.
Hilary Brown	Added the following to the Type 5 standard language letter: The natural environment in Florida is being destroyed at an alarming rate by development, pipelines and mines.	• Section 4.12 of the Final AEIS describes the cumulative effects of phosphate mining, including on ecological resources.
Janet Filippi	Added the following to the Type 5 standard language letter: I live in Manatee county, FL.	• Comment acknowledged.
Joseph Weinzettle	Added the following to the Type 5 standard language letter: In addition to impacting the people, Mining is eating up critical natural habitat for key Florida wildlife. Species such as the Florida panther, black bear, deer, gopher tortoise and Florida scrub jay need every bit of space that they can get. This space should be returned to nature, not further eroded and polluted.	• Section 8 of the decision document, and the approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources. • Section 4 5 3 of the Final AEIS describes how the Corps considered direct and secondary impacts to wildlife habitat in the Final AEIS. • Section 5 3.4 of the Final AEIS describes the specific evaluation of wildlife habitat impacts associated with Wingate East conducted for the Final AEIS. • Section 4.12.5 of the Final AEIS describes the cumulative effects on ecological resources.
June Seefeldt	Added the following to the Type 5 standard language letter: I live in Manatee County and this is a concern for me.	• Comment acknowledged.
Karen Quaritius	Added the following to the Type 5 standard language letter: I am a native Floridian, and I'm writing to let you know that I don't want one more square inch of Florida's precious native land dug up and poisoned by phosphate mining!!	• Comment acknowledged.
Karla Boemig	Added the following to the Type 5 standard language letter: The overdevelopment has already stressed our lands and waters. Please stop the insanity of corporate raping our environment. Thank you.	• Comment acknowledged.
Kate Curley	Added the following to the Type 5 standard language letter: I live down stream on the Peace River and am very afraid for the river's future because of the mining already going on. NO MORE mines!	• Comment acknowledged.
Katherine Borello	Added the following to the Type 5 standard language letter: In addition, Mosaic has been engaging in a propaganda campaign throughout the area. They need to be stopped.	• Comment acknowledged.
Kevin Kinnebrew	Added the following to the Type 5 standard language letter: STOP THIS ABSURD PRACTICE NOW IF THE POLITICIANS THAT ARE TAKING KICKBACKS AND CAMPAIGN CONTR BUTIONS WILL LET YOU!!!	• Comment acknowledged.
Laura R. Goldstein	Added the following to the Type 5 standard language letter: I guess you have stock or ownership in fresh water & spring water companies. That's the only reason to poison the aquifer. Do you have enough stored to save your family for the rest of their lives?	• Comment acknowledged.
Lisa Mateas	Added the following to the Type 5 standard language letter: I am a Florida resident living in Sarasota County, right next to Manatee County.	• Comment acknowledged.
M Walters	Added the following to the Type 5 standard language letter: Moreover, so called "reclamation" is rarely done properly and, in any case, can never return the land to is original pristine condition.	• Section 5.7 of the Final AEIS describes reclamation as required by FDEP.
Marianne Amann	Added the following to the Type 5 standard language letter: Just because the republicans in Florida don't care about its citizens doesn't mean the EPA shouldn't protect the people.	• Comment acknowledged.
Marsha Wikle	Added the following to the Type 5 standard language letter: I am very concerned about our fresh water sources in Florida and am writing to let you know that I am against any additional phosphate mining, especially in Manatee County.	• Appendix F of the Final AEIS describes the development and application of a groundwater flow model to evaluate direct, indirect, and cumulative effects of phosphate mining on surficial, intermediate (2), and Floridan aquifer levels. This modeling was completed on a regional level. Additionally, the Corps considered local-scale modeling that compares pre-mining and post-mining hydrologic conditions, especially in relation to surface water flows and levels. Finally, the water use permit issued by SWFWMD includes permit conditions that protect adjacent water users, the affected aquifers, and onsite and adjacent aquatic resources.
Melinda W Sowder	Added the following to the Type 5 standard language letter: The letter below is from the supporters of this ban. I lived in Florida for 17 years and watched as they spread concrete over miles of raw beautiful land on the beaches and in the everglades. Then.. man in his infinite infancy tries to fix his mess and spends MILLIONS restoring what nature had there in the first place. Learn from history.. DON'T REPEAT IT.	• Comment acknowledged.
Nancy Bachay	Added the following to the Type 5 standard language letter: I am very concerned about our water supply and our environment. I can't believe the mosaic disaster even occurred. I can't believe that there were not safeguards in place.	• Appendix F of the Final AEIS describes the development and application of a groundwater flow model to evaluate direct, indirect, and cumulative effects of phosphate mining on surficial, intermediate (2), and Floridan aquifer levels. This modeling was completed on a regional level. Additionally, the Corps considered local-scale modeling that compares pre-mining and post-mining hydrologic conditions, especially in relation to surface water flows and levels. Finally, the water use permit issued by SWFWMD includes permit conditions that protect adjacent water users, the affected aquifers, and onsite and adjacent aquatic resources.
Risa Jones	Added the following to the Type 5 standard language letter: Making MORE of our precious land into a desolate waste pile is an abominable idea! Mosaic has taken ENOUGH. Our aquifer, all of the environment, and the livelihoods of the CITIZENS that depend upon clean land and water are MORE MPORTANT than kissing the butt of another irresponsible corporation. One would think that the Army Corps would be interested in leaving a legacy that is respectable instead of one that will anger and embarrass future generations. We are called on to be STEWARDS OF THE LAND. Start "stewarding!"	• Section 4.12 of the Final AEIS describes the cumulative effects of phosphate mining, including on ecological resources. • Section 4.4 5 of the Final EIS describes the predicted effects of Wingate East Mine on surface water quality. • Section 4 3.4 of the Final AEIS describes Wingate East's effects on groundwater.
Rob Wilson	Added the following to the Type 5 standard language letter: You know what the right thing to do is, now please do it	• Comment acknowledged.
Robert Scott	Added the following to the Type 5 standard language letter: Addendum. I think it is getting clear that phosphate mining does more harm than good. Can you please help put an end to it?	• Comment acknowledged.
Roger Vaughan	Added the following to the Type 5 standard language letter: I live in Tampa and I'm writing to let you know that I don't want one more square inch of Florida's precious native land dug up and poisoned by phosphate mining.	• Comment acknowledged.

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Thomas Gray	Added the following to the Type 5 standard language letter: Good clean water is already gone you are just setting everyone up for death. t needs to stop it has already been taken way too far and everyone knows it! Trading our life giving resources for money in just plain stupid! You will be long gone before they return to the world.	• Section 4.4 5 of the Final EIS describes the predicted effects of Wingate East Mine on surface water quality. • Section 4 3.4 of the Final AEIS describes Wingate East's effects on groundwater.
Lisa Modola	Added the following to the Type 5 standard language letter: In Bradford and Union counties Phosphate mining is trying to destroy agricultural and forested lands.	• Comment acknowledged.
The following 3 comments are from letters compiled by CBD and received by the Corps as a package, but do not use the CBD "standard language".		
Kathryn Dorn	I heard that the U.S. Army Corps of Engineers is considering an application for another 7,500 acres of phosphate mining in the peace River watershed. Please do not allow this proposed project to go through.	• Comment acknowledged.
Kathryn Dorn	Added the following to the standard language letter: Even aside from the massive environmental devastation that strip mines cause to this state's natural habitats - which are already threatened by development and rising sea levels - and the huge amounts of groundwater that phosphate mining consumes, not to mention the vast piles of unusable phosphogypsum "by-product," I am sure that I don't need to remind you of the cyanobacteria bloom currently damaging Lake Okeechobee and estuaries on both our Gulf and Atlantic coasts. Fertilizer-filled runoff water from farms and lawns contains too much nitrogen and phosphorus, feeding the cyanobacteria and allowing then to choke out most other organisms in the lake and estuaries. Why would we knowingly shoot ourselves in the foot multiple times by letting companies tear apart Florida's natural habitats and disrupt the flow of water to strip-mine our phosphate, which they then sell to farms as a fertilizer component to dump on the ground, so that it ends up in our waterways and surrounds us with toxin releasing cyanobacteria?	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively. These analyses include consideration of ecological resources and groundwater. • As explained in Section 1.3.1 of the Final AEIS, phosphogypsum stacks are associated with fertilizer production, which is outside the scope of the proposed action. Similarly, the use of fertilizers and their potential environmental effects is also outside of the scope of this proposed action.
Kathryn Dorn	Added the following to the standard language letter: As a state and as a species, we have to find safer way to grow food and ripping up the state to extract phosphate won't help. Added the following to the standard language letter: Phosphate mining does not serve Florida's interests. Please oppose this application and any future phosphate-mining applications! Thank you for your time!	• Comment acknowledged.
Donna Grace	Added the following to the standard language letter: Please stop the phosphate strip mining. I urge you to do everything in your power to stop the plan to mine the Peace River watershed!	• Comment acknowledged.
Donna Grace	Added the following to the standard language letter: Phosphate strip mining completely destroys landscapes and wildlife habitat.	• Section 5.7 of the Final AEIS describes reclamation as required by FDEP. • Section 8 of the decision document, and the approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources. • Section 4 5 3 of the Final AEIS describes how the Corps considered direct and secondary impacts to wildlife habitat in the Final AEIS. • Section 4 5 3 5 of the Final AEIS describes the specific evaluation of wildlife habitat impacts associated with the Wingate East project conducted for the Final AEIS. • Section 4.12.5 of the Final AEIS describes the cumulative effects on ecological resources.
Donna Grace	Added the following to the standard language letter: Then it creates tons of radioactive byproduct each year that must be stored. These are the largest repositories of hazardous waste in the nation and what are the chances that they will remain intact and not leak? Very low.	• As explained in Section 1.3.1 of the Final AEIS, phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants.
Donna Grace	Added the following to the standard language letter: This will mean the permanent loss of agricultural and ranching jobs, and it will cause profound environmental damage. Please support ending phosphate strip mining, and protect Florida's lands.	• Section 4 6 5 of the Final AEIS describes the economic effects of Wingate East. In addition, Section 7 0(p) of the decision document describes how the Corps updated the economic analysis to consider project changes since the Final AEIS. • Section 8 of the decision document, and the attached approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources.
Jill Jaksetic	Added the following to the standard language letter: An application from Mosaic (the largest phosphate mining company in Florida) is being reviewed by the U.S. Army Corps of Engineers seeks to mine 7,500 additional acres in the Peace River watershed.	• Comment acknowledged.
Jill Jaksetic	Added the following to the standard language letter: While writing this letter to you, I took some time out to learn more about Mosaic. They seem to have a great record of environmental stewardship and promoting responsible fertilizer use. What are their plans for cleaning up their existing mess and restoring habitats lost due to mining in our state? It would be wonderful if part of receiving this permit meant Mosaic pledges to complete the aforementioned items in a timely manner.	• Section 5.7 of the Final AEIS describes reclamation as required by FDEP.
The following comment was sent from the CBD website but does not use the CBD "standard language".		
Cheryl Gross	More than 300,000 acres in Florida have been destroyed by phosphate mining, with less than half that area "reclaimed". Now the Mosaic Company seeks to mine 3,635 additional acres in eastern Manatee County, further threatening the Myakka and Peace River watersheds and placing the Floridan aquifer and the millions who depend upon it at further risk. Phosphate mining has already badly damaged the Peace and Myakka River basins, in some areas of the upper Peace River basin totally destroying the surficial aquifer. The mining has also damaged or destroyed thousands of acres of wildlife habitat, including wetlands, forests and streams. Extraction goes down 60 to 80 feet, which is damaging enough, but the mined material is processed with sulfuric acid, resulting in massive clay "slime" ponds that cover 40 percent of the mined-out land. The reclamation required by the state and authorized by the Corps does not and cannot restore the habitat and ecosystems actually destroyed. The sulfuric acid process creates not only fertilizer and slime ponds, but an estimated 30 million tons of radioactive phosphogypsum, which is stored in 200 foot stacks. More than 1 billion tons of phosphogypsum are already piled up atop the Floridan aquifer, on Karst topography prone to sinkholes and threatening the aquifer serving nearly 10 million Floridians. The fertilizer produced in this dangerous, destructive and contaminating process is not even a complete product, lacking most of the elements that natural, organic fertilizer provides and that are vital to nutritious food crop production. Nor is the industry providing long-term financial benefits since Florida's phosphate is projected to be depleted by 2035. Instead the industry leaves behind destroyed wildlife habitat and vital ecosystems, slime ponds piles of radioactive waste, major threats to drinking water, potential negative health effects, permanent loss of agricultural and ranching jobs and negative impacts on tourism. In both the short and the long term these financial, social, environmental, and health costs are borne by the public. I urge you to deny any expansion of this toxic, non-essential and destructive mining in Florida. We will be suffering enough long into the future from the existing mess the industry has already created.	• Chapter 5 of the Final AEIS describes the compensatory mitigation process for the Corps and the state, and also describes the state's mandatory reclamation requirements. • Section 4 2.4 of the Final AEIS describes the predicted effects of the Wingate East project on surface water flows within the Peace River and Myakka River. • Section 3.1.4 of the Final AEIS describes the role of clay settling areas in phosphate mining. • Section 1 2.1.1 of the Final AEIS describes the need for phosphate rock as a source of phosphorus in fertilizer. • Section 4 8 2 of the Final AEIS describes the expected effects of phosphate mining, including those associated with Wingate East, on radiation levels. • Section 1 3.1 of the Final AEIS, explains why phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants.

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The following comments were sent from Food & Water Watch (F&WW) on behalf 37 individuals.		
37 commenters – F&WW Standard Language Letter	I urge you to protect Manatee County and its residents by rejecting Mosaic Company's proposed Wingate East Mine Extension.	• Comment acknowledged.
37 commenters – F&WW Standard Language Letter	Strip mining for phosphate has already ravaged hundreds of thousands of acres in Florida and turned wetlands and agricultural land into barren fields.	• Section 5.7 of the Final AEIS describes reclamation as required by FDEP. • Section 8 of the decision document, and the approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources.
37 commenters – F&WW Standard Language Letter	Less than a year ago, a sinkhole opened underneath a stack of phosphate mining waste and sent over 200 million gallons of contaminated water into the Floridan Aquifer.	• Section 1 3.1 of the Final AEIS, explains why phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants.
37 commenters – F&WW Standard Language Letter	Simply put, phosphate mining is too dangerous to allow it to continue expanding.	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively.
37 commenters – F&WW Standard Language Letter	Please protect Manatee County residents and our environment by rejecting Mosaic Company's proposal to expand its mining for phosphate.	• Comment acknowledged.
The Following 7 comments are variations of the F&WW Type 5 "Standard Language" letter.		
Debbie Plume	Added the following to the standard language letter: NO PHOSPHATE MINIG!	• Comment acknowledged.
Diana Cowans	Added the following to the standard language letter: Mosaic tries to cover their tracks by advertising that they protect the environment, but they are not fooling us. Far better to not destroy the environment in the first place. We have enough of a fight to protect our earth without knowingly causing more damage. As a long-time resident of Florida and now of Manatee County, I will continue to speak up and watch out for our beautiful land.	• Comment acknowledged.
Marie Devine	Added the following to the standard language letter: as a resident of manatee county since 1984, I can tell you that mosaic does not have a lot of fans here, especially since their giant sinkhole opened up last year not far north from us, dumping radioactive waste into the only fresh water source we Floridians have, the Florida aquifer. With this new project in manatee county but political games and lobbyist bribery have rammed it through anyway. Now I must ask you, beg you, to please put a stop to this before it's too late. The area in Polk county where mosaic's sinkhole opened up is relatively isolated towards the center of the state. The area they want to strip mine in manatee county is not. t is actually near sensitive wetlands, in a residential neighborhood. A sinkhole like the one in Polk would be a devastating here. Please protect our wildlife, our water source, our children's health, and the beauty of the state we love.....	• Section 1 3.1 of the Final AEIS, explains why phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants.
Martha Burton	Added the following to the standard language letter: Also, the counties to the south have already spent millions trying to slow down this horrible raping of the land by the phosphate industry.	• Comment acknowledged.
Robert Bishop	Added the following to the standard language letter: You know what they do and its much worst than above. We the people of Manatee County should not even have to ask of you to say no. One of the main responsibilities of the Army Corps of Engineers is to protect and aid the people of our county and state. Please do so with a strong NO!!!	• Comment acknowledged.
Stefan Ciosici	Added the following to the standard language letter: MOSAIC HAS ALREADY SP LLED HUNDREDS OF THOUSANDS OF POISONOUS WATER NTO THE WATER TABLE!!! THEY CANNOT BE TRUSTED!!! STOP MOSAIC FROM EXPANDING THE R PHOSPHATE MINING OPERATIONS IN MANATEE COUNTY!!!	• Comment acknowledged.
Susan McDonough	Added the following to the standard language letter: As a Manatee County resident, I urge you to protect Manatee County and its residents by rejecting Mosaic Company's proposed Wingate East Mine Extension.	• Comment acknowledged.
Non-Bundled Comments		
Commenter/ Organization	**Comment**	**Response**
Alice Newlon	The Wingate East mine expansion is at the headwaters of the drinking water sources for Manatee and Sarasota Counties.	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively, including water quality and surface water hydrology.
Alice Newlon	Our county, Manatee, seems to side with developers, no matter how dangerous it is to our population or how much destruction it does to the habitat of endangered species or even if it will permanently degrade the land, and thus the income base of the county. I hope you have the power to stop this destruction. The world does not need THIS phosphate in a highly populated and growing state. The world has many other locations that can mine. If you have the ability, please deny the mining expansion by Mosaic in Manatee County, Florida. Thank you.	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively. • Section 10.1 of the decision document describes the Corps' final determinations for Wingate East pursuant to Section 7 of the Endangered Species Act. • Section 5.7 of the Final AEIS describes reclamation as required by FDEP. • Section 8 of the decision document, and the approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources.
Candice Luther	I am asking you to please deny the expansion for the following reasons: 1. Post mined land is radioactive and dangerous to living beings both human and animal. 2. Mining produces acidic waste which must somehow be disposed of, typically by diluting and dumping into adjacent rivers and streams. 3. The possibility of runoff into nearby bodies of water is too great, especially in the Peace River watershed which supplies Sarasota, Desoto and Charlotte Counties with drinking water. 4. The phosphogypsum waste is being sent to neighboring counties to be stored forever in stacks that risk contamination of environment in he even of a natural disaster. 5. The possibility of sinkholes developing in this area risking contamination of the underlying aquifer is too great. 6. We all know the wildlife are killed off in the process. Mosaic officials are lying if they are saying all of the creatures are relocated. That would be impossible to do. 7. There has been no "successful" reclamation of forested wetlands to date. There have been unsuccessful attempts. 8. Regardless of the lies they spew in their commercials meant to brainwash the public into thinking they are good stewards of the environment, the fact remains that the land will never be of the same quality it once was. 9. Manatee County already has issues with illness as a result of environmental contamination on the west side of town in the Bayshore area. We don't need more. 10. The precious farmlands around the mines will be lost causing harm to our farming community, which is ironic since they claim to help grow the food we need. The truth is, their phosphate helps grow corn, which is fed to the factory farming animals, which people eat unless you are vegetarian. It is also used to make ethanol fuel. Most is shipped overseas.	• Section 4 8 2 of the Final AEIS describes the expected effects of phosphate mining, including those associated with Wingate Creek, on radiation levels. • Section 4.1 8 8 of the Final AEIS describes how the Corps considered waste in its review of phosphate mining. • Section 4.4 5 of the Final EIS describes the predicted effects of Wingate East Mine on surface water quality. • Appendix F of the Final AEIS describes the development and application of a groundwater flow model to evaluate direct, indirect, and cumulative effects of phosphate mining on surficial, intermediate (2), and Floridan aquifer levels. • Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively. These analyses include consideration of ecological resources, wildlife, and groundwater. • The DA permit includes a permit condition requiring Mosaic to provide yearly compliance reports on the status of the authorized activities, the FDEP-required reclamation, and the Corps required mitigation. The permit also includes a condition requiring a comprehensive compliance review every five years. • Section 4.1 8 of the Final AEIS addresses several of the issues related to community health, safety, and quality of life, with

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	11. By denying this, you have the ability to stand behind the hundreds of citizens who came before the commission to oppose this, and those who wrote letters if they could not attend. The commissioners voted against the will of the people of Manatee County when they approved this. If you look at who funded the campaigns of those on the dais, you will see that most took money from Mosaic, which gives the appearance of bribes to gain their approval. The well being of this county and it's citizens should not be sold to the highest bidder. 12. This case could set precedence for a new trend toward concern for the environment over dollars in someone's pocket. There are more reasons, but I think I have stated enough to warrant a "No" vote on this issue. Thank you for your time and consideration, Candace Luther	consideration of federal, state and local requirements.
Kathryn Dorn	Do not allow any more phosphate mining in my home state! In particular, do not give Mosaic the 3,635 acres it wants to destroy in Manatee County! We still don't have a good way of dealing with the ridiculous phosphogypsum waste stacks; phosphate companies can't replace the wildlife they've annihilated during mining by their eventual reclamation attempts; and Florida's rivers, including the Peace and Myakka Rivers threatened by Mosaic's most recent plan, suffer enough from all of the phosphate-derived fertilizer we indirectly dump in them, along with the mines' land alteration. I am sick of seeing phosphate companies punch holes in my state, only to sell us back the algae bloom-causing excessively rich fertilizers and claim that they're helping the world. We rely far too heavily on the finite resource of phosphate deposits; it's past time to wean ourselves off of them by developing other phosphate sources, such as omnivores' and carnivores' manure, and simultaneously stop suffering the damage caused by the phosphate mining process. Please deny Mosaic's request and do not let them permanently wreck one more piece of Florida.	• Section 1 3.1 of the Final AEIS, explains why phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants. • Section 4 2.4 of the Final AEIS describes the predicted effects of the Wingate East project on surface water flows within the Peace River and Myakka River. • Section 5.7 of the Final AEIS describes reclamation as required by FDEP. Section 12.2.4 of the decision document describes how the DA permit for Wingate East complies with Executive Order 13112 on invasive species. • Section 2 2 6 2 of the Final AEIS explains why avoiding the use of phosphate fertilizers is not a feasible alternative.
Mari R.H	Sure gain for the Mosaic company and an uncertain gamble for public health.	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively.
Rachel Garibay	I believe the above permit should be denied for the following reasons. A foreign entity, company wants to expand in Manatee County. Why should we cater to a company that robs our environment and sends their product all over the world. This company does not care about the quality of the water, animals, birds, environment or public health of the citizens that live in this area and beyond. Tampa already has piles of radioactive leftovers due to phosphate mining that nobody wants to take responsibility for. Occasionally, water has to be leaked into the bay because the holes are full. Florida is a tourist state and is the Second now in population. Do you think we can continue to offer pristine water to swim in and drink in? At the very least, we need a ELS study to be required because of the effects of mining on the Human environment are highly controversial. Future generations babies need to be protected!	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively.
Charlie Hunsicker, Manatee County	Thank you for allowing Manatee County government to provide comments on the Supplemental Environmental Assessment, Draft Clean Water Act Section 404(b)(I) Guidelines Analysis, and Draft Public Interest Review for Department of the Army (DA) Permit Application SAJ-2009- 03221 (Wingate East Mine). Staff has review the documents and are providing the following comments: While the above-referenced documents correctly state that Manatee County has approved the Master Mining Plan for Wingate East there are particular Conditions and Restrictions that we would like to highlight. First, as previously mentioned in Manatee County comments made during the scoping process for the AEIS, the Manatee County Phosphate Mining Code (Ordinance 04-39) has restrictions on mining below the 25-year floodplain, mining in wetlands that are significantly dependent on the 25-year floodplain, and mining of perennial streams. Therefore, as a condition of the Master Mining Plan for Wingate East, there are additional permitting requirements for mining certain areas in the vicinity of Stream 100, in Sections 27 and 34. These areas include wetland systems that are identified as mitigation framework wetlands and streams and portions of the 25-year floodplain for Stream 100. As such, the applicant's preferred alternative, as depicted in Figure 7 of the Environmental Assessment, still requires additional Manatee County approvals. Secondly, the applicant is requesting to use the Wingate Creek Mine beneficiation plant and transportation corridors for the processing and transportation of ore produced at Wingate East Mine. There are specific conditions associated with the transportation of ore on County roads within the Wingate Creek Mine Master Mining Plan which restrict truck traffic. The increase in production rate to 1. 7 MM tons may exceed the amount of ore that the applicant is able to transport under the current County permit. The applicant's current application to modify the Wingate Creek Mine Master Mining Plan includes no request to modify the transportation conditions. As described in tem (6)(c) of the Draft Public Interest Review, the Final EIS describes predicted effects of Wingate East on surface water quality on the Upper Myakka River and Horse Creek. It is recognized that the mine will need to comply with Section 401 water quality certification as part of ERP Permit 0095520-025 and Section 402 NPDES permit as it relates to these offsite and downstream waters. In addition to these requirements, surface water quality monitoring of Stream 100 and the West Fork of Horse Creek is required by Manatee County, in order to establish that degradation of preserved creeks and streams, as defined in Section 2-20-10 of the Phosphate Mining Code, is not occurring. Thank you again for the opportunity to participate in the permitting process. If you have any questions or need any additional information, please feel free to contact me at 941-745-3727 or email: Charlie.Hunsicker@mymanatee org.	• Comment acknowledged.
Glenn Compton, Chairman, ManaSota-88, Inc.	ManaSota-88, Inc. submits the following comments and request for a public meeting concerning the draft CWA Section 404(b)(1) Guidelines analysis and public interest review for DA Permit Application SAJ-2009-03221.	• The Corps has provided a separate, written response to the request for a public hearing.
Glenn Compton, Chairman, ManaSota-88, Inc.	Additionally, ManaSota-88, Inc. strongly recommends the Army Corps of Engineers (ACOE) deny DA permit application SAJ-2009-03221 and find the project Environmentally Unsatisfactory. During the permit decision process, the Corps must evaluate the project in relation to the public interest. The public benefits and detriments of all factors relevant to each case are to be carefully evaluated and balanced. Relevant factors may include conservation, economics, esthetics, wetlands, cultural values, fish and wildlife values, water supply, water quality, and any other factors judged important.	• Section 7 of the decision document describes the Corps' evaluation of public interest pursuant to 33 CFR 320.4 and RGL 84-09.
Glenn Compton, Chairman, ManaSota-88, Inc.	ManaSota-88, Inc. (hereinafter, "ManaSota-88"), is a public interest conservation and environmental protection organization which is a Florida not-for-profit corporation and a citizen of the State of Florida whose address is: ManaSota~88, P.O. Box 1728, Nokomis, Florida 34274. The corporate purposes of ManaSota-88 include the protection and preservation of water quality and wildlife habitat in Manatee and Sarasota Counties. ManaSota-88 is a citizen of the State of Florida pursuant to section 403.412(5), Florida Statutes. ManaSota-88 and its members will be substantially and adversely affected by the conditions and activity which will result if this permit is issued.	• Comment acknowledged.
Glenn Compton, Chairman, ManaSota-88, Inc.	GENERAL COMMENTS Post - reclamation lands must not be permitted to exceed pre-mining, unenhanced natural background soil radium and gamma levels. Best Possible Technologies can reclaim mined land to pre-mining soil radium and gamma levels. Since the future land uses of the reclaimed lands are not known, all potential radiation exposures should be avoided. Since it is both economically and technically feasible, DA permit application SAJ-2009- 03221 should require radiation levels after mining not exceed those that existed before mining. Clay Settling Areas are one of the significant environmental and public health threats associated with the Wingate East Mine. Radioactive wastes from these ponds threaten surface and groundwater; the hazard of slime spills is a constant menace to essential public water supplies and natural systems. Elevated levels of fluorides, chromium, cadmium, arsenic and other toxins are commonly found in clay settling areas.	• Section 3 3.7 of the Final AEIS provides information on the possibility of increased indoor radon concentrations, mining practices that reduce the potential for public exposure, and other radiation-related public health concerns. • Section 4 8 2 of the Final AEIS describes the expected effects of phosphate mining, including those associated with Wingate East, on radiation levels. • Section 4.12.1.4 of the Final AEIS describes past, present, and reasonably foreseeable future actions considered in the cumulative effects analysis, including past mining actions and reclamation and reclaimed land re-use on prior mined lands.

	The possibility of a slime pond dam break cannot be ruled out. When a pond ruptures their earthen impoundments, the highly acidic, highly radioactive slime effluents completely annihilate all aquatic life in the receiving waters. The highly acidic slime ponds also emit fluoride and radon gases, which are harmful to humans, plants and animal tissues. Water quality protection won't be accomplished by permitting thousands of tons of toxic and radioactive sandy slimes to be deposited in mine cuts which cut through to the surficial aquifer and beyond or permitting sandy slimes to be dumped in surface impoundment's.	
Glenn Compton, Chairman, ManaSota-88, Inc.	DISPUTED ISSUES OF LAW AND FACTS ManaSota-88 alleges the following disputed issues of law and material fact for determination in the DA permit application SAJ-2009-03221; Mosaic - Wingate East Mine. (a) Whether Mosaic Fertilizer, LLC (hereinafter "Applicant") has provided reasonable assurances that the applicable state and federal water quality standards will not be violated as a result of the discharge from Wingate outfalls; (b) Whether Applicant has provided reasonable assurances that the Daily Maximum Discharge Limits of Total Suspended Solids, Fixed Suspended Solids, Total Phosphorus, Total Nitrogen, Total Radium 226 + Radium 228, Alpha, Gross Particle Activity and whole effluent acute toxicity limits will be in compliance with Clean Water Act Section 404 and Class II water quality standards; (c) Whether Applicant has provided reasonable assurances of compliance with Clean Water Act Section 404 and Class II water quality standards for the direct, secondary and cumulative impacts of the proposed discharges. These include, but are not limited to, the water quality standards for: nutrients, turbidity transparency, biological integrity, nuisance conditions, heavy metals and other contaminants, and dissolved oxygen, and including the anti-degradation and public interest provisions;	• As stated in Section 10.5 of the decision document, the FDEP issued a water quality certification on November 16, 2015, as part of their ERP. This constitutes water quality certification under Section 401 of the Clean Water Act. • As stated in Section 10.11 of the decision document, the FDEP issued a Section 402 NPDES permit on November 21, 2012. The NPDES permit requires that discharges from the mine be monitored to ensure that water quality standards are not violated. • Section 4.4 of the Final AEIS describes the direct and indirect effects of phosphate mining on water quality. • 4.12.4 of the Final AEIS describes the cumulative effects of phosphate mining on surface water quality.
Glenn Compton, Chairman, ManaSota-88, Inc.	(d) Whether Applicant has provided reasonable assurances that the proposed activity is not contrary to the public interest as set forth in Clean Water Act Section 404 and the rules promulgated thereunder; (e) Whether Applicant has provided reasonable assurances that the cumulative impacts of the proposed project, including applicable past, present and foreseeable cumulative impacts, will not cause violations of any state or federal standard; (f) Whether Applicant has provided reasonable assurances that no significant unpermittable adverse cumulative impacts on water quality, and conservation and protection of fish and wildlife resulting from the extraction of phosphate ore will occur; (g) Whether Applicant has provided reasonable assurances there will be no unpermittable foreseeable adverse secondary impacts from the proposed extraction of phosphate ore; (h) Whether Applicant has provided reasonable assurances the mitigation proposed will be viable after construction activities; (i) Whether Applicant has provided reasonable assurances that the applicable state and federal water quality standards will not be violated as a result of the proposed extraction of phosphate ore; j) Whether Applicant has provided reasonable assurances that the proposed extraction of phosphate ore is in compliance with EPA approved water quality standards with regard to Section 404 of the Clean Water Act; (k) Whether Applicant has provided reasonable assurances that the proposed activity is not contrary to the public interest as set forth in Section 404(b) of the Clean Water Act; (l) Whether Applicant has provided reasonable assurances that the cumulative impacts of the proposed project, including applicable past, present and foreseeable cumulative impacts, will not cause violations of any state or federal standard; (m) Whether Applicant has provided reasonable assurances that permanent impacts associated with the disturbance of jurisdictional wetlands and non-jurisdictional wetlands does not violate any state or federal standard; (n) Whether Applicant has provided reasonable assurances that the proposed extraction of phosphate ore is in compliance with Section 7 of the Endangered Species Act.	• Section 7 of the decision document addresses the public interest review for Wingate East. • Section 4.12 of the Final AEIS describes the cumulative effects of phosphate mining, including Wingate East. • The DA permit will include a permit condition requiring Mosaic to provide yearly compliance reports on the status of the authorized activities, the FDEP-required reclamation, and the Corps required mitigation. The permit also includes a condition requiring a comprehensive compliance review every five years. • Once mitigation areas have achieved the necessary performance standards, The DA permit conditions will require Mosaic, to execute and implement a funded long term management plan to monitor and maintain the mitigation areas in perpetuity. • Sections 6 and 7 of the decision document address the 404(b)(1) guidelines and public interest review, respectively. • The Corps' review of the project impacts, as described in the decision document, is limited to those impacts within the Corps' regulatory authority. • Section 10.1 of the decision document describes the Corps' final determinations for Wingate East pursuant to Section 7 of the Endangered Species Act.
Glenn Compton, Chairman, ManaSota-88, Inc.	APPLICABLE LAWS AND STATUTES Federal Laws and Statutes: -Section 404 of the Clean Water Act(33 U.S.C. 1344), -Section 404(b) of the Clean Water Act, -Coastal Zone Management Act and the National Environmental Policy Act., -Section 7 of the Endangered Species Act. Florida Laws and Statutes: -Section 62-302 F.S. - Surface Water Quality Standards, -Section 62-302.530 F.S. - Table: Criteria for Surface Water Quality Classifications, -Sections 62-4 242, 62-4 243, 62-4 244, and 62-4.246 F.S. - antidegradation permitting requirements.	• Comment acknowledged.
Glenn Compton, Manasota-88, Inc.	WHEREFORE, ManaSota-88, Inc., formally requests that ACOE hold a public hearing concerning DA permit application SAJ-2009-03221; Mosaic - Wingate East Mine.	• The Corps has provided a separate, written response to the request for a public hearing.
Beverly Griffiths, Florida Sierra Club Phosphate Committee	Please accept these comments, objections and request for hearing which are provided on behalf of the Phosphate Committee of the Florida Sierra Club regarding the Wingate East Supplemental Environmental Assessment (Supplemental EA or EA). The Florida Sierra Phosphate Committee participated actively throughout your Areawide Environmental Impact Statement process, providing numerous comments and documentation. We incorporate those submissions into this response.	• Comment acknowledged.
Beverly Griffiths, Florida Sierra Club Phosphate Committee	Your Supplemental EA confirms the validity of our prior objections. t demonstrates that the purpose and need statement on which the AEIS and this EA are based is fundamentally flawed and amounts to nothing more than a statement that the mining company needs what it says it needs and that is good enough for the National Environmental Policy Act (NEPA). t is not.	• Section 1 2 of the Final AEIS discusses how the Corps considers purpose and need under NEPA and the 404(b)(1) Guidelines.
Beverly Griffiths, Florida Sierra Club Phosphate Committee	<u>Purpose and Need Statement is Improper</u> We previously commented that the decision to allow the purpose and need for the project to be based solely on what the mining applicant says it wants to mine is improper. t is a purpose and need finding that can lead to only one result, the permit the applicant seeks. The current EA in fact provides an extreme demonstration of this problem. It provides Mosaic's demonstration, paragraphs long, of why it wants to mine 28 MMT, why it "needs" to mine 28MMT. And the need is apparently that it has already rebuilt a beneficiation plant and bought new dredges assuming that it would be allowed to mine 28 MMT. EA 6. Mosaic's business plan is all that is required to establish and justify the purpose and need. This turns the whole idea of purpose and need upside down.	• As explained in Section 1.7.1 of the decision document, production is part of the applicant's statement of need. As also explained in Section 1.7.1, and as stated in 33 CFR Part 325, Appendix B, when defining the purpose and need for a project "while generally focusing on the applicant's statement, the USACE will in all cases, exercise independent judgment in defining the purpose and need for the project from both from the applicant's and the public's perspective."
Beverly Griffiths, Florida Sierra Club Phosphate Committee	Mosaic's past investment decisions simply illustrate that it knows that the Corps will give it a permit for whatever it wants and that the whole AEIS/EA process is preordained. The AEIS/EA is a post hoc rationalization for a corporate business decision. This is fundamentally contrary to NEPA and the Clean Water Act (CWA). In fact, in explaining the revisions to the mining plan since the AEIS, the EA document states that the "inability to absorb increased mining cost and/or low sales prices have caused numerous U.S. mining operations to fail. The Applicant would face similar risks, including becoming an economically-marginal producer." EA 5. Rather than recognize the reality that there is plenty of phosphate on the world market and that the past claim by Mosaic that it	• Section 1 2 of the Final AEIS discusses how the Corps considers purpose and need under NEPA and the 404(b)(1) Guidelines. • Section 1.7 of the decision document references the public and applicant's need discussion in the Final AEIS, and describes the project-specific basic and overall project purpose, and the applicant's need, for Wingate East

	is providing a crucially needed world product is no longer valid, if it ever was, the Corps now sees its mission as propping up the economics of the company by lowering environmental compliance costs. The purpose and need statement is fatally flawed and Mosaic's decision, prior to permitting, to invest in a revised beneficiation plant and new draglines is not a reason to issue it whatever permit it wants. It is simply an admission by Mosaic that it believes the permit process is one that it controls. We ask the Corps to revise the EA to reflect the purpose and need along the lines we have previously requested, to mine phosphate in a manner that protects the environment.	
Beverly Griffiths, Florida Sierra Club Phosphate Committee	The Alternatives Analysis is Fatally Flawed The Alternatives Analysis selects as alternatives other Mosaic mines and judges them by a set of criteria that require 28 MMT and compliance with Mosaic's mine development sequence. EA 10. Again, the alternatives are predesigned to reach only one outcome, the permitting of Wingate East. The process is improper but the stretch to reach this result leads to some upside-down reasoning.	• Section 1.7 of the decision document describes the purpose and need for the project. • Section 5 of the decision document explains how the Corps considered the purpose and need in its alternatives analysis.
Beverly Griffiths, Florida Sierra Club Phosphate Committee	For example, the Mosaic Ona mine is identified as an alternative but is rejected because it does not meet the Mosaic mine plan! EA 13. The Mosaic Pioneer mine is identified as an alternative but is rejected as being more environmentally damaging! EA 16. We assume that Mosaic and the Corps will remember this when it comes time to permit Pioneer and reject any Pioneer permit. To evaluate other possible alternatives the Corps assumes a preservation rate of 14%, making it perfectly clear that preservation is not driven by the actual analysis of the environmental characteristics of the property but by what Mosaic will agree to. And several alternatives are rejected because they don't produce 28 MMT. In fact, an alternative which would protect important landscape features is rejected because it only produces 21 3 MMT, demonstrating that Mosaic's production plan is driving all decisions. EA 20. Note that if one used Mosaic's actual past production efficiency of 85%, rather than the hypothetical 100% now assumed in the EA, its "need" would be only 23.8 MMT, almost met by the 21 3 MMT alternative, demonstrating again that the EA is drafted to justify a decision to give Mosaic what it wants, rather than to comply with the NEPA required review.	• Sections 1.1.1 and 1.4 of the Final AEIS describe the purpose for the AEIS. • Section 1 2 of the Final AEIS explains how the Corps is required to consider the purpose and need of a project. • Section 5 of the decision document describes how the Corps considered all alternatives, including the No Action Alternative, in its review of Wingate East. • Chapter 2 of the Final AEIS describes how the Corps identified alternatives under NEPA.
Beverly Griffiths, Florida Sierra Club Phosphate Committee	Myakka Headwaters Offsite Mitigation Plan The Mosaic offsite mitigation plan involves protection and enhancement of two parcels related to the headwaters of the Myakka River. We support this effort at mitigation and urge that mitigation in general, at this and other sites, focus on protection of the Myakka and Peace River systems, including as much preservation as possible, which will serve the hydrology of the rivers, the groundwater systems associated with the rivers, and the importance of the river systems as wildlife corridors.	• Comment acknowledged.
Beverly Griffiths, Florida Sierra Club Phosphate Committee	Adaptive Management and Financial Assurances The EA assumes there will be a requirement for adaptive management and we strongly endorse that idea, including the availability of results so that the public can participate in that process. We believe, however, that the assumption that financial assurances will be limited to 110% of 3 years of obligations is entirely insufficient. Hardwood systems are hard to replace and, even where successful, take extended periods of time. The Corps, or Mosaic, or both, have already identified the risk of company failure due to lower prices. Mosaic's recent well-publicized gypstack failure demonstrates the costs faced by the company for its many high-risk operations. (This ongoing event has been widely covered in the press and is illustrated in detail by Mosaic at http://www.mosaicco.com/florida/new wales water loss incident htm. We understand the current amount of the repair cost is $70 million. We are supplying a limited sample of the some of the coverage here: http://www.theledger com/news/20170302/mosaicsinkhole-repair-on-schedule-for-june-finish; http://www.tampabay.com/news/environment/water/fillinq-sinkhole-taking-lonqer-thanexpected-mosaic-says/2327294).	• As described in the approved compensatory mitigation plan for Wingate East, implementation financial assurance covers all compensatory mitigation areas that have not yet achieved their performance standards for as long as it may take to do so. The financial assurance is updated on a yearly basis to include new mitigation areas and 'release' successful areas.
Beverly Griffiths, Florida Sierra Club Phosphate Committee	We have previously contended that fertilizer plants and gypstacks should be included in the AEIS and EA analyses. That discussion is included in the material we have asked to be incorporated. We simply point out here, in addition, that Mosaic and the Corps have themselves referred to the risk of failure. t is important that the public interest be protected from any failure of obligation due to insufficient financial assurances. Mitigation, reclamation, monitoring, adaptive management and possible gypstack failure costs, looking out over the period of operation and closure, should be covered by an actual bond. Further, the evidence that gypstack failure is a real and existing possibility requires that comprehensive gypstack monitoring be a part of the permit for any mine which will send material to that gypstack and its fertilizer plant. In this case we understand that the Riverview and New Wales gypstacks will be receiving wastes from management of the Wingate East mine materials and should be monitored as part of mine permitting.	• Once the Wingate East mitigation areas have achieved the necessary performance standards, The DA permit conditions will require Mosaic to execute and implement a funded long term management plan to monitor and maintain the mitigation areas in perpetuity. Funding will take the form of a guarantee surety bond and standby trust agreement with FDEP acting as bond obligee and trust beneficiary on behalf of the Corps. • Section 1 3.1 of the Final AEIS, explains why phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants.
Beverly Griffiths, Florida Sierra Club Phosphate Committee	In summary, the Supplemental EA is nothing more than a post hoc rationalization for a decision to permit whatever Mosaic says it wants. We object to the EA and ask that an adequate supplemental EIS and CWA analysis be performed before permitting. Further we request that a public hearing be held to address the deficiencies in the proposed EA and obtain input to support the review required by statute.	• The decision document describes how the Corps' review of the application for Wingate East complied with all relevant federal regulations, including Section 404 of the Clean Water Act. • The Corps has provided a separate, written response to the request for a public hearing.
Beverly Griffiths, Florida Sierra Club Phosphate Committee	Thank you for your service and for this opportunity to comment. Beverly Griffiths, on behalf of the Florida Sierra Club Phosphate Committee	• Comment acknowledged.
Dennis Mader/3PR (People for Protecting Peace River, Inc.)	Our organization (People for Protecting Peace River or 3PR) is once again appreciative for the opportunity to offer comments on the Supplemental Environmental Assessment (SEA). t is our sincere hope that the USACOE will duly consider the input of the public sector in determining the appropriateness of allowing the presence of yet another phosphate strip mine in west central Florida. Please note that our organization is a signatory to the very detailed and comprehensive review of the SEA prepared by the Center for Biological Diversity, and we concur absolutely with their comments. Also, note that 3PR submitted into the public record a very lengthy review (133 pp) of the FAEIS, June 3, 2013, and we have not departed significantly from our thoughts or opinions on the unacceptable and deleterious effects of phosphate mining on the natural environment or the economy of west central Florida. Since all phosphate stripmining operations in Florida are prima facie the same, the comments we made in our review of the AEIS hold true for the proposed operations of Wingate East. It differs only in the most minute of details. Therefore we would like to make it unmistakably clear that based on the tainted and indeed shameful record of the phosphate industry over the past century we as an organization would implore you to deny this permit.	• The decision document provides the Corps' final determinations for Wingate East.
Dennis Mader/3PR (People for Protecting Peace River, Inc.)	1. The first and most basic flaw of the SEA is the state of purpose and need; it is too narrow and precludes a fair examination of alternatives, including the No-Action / no permit alternative. This critical short-coming was addressed in our comments on the AEIS: The Applicants' purpose and need forms the basis for the alternatives analysis. The purpose and need for an Environmental Impact Statement is "Protection of the Environment" in federal actions. Nowhere is this NEPA directive found in the FAEIS. The FAEIS therefore completely obfuscates and fails to acknowledge the primary purpose and legal basis upon which it, by law, must be founded and developed. The position taken by the USACE is inconsistent with federal law, and has the effect not only of promoting phosphate strip mining, but to virtually ensure and predetermine that alternatives proposed by the Applicants are approved (permitted). This position taken by the USACE effectively excludes Alternative-1 ("No Action" / "no permit"). It is clear that all of the other alternatives are merely additional scenarios acceptable to the Applicants.	• Sections 1.1.1 and 1.4 of the Final AEIS describe the purpose for the AEIS. • Section 1 2 of the Final AEIS explains how the Corps is required to consider the purpose and need of a project. • Section 5 of the decision document describes how the Corps considered all alternatives, including the No Action Alternative, in its review of Wingate East. • Chapter 2 of the Final AEIS describes how the Corps identified alternatives under NEPA.

	None were formulated by the 3rd party public at large. In actuality, NEPA requires that "the agency" propose the "alternatives, including the proposed action", not the Applicants. And, "the agency", is required to do this by "affirmatively soliciting comments from those persons or organizations which may be interested or affected".	
Dennis Mader/3PR (People for Protecting Peace River, Inc.)	40 CFR 1502.13 Purpose and need. The statement shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action. The "Purpose and Need" should be changed to: "The purpose of the proposed action is "Protection of the Environment" via independent comprehensive analysis of the direct and cumulative environmental impacts of phosphate strip mining throughout the CFPD, while ensuring protection of all natural environmental assets, conservation of water and air, public health safety and welfare". (p. 25 3PR Comments FAEIS)	• Section 1 2 of the Final AEIS explains how the Corps is required to consider the purpose and need of a project.
Dennis Mader/3PR (People for Protecting Peace River, Inc.)	2. Wingate East would destroy (or impact) a high percentage of the wetlands and streams on the site. These are significant impacts to the water resources of the United States that belong to the people. Mosaic should not be allowed to destroy these water resources. Mining phosphate rock for their own corporate gains is not in the public interest. Again, this is a point that we expressed repeatedly in our comments to the AEIS: 3PR questions the adequacy of the environmental analyses in the FAEIS because it does not consider the irreplaceable values of natural wetlands systems, or the essential role of native soils relative to ecosystem function and hydrology. Evaluations of the important dynamics of surface water, groundwater and soil interaction are completely omitted. And, the FAEIS does not appropriately recognize and consider: (1) the regional (CFPD) and statewide cumulative impacts of area-wide destruction of entire classes of native wetlands, such as isolated wetlands, and the concomitant loss of genetic diversity and long-term loss of habitat for dependent animals and other biota; (2) the fact that wetlands systems are complex and may have taken hundred or even thousands of years to develop, and that the phosphate industry does not have the technology (presuming it could exist), the resources, or the will to properly construct and manage, in perpetuity (or until stable and selfsustaining) hundreds of isolated wetlands, many miles of creeks, streams and tributaries; and, (3) that the processes required for wetlands to establish, stabilize, and begin to efficiently remove nutrients requires time — a long time in the case of forested wetlands, and this with constant maintenance.	• Section 4.12 of the Final AEIS describes the cumulative impacts of phosphate mining, including determinations of degree of effect and significance. • Section 4 3 of the Final AEIS describes the direct and indirect effects of phosphate mining on groundwater. • Section 4.4 of the Final AEIS describes the direct and indirect effects of phosphate mining on water quality. • Section 5 of the decision document describes how the Corps considered project alternatives to avoid and minimize adverse impacts to waters of the United States in its review of Wingate East, including the preservation of as much of the higher-quality habitats as was practicable. • Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively, including water quality and surface water hydrology • The Corps independently evaluated the information in the document to ensure that it was technically adequate and not biased, and made the final determinations on whether the data provided was adequate and accurate. • Chapter 7 of the Final AEIS provides a list of references for the information used to prepare the Final AEIS. • Section 7 of the decision document describes the Corps' evaluation of public interest pursuant to 33 CFR 320.4 and RGL 84-09. • Section 4.12 of the Final AEIS describes the cumulative effects of phosphate mining, including Wingate East.
Dennis Mader/3PR (People for Protecting Peace River, Inc.)	The phosphate industry's track record of restoring the natural environment is dismal. In most phosphate strip mining operations the natural surficial aquifer system (SAS) is completely or mostly removed. The SAS is the unconsolidated zone or strata important in formation of seepage slopes and seep springs in Florida. t is generally of little or limited interest to most hydrologists due to small discharge or diffuse nature of seepage, but invaluable to the residents of rural areas such as Hardee, DeSoto, and western Manatee counties because SAS wells are the primary source of drinking water, household water, and often irrigation water for these regions. There are many unanswered public health questions, both chemically and radiological, having to do with consuming water from shallow wells located on or near land formerly strip mined. There are also unanswered questions regarding the economic impact of mitigating these concerns, especially in the low-income and minority communities which dominate these regions. An independent scientific committee should be established to comprehensively and exhaustively evaluate the impacts which phosphate strip mining causes, and has caused, to native soils, natural aquifers, wetlands, native ecosystems, regional aesthetics, and public health. Nowhere in the FAEIS are these impacts or natural resources properly evaluated, cumulatively evaluated, or their values genuinely considered as required by NEPA. The FAEIS, throughout, is directly inconsistent with NEPA's legally authorized mission and "Basic National Charter" of "Protection of the Environment". The protection of ecosystems and ecosystem services is essential for the protection of all aspects of Florida's precious water resources, and for the protection public health, the economy and human society. (pp 71-72 3PR Comments FAEIS)	• Section 4.1 8 of the Final AEIS addresses several of the issues related to community health, safety, and quality of life, with consideration of federal, state and local requirements. • Section 4 6.4 of the Final AEIS describes the economic effects of Wingate East. Section 7 0 of the decision document considers how changes to the Wingate East project identified in Section 1.4.1 alter the economic resources determinations made in the Final EIS. • The decision document describes how the Corps' review of the application for Wingate East complied with all relevant federal regulations, including Section 404 of the Clean Water Act.
Dennis Mader/3PR (People for Protecting Peace River, Inc.)	3. Because of its wholesale destruction of land for the purpose of agricultural production, as well as residential and commercial development, further phosphate mining is not in the public interest generally; it particularly violates the interests of the less advantaged segment of the Florida population and thereby becomes an issue of environmental justice. This issue was thoroughly addressed in 3PR's response to the AEIS. Allow me to quote here from our comments: it is certain that wide-spread destruction of native agriculture soils and potential farmlands, some of which have been in production for decades, and extensive alterations of topography and water resources, will negatively impact rural communities whose residents traditionally derive their livelihoods from local agriculture which historically has been the dominant industry of the region. Many decades are required to build the infrastructure necessary to sustain such regionally specialized agriculture as citrus farming, truck (vegetable) farming, berry farming, cattle ranching, and others. Area-wide phosphate strip mining is an exploitive, short-sighted industry, out for huge profits at the expense of lands, traditions, and communities. Mining erodes agricultural infrastructure and the rural way of life by temporarily moving part of the economy to an industry which merely passes through, destroying tremendous tracts of agricultural land as it proceeds. The industry quickly mines its way through communities leaving perpetual, incomprehensible liabilities in its wake. Some agricultural lands which have been recently mined had been in almost continuous agricultural production for nearly 100 years. The traditional way of life and otherwise prosperous future of (predominantly rural agricultural) counties are thus threatened by the permanent and multifaceted devastation imparted by phosphate strip mining. When communities become reliant on a polluting and environmentally destructive industry for jobs and tax revenues, local governments become more reluctant to take actions which would avoid risks to health and the environment that cost the industry money. Many public health risks are not visible or apparent to the general public or the elected bodies which represent them. In this scenario, minority and low-income communities usually do not enjoy the benefits of their labor in proportion to the health risks and economic impacts they are forced to bear. Although a great body of science exists which provides technologies for efficient, profitable, and safe farming in areas supported by native soils, much less is known concerning the unnatural rocky/marl/sand/clay/etc (Arents-Hydraquents-Neilhurst) substrates resulting from phosphate strip mining. (3PR Comments FAEIS pp 12-13)	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively. • Section 4 6 of the Final AEIS evaluates the economic effects of phosphate mining. In addition, Section 7.0(p) of the decision document describes how the Corps updated the economic analysis to consider project changes since the Final AEIS. • Section 4.7 of the Final AEIS evaluates the impacts of phosphate mining on minority or economically disadvantaged communities. • As stated in Section 12.2.3 of the decision document, "The Corps has determined that this proposed project would not use methods or practices that discriminate on the basis of race, color or national origin nor would it have a disproportionate effect on minority or low-income communities."
Dennis Mader/3PR (People for Protecting Peace River, Inc.)	4. There is no credible third-party study proving the viability of reclaimed phosphate for any commercial purpose due to the presence of radioactivity caused by the concentration and removal of natural radioactive elements in the phosphate matrix. Therefore phosphate mining is not in the public interest. At issue are approximately 10 square miles of former phosphate mining lands near Lakeland, FL, where EPA has taken no cleanup action despite concerns since the late 1970s that the indoor air of homes built on the lands are contaminated with cancer causing levels of radiation. The overwhelming cost of cleaning up the sites -- as much as $11 billion by some estimates -- has been a factor in the lack of action, agency officials admit in documents Inside EPA recently obtained under the Freedom of Information Act (Superfund Report, Sept. 6). In addition, sources have said a potentially precedent-setting fight between EPA and the state over the appropriate cleanup standard for the sites is another major reason for the agency's inaction (Superfund Report, Jan. 25).	• Section 4 8 2 of the Final AEIS describes the expected effects of phosphate mining, including those associated with Wingate East, on radiation levels. • Section 4.12.1.4 of the Final AEIS describes past, present, and reasonably foreseeable future actions considered in the cumulative effects analysis, including past mining actions and reclamation and reclaimed land re-use on prior mined lands. • Section 3 3.7 of the Final AEIS provides information on the possibility of increased indoor radon concentrations, mining practices that

	The main concern with the Florida sites is that former phosphate mining lands tend to have elevated levels of naturally occurring radium-226 due to past mining activity, and that thousands of people now live in homes built on top of the former mines. "Many of these homes are believed to have elevated levels of [radium-226] or gamma radiation that exceeds EPA's safe standards," according to the EPA documents. (Superfund Report - 10/04/2010) Over the years, residential development on the former phosphate mining lands has continued, and sources say approximately 40,000 people could now be exposed to dangerous levels of radiation. According to a 1994 Federal Register notice, some people in the area are exposed to up to 500 millirems (mrem) per year of radiation, which environmentalists argue is a level significantly higher than the 15 mrem levels EPA has historically considered safe. Based on current EPA Superfund standards, about 1 in 40 people would be expected to develop cancer at the 500 mrem dose level, according to a 2006 internal concept paper the federal Agency for Toxic Substances & Disease Registry (ATSDR) developed regarding the Florida situation, which Inside EPA recently obtained. This is a risk approximately 250 times greater than the 1-in-10,000 cancer risk level that EPA typically considers the worst acceptable scenario at a Superfund cleanup site. (Daily News from InsideEPA com - Thursday, January 21, 2010) Teneroc Fish Management Area (TFMA): The site is a 6,000-acre tract of partially reclaimed phosphate strip mines that the Borden Chemical Company donated to the state of Florida in 1982 to create TFMA. The site consists of approximately 1,000 acres of former phosphate mining pit lakes and 5,000 acres of reclaimed recreational areas for picnicking, hiking, horseback riding, shooting, fishing and small game hunting. The groundwater migration pathway is of some concern because of the proximity of the Auburndale municipal wells, which are located within 4 miles of on-site sources. Due to the presence of karst topography surrounding the site, the surficial and Floridan aquifers are hydraulically connected and consider to be one hydrogeologic unit. An observed release to groundwater has not been established at the site. Radium-226 andradium-228 have been identified at levels above the cancer risk screening concentrations of 0.16 and 0.19 pCi/L in the on-site TFMA private well and nearby private wells. The nearby private wells are located southeast of the on-site source areas; groundwater flow in the/Floridan acquifer is reported to be toward the southwest. (Draft Expanded Site Inspection Report. Borden Chemical Company/Tenoroc Mine, Auburndale, Polk County, Florida U.S. EPA ID No. FLD98727432	reduce the potential for public exposure, and other radiation-related public health concerns. • Section 7 of the decision document describes the Corps' evaluation of public interest pursuant to 33 CFR 320.4 and RGL 84-09.
Dennis Mader/3PR (People for Protecting Peace River, Inc.)	5. Reclaimed phosphate mine is not suitable for agricultural purposes, due to the degradation of natural soil layers. very little acreage of reclaimed land have (sic) been used for commercial agriculture (e.g. row or field crops) or citriculture. The predominant agricultural use is improved pasture. According to SWFMWD's 1999-2000 land use/land cover mapping, of the estimated 48,775 acres of mined soils in Hillsborough and Polk counties, only 6785 acres (just over 1%) are in citrus, 33 acres in row crops, and six acres in nurseries/vinyards probably sod farms). Roughly 3,510 acres (7.2%) is classifed cropland/pastureland (a catch-all category that SWFWMD GIS staff has suggested is largely pasture land), and 202 acres is classified as open rural land . Simply stated, agricultural production on phosphatic clays is a risky venture. (Land Use Suitability Index for Use in Hardee County 2002. Carter and Wharton)	• Section 5.7 of the Final AEIS describes reclamation. • The administrative record contains additional information on the mitigation and reclamation plans for the project.
Dennis Mader/3PR (People for Protecting Peace River, Inc.)	6. t is prohibitively expensive to return reclaimed phosphate land to its natural eco-systems. The strip mining process completely alters soils and hydrology. Strip mining's complete disturbance of the land represents a significant challenge to restore the natural system, type for type, function for function—but it's the law. In Florida, land is reclaimed after mining through the construction of upland and wetland habitats, but successfully reclaiming strip-mined land is an expensive undertaking. The costs to do it right can easily exceed $25,000 per acre. It was my responsibility to review IMC-Cargill's reclamation plan and budget for the proposed 20,000 acre Ona Mine in Hardee County. In virtually every area, IMC-Cargill has grossly underestimated the costs of successful reclamation. Their failure to plan and budget properly will be reflected in the failure of their "restoration" of the natural system. IMC-Cargill has not been able to demonstrate that their plan to reclaim the land will offset the adverse impacts associated with strip mining. Their failure may ultimately put the public at risk for the cost of the proper restoration and maintenance of these lands. In 2003, I evaluated fifty IMC-Cargill reclamation projects. I have observed no improvement in conditions since the completion of our 1997 study for the Florida Institute of Phosphate Research (FIPR). The very poor conditions I observed on most of IMC-Cargill's reclamation projects means that their methods and budgets for reclamation, management and monitoring are inadequate. In short, neither their budgets nor methods are working—and haven't for years. If the mining process does not provide the basic ingredients required for successful restoration, then success is not possible. Without soil, habitat restoration is destined to fail. The natural relationship between the soil and water table elevations does not exist in IMC-Cargill reclamation sites. IMC-Cargill needs to strip, segregate, relocate, and protect/stockpile the native soils and properly relocate and contour these soils after mining. There are typically two levels of plantings, the canopy (trees) and the undergrowth (ground cover). The demands of restoring different habitats such as oak scrub, freshwater swamps, pine flatwoods, prairies and streams are very different. The difference between doing it right and doing it as IMC-Cargill proposes, amounts to thousands of dollars per acre—millions of dollars for a project. In their reclamation budget, IMC-Cargill assumes the same cost per plant per acre with no budget for supplemental planting as a site matures, nor for replanting in response to mortalities. The major form of maintenance performed by IMC-Cargill on their reclaimed lands is the application of herbicides to remove exotic and problematic nuisance plant species. Given the very poor condition of IMC-Cargill's reclamation projects, it is doubtful that their reported maintenance schedules—those they provide to DEP—are followed. Many of the unmined (preserved) lands adjacent to reclaimed strip mine areas are being impacted by over-drainage and exotic plant infestations. Vast areas reclaimed by IMC-Cargill are now fields of cogon grass, producing very little value to wildlife. The current lack of adequate monitoring has resulted in a very serious reporting problem for MC-Cargill. IMC-Cargill is required to provide DEP monitoring reports to demonstrate the progress of their restoration efforts. Absent from this reporting requirement is monitoring of groundwater hydrology, surface water hydrology, water quality, soils, aquatic fauna, wildlife, and ecosystem diversity. Even so, the quality of the reports that are provided is poor. It's difficult to see the real problems and conditions, based on the reports. Again, the cost of doing it right far exceeds what MC-Cargill currently proposes to spend. (Charlotte Sun. By Kevin Erwin, Certified Senior Ecologist Kevin L. Erwin Consulting Ecologist, Inc. May, 2005)	• Section 5.7 of the Final AEIS describes reclamation. • The administrative record contains additional information on the mitigation and reclamation plans for the project.
Dennis Mader/3PR (People for Protecting Peace River, Inc.)	Phosphate strip mining extensively alters the physical, chemical, and hydrologic properties of surficial aquifers and water tables. t is well documented that native upland ecosystems and vegetative communities are precisely adapted and require these special natural attributes (Orzell & Bridges 2006) (Cole et al 1994) (Huck 1987). Natural native ecosystems and their specific vegetative communities are therefore precluded from re-establishment as a result of the native soil destruction caused by phosphate strip mining, phosphate processing waste disposal, and so-called reclamation. The effects of converting vast areas of native soils to unnatural post-mining Arents-Hydraquents-Neilhurst substrates, which cannot support native upland ecosystems, including "dry prairie, pine/palmetto flatwoods" vegetative communities, are devastating to vast areas of the natural environment. These essential ecological assets must be thoroughly analyzed and assessed, providing special attention to the cumulative negative impacts which area-wide phosphate strip mining has imparted, and will impart, on the regional ecology, native biota, genetic diversity (genetic erosion), natural hydrology, and critical bio-hydrologic regimes of the Southwestern Florida Flatwoods Ecoregion. The aerial extent of each native soil type must be correlated to the amount of each native vegetative community which has been lost, and would be lost if phosphate strip mining is allowed to continue. Each native vegetative community must be fully characterized as in Orzell & Bridges (2006) because little is known of ecosystem structure in the regions west of the Lake Wales Ridge, and because numerous plant species have been recently discovered in that region which were formerly unknown to science, and which are planned to be proposed for federal listing. Evaluations must be conducted for each alternative, and for lands which have already been mined, so that negative environmental impacts may be evaluated separately, and then cumulatively.	• Section 4.12 of the Final AEIS describes the cumulative impacts of phosphate mining, including determinations of degree of effect and significance.

	Additionally, destruction of native soils, especially those supporting, or formerly supporting, dry prairie, pine/palmetto flatwoods, precludes traditional agriculture, both private and commercial agribusiness. The agricultural infrastructure within west central Florida is based on nearly 100 years of technology developed specifically to farm on native soils. (p. 50 3PR Comments FAIS)	
Dennis Mader/3PR (People for Protecting Peace River, Inc.)	3PR contends that our conclusions about the monumental and numerous destructive impacts of phosphate strip mining in general and the proposed Wingate East Mine in particular - which is characterized by the same unacceptable elements which have created the impacts that we have summarized in this brief letter of comment would indicate that if the USACE were to fairly consider our input and the more detailed and lengthier narrative of our Review Comments of the AEIS you could not in good faith proceed to grant the applicant the 404 Dredge and Fill Permit. The proposed project does not pass the standard of public benefit. The only conceivable benefit is limited to the economic aspirations of the applicant itself which is not sufficient to allow the project to move forward. We thereby submit our comments with sincerity and respect in hopes that the USACE will fulfill its mandate to uphold the CWA, NEPA and ESI and refuse to allow this project to see the light of day.	• The decision document for Wingate East describes how the Corps evaluated Wingate East under NEPA, the Clean Water Act 404(b)(1) Guidelines, and the public interest test. • Section 5 of the decision document describes how the Corps considered the No Action Alternative in its review of Wingate East. • Sections 1.1.1 and 1.4 of the Final AEIS describe the purpose for the AEIS.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	On behalf of the Center for Biological Diversity, ManaSota-88, People for Protecting Peace River, Inc., and Suncoast Waterkeeper, please accept the attached comments on Mosaic Fertilizer, LLC's Permit Application SAJ-2009-03221 for Wingate East Mine. We submit these comments on behalf of our staff and members, many of whom live and recreate in Manatee County and nearby counties. As explained in detail in our attached comments, we have reviewed the Public Notices, Areawide Environmental Impact Statement, Supplemental Environmental Assessment, Draft Clean Water Act Section 404(b)(1) Guidelines Analysis, Draft Public Interest Review, and Endangered Species Act analyses in related Incidental Take Permits, Habitat Conservation Plans, and Biological Opinions, and we conclude the Project is not in the public interest, will have significant environmental impacts on wetlands, and will likely harm endangered species and their habitats. For these reasons, we respectfully request the Corps deny the permit application. Also, given the substantial interest in holding a hearing and public opposition to Wingate East Mine, we request a public meeting to help ensure informed and transparent environmental decisionmaking. Shortly, you will also receive PDF copies of all literature cited in the comment via the document-sharing service wetransfer.com. We request that you please confirm receipt of this comment and the literature cited. If necessary, please also indicate whether you prefer to receive the literature cited another way. Thank you for the opportunity to submit these comments. On behalf of the staff and members of the Center for Biological Diversity, ManaSota-88, People for Protecting Peace River, Inc., and Suncoast Waterkeeper, we respectfully submit the following comments to the U.S. Army Corps of Engineers (Corps) regarding the June 22, 2017 Public Notice for SAJ-2009-03221 (MEP) also known as Wingate East Mine, in Manatee County, Florida (Project). We submit these comments on behalf of our members, including our thousands of members and supporters who recreate and live in Manatee, and nearby counties.	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively, for Wingate East, including the project's effects on wetlands and listed species. • The Corps has provided a separate, written response to the request for a public hearing. • The Corps has reviewed the submitted literature and considered it in its decisionmaking.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	We have reviewed the Public Notices, Areawide Environmental Impact Statement (AEIS), Supplemental Environmental Assessment, Draft Clean Water Act Section 404(b)(1) Guidelines Analysis, and Draft Public Interest Review and conclude the Project is not in the public interest, will have significant environmental impacts on wetlands, and will likely harm endangered species and their habitats. For these reasons, we respectfully request the Corps deny the permit application.	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively, for Wingate East, including the project's effects on wetlands and listed species.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	Also, given the substantial interest in holding a hearing and public opposition to Wingate East Mine, we request a public meeting to help ensure informed and transparent environmental decisionmaking.	• The Corps has provided a separate, written response to the request for a public hearing.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	I. Wingate East Mine Application Background On May 3, 2013, the Corps published a notice of availability for the Final Areawide Environmental Impact Statement on Phosphate Mining in the Central Florida Phosphate District (FAEIS).4 On July 13, 2013, the Corps released an Addendum to the FAEIS that corrected its surface water hydrology analysis, included public comments received during the comment period for the Draft AEIS but not responded to in the FAEIS, and included a Spanish language translation of the Executive Summary. On June 22, 2017, the Corps released a Supplemental Environmental Assessment, draft public interest review, and draft Clean Water Act 404(b)(1) Guidelines analysis for Wingate East Mine (collectively Supplemental Environmental Assessment or EA). Wingate East Mine would impact 553.1 acres of wetlands of the Wingate Creek Headwaters of the Myakka River Watershed and the West Fork Horse Creek Headwaters of the Peace River Watershed by mining phosphate ore from 3,137 acres within the 3,635-acre property over 20 years.	• Comment acknowledged.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	II. The Corps Must Deny the Clean Water Act Permit Application for the Wingate East Mine	• The decision document for Wingate East describes how the project complies with the applicable federal regulations.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	In enacting the Clean Water Act in 1972, Congress sought "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." The statute provides that "the discharge of any pollutant by any person shall be unlawful" absent a permit. A section 404 permit must satisfy regulations promulgated by the Corps and the Environmental Protection Agency (EPA). Notably, a permit will not be granted if contrary to public interest. The regulations under section 404(b)(1) of the Clean Water Act further provide that adverse impacts to wetlands must be avoided to the extent that practicable alternatives are available that will result in less adverse impacts. A "practicable" alternative is one that is "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes." The 404(b)(1) Guidelines establish a presumption that all practicable alternatives that do not involve a discharge into wetlands have less adverse impact on the environment "unless clearly demonstrated otherwise." To determine whether a practicable alternative exists, the Corps must undertake a multi-step analysis. The Corps must first determine whether the project is water dependent. A water dependent project is one that "requires access or proximity to or siting within the special aquatic site in question to fulfill its basic purpose." If the Corps determines that the project is not water-dependent, it then must presume that practicable alternatives not involving wetlands exist. The Corps may not grant a permit unless the presumption is rebutted by a clear contrary demonstration by the Project applicant. Where no practicable alternative sites exist that would avoid filling or have a less adverse impact on wetlands, the Corps must consider whether "appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem." Corps regulations require the Corps to evaluate the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest weighing foreseeable benefits against foreseeable detriments using all factors that may be relevant. Relevant factors are numerous and include wetlands impacts, fish and wildlife habitat values, and recreational, aesthetic, and economic values.	• Comment acknowledged.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	The Corps must deny the Clean Water Act 404 permit as contrary to the public interest and because it is not the least environmentally damaging alternative available and does not adequately compensate to damage to waters of the United States. First, Wingate East Mine is contrary to the public interest, as evidenced by the widespread opposition to phosphate mining in the region, which is based on the perceptions and opinions of the impacted communities, the science and observations offered by experts, and the economic analysis provided by the public.	• The decision document for Wingate East describes how the project complies with the applicable federal regulations.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	It is beyond dispute that Wingate East Mine's supposed public benefits do not outweigh the damage that will be done to the water resources the Clean Water Act is intended to protect. It is also undisputable that Wingate East Mine is not water dependent, and that the Corps and applicant have not overcome the presumption that a practicable alternative that does not involve a discharge into wetlands exists. Even if the Corps could conclude that practicable alternatives that meet the overall purpose of the project do not exist, it cannot ignore the comments by expert agencies and individuals— and the paucity of information provided by the applicant—that indicates that phosphate mine reclamation does not deliver the promised mitigation or compensation.	• The decision document explains the criteria that the Corps used to evaluate the Wingate East DA permit application. • The Corps made its determination that Wingate East is not "water dependent" in accordance with 40 CFR 230.10(a)(3) • Section 5 of the decision document describes how the Corps evaluated avoidance (offsite) and minimization (onsite) alternatives for Wingate East. Section 12.4.1 of the decision document provides the Corps' LEDPA determination. • Section 5.7 of the Final AEIS describes reclamation. The administrative record contains additional information on the mitigation and reclamation plans for the project, and the

		applicant's history of reclamation and enhancement efforts. • Section 8 of the decision document and the approved compensatory mitigation plan explain how the applicant will compensate for unavoidable impacts to aquatic resources.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	A. The Wingate East Mine is Contrary to the Public Interest	• Section 7 of the decision document describes the Corps' evaluation of public interest pursuant to 33 CFR 320.4 and RGL 84-09.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	When evaluating a permit application, the Corps shall evaluate the probable impacts of the proposed activity on the public interest. This public interest review requires weighing all relevant factors in a general balancing process. These factors include conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, energy needs, safety, and the broader "needs and welfare of the people." The Corps must deny a permit application if it is "contrary to the public interest." In order to perform this public interest review, the permit application must contain a complete description of the proposed activity, including information on the location, purpose, and need for the activity. This description must be thorough enough to provide public notice. An agency must exercise independent judgment in defining the purpose and need of a project and cannot rely exclusively on the statements and opinions of the applicant. Additionally, the Corps may not put forward a purpose and need statement that is so narrow as to "define competing 'reasonable alternatives' out of consideration." The Corps' regulations state "the unnecessary alteration or destruction of [wetlands] should be discouraged as contrary to the public interest." Wetlands considered to perform functions important to the public interest include: -Wetlands which serve significant natural biological functions, including food chain production, general habitat and nesting, spawning, rearing and resting sites for aquatic or land species; -Wetlands set aside for study of the aquatic environment or as sanctuaries or refuges; -Wetlands the destruction of alteration of which would affect detrimentally natural drainage characteristics, sedimentation patterns, salinity distribution, flushing characteristics, current patterns, or other environmental characteristics; -Wetlands which are significant in shielding other areas from wave action, erosion, or storm damage. Such wetlands are often associated with barrier beaches, islands, reefs and bars; -Wetlands which serve as valuable storage areas for storm and flood waters; -Wetlands which are ground water discharge areas that maintain minimum base flows important to aquatic resources and those which are prime natural recharge areas; -Wetlands which serve significant water purification functions; and -Wetlands which are unique in nature or scarce in quantity to the region or local area. The regulations further provide that "[n]o permit will be granted which involves the alteration of wetlands identified as important by paragraph (b)(2) of this section . . . unless the district engineer concludes, on the basis of the analysis required in paragraph (a) of this section, that the benefits of the proposed alteration outweigh the damage to the wetlands resource." Courts have upheld permit denials based on findings that wetlands were important within the meaning of 33 C.F.R. § 320.4(b)(2).	• Comment acknowledged.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	In considering whether a project is in the public's interest, the Corps must refer back to purpose and need for the project. In this instance neither the EA nor the FEIS state a public need for mining phosphate in wetlands. The EA refers the public back to Section 1.2.1 of the Final EIS, while the FEIS states that there is a public need for phosphate rock, but then concedes that more than 95 percent of the U.S. phosphate rock mined is used to manufacture fertilizer. The balance of the six-page public need statement is dedicated to describing the public need for and economic benefits of fertilizer, not mined phosphate ore.	• Section 1 2 of the Final AEIS discusses how the Corps considers purpose and need under NEPA and the 404(b)(1) Guidelines.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	1. The public benefits of fertilizer production are in dispute To begin with, the supposed economic benefit of fertilizer production and the phosphate industry more broadly is disputed. A review of the Corps' economic analysis by Richard Weiskoff in 2012 found that the AEIS economic analysis uses an inappropriate model and fails to take into account the full cost of displacing the dynamic and growing agricultural sectors, especially agricultural services, and their linkages. (Weiskoff 2012). In addition, it found that the quality and productiveness of the reclaimed land cannot be determined. Therefore, the real cost to the region is the loss of farm land, depletion of the aquifer, the accumulation of toxic waste, and the potential destruction of the downstream water supply.	• Section 2 2 6 of the Final AEIS discusses functional alternatives, including the importation of phosphate. • Appendix A of the Final AEIS includes the Corps' responses to Dr. Weiskoff's analysis.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	2. If fertilizer is in the public interest, the Corps should have evaluated its impacts Next, if the public need were truly for fertilizer, as opposed to just phosphate ore, then the EA or the FAEIS should have also evaluated the impacts of the growth or addition of phosphogypsum stacks that would result from approval of the Wingate East Mine. However, in its 2013 AEIS, the Corps stated that "the four proposed phosphate mines have independent utility from the existing fertilizer plants and that the mining operations are single and complete projects" and that the Corps does not consider the phosphogypsum stacks to be a component of the direct and indirect effects of the four proposed mines. Aside from the Corps' failure to evaluate this indirect impact, it is difficult to believe the applicant would invest in a mine expansion for the stated purpose of obtaining phosphate ore for phosphate fertilizer production if it could not also rely on its ability to expand its phosphogypsum management system. The dredge and fill activities of the Wingate East Mine are inextricably related to any future phosphogypsum stack management expansion. Phosphogypsum is a byproduct of the process that converts mined phosphate rock into the compounds used in fertilizer. The desired phosphorous content of the mined phosphate rock is in the form of calcium phosphate which is not readably useable as fertilizer because it does not dissolve in water and cannot be metabolized by crops. In order to create its ultimate sellable product, the applicant separates phosphoric acid in a slurry using sulfuric acid, the slurry is then stored in open-air storage stacks known as phosphogypsum stacks or gypstacks which are often created on unused or mined-out land on the processing site. Phosphogypsum is radioactive, containing uranium, radium-226, and thorium. t may also contain high levels of cadmium, plus any chemicals used in the slurry. Numerous commenters provided information on phosphogypsum stacks that should have been included in the AEIS, noting that: Phosphogypsum stacks are located in the study area and their number and extent are directly a result of past and future phosphate mining. The proposed mines will increase the need for such facilities and add to the recently observed impacts/costs of stack closures. They have not only environmental impacts on water quality, but also potential economic impacts for existing/future public utilities using surface water supplies downstream of mining in the [Central Florida Phosphate District] . . . . The Corps dismissed the comments, stating "[p]hosphogypsum stacks are not specifically address [sic] in the Final AEIS except as an industrial aspect of the cumulative impacts."39 According to the Corps, "[a]lthough they are not included as part of the Proposed Action, they are included in the scope of the cumulative impacts analysis"40 and that the Final AEIS "took into account the impacts of phosphogypsum stacks – as it does other past, present, and reasonably foreseeable actions in addition to the Applicants' Preferred Alternatives – in determining cumulative impacts of the Proposed Action and other reasonably foreseeable actions." The Corps concluded that "the mineral processing plants that produce phosphogypsum as a byproduct, and the phosphogypsum stacks associated with those facilities, are considered by the USACE to have independent utility from the phosphate mining activity." The stacks are not in the public interest as they are radioactive and there's no long term solution for what will be done with the 1 billion tons (and growing) of radioactive waste generated by the process. Indeed, the EPA's 2015 settlement agreement with Mosaic, calling for $2 billion to remedy violations with respect to existing phosphogypsum stacks calls into question whether the applicant is fit to continue to put entire communities at risk with its waste production. The consent decree that resulted from the settlement agreement also calls for a Resource Conservation and Recovery Act (RCRA) hazardous waste determination for eight phosphogypsum stacks. If any of the phosphate mined from Wingate East Mine would contribute to one of those stacks, operations must not begin until a RCRA plan is in place.	• As explained in Section 1.3.1 of the Final AEIS, phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants. • Determination of compliance with the terms of EPA's RCRA settlement is outside the scope of the Corps' authority.

	The threats these phosphogypsum stacks create for local communities is imminent. On September 15, 2016, news broke that a sinkhole had opened up below and in a phosphogypsum stack at Mosaic's New Wales plant.43 The sinkhole had allowed at least 215 million gallons of water to pour into the Floridan aquifer. It appears Mosaic knew about the spill and sinkhole for three weeks before the media broke the story (Bernard 2016). This is not the first time a sinkhole has opened up the stacks at this location, with sink holes occurring in 2013, 2004, and 1994.44 The New Wales phosphogypsum stack is the destination site of the radioactive phosphogypsum that will be generated by the proposed Project. Beyond New Wales, in 2009 a sinkhole at the PCS White Springs facility released more than 90 million gallons of hazardous wastewaters into the Floridan aquifer. To further show how dangerous phosphogypsum stacks are, a leading global specialty minerals and specialty chemicals company, Israel Chemicals Ltd., reported on June 30, 2017, that a dike that is used for the accumulation of phosphogypsum water, a byproduct of phosphate fertilizer production processes conducted at the plant, partially collapsed. The environmental damage is still yet to be determined while the company is continuing its efforts to remedy the immediate environmental effect and damages resulting from the phosphogypsum water spill. The Corps must take these threats to the region seriously and evaluate them as indirect impacts of authorizing phosphate mining in the region.	
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	B. The Corps Must Comply with its Mandate to Avoid, Minimize, and Select the Least Environmentally Damaging Alternative Practicable Under the Clean Water Act the Corps has the responsibility of evaluating permit applications for the discharge of fill into waters of the U. S. The Clean Water Act gave the EPA the task of developing the 404 (b)(1) Guidelines (Guidelines) with the specific goal of providing the environmental criteria and framework by which the Corps evaluates dredge and fill applications. 40 C.F R. Part 230 - Section 404 (b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material, Subpart A - General, Section 230.1 Purpose and policy states: (a) The purpose of these Guidelines is to restore and maintain the chemical, physical, and biological integrity of waters of the United States through the control of discharges of dredged or fill material. (c) Fundamental to these Guidelines is the precept that dredged or fill material should not be discharged into the aquatic ecosystem, unless it can be demonstrated that such a discharge will not have an unacceptable adverse impact either individually or in combination with known and/or probable impacts of other activities affecting the ecosystems of concern. (d) From a national perspective, the degradation or destruction of special aquatic sites, such as filling operations in wetlands, is considered to be among the most severe environmental impacts covered by these Guidelines. The guiding principle should be that degradation or destruction of special sites may represent an irreversible loss of valuable aquatic resources. Nichols et al. (2008) succinctly describe the role of the Guidelines in framing the Corps' review of permit applications for discharges of fill in wetlands: Central to the Guidelines is the fundamental requirement for an alternatives analysis. "[N]o discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the environment, so long as the alternative does not have other significant adverse environmental consequences . . . . [T]he application is required in every case (irrespective of whether the discharge site is a special aquatic site or whether the activity associated with the discharge is water dependent) to evaluate opportunities for the use of non-aquatic areas and other aquatic sites that would result in less adverse impact on the aquatic ecosystem." Thus, applicants must demonstrate that for any discharge or fill activity there is no practicable alternative site for the proposed activity that will have less adverse environmental impacts.	• Section 5 of the decision document describes how the Corps evaluated avoidance (offsite) and minimization (onsite) alternatives for Wingate East. • Section 6 of the decision document addresses the 404(b)(1) Guidelines review for Wingate East. • Section 12.4.1 of the decision document provides the Corps' LEDPA determination.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	For special aquatic sites such as wetlands, however, the Guidelines propose a more difficult test for avoidance with two presumptions. For proposed discharges to special aquatic sites there is a presumption that an alternative site that is not a special aquatic site exists and a presumption that such a site will result in less adverse environmental impacts on the aquatic ecosystem. These rebuttable presumptions clarify how to determine if discharges proposed for special aquatic sites meet the requirement that the practicable alternatives have less significant adverse impact on the environment and do not have other significant environmental impacts.	• Comment acknowledged.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	Furthermore, the Clean Water Act and EPA's Guidelines make mitigation a requirement of the Section 404 program through standards set at 40 C.F.R. §§ 230.10 (a)-(d). The Memorandum of Agreement between EPA and the Corps concerning mitigation under the Clean Water Act 404(b)(1) Guidelines (Mitigation MOA) defines the three steps of mitigation - the first two being avoidance and minimization of impacts: 1. Section 230.10(a) allows permit issuance for only the least environmentally damaging practicable alternative. The thrust of this section on alternatives is avoidance of impacts. Section 230.10(a)(1) requires that to be permittable, an alternative must be the least environmentally damaging practicable alternative (LEDPA). In addition, Section 230.10(a)(3) sets forth rebuttable presumptions that 1) alternatives for non-water dependent activities that do not involve special aquatic sites are available 2. Minimization. Section 230.10(d) states that appropriate and practicable steps to minimize the adverse impacts will be required through project modifications and permit conditions. Sequencing requires the applicant must first demonstrate impacts to wetlands have been avoided. Next the applicant must demonstrate any remaining unavoidable impacts have been minimized. Lastly, and only after avoidance and minimization of impacts has occurred, the applicant must compensate for any remaining impacts [i.e. compensatory mitigation]. Nichols et al. (2008) provides an excellent description of the avoidance requirement: Avoidance is the first step in the sequencing process by which the Corps determines whether or not the proposed project is the least environmentally damaging practicable alternative (LEDPA). The LEDPA is identified by an evaluation of the direct, secondary, and cumulative impacts on the aquatic ecosystem and "other ecosystems" of each alternative under consideration. The Guidelines state: [N]o discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem so long as the alternative does not have other significant adverse environmental consequences.	• Section 5 of the decision document for Wingate East describes how the Corps evaluated all alternatives, including the Applicant's Preferred Alternative. • Section 5 3 of the decision document for Wingate East explains the criteria used by the Corps in evaluating onsite minimization alternatives and in making its determination of the LEDPA. • Section 5.4 of the decision document for the Wingate East explains how the Corps considered onsite minimization alternatives in its review, including the application of the Mitigation Framework described in Section 5.4 of the Final AEIS. • The approved compensatory mitigation plan describes how the permittee incorporated the preservation and enhancement of key landscape systems, including upland and wetland areas, into the mitigation.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	The universality of the requirement to evaluate opportunities for use of non-aquatic areas and other aquatic sites that would result in less adverse impact on the aquatic ecosystem was reiterated in a EPA and Army guidance memo in 1993.47 The Corps formalized the requirement for sequencing in its regulations regarding Compensatory Mitigation for Losses of Aquatic Resources, 33 C F.R. § 332.1: (2) Pursuant to these requirements, the district engineer will issue an individual section 404 permit only upon a determination that the proposed discharge complies with applicable provisions of 40 C.F R. part 230, including those which require the permit applicant to take all appropriate and practicable steps to avoid and minimize adverse impacts to waters of the United States. Practicable means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. Compensatory mitigation for unavoidable impacts may be required to ensure that an activity requiring a section 404 permit complies with the Section 404(b)(1) Guidelines. (3) Compensatory mitigation for unavoidable impacts may be required to ensure that an activity requiring a section 404 permit complies with the Section 404(b)(1) Guidelines. During the 404(b)(1) Guidelines compliance analysis, the district engineer may determine that a DA permit for the proposed activity cannot be issued because of the lack of appropriate and practicable compensatory mitigation options.	• Section 5 3 of the decision document for the Wingate East explains how the Corps considered offsite avoidance alternatives in its review. • Section 5.4 of the decision document explains how the Corps considered onsite minimization alternatives in its review. Section 6 of the decision document addresses the 404(b)(1) Guidelines review for Wingate East. • Section 12.4.1 of the decision document provides the Corps' LEDPA determination.

	Therefore, based on the detailed description of the Clean Water Act's requirements, the 404 (b)(1) Guidelines, the mitigation sequencing requirement, and the least environmentally damaging practicable alternative are fundamental to the federal review of permit applications for the discharge of fill into wetlands.	
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	Here, the Corps does not discuss the public's need to mine phosphate ore or the public's need for the applicant to have a mine in close proximity to its existing beneficiation plant infrastructure, nor does it explain the public's interest in the applicant meeting its desired production output. Since the purpose of the proposed action informs the alternatives analysis, and since the purpose and need statement are not in the public's interest, proper consideration has not been given to alternatives that were not the applicant's preferred alternative, especially the No Action Alternative. The Corps should independently address the purpose and need of the proposed project in its EA to better inform its alternatives analysis.	• Section 1 2.1 of the Final AEIS describes the public's need for phosphate. • The practicable pumping distance for phosphate ore, as described in Section 3.1 5 of the Final AEIS and as referenced in Section 5.1 of the decision document, is a factor in the determination of whether or not an alternative is practicable. • As explained in Section 1.7.1 of the decision document, production is part of the applicant's statement of need. As also explained in Section 1.7.1, and as stated in 33 CFR Part 325, Appendix B, when defining the purpose and need for a project "while generally focusing on the applicant's statement, the USACE will in all cases, exercise independent judgment in defining the purpose and need for the project from both from the applicant's and the public's perspective."
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	1. Practicable alternatives exist The Clean Water Act (as well as the National Environmental Policy Act) require the Corps to analyze the alternatives to the proposed project. The regulations provide that adverse impacts to wetlands must be avoided to the extent that practicable alternatives are available which will result in less adverse impacts. A "practicable" alternative is one that is "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes." If it is otherwise a practicable alternative, an area not presently owned by the applicant which could reasonably be obtained, utilized, expanded or managed in order to fulfill the basic purpose of the proposed activity may be considered." Guidelines establish a presumption that all practicable alternatives that do not involve a discharge into wetlands have less adverse impact on the environment "unless clearly demonstrated otherwise." The applicant has failed to demonstrate that the proposed project is in fact needed, much less that there are no practicable alternatives. Alternatives explore other ways of meeting the purpose and need. Proposing alternatives that are actually projects slated for another time—like the Ona Mine, Pioneer Tract, and Site W-2—circumvents the purpose of an alternatives analysis, which is to consider other actions. The Corps summarized the need and therefore used in its evaluation of the least environmentally damaging practicable alternative, the need to produce 28 million metric tons of phosphate ore, with a maximum production level of 1.7 million metric tons per year, taking into account required infrastructure—namely being within 10 miles of the beneficiation plant. Based on that criteria, the Corps evaluated a No Action Alternative, the preferred alternative, Ona Mine, Pioneer Tract, and Site W-2. The Corps concedes that there is no mine plan for the Pioneer Tract or Site W-2 mine so the applicant provided estimated plans. The Corps purports to have also evaluated seven minimization alternatives, including a No Action Alternative/Upland Mining; Upland Mining with Crossings of water of the United States (WOUS); Priority Avoidance; Initial Landscape Systems Avoidance; Avoidance of Key Landscape Systems; the preferred alternative; and the original mine plan. The Corps rejected the Upland Mining alternative, which would avoid 100 percent of the WOUS and streams, because it would only recover 34 percent of the totally commercially mineable phosphate reserves. It also states that the Project would "conflict with the current County permit" but that ignores the fact that the County itself had to grant exemptions from mining in the watershed and still has not approved the final Master Mining Plan. The Corps rejected the Upland Mining with WOUS Crossings alternative, which would only impact 2.1 acres of WOUS, because it would only allow recovery of 35 percent of commercially mineable phosphate reserves. The Corps rejected the Priority Avoidance alternative, which would only impact 327.6 acres of WOUS and would avoid 100 percent of the resources prioritized by the mitigation framework, because it would only allow recovery of 59 percent of the total commercially mineable phosphate reserves. The fact that the Project purpose was so narrowly drawn precluded other alternatives that would have resulted in less environmentally damaging effects. The Corps should consider other alternatives that would satisfy the project need, like importing the phosphate ore or using less fertilizer in general. There is consensus that the world's phosphate rock supply is finite and that in order to meet global demand for the agricultural sector, greater recycling of and sustainable use of phosphorus will be necessary (Cordell and White 2013). Proposals that look at non-phosphate fertilizers could be examined if the purpose of the Project were more broadly drawn.	• Section 1.7 of the decision document describes the purpose and need for the project. Section 5 of the decision document explains how the Corps considered the purpose and need in its alternatives analysis. • Section 5.4.1 of the decision document describes the Corps' evaluation of the No Action– Upland Only Mining alternative. • Section 2 2 6 of the Final AEIS discusses functional alternatives, including the importation of phosphate. • Section 2 2 6 2 of the Final AEIS explains why avoiding the use of phosphate fertilizers is not a feasible alternative.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	2. The proposed mitigation does not compensate for the Project's impacts	• As described in Section 8.2.7 of the decision document and the approved compensatory mitigation plan, the functional analysis shows that the proposed mitigation replaces the lost aquatic resource functions, with consideration of time lag and risk.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	The Clean Water Act requires applicants to first avoid wetlands through a practicable alternative. If all efforts have been made to avoid impacts, the Act requires the applicant to minimize impacts through project modifications. If—and only if—all efforts have been made to avoid and minimize impacts, may the applicant compensate for the loss through mitigation. As explained above there are numerous practicable alternatives to the proposed project that would avoid significantly impacting these important resources. Further, there is no evidence that the applicant has minimized impacting these resources through project modifications.	• Section 5 of the decision document explains how the permittee avoided and minimized impacts to waters of the United States.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	Minkin and Ladd (2003) conducted a study of the effectiveness of compensatory mitigation projects (creation and restoration) required for permitted impacts in New England and to determine what programmatic improvements might be necessary. Their study found that "[f]orty of the mitigation projects (67%) were determined to meet permit conditions and would be considered successful by that standard[; h]owever, only 10 (17%) were considered to be adequate functional replacements for the impacted wetlands." They attribute the failure of mitigation projects to compensate for wetlands losses in part to "inadequate mitigation amounts for permitted impacts and also for inappropriate functional replacements, e g., replacing forested wetlands with open water, emergent, and/or scrub-shrub systems." They also raised the issue of whether created or restored wetlands could replace those of natural systems and concluded that 1:1 mitigation ratios were inadequate. The study also seems to indicate that insufficient compensatory mitigation has been required to offset project impacts. With impacts to 352 31 acres of wetlands and proposed compensatory mitigation of 324.12, of which no more than 317 65 became wetland, there would be an overall net loss in acreage of wetlands. Since there was considerable out-of-kind mitigation, there were increased losses in the more complex wetland types. The general replacement of forested wetlands with open water and emergent systems has resulted in considerable loss of function, particularly forested wildlife habitat and water quality functions such as denitrification, which occur best in seasonally saturated wetlands. They also considered the results of other studies in reaching a conclusion that greater mitigation ratios are required: He [Whigham] questioned whether there is any scientific justification for the underlying assumption of mitigation, that restored and created wetlands function similarly to natural wetlands with regard to biodiversity and nutrient cycling. He also noted that concentrating on replacing lost acreage amounts fails to account for the wetland degradation and functional loss resulting from creation and restoration of mitigation wetlands of lower functional value. In this regard, greater compensatory mitigation acreage is required to replace the lost functions of impacted systems, i e., mitigation to impact ratio must be greater than 1:1. Minkin and Ladd (2003) concluded that there is a need for higher mitigation ratios if preservation and enhancement are proposed as compensatory mitigation. An examination of enhancement and preservation, included in the overall mitigation proposals for several of the study projects was not reviewed in this study.	• Comment acknowledged.

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	Although preservation and enhancement can be important parts of a mitigation proposal, they do not prevent a net loss in wetland acreage and may not prevent a net loss in wetland function.	
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	Mitigation banks might do no better in providing compensation for lost wetland functions and values. Kihslinger (2008) reported that: A recent more comprehensive review of 12 mitigation bank sites in Ohio found that 25% of the bank areas studied did not meet the definition of wetlands (Mack and Micacchion 2006). Of the actual wetland acreage, 25% was considered in poor condition, 58% was fair, and 18% was good quality in terms of vegetation as compared to natural reference wetlands. The study also found that amphibian community composition and quality was significantly lower at banks than at natural forest, shrub, or emergent wetlands and that pond-breeding salamanders and forest-dependent frogs were virtually absent from the bank sites. A recent study from Florida found that of the 29 banks evaluated, 70% fell within the moderate to optimal range of function. Although the baseline conditions of most sites were in the high functional range, most of the projects relied upon enhancement, rather than restoration, as the mitigation method (Reiss et al 2007). t must be noted that while the findings of the Florida study are more encouraging, these banks employed enhancement, rather than restoration, and that raises the concern that wetlands functions and values continue to be lost.	• Section 8 of the decision document and the approved compensatory mitigation plan explain how the applicant will compensate for unavoidable impacts to aquatic resources. The compensatory mitigation plan complies with the 2008 Compensatory Mitigation Rule, which considers much of the earlier research on unsuccessful mitigation cited in the comments.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	Brown and Lant (1999) conducted a survey of whether 68 mitigation banks within the United States, as of January 1996, were achieving no-net-loss of wetland acreage nationally and regionally. Their review revealed that: Although 74% of the individual banks achieve no-net-loss by acreage, overall, wetland mitigation banks are projected to result in a net loss of 21,328 acres of wetlands nationally, 52% of the acreage in banks, as already credited wetland acreages are converted to other uses. While most wetland mitigation banks are using appropriate compensation methods and ratios, several of the largest banks use preservation or enhancement, instead of restoration or creation. Most of these preservation/enhancement banks use minimum mitigation ratios of 1:1, which is much lower than ratios given in current guidelines. Assuming that mitigation occurs in these banks as preservation at the minimum allowable ratio, ten of these banks, concentrated in the western Gulf Coast region, will account for over 99% of projected net wetland acreage loss associated with banks.	• Section 8 of the decision document and the approved compensatory mitigation plan explain how the applicant will compensate for unavoidable impacts to aquatic resources. The compensatory mitigation plan complies with the 2008 Compensatory Mitigation Rule, which considers much of the earlier research on unsuccessful mitigation cited in the comments.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	Sufficient evidence exists to demonstrate the general failure of compensatory mitigation in replacing lost wetlands functions and values. For this reason, an emphasis should be placed on avoidance and minimization of impacts to waters of the state.	• Section 5 of the decision document explains how the permittee avoided and minimized impacts to waters of the United States. • Section 8 of the decision document and the approved compensatory mitigation plan explain how the applicant will compensate for unavoidable impacts to aquatic resources. The compensatory mitigation plan complies with the 2008 Compensatory Mitigation Rule, which considers much of the earlier research on unsuccessful mitigation cited in the comments.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	Beyond so-called "white papers" provided by the applicant, which appear to be little more than the applicant's own propaganda, the AEIS and EA present no information that past reclamation has produced adequate compensation or that future mitigation or reclamation will be adequate to compensate for impacts to wetlands and species' habitats. However, information to the contrary has been provided by several expert agencies and individuals.	• The approved compensatory mitigation plan complies with the 2008 Compensatory Mitigation Rule, which considers much of the earlier research on unsuccessful mitigation cited in the comments.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	For example, USGS critiques the DAEIS for not basing its assumptions about surface and groundwater impacts in logic or science. Likewise, the Florida Association of Mitigation Bankers found that "predicting the post-reclamation hydrology has been a challenge historically"; that "the risk of unsuccessful mitigation on mined site is understated in the Draft AEIS"; and that the analysis "should reflect the issues that have plagued the industry's post-reclamation (on-site) mitigation in the past, rather than optimistic speculation about the ability of new technology to resolve these issues."	• Section 4 2 of the Final AEIS describes the direct and indirect effects of phosphate mining on surface water hydrology. • Section 4 3 of the Final AEIS describes the direct and indirect effects of phosphate mining on groundwater. Section 4.12.2 of the Final AEIS describes the cumulative effects of phosphate mining on surface water hydrology. Section 4.12.3 of the Final AEIS describes the cumulative effects of phosphate mining on groundwater.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	Experts on behalf of the Sarasota County Board of Commissioners informed the Corps that: the discussion of mitigation gives a conclusory assertion of an 'evolution' in technology, but does not explain how this evolution took place, and gives no empirical data which demonstrates that the post-reclamation wetlands and streams resemble native habitats in soil type, soil pH, dominant vegetative species composition, species richness or diversity, use by wetland dependent species, microtopography, or hydroperiods. Despite assertions by the industry that undesirable vegetative species in restored wetlands will inevitably die out and give way to desired species, some of the oldest reclamation sites are still dominated by wax myrtle. Given the doubts expressed again and again about the efficacy of past reclamation and restoration technologies . . . the Draft AEIS should provide an in depth discussion as to the reasons why it is believed that current technology will correct past failures 61 Brian Winchester, President and Technical Director of Winchester Environmental Associates, Inc., with more than 40 years as professional Florida ecologist specializing in wetlands ecology with emphasis on wetland creation and restoration cautioned that "over the last two decades there have been thousands of wetland acres released by agencies as being successfully reclaimed that in fact never demonstrated the type and function characteristics comparable to the native wetland systems they were intended to replace."	• Section 8 of the decision document, and the attached approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources. The Corps considered temporal loss and risk in its evaluation of the mitigation.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	Furthermore, while the EA states that the applicant will implement a monitoring program, it does not provide details about that program, other than that the applicant itself will monitor and periodically report to the Corps, allowing the fox to guard the henhouse.	• The DA permit for Wingate East includes conditions requiring monitoring and reporting on the status of the compensatory mitigation and the overall project status, including details on timing, duration, and report content.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	The Corps must seriously consider the concerns of these expert agencies and individuals. It cannot accept the applicant's promises of doing reclamation better in the future than it has done in the past as scientific evidence that promised mitigation in the form of state-mandated reclamation will rise to the task of compensating for the wetlands that will be lost to phosphate mining.	• The DA permit includes a permit condition requiring Mosaic to provide yearly compliance reports on the status of the authorized activities, the FDEP-required reclamation, and the Corps required mitigation. The permit also includes a condition requiring a comprehensive compliance review every five years. As described in the approved compensatory mitigation plan for Wingate East, implementation financial assurance covers all compensatory mitigation areas that have not yet achieved their performance standards for as long as it may take to do so.

Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	III. The Corps must comply with the National Environmental Policy Act Congress provided a broad environmental purpose in the National Environmental Policy Act (NEPA): [t]o declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation . [ ]t is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans. In that regard, NEPA is America's "basic national charter for protection of the environment." NEPA ensures that federal agencies "will have available, and will carefully consider, detailed information concerning significant environmental impacts" and that such information "will be made available to the larger [public] audience." To this end, NEPA requires federal agencies to prepare a detailed EIS for any "major Federal actions significantly affecting the quality of the human environment." The issuance of a Section 404 by the Corps is a "federal action" to which NEPA applies. To determine whether the environmental impact of a proposed project is significant enough to warrant the preparation of an Environmental Impact Statement (EIS), the agency may prepare an Environmental Assessment (EA). An EA is "a concise public document that briefly provides evidence and analysis for determining whether to prepare an EIS or a finding of no significant impact." When an EA is performed on a project, the Corps must take a "hard look" and "must make a convincing case" for a Finding of No Significant Impact (FONSI) and decision not to perform an EIS. The fundamental objective of NEPA is to ensure that an "agency will not act on incomplete information only to regret its decision after it is too late to correct." Therefore, if "substantial questions as to whether a project . . . may cause significant degradation of some human environmental factor," an EIS must be prepared. The Council on Environmental Quality (CEQ) has promulgated regulations to guide agencies in determining whether a proposed project will have "significant" impacts to the environment. Whether an action will have a "significant" impact on the environment, thus warranting the preparation of an EIS, requires considerations of both "context" and "intensity." "Context" means that the significance of an action must be analyzed in several different contexts (i.e. national, regional, and local significance of the action). "Intensity" refers to the severity of the impact. The CEQ regulations set forth several factors for the Corps to consider when evaluating intensity, including, but not limited to: -The degree to which the proposed action affects public health or safety -Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas -The degree to which the effects on the quality of the human environment are likely to be highly controversial -The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks -The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration -Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts -The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act Courts have held that a plaintiff need not show that significant effects will in fact occur, but if a plaintiff raises substantial questions whether a project may have a significant effect, an EIS must be prepared. Completing an EIS is important because the Corps must go beyond the analysis of an EA and describe: (1) the "environmental impact of the proposed action"; (2) any "adverse environmental effects which cannot be avoided should the proposal be implemented"; (3) alternatives to the proposed action; (4) "the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity"; and (5) any "irreversible or irretrievable commitment of resources which would be involved in the proposed action should it be implemented." As part of the EIS, each federal agency must "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." An agency must "rigorously explore and objectively evaluate all reasonable alternatives." In addition, an agency "shall state how alternatives . . . will or will not achieve the requirements of section 101 and 102(1) of the Act" which requires agencies to "use all practicable means" to "assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings" and to "preserve important historic, cultural, and natural aspects of national heritage" as well as how alternatives "will or will not achieve the requirements of . . . other environmental laws and policies." Until an agency issues a Record of Decision (ROD) pursuant to NEPA, no action concerning a proposal may be taken that would have an adverse environmental impact, or limit the choice of reasonable alternatives. NEPA requires the consideration of reasonably foreseeable, direct, indirect, and cumulative impacts to the natural and physical environment. Cumulative impacts are impacts that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.	• Comment acknowledged.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	Federal agencies have a continuing obligation to gather and evaluate new information relevant to the environmental impact of its actions. "An agency that has prepared an EIS cannot simply rest on the original document. The agency must be alert to new information that may alter the results of its original environmental analysis, and continue to take a 'hard look' at the environmental effects of [its] planned action, even after a proposal has received initial approval.	• The information used in the preparation of the Final AEIS and in the evaluation of the application for Wingate East was current and accurate. The decision document for Wingate East is in compliance with NEPA.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	Here, the Corps has clearly predetermined the outcome of its NEPA review. In its EA for Wingate East Mine, the Corps states that despite the fact that the draft analysis "does not include any of the final determinations" required by the Clean Water Act (because "the Corps cannot make such determination until the conclusion of the permit application review process"), those conclusions will be published in the record of decision and statement of findings (RODSOF) (as opposed to a FONSI or determination that an EIS is needed), and that the Corps "plans to adopt the Final EIS and this EA in the RODSOF." Instead, the Corps must complete a site-specific evaluation of the Project and must evaluate the significant impacts will have on the human environment.	• The Corps did complete a site-specific EIS (the AEIS) as well as a site-specific Supplemental EA for the Wingate East project. • As stated in Section 12.3 of the decision document, the Final AEIS considered the direct, indirect, and cumulative effects of the Wingate East project. The decision document is the Record of Decision for Wingate East, in compliance with NEPA.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	A. The Corps must complete a site-specific Environmental Impact Statement before rendering a final permit decision for the Wingate East Mine	• The Corps did complete a site-specific EIS (the AEIS) as well as a site-specific Supplemental EA for the Wingate East project. • As stated in Section 12.3 of the decision document, the Final AEIS considered the direct, indirect, and cumulative effects of the Wingate East project. The decision document is the Record of Decision for Wingate East, in compliance with NEPA.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	The FAEIS does not alone satisfy NEPA requirements for individual projects within its scope. CEQ regulations indicate when tiering from a broader environmental impact statement to a subsequent narrower statement is	• Comment acknowledged. The decision document describes how the Corps' review of

	appropriate, and specifically give the example of a regional or basin wide program statement and the ultimate site-specific statements.	the application for Wingate East complied with all relevant federal regulations, including NEPA's implementing regulations.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	Manifesting this intent, the EA incorporates by reference the FAEIS and provides no further discussion of the Wingate East Mine's impacts. For example, in its factual determinations under the Clean Water Act 404(b)(1) Guidelines for physical substrate, the EA states that "mining leads to a moderate to major degree of effect on surficial geology and soils, including soils and substrate present in wetlands and waterbodies. However, the reclamation required by the state, and the mitigation required by the state and the Corps, will offset the adverse direct impacts of mining."	• Using physical substrate as an example, Section 4.10 of the Final EIS considers the degree of effect moderate and the impacts insignificant if, as expected, local, state, and federal permits will be required, and that adequate assurances will be provided by the applicant that reclaimed areas will be returned to a beneficial use, and that the mitigation will be successful. Absent mitigation and assurances that the reclamation/mitigation would be successful, the degree of effect would be major, and the unmitigated impacts significant. • Referencing Section 4.10 of the Final AEIS, Section 6.1.1 of the decision document considers changes to the project since completion of the Final EIS, the reclamation plan, the approved mitigation plan, and other mitigative measures. • Section 6 6.1 then evaluates the effects to determine compliance with the Section 404(b)(1) Guidelines for Physical Substrate.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	Despite the 1975 Florida law requiring that all lands mined for phosphate after July 1, 1975, be reclaimed, it has been estimated that there are 200,000-300,000 acres of lands yet to be reclaimed. It is important to note the meaning of the word "reclaimed," especially in the context of the word "restored." Restored lands are ones that assist in the reestablishment of natural communities, habitat, species, or other ecological attributes that have been eliminated or greatly reduced by phosphate mining. In contrast, reclaimed lands are lands disturbed by phosphate mining that are rebuilt to provide some beneficial land use. Reclamation has not been proven to provide the same ecosystem benefits as restoration. At least one author has compared the restoration of phosphate mined lands to Everglades restoration saying that "the restoration of phosphate mined lands may be a far greater challenge."	• Comment acknowledged.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	With respect to mitigation, the Corps reports that the applicant's proposed mitigation plan includes: the preservation of 292 acres of on-site wetlands; the enhancement and preservation of 27 acres of on-site wetlands; the "reestablishment" of 598 acres of on-site wetlands; the "establishment" of 45 acres of off-site herbaceous wetlands; the preservation of 37 acres of offsite forested wetlands; the enhancement and preservation of 8 acres of off-site wetlands and the "establishment" of 4 acres of off-site wetlands.	• The approved mitigation plan is attached and is summarized in Section 8 of the decision document.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	A 1993 study comparing non-mined river basins with reclaimed river basins in west central Florida found the following (Lewelling 1993): -Peak runoff rates from the reclaimed basins generally were higher than those from the unmined basins during intense, short-duration storms; -Reclaimed basins backfilled with clay sustained no base flow to streams; -The depth to the water table in the surficial aquifer in the three reclaimed basins was greater than the unmined basins; and -Recharge from the surficial aquifer to the underlying aquifer was greatly reduced. Other studies have found impacts to water quality. FIPR (2001) explains that the major reagents used in phosphate beneficiation include fatty acid (to collect the phosphate), amine (to collect the sand), fuel oil (as an extender), sodium silicate (to depress sand), soda ash or ammonia (to modify pH), and sulfuric acid (for washing away the collector on the rough concentrate). Multiple pounds of each of the above additives are used per each ton of phosphate, and since phosphate operations produce millions of tons annually, millions of pounds of the reagents are used annually. t is estimated that 30 percent of the reagents are unaccounted for and may be released into the environment. This same study detected fuel oil in groundwater samples of surficial aquifer and intermediate aquifer wells that had been installed in active and inactive sand tailing areas (FIPR 2001). Zhang (2012) found that "[c]lay-settling areas (CSAs) are one of the most conspicuous and development-limiting landforms remaining after phosphate mining" (Zhang 2012). The clay lined bottom of the CSA limit their recharge capacity, evaporating instead of recharging the groundwater system, which is a loss of water from the upper Peace River basin that did not occur before mining operations began (Metz 2009). This Project calls for the construction of a clay settling area. To be clear, the applicant has proposed to mine in the 25-year floodplain of Stream 100, a tributary of the Myakka River, impacting 4.8 acres of wetlands, and 21.3 acres of uplands. The applicant has also proposed to mine wetlands that are functionally integrated with the 25-year floodplain of Stream 100. Stream 100 connects headwater wetlands to the upper Myakka River downstream of the Wingate East Mine. As the staff report for R-16-132, the Manatee County permit, stated: "[t]he 25-year floodplain of stream 100 provides water quality treatment, energy dissipation, moderation of groundwater flow, nutrient cycling, organic carbon export, flood storage during flood events and habitat functions."86 The staff recommendation found that the applicant had not demonstrated by competent and substantial evidence that the Project can satisfy the requirements of Manatee County Ordinance 04-39 and required a stipulation that no mining would be allowed until wetlands on the Altman Tract, Parcel No. 4 have been reclaimed, and a 30-foot buffer zone around the no mining area. The land has characteristics that are unique, including wetlands, particularly riparian forests. Riparian forests have been found to reduce delivery of nonpoint-source pollution to streams and lakes in many types of watersheds (Vellidis 2002, Vellidis 2003, Lowrance 1984, Lu 1985). Riparian forest ecosystems are excellent nutrient and herbicide sinks that reduce the pollutant discharge from surrounding agroecosystems (Peterjohn 1984). For example, studies from coastal plain agricultural watersheds reveal that riparian forest ecosystems are excellent nutrient sinks and buffer the discharge from surrounding agroecosystems (Lowrance 1984). Riparian buffers are especially important on small streams where intense interaction between terrestrial and aquatic ecosystems occurs (Vellidis 2003), because first- and second-order streams comprise nearly three-quarters of the total stream length in the U.S. (Leopold 1964). During the Planning Commission meeting August 18, 2016, a representative of the applicant, Shannon Gonzalez of Flatwoods Consulting Group hired by Mosaic, stated that there was peer reviewed scientific information indicating that reclaimed lands provide the ecosystem benefits promised. This individual referenced, but did not offer into evidence, an unnamed 2008 report by the Florida Institute of Phosphate Research (FIPR). The 2008 study co-authored by Shannon Gonzalez, commissioned by F PR, reviewed 62 mined lands comprised of 24 upland, 18 wetland, and 20 mixed sites and found five classes of vertebrates, including 299 individual species (BRA 2008). The report did not however rate how well the reclaimed areas fared using any metric.	• Comment acknowledged.

Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	Regarding impacts to surface water quality and suspended particulate/turbidity, the Corps states that Wingate East will have a minor to moderate degree of effect, but appears to attempt to discount that impact stating that discharges will need to comply with 402 permits. Regarding impacts to aquatic ecosystem effects, the EA only generally cites to Corps' obligations to avoid, minimize, and compensate, and states that with mitigation, Wingate East would have no impact to a minor impact on wetlands. Regarding cumulative effects, the Corps states that it performed a cumulative effects analysis in the FAEIS, despite not having site-specific analysis for any of the proposed mines at the time. t also states that since the FAEIS, the applicant has identified multiple additional parcels that will be or are proposed to be part of phosphate mines within the study area, but that this does not alter the cumulative effects determinations made in the FAEIS. The level of analysis performed by the Corps falls far short of the "hard look" required of NEPA. The conclusions the Corps reaches are not supported by the information in front of it and are therefore arbitrary and capricious. Regarding secondary impacts, the EA simply states: "the evaluations of impacts described in the Final EIS included both direct and indirect, or secondary, impacts. Therefore, Chapter 4 of the Final EIS describes the secondary effects of the Wingate East project." However, neither Chapter 4 of the FEIS, nor the EA by incorporating the FEIS, specifically discuss site-specific secondary effects caused by the Wingate East Mine. The purpose of an areawide impact statement is to facilitate the evaluation of cumulative impacts, and should not be a shortcut designed to eliminate in-depth, site-specific scientific evaluation of direct and secondary impacts for each permitted project.	• Section 4.4 5 of the Final EIS describes the predicted effects of Wingate East on surface water quality. Discharges from the mine will need to comply with both a Section 401 water quality certification (FDEP ERP) and a Section 402 NPDES permit (also issued by FDEP). • Section 4 5 of the Final EIS describes the predicted effects of Wingate East on ecological resources. Chapter 5 of the Final EIS describes mitigation. Section 5 of the decision document explains how the permittee avoided and minimized impacts to waters of the United States. Section 8 of the decision document and the approved compensatory mitigation plan explain how the applicant will compensate for unavoidable impacts to aquatic resources. • Section 4.12 of the Final EIS describes the cumulative effects of phosphate mining. This cumulative effects analysis included available information about the direct and indirect effects of each of the four proposed actions, including Wingate East, as described in the Final EIS and its appendices. • Sections 2 d.v and 5.g of the decision document provides additional explanation about how the Corps considered the additional parcels and other changes in its cumulative effects analysis for Wingate East. • Sections 4 2 through 4.10 of the Final EIS describe the direct and indirect effects of the alternatives considered, including Wingate East. The Corps used the analyses of the Wingate East alternative in the Final EIS to support its 404(b)(1) Guidelines and public interest reviews of Wingate East in Sections 6 and 7 of the decision document, respectively. • Changes to the Wingate East project identified in Section 2.d of the decision document do not alter the determinations made in the Final EIS.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	B. The Corps cannot issue a Finding of No Significant Impact.	• The decision document does not include a Finding of No Significant Impact determination. As described in Section 1.1.1 of the Final AEIS, the Corps already determined that Wingate East, along with the other three phosphate mines then proposed, should be evaluated in an EIS. The Corps prepared the Final AEIS in compliance with NEPA.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	The Project meets several of the significance factors warranting an EIS.	• As described in Section 1.1.1 of the Final AEIS, the Corps already determined that Wingate East, along with the other three phosphate mines then proposed, should be evaluated in an EIS. The Corps prepared the Final AEIS in compliance with NEPA.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	Phosphate mining in Florida is open pit strip mining where a company strips approximately 10 meters of so-called overburden and removes the matrix below which contains the phosphoric ore. Beneficiation of the matrix separates the phosphoric ore from the sand and the clay. The sand tailings are set aside for use in recontouring the land once mining is completed. The clay is returned to the empty pits and stored in elevated clay settling ponds (the clay is now swollen with water and chemicals used in beneficiation) where they wait to drain. These clay settling areas occupy about 40 percent of post-mining lands. The phosphoric ore is treated with sulfuric acid to produce phosphoric acid, which is used in fertilizer. This process creates phosphogypsum, a radioactive byproduct for which the Environmental Protection Agency requires that it be stored in stacks indefinitely because of its radioactivity. t is radioactive due to the presence of naturally occurring, but artificially concentrated and released, uranium, radium-226, and thorium. It may also contain high levels of cadmium.	• Comment acknowledged.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	In 2003, Judge Johnston, in adjudicating a case regarding phosphate mining in neighboring Charlotte County found that "phosphate mining in this area is accomplished through utter destruction of the local natural environment from ground surface down to a depth of approximately 50 feet." Unfortunately, this observation is true wherever phosphate is mined in Florida. The Peace and Myakka river basins have been substantially altered by open pit mining for phosphate, changes in land use for mining, and groundwater use for phosphate mining.94 It is beyond dispute that phosphate mining has forever altered the natural landscape, including streams and drainage. For example, in some areas of the upper Peace River basin, the surficial aquifer does not even exist because phosphate mining has removed the surface sediments.	• Chapter 4 of the Final EIS describes the anticipated direct, indirect, and cumulative effects of the four proposed actions, their alternatives, and reasonably foreseeable future actions.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	In addition to scarring the landscape, groundwater pumping for phosphate mining has been implicated in the creation of sinkholes in the upper Peace River, and storage of the acidic, radioactive waste generated by the process has also caused sinkholes.	• Appendix F of the Final AEIS describes the development and application of a groundwater flow model to evaluate direct, indirect, and cumulative effects of phosphate mining on surficial, intermediate (2), and Floridan aquifer levels. This modeling was completed on a regional level. Additionally, the Corps considered local-scale modeling that compares pre-mining and post-mining hydrologic conditions, especially in relation to surface water flows and levels. Finally, the water use permit issued by SWFWMD includes permit conditions that protect adjacent water users, the affected aquifers, and onsite and adjacent aquatic resources.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	1. The proposed action may affect public health or safety Phosphate rock mining leads to reallocation and exposure of several heavy metals and radionuclides that become airborne or enter waterbodies. Some of this information is described above in the public interest section regarding phosphogypsum stacks, which has grave health effects; however, in addition, several studies have indicated that phosphate mining poses human health risks. Yang (2014) found elevated levels of lead, manganese, and mercury in house dust, attributable to nearby phosphate mines. Abdalla (2011) found wells downstream of phosphate mining activities had high concentrations of heavy metals, such as lead, cadmium, zinc, and nickel, when compared with upstream wells. In general, the release of these heavy metals can have serious health implications (Al-Hwaiti 2013). Also submitted to the Corps via public comments on its DEIS, members of the public adjacent to mine sites report loss of springs and ecosystem benefits of wetlands that were destroyed and/or moved by mining practices. Likewise, neighboring property owners have complained of fugitive dust. In addition, once the land has been used	• Section 4.1 8 of the Final AEIS addresses several of the issues related to community health, safety, and quality of life, with consideration of federal, state and local requirements. The cited study by Yang et al. involves mining in China, the cited study by Abdalla et al. involves mining in Egypt, and the cited study by Al-Hwaiti et al. involves phosphate deposits in Jordan.

	for phosphate mining, the land can no longer be used for economic development such as agriculture, commercial or residential uses. For example, John Jerue, a resident of South Lakeland, who filed a suit against developer Drummond Co., seeking damages suffered as a result of the contamination to his and several other residents' properties by the phosphate mining and reclamation activities of Drummond and its real estate division. After reclaiming the land, Drummond developed the land into residential properties and sold it without warning of, or disclosing to the buyers, the hazardous radiation and substances it knew emanated from the contaminated property. Reclaimed phosphate land has dangerously high levels of radiation that drastically raise the risk of many cancers. In 2003, EPA officials considered that land so radioactive that it was a candidate for emergency cleanup action, but local politics intervened and EPA never moved forward. Such serious health and environmental concerns are clearly contrary to the public interest.	
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	Phosphogypsum stacks Phosphate ores are comprised of fluorapatite, goethite, quartz, Al-phosphates, anatase, magnetite, monazite, barite, cadmium, nickel (and other heavy metals and trace elements), uranium, thorium, and radium. Phosphogypsum is a waste by-product of processing phosphate ore by "wet acid method." Phosphogypsum is largely comprised of gypsum, but may also contain phosphoric acid, monocalcium phosphate, dicalcium phosphate, calcium phosphate, residual acids, flourides, sulphate ions, trace metals (arsenic, silver, barium, cadmium, chromium, lead, mercury, and selenium, and organic matter. The wet processing also concentrates naturally occurring radium, uranium, polonium, and thorium. Depending on the phosphoric ore, processed phosphogypsum can have 60 times the radioactivity as the level found prior to processing. Radium and lead are the major radionuclides with activity concentrations high compared to recommended normal levels (Afifi 2009). In a 2009 review of literature on the environmental impact and management of phosphogypsum, Tayibi et al. found that radon from Ra-226 decay is a significant environmental problem, as is exposure to local gamma radiation levels many times more than normal, background rates. t also found stack solutions and wells monitoring surface waters had elevated uranium and radium. Bolivar (2000) likewise identified estuary contamination of polonium, uranium, barium, zinc, nickel, copper, cadmium, and strontium from near phosphogypsum stacks. Wang (2014) found uranium in river sediments near phosphate mines. Duenas (2007) found significant radon exhalation from phosphogypsum stacks and nearby lands. For every one ton of phosphoric acid produced, five tons of phosphogypsum are produced. The phosphate industry in Florida produces about 30 million tons of phosphogypsum each year. Approximately 15 percent of phosphogypsum worldwide is recycled as building materials, fertilizer, or soil stabilizers, the remaining 85 percent are stored untreated in stacks. There are 25 gypstacks scattered around Florida, and just one stack can cover 500 acres wide and 240 feet tall. These gypstacks contain about 1 billion tons of radioactive phosphogypsum. That's enough to give every man, woman and child in Indonesia, Brazil and Pakistan, one ton of phosphogypsum each. Tayibi et al. (2009) conducted a review of the environmental impact and management of phosphogypsum, noting that about 5 tons of phosphogypsum are generated for every one ton of phosphoric acid produced. This by-product is usually disposed into large stock piles in coastal areas without any treatment, causing serious environmental damage. Phosphogypsum contains high levels of impurities such as phosphates, fluorides and sulphates, naturally occurring radionuclides, heavy metals, and other race elements. Sahu et al. (2014) found that phosphate ore processing and disposal of phosphogypsum contributes to enhanced levels of natural radionuclides and heavy metals in the environment, and that the resulting environmental impact should be considered carefully to ensure safety. They found that gypstacks can cause serious environmental contamination of soils, water, and the atmosphere through gypstack erosion and the release of heavy metals, sulphates, fluorosilicates, hydrogen fluorides, phosphorus, cadmium and radium-226. Borylo et al. (2012) found elevated levels of metals in plants nearby phosphogypsum stacks, some higher than permissible levels in food. They calculated that the factor contamination for the plants were 2.1 for Pb, 3.7 for Zn, 2.8 for Ni, and 3 2 for Fe for green parts, to 11.8 for Pb, 12.2 for Zn, 9.4 for Ni, and 5.5 for Fe in root times higher in comparison to non-contaminated plants. They concluded that the subject gypstack may pose a health risk to the local population through consumption of the vegetables. Borylo et al. (2013) found elevated levels of Po and Pb in soil near a phosphogypsum stack. They theorized that heavy rainfall for a long time may cause infiltration of radionuclides from phosphogypsum stacks to nearby soils and waterways. Al Attar et al. (2011) found elevated levels of fluoride in air and soil sampling near phosphogypsum stacks. Da Silva (2010) found that phosphate mining and processing (where phosphogypsum was created) enriched cadmium was enriched 105-208 times and uranium was enriched 18-44 times. It also found a general trend of an increase in heavy metals content with decreasing particle size. There are 25 gypsum stacks in the region, including the New Wales stack that recently caused at least 215 million gallons of radioactive hazardous waste to spill into the Floridan aquifer.105 This is not the first time a sinkhole has opened up below a radioactive phosphogypsum stack, it's not even the first time a sinkhole has opened up at this site. In 1994, a sinkhole formed under the north stack, and in 2004 and 2013, two other "anomalies" were remediated.106 Furthermore, in 2009 a sinkhole at the PCS White Springs facility released more than 90 million gallons of hazardous wastewaters into the Floridan aquifer. In October 2015, the EPA and Mosaic settled a lawsuit regarding a series of alleged violations of how Mosaic handles and stores its hazardous waste. The Southwest Florida Water Management District believes that sinkholes may form when "industrial phosphate run-off and materials settlement storage ponds are created . . . . The substantial weight of the new material can trigger an underground collapse of supporting material, thus creating a sinkhole."	• As explained in Section 1.3.1 of the Final AEIS, phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	2. The land has unique characteristics such as proximity to wetlands The land has characteristics that are unique, including wetlands, particularly riparian forests. The proposed alternative will impact over 553 acres of Corps' wetlands.	• The Wingate East project involves 221 acres of Corps jurisdictional forested wetland impact, and 543 acres of impact to Corps-jurisdictional wetlands overall.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	The wetlands and adjacent lands support a host of imperiled and iconic species including wood stork, eastern indigo snake, crested caracara, Florida scrub jay, bald eagle, gopher tortoise, Florida pine snake, gopher frog, Florida sandhill crane, Sherman's fox squirrel, Florida burrowing owl, southeastern American kestrel, Florida mouse, snowy egret, little blue heron, tricolor heron, white ibis, and American alligator. Haag (2010) found wetlands are a dominant feature in Florida's landscape and represent a greater percentage of the land surface in Florida than in any other state in the conterminous United States. There are an estimated 11.4 million acres of wetlands occupying 29% of the area of the State.	• Comment acknowledged.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	As Semlitsch and Bodie (1999) argue, small wetlands are crucial for maintaining regional biodiversity in a number of plant, invertebrate, and vertebrate taxa (e g. amphibians). A consequence of losing these wetlands lies in potential changes to the metapopulation dynamics of the remaining wetlands. The consequences could be a reduction in the number or density of individuals dispersing and an increase in dispersal distances among wetlands. A reduction in wetland density can decrease the probability that a population can be "rescued" from extinction by a neighboring source population because of lower numbers of available recruits and greater distances between wetlands. Remaining wetlands could face increased probabilities of population extinctions.	• Section 8 of the decision document, and the approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources. As detailed in the mitigation plan, the permittee proposes preservation, enhancement, and establishment of aquatic resources across a wide range of sizes and hydroperiods.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	While wetlands provide numerous services to human society, perhaps one of the easiest to quantify is flood protection. A Washington State Department of Ecology evaluation of the economic worth of this single function produced values ranging from $8,000 to $51,000 per acre (Leschine 1997). The study points out that "policies which permit wetlands to disappear that are presently contributing little to stem flood protection, but which have the potential to do so in the future, could lead to rapidly rising values for the remaining wetlands for flood protection, as increasingly marginal wetlands are called into service. At some point the 'next best' alternatives to enhanced flood protection will not involve wetlands at all, and the purely engineered systems that might have to be built could prove very expensive indeed." Of course any analysis that included economic values of the full range of wetland functions including pollutant removal, flood protection, recreation, species protection, groundwater recharge, and others would obviously derive much higher values.	• Comment acknowledged.

Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	3. The effects on the quality of the human environment are likely to be highly controversial The Corps has already received thousands of comment letters from concerned and impacted citizens of Florida. Furthermore, the byproduct of the process the Corps is considering permitting is radioactive, with no real solution for permanent storage. These two factors alone warrant an Environmental Impact Statement and make a FONSI a factual and legal impossibility.	• The Corps has addressed comments received during scoping and on the Draft AEIS in accordance with NEPA requirements. The Corps has also addressed comments on Wingate East and additional AEIS comments in accordance with NEPA requirements. • As explained in Section 1.3.1 of the Final AEIS, phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants. As described in Section 1.1.1 of the Final AEIS, the Corps already determined that Wingate East, along with the other three phosphate mines then and currently proposed, should be evaluated in an EIS. • The Corps prepared the Final AEIS in compliance with NEPA.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	4. The possible effects on the human environment are highly uncertain or involve unique or unknown risks This topic is covered in the public interest and public health and safety sections above.	• Chapter 4 of the Final AEIS describes the direct, secondary/indirect, and cumulative effects of phosphate mining, including Wingate East. • Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	5. The action is related to other actions with individually insignificant but cumulatively significant impacts The FEIS details, and the Corps is currently considering, associated projects that cumulatively have significant impacts.	• As described in Section 1.1.1 of the Final AEIS, the Corps already determined that Wingate East, along with the other three phosphate mines then and currently proposed, should be evaluated in an EIS. The Corps prepared the Final AEIS in compliance with NEPA.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	6. The action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act This topic is covered in the following section.	• Section 10.1 of the decision document describes the Corps' final determinations for Wingate East pursuant to Section 7 of the Endangered Species Act.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	IV. The Corps and U.S. Fish and Wildlife Service must comply with the Endangered Species Act Congress enacted the ESA to provide a "means whereby the ecosystems upon which endangered species and threatened species depend may be conserved . . . [and to implement] a program for the conservation of such endangered species and threatened species." At its core, the ESA prohibits any person from taking any species listed as endangered, and empowers the Service to promulgate regulations prohibiting the taking of any species listed as threatened. "Take" is defined broadly to include all manner of harm or harassment to protected species, including both direct injury or mortality and also acts and omissions which disrupt or impair significant behavioral patterns. Similarly, federal agencies are required to "carry[] out programs for the conservation of endangered species and threatened species,"119 and to "insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the adverse modification of [the critical] habitat of such species." Section 7 Consultation Section 7 consultation is required for "any action [that] may affect listed species or critical habitat." If the action agency determines its action "may affect" a listed species, the agency must initiate formal consultation with an expert agency (in this case, the Service). Once the action agency has initiated formal consultation, the Service is required to complete a biological opinion (BiOp) for that proposed action. The BiOp summarizes the Service's findings and determines whether the proposed agency action will jeopardize the continued existence of any species or result in adverse modification of critical habitat. If the Service determines the agency action is likely to jeopardize the continued existence of a listed species or result in adverse modification, the BiOp impacts such that the agency action may avoid jeopardizing listed species. Pervading the Section 7 consultation process is the mandate for "each agency [to] use the best scientific and commercial data available." Importantly, each federal agency has an independent duty to "use the best scientific and commercial data available" to ensure any action it authorizes "is not likely to jeopardize the continued existence . . . or result in the destruction or adverse modification of [the critical] habitat" of any listed species. Section 7(a)(1) of the ESA requires the Corps, in consultation with and with the assistance of the Service, to utilize its authorities in furtherance of the purposes of the ESA by carrying out programs for the conservation of endangered and threatened species. Federal agencies have an independent and substantive obligation to insure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or adversely modify critical habitat. Indeed, a "no jeopardy" BiOp from the Fisheries Service does not absolve the action agency of its duty to insure that its actions comply with the ESA. Section 10 Incidental Take Permit and Habitat Conservation Plan The ESA, by way of its "language, history, and structure . . . indicates beyond doubt that Congress intended endangered species to be afforded the highest of priorities" for protection under the law. Thus, the ESA prohibits the "take" of a listed species. Section 10 of the ESA provides an exception to the take prohibition by allowing the incidental take of a listed species where, "such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity." An "incidental take permit" (ITP) will not be granted unless the applicant submits a habitat conservation plan (HCP) to the Service, who receives delegated authority from the Secretary of the Department of Interior. The Service then makes a determination that the "impact which will likely result from such taking" and the "steps the applicant will take to minimize and mitigate such impacts . . . will not appreciably reduce the likelihood of the survival and recovery of the species in the wild." Before issuing an ITP, the Service must make a finding that the application and conservation plan provide: 1) the taking will be incidental; 2) the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking; 3) the applicant will ensure that adequate funding for the plan will be provided; 4) the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and 5) the measures, if any, required under subparagraph (A)(iv) will be met . . . Prior to granting an ITP application, the Service must also undergo the consultation process with itself, as outlined in Section 7 of the ESA, to assure that granting the permit "is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species." To jeopardize the continued existence of the species is to engage in an activity that either, "directly or indirectly . . . reduces appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species." When engaging in Section 7 consultation to determine whether the approval of an ITP will cause jeopardy, the Service is required to render its decision by evaluating the "best scientific and commercial data available." If the Service determines the project is unlikely to cause jeopardy to the species or adverse modification of its habitat, the agency must provide a statement specifying the impact of the incidental take on the listed species, outlining "reasonable and prudent measures" to minimize the impact from incidental take, and setting forth any conditions the agency and applicant must follow in accordance with the ITP. In addition to its obligations under the ESA, the Service also must satisfy its obligations under NEPA before it may issue an ITP. NEPA requires that all federal agencies carrying out "major Federal actions significantly affecting the quality of the human environment" produce a "detailed statement" that specifies the impact the proposed action will have on the environment, the adverse effects resulting from the proposed action that cannot be avoided, and any alternative actions. Under NEPA, the agency must also consider "any irreversible . . . commitments of resources," such as the loss of a protected species caused by the proposed action.	• The decision document describes how the Corps' review of the application for Wingate East complied with all relevant federal regulations, including Section 7 of the Endangered Species Act. • Section 10.1 of the decision document describes the Corps' final determinations for Wingate East pursuant to Section 7 of the Endangered Species Act. • Section 4.1 8 3 of the Final AEIS describes how the Corps considered Climate and Sea Level Rise in its review of phosphate mining. • Section 1 3.1 of the Final AEIS, explains why the Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the existing fertilizer plants.

Federal agencies, like the Service here, must prepare an EIS prior to engaging in "major Federal actions" that significantly affects the environment. An agency's decision to grant a permit may constitute "major federal action," triggering the need for an EIS.

U.S. Fish and Wildlife Service engagement on Wingate East Mine

In the course of approving an ITP for Wingate East Mine, on May 24, 2012, the U.S. Fish and Wildlife Service (Service) transmitted a letter to the applicant purporting to make a "determination" for federally listed species on the property. It states that on some unidentified date, Cardno Entrix evaluated the Project for potential impacts to federally-listed species and determined that the Project occurs within the range of the wood stork and Audubon's crested caracara and determined that the project is not likely to adversely affect ether species. It also stated that no other listed species of plant or animal are known to occur on the property and that "therefore the project will not affect any other listed species."

A. The 2012 ITP is invalid

The May 18, 2012 ITP (permit number TE236128-1) is legally and scientifically deficient and violates Section 10 of the ESA because: 1) the underlying ITP, habitat conservation plans, and BiOps on which the 2012 ITP relies are deficient; and 2) new information and amendments to the mining plans warrant reinitiation of consultation and an amended ITP. The Service and Mosaic relied on a convoluted mix of HCPs, ITPs, ITP amendments, and BiOps—many of which are legally and scientifically deficient—in an attempt to analyze and cover anticipated take incidental to mining activities at Wingate East Mine. This haphazard patchwork of analyses has led to legal, scientific, and procedural deficiencies in the overall review of species impacts under the ESA.

1. Background

<u>ESA Permitting History</u>

In September 2009, Mosaic submitted to the Service an application for an ITP and a supporting HCP for the take of Florida scrub-jays (Aphelocoma coerulescens) on approximately 4,345 acres at the "Texaco Tract" (later known as the "Wingate East Tract," which includes both the 661-acre Wingate Extension Mine and the 3,684-acre Wingate East Mine) in Manatee County for a period of 24 years.145 On September 28, 2010, the Service issued Mosaic an ITP for take of Florida scrub-jays in connection with clearing and mining activities on the Wingate East Tract (ITP No. TE236128-0, hereinafter "2010 ITP"). Concurrent with the ITP, the Service authorized translocation of scrub-jays from the Wingate East site to the 1,000-acre Mosaic Wellfield in Manatee County (TE051429-0).147 On September 27, 2010, the Service issued an ESA Section 7 BiOp on its decision to issue the 2010 ITP.

On October 5, 2011, Mosaic submitted to the Service an application and HCP for amendment of the 2010 ITP to cover additional listed species; namely, the eastern indigo snake (Drymarchon couperi). Additionally, Mosaic sought to extend the duration of the permit to 41 years from the date of amendment. The application and HCP for the permit amendment almost exclusively analyze impacts to the eastern indigo snake.

On May 18, 2012, the Service issued a modified version of ITP Number TE236128-0 (2012 ITP), which covered the take of Florida scrub-jay and eastern indigo snake on the Wingate East Tract. As part of the permit-amendment process, on May 15, 2012, the Service issued an ESA Section 7 BiOp, which constituted the Service's opinion of the 2012 ITP's impacts to the eastern indigo snake only. Although the modified 2012 ITP also authorized take of the Florida scrubjay, the Service did not appear to initiate consultation on the modification or reinitiate consultation on the 2010 ITP. Rather, the Service decided "[t]he [BiOp] dated September 28, 2010 will continue to be the Service's [BiOp] for the scrub-jay" and declined to further address Florida scrub-jays in the 2012 BiOp.

<u>Eastern indigo snake</u>

The Service listed the eastern indigo snake as threatened under the ESA in 1978. Historically, the species was found throughout Florida, Alabama, Mississippi, and portions of Florida; however, the species is now only found within Georgia and Florida. Eastern indigo snakes are more often "found in pinelands, tropical hardwood hammocks, and mangrove forests," as they are more inclined to upland habitats and ecosystems. The most frequent used types of habitat where the indigo is found includes "pine flatwoods, scrubby flatwoods, dry prairie, tropical hardwood hammocks, edges of freshwater marshes, agricultural fields, coastal dunes, and human-altered habitat"; however, the species needs a variety of these habitats to complete its life cycle. The eastern indigo snake shares a special relationship with the gopher tortoise, which is critical in northern portions of the snake's range because it will take refuge in the tortoise's burrows to weather the cold. This relationship is somewhat less critical in the milder south Florida climate where indigo snakes have been documented using manmade refugia and disturbed habitats. The snakes are still known to use the underground burrows of these tortoises and other species in the region of the Project. Thus, the survival of the indigo snake is essentially tied to the health and survival of the gopher tortoise.

The eastern indigo snake was initially listed as threatened as the result of several activities including, habitat destruction and fragmentation, "over-collecting for the pet trade, and mortality from gassing gopher tortoise burrows to collect rattlesnakes." Presently, the species is vulnerable to habitat destruction and fragmentation associated with "residential and commercial construction, agriculture, and timbering." Development will continue to impact the eastern indigo snake because it permits increasing human populations in indigo snake habitat, which leads to an increased risk of snake mortality resulting from vehicular collisions and contact with property owners and domestic animals. The indigo snake is also subject to harm from the bioaccumulation of pesticides in its prey, which results from the use of pesticides in agricultural and silvicultural activities, and from contact with rodenticide used to control rat populations within its range.
On July 18, 2016, Krysko et al. published a peer-reviewed article identifying a new, cryptic species of indigo snake in the United States, the Gulf Coast indigo snake (Drymarchon kolpobasileus). The study distinguishes the new species from the federally threatened eastern indigo snake (Drymarchon couperi) using morphological and molecular analyses, and it identifies new distributions for each discrete species based on their observed morphological and genetic differences.

This study has several implications for the conservation of the species as a whole, the Central Florida Phosphate District, and in the South Pasture Extension project area. On a broad scale, this study takes an already rare and imperiled species of snake and effectively splits it into two separate species that inhabit even smaller ranges. As a result of splitting the species in two, these species are of increased rarity, and thus any proposed impact on "eastern indigo snakes" will need to be reassessed based on the ecology and conservation status of each distinct species. Locally, the study reveals that the species in Manatee County is not the eastern indigo snake, but rather the cryptic Gulf Coast indigo snake.

Climate change and sea-level rise also threaten the eastern indigo snake. Amphibians and reptiles are considered to be highly sensitive to anthropogenic climate change (Corn 2005, Blaustein et al. 2010, Mitchell & Janzen 2010, Li et al. 2013). As ectothermic animals, all aspects of their life history are strongly influenced by the external environment, particularly temperature and moisture (Case et al. 2015). Climate change is expected to affect amphibians and reptiles at the individual and population levels though a number of pathways including shifts in phenology (seasonal life-cycle events) and range; habitat alterations including changes in hydrology, vegetation, and soil; changes in pathogen-host dynamics, predator-prey relationships, and competitive interactions which can alter community structure, all of which can affect a species' survival, growth, reproduction and dispersal capabilities (Corn 2005; Blaustein et al. 2010;
Mitchell & Janzen 2010; Li et al. 2013).

In addition, global climate change poses a serious threat to terrestrial ectotherms like the eastern indigo snake simply because they rely on the external environment to regulate and stabilize their body temperatures. It is predicted that large areas of the planet will experience a variance in thermal regimes, mean temperatures, and precipitation (Aubret & Shine 2009). Although Florida's climate is predicted to warm less than other regions in

North America, a climate inventory over the past 35 to 108 years indicated Florida is experiencing greater climate extremes, with trends of increased summer and fall maximum temperatures and decreased winter and spring minimum temperatures (Reece et al. 2013). Terrestrial ectotherms in particular are at risk from these changes because they are less effective at buffering their body temperature than other creatures. Changes in ambient temperature have been shown to impact growth, locomotion, and reproduction in terrestrial ectotherms because these processes are strongly dependent on body temperature (Reece et al. 2013). An inability to buffer body temperature may alter essential behaviors of reptiles like the eastern indigo snake, including feeding, breeding, and searching for shelter, and alterations could result in increased vulnerability to predators and extreme climate. The future survival of these species will be entirely dependent on their ability to adapt to a rapidly changing climate. Sears et al. 2016 recently found ectothermic species' success at regulating their body temperatures in a warming climate also depends on the distribution and accessibility of cool microclimates, factors previous reptile studies have failed to assess. Thus, it is possible that estimates of future reptile extinctions are much higher than previously thought.

Though past studies of reptiles indicate they will have difficulty adapting to warmer climates in the future, these studies may underestimate the full impact to these ectothermic species. Sears et al. (2016) recently found ectothermic species' success at regulating their body temperatures in a warming climate depends not only on the availability of cool microclimates but also on the distribution and accessibility of those microclimates, factors previous reptile studies have failed to assess. Specifically, the study found that when shaded areas were liberally interspersed with nonshaded areas, reptiles were able to successfully maintain stable temperatures; however, when shaded areas were clumped together, reptiles had a difficult time regulating and maintaining stable temperatures (Sears et al. 2016). Because the location and proximity of shaded and nonshaded areas for thermoregulation is key for ectotherms like the eastern indigo snake, the Board should consider the Project's impact on accessibility of appropriate microhabitat for thermoregulation. It is likely that the large footprint of the Project will create a barrier, causing snakes to expend excess energy and subject themselves to increased risk of predation to travel from one "clump" of microhabitat to another.

Because eastern indigo snakes are rare and face numerous threats, they are listed as Threatened under the federal Endangered Species Act and Florida's Endangered and Threatened Species Act. Despite these protections, habitat loss and degradation throughout the eastern indigo snake's range continues to cause the decline of this rare, beautiful, and important snake (Johnson & McGarrity 2016).

The Service's recovery plan for the eastern indigo snake highlights monitoring as an essential tool for attaining the snake's recovery. The Project area should be resurveyed to determine the relevant locations and habitat use of eastern indigo snakes. The Project should also impose a monitoring plan for the life of the permit, which would allow the Service to identify severe population declines and take action.

Breininger et al. (2012) have concluded that habitat fragmentation is likely a critical factor for the eastern indigo snake's persistence and that eastern indigo snakes are vulnerable to extinction in conservation areas bordered by roads and developed areas. Though the snake's chances of survival can be quite high in conservation core areas, its survival rates significantly decline in conservation areas along highways and in suburbs. More than half of known snake mortalities documented in the study were caused by humans, directly or indirectly, along roads. Additionally, the Service should consider whether "corridors" between protected areas are wide enough to provide adequate protection for eastern indigo snakes.

When assessing the Project's impacts on eastern indigo snake habitat, the Service should not only consider broad habitat types used by the eastern indigo snake (e g., upland habitat) but also availability of essential microhabitat required by the species. For example, Hyslop et al. (2009) found that "[r]eduction in suitable underground shelters caused by habitat degradation and loss, which reduces or eliminates populations of [gopher tortoise], is likely an important factor in extirpation of the species from areas otherwise perceived as suitable habitat."

Florida scrub jay

The Service listed the Florida scrub jay as a threatened species under the ESA in 1987.172 The species is endemic to Florida and requires specific habitat features with "well drained to excessively well-drained sandy soils [and] oak-dominated scrub, or xeric oak scrub . . . [that is] adapted to nutrient poor soils, periodic drought, high seasonal rainfall and frequent fires." Due to the scrub jay's particular habitat needs, the primary threats to its survival are habitat destruction, including both loss and fragmentation, and habitat degradation. Given these threats the Service must better explain why the Project is not likely to adversely affect the Florida scrub jay.

About 16 percent (650 pairs) of the existing scrub jay population face an extinction probability of 3-50 percent. These subpopulations primarily occur in Manatee and Sarasota counties (FWS 2016). Eleven of the remaining 21 metapopulations are highly vulnerable to quasi-extinction, including populations in Manatee County (FWS 2015).

2. The 2012 BiOp for the Eastern Indigo Snake is Deficient and Violates Section 7 of the ESA

The 2012 BiOp is deficient because: (1) it does not adequately consider all impacts to affected species; (2) it does not rely on the best available science and does not draw rational connections between the facts found and the choices made; (3) it fails to address impacts to Florida scrubjays, which are also covered under the amended permit; and (4) it does not have a valid incidental take statement (ITS).

First, the 2012 BiOp fails to consider all impacts to listed species affected by the ITP. The 2012 BiOp fails to provide a detailed analysis of all the impacts of the action, including but not limited to: the steps of the mining process and how it will impact the species, including timelines, intensity of the actions, and what types of take the will cause (i.e. killing, injuring, harming, harassing); the purported efficacy of mine reclamation and whether peer-reviewed science supports Mosaic's claims that it will mitigate impacts to listed species; claims that mining will occur in a fashion that allows snakes to move safely from one unmined area to another; and claims that eastern indigo snakes will return to the site following reclamation. Although the 2012 BiOp states that "[m]ining will take approximately 36 years, followed by reclamation, for a total 41-year period," it does not analyze how the time lag between mining and reclamation will impact species. Additionally, although the 2012 BiOp mentions that juvenile indigo snakes may hide in temporarily established sheltering areas during construction, such as brush piles, equipment stock piles, and dirt mounds, it fails to include that as an "impact of the action."

Additionally, although the 2012 BiOp rightly states that "[t]he mine will represent a permanent change to roughly 4,073 acres . . . of the project landscape for eastern indigo snakes," it does not evaluate what the significance of this permanent change is with regard to the eastern indigo snake. For instance, it does not analyze whether the species will ever return following mining, instead simply concluding—with no supporting science—that the species "should recolonize the site as reclamation is completed and gopher tortoises are restocked to the reclaimed upland habitats."

Moreover, it appears the Service did not have the final mitigation plan before it when it considered impacts to species—including purported beneficial impacts of reclamation. Without the precise reclamation and mitigation plans before it, the Service was precluded from performing an informed analysis of proposed reclamation based on the best available science, which is required under Section 7 of the ESA.

The 2012 BiOp also considers mitigation for the Florida scrub-jay at the off-site Mosaic Wellfield mitigation area as a "beneficial effect" for the eastern indigo snake. Although the two species sometimes exist in the same habitats, there is no indication that any conservation measures will be undertaken specifically for the eastern indigo snake at the mitigation site. The Service cannot rightly rely on mitigation for one species to offset impacts for another.

The 2012 BiOp also fails to consider fertilizer production plants as activities that are interrelated or interdependent to mining at the Wingate East Mine. "The test for interrelatedness or interdependentness is 'but for' causation: but for the federal project, these activities would not occur." It is clear that fertilizer production at Mosaic's facilities, and thus creation of phosphogypsum waste, will not proceed but for the economically viable phosphate rock supplied by the SPE Mine. More specifically, phosphate extraction at the Wingate East Mine and fertilizer

	processing are interrelated actions that are jointly justified by the larger action of creating and selling synthetic fertilizers Likewise, based on Defendants' own representations, fertilizer production plants would have no independent utility apart from the "economically viable" phosphate rock supplied from the SPE Mine. The 2012 BiOp also inappropriately characterizes private and local actions as federal actions to avoid analyzing them as cumulative impacts. The 2012 BiOp is not based on the best available science and does not make a rational connection between facts found and decision made. For example the BiOp failed to include all the best available science on the eastern indigo snake's home range, omitting a study by Smith 2003 demonstrating that in Florida, home ranges for female and male snakes range from 5 to 371 ac and 4 to 805 ac, respectively.187 Although it cites to Breininger et al. (2004), it fails to acknowledge the most important conclusion from that study—that eastern indigo snakes require large, interconnected, upland systems with few fragmenting effects from roads to persist. Likewise, in its climate change analysis, it failed to assess the full projected impacts of climate change by failing to acknowledge that Titus and Narayanan's (1995) worst-case scenario is premised on a 1 percent chance that global warming would raise sea level, that most climate change researchers agree with the findings in the PCC Report (2007), and that more recent scientific evidence indicates an increase in the speed and scale of changes affecting global climate. Additionally, the BiOp uses information from surveys on the Wingate East site to determine the number of indigo snakes present, stating that "in roughly 1,318 hours of field effort over a 7-year period in the action area of Wingate East mine over a total of 50 days."188 However, the BiOp does not indicate whether surveying occurred during the appropriate times of day and year. As the BiOp indicates, eastern indigo snakes are cryptic and difficult to find during surveys. Consequently, the Service has concluded that surveys should be conducted October 1 through April 30 during daylight hours.189 If the surveying did not occur during this time, it could be inaccurately indicating a smaller eastern indigo snake population that actually exists on site. Using this flawed information to estimate density of snakes at the Wingate East site190 would be arbitrary and capricious and not based on the best scientific information available. Assuming estimates of snake presence at the Wingate East site are accurate, the 2012 BiOp fails to make a rational connection between that information and the decision to allow take of 3 snakes per each 5-year period during the duration of the permit. Analysis in the 2012 BiOp concludes that there are between 2.1 and 3.2 individual eastern indigo snakes in the action area for the Wingate East Mine.191 t is arbitrary and capricious to allow take of more snakes than exist on the Wingate East site. Moreover, the "3 snakes per each 5-year period" limit apparently allows the take of 27 snakes over the 41-year period of the ITP, which appears especially unreasonable in light of the small number of eastern indigo snakes anticipated to use the site. The 2012 BiOp also fails to cite any scientific information showing that phosphate mine reclamation can successfully reclaim land to a point where it will support threatened and endangered species. To the extent it relies on data outside the 2012 BiOp, it fails to cite any reliable, unbiased, peer-reviewed data on the purported efficacy of phosphate mine reclamation. Consequently, its determination that reclamation will mitigate impacts to species is not based on a rational connection between "facts found" and the decision made. The 2012 BiOp fails to analyze impacts to Florida scrub jays, despite new impacts presented by the amended 2012 ITP, presumably because the Service believed "[t]he applicant . . . is otherwise not proposing any changes to the amount of take for the scrub-jay." The new ITP imposes impacts on the scrub-jay and its habitat for a longer duration than the original 2010 ITP.192 Additionally, at the time the 2012 ITP was approved there was new information about the species, the mining plan, and the impact of mining on the species, which should have been considered in the BiOp before the permit was amended. The ITS in the 2012 BiOp also fails to specify take and develop a "trigger" to ensure reinitiation of consultation should anticipated take be exceeded.193 Although the BiOp recognizes potential take in the form of harassment to eastern indigo snakes,194 it fails to specify whether that take is included in the 3-snakes-per-five-year-period take limitation. Even if take in the form of harassment is included in that limit, the ITS fails to implement monitoring and reporting requirements that would capture such forms of take—namely, a requirement that workers immediately report any sighting of an indigo snake leaving the site in response to clearing, mining, or reclamation activities. For all the above-stated reasons, the 2012 BiOp inadequately assessed impacts to eastern indigo snakes from issuing the 2012 ITP for the Wingate East Mine. Consequently, the Service's conclusion that the 2012 ITP is not likely to jeopardize the continued existence of a listed species is arbitrary and capricious. Because the underlying 2012 BiOp is deficient, the 2012 ITP is deficient. 3. The 2012 Concurrence Letter is Deficient and Violates Section 7 of the ESA The Service did not adequately consider impacts to all listed species within the action area of the Wingate East Mine when it concurred that the project is not likely to adversely affect the wood stork and Audubon's crested caracara. t also did not adequately consider impacts to other federally listed species that occur in Manatee County when it found that there would be "no effects to any other listed species."195 Specifically, the Wingate East Mine will impact wood storks because it appears to fall within the species' core foraging areas.196 The Wingate East Mine will also impact Northern crested caracaras. Caracaras, and a known nest, have been observed adjacent to Wingate East Mine, and the site contains open pastureland, which caracaras use for hunting and nesting (when appropriate nesting trees are available).	
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	Mining at the Wingate East Mine site will have unquestionable impacts on the hydrology of the region, which is interconnected with the coastal estuaries through the Peace River watershed, the Little Manatee River watershed, and the Myakka River watershed. Consequently, the Service should not have hastily written off impacts to coastal species such as the gulf sturgeon (Acipenser oxyrinchus desotoi), loggerhead turtle (Caretta caretta), piping plover (Charadrius melodus), green sea turtle (Chelonia mydasi), leatherback sea turtle (Dermochelys coriacea), Kemp's ridley sea turtle (Lepidochelys kempii), smalltooth sawfish (Pristis pectinata), and West Indian manatee (Trichechus manatus).	• Section 4 2 of the Final AEIS describes the direct and indirect effects of phosphate mining on surface water hydrology. • Section 4 3 of the Final AEIS describes the direct and indirect effects of phosphate mining on groundwater. • Appendix F of the Final AEIS describes the development and application of a groundwater flow model to evaluate direct, indirect, and cumulative effects of phosphate mining on surficial, intermediate (2), and Floridan aquifer. This modeling was completed on a regional level. Additionally, the Corps considered local-scale modeling that compares pre-mining and post-mining hydrologic conditions, especially in relation to surface water flows and levels. Finally, the water use permit issued by SWFWMD includes permit conditions that protect adjacent water users, the affected aquifers, and onsite and adjacent aquatic resources. • Essential habitats utilized by smalltooth sawfish, gulf sturgeon, and four species of sea turtles (except when nesting) are under the purview of the NMFS. The Corps sent an EFH assessment dated February 27, 2014, to NMFS Habitat Conservation Division (NMFS-HCD). In a December 10, 2015, e-mail, the Corps requested that NMFS-HCD review the four proposed phosphate mine projects based on that EFH assessment and the Corps applications. In an e-mail dated December 16, 2015, the NMFS Habitat Conservation Division

		(NMFS-HCD) stated that they anticipated any adverse effects associated with the proposed projects that might occur on marine and anadromous fishery resources would be minimal and, therefore, they did not object to issuance of a permit. • Section 10.1 of the decision document describes the Corps' final determinations for Wingate East pursuant to Section 7 of the Endangered Species Act.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	Intraservice consultation and conference must consider effects on listed, proposed, and candidate species.198 "Candidate species are treated as if they are proposed for listing for purposes of conducting internal FWS conferencing." Therefore, the Service must also consider impacts to candidate species including the gopher tortoise, gopher frog, and eastern diamondback rattlesnake. 4. The 2012 HCP Must Meet the Requirements of Section 10 of the ESA The 2012 ITP requires a new HCP that ensures the conservation of both the eastern indigo snake and the Florida scrub-jay, which are both covered in the ITP, and that accounts for new information and impacts presented at the time the permit amendment was sought. If the Service received an HCP for the 2012 ITP amendment, the HCP must meet all the requirements of ESA Section 10 and its implementing regulations, including the requirements discussed in the introduction to this section and those discussed in the next subsection (in the context of the 2010 HCP). The Service cannot rely on the 2010 HCP to support the 2012 ITP because the 2010 HCP only addresses impacts to the Florida scrub-jay, to the exclusion of the eastern indigo snake. 5. The 2010 HCP for the Florida Scrub-Jay is Deficient and Violates Section 10 of the ESA The 2012 ITP is invalid because it relies on an adequate and outdated HCP for the take of scrub jays. The 2010 HCP for scrub jays is legally deficient because it fails to meet the minimum criteria required under the ESA. Specifically, it fails to specify: the likely impact of the taking; the funding available to implement mitigation, minimization, and monitoring measures; and the procedures to deal with unforeseen circumstances. It also fails to analyze all alternatives available to the proposed mine. First, the 2010 HCP fails to "specify . . . the likely impact of the taking."203 "To fully identify all sources of take that may result in an impact, it is necessary to consider each component of the proposed activity in detail."204 Additionally, the HCP must describe "the impacts of the taking should . . . in the HCP relative to a species['] reproduction, numbers, and distribution, which are usually interdependent."205 Although the HCP generally mentions "Land clearing activities associated with phosphate mining"206 and "[a]ctivities normally conducted in the recovery of phosphate,"207 it wholly fails to specifically describe the process involved in land clearing and phosphate mining and how that will impact listed species like the Florida scrub-jay. Rather, the 2010 HCP simply states that "no direct take of the species is anticipated from mining activities,"208 and that the permit only implicates incidental take of occupied Florida scrub-jay habitat. Additionally, the 2010 HCP conclusorily finds that "reclamation activities will restore the upland habitats acre for acre, replacing those lost to mining,"209 without specifying whether and how reclamation activities purportedly mitigate impacts to Florida scrub-jays. In fact, there is no specific discussion of what reclamation of the Wingate East Mine entails. Moreover, the 2010 HCP fails to acknowledge what the 2012 ITP itself recognizes—that scrub-jay habitat "would be permanently eliminated" due to phosphate mining activities 210 Without a detailed analysis of the impacts of phosphate mining and the purported effects of reclamation, the 2010 HCP cannot possibly specify the likely impact of the taking. Moreover, even if the conclusion that reclamation will "replace" habitat lost to mining were true, the 2010 HCP does not explain how reclamation would benefit Florida scrub-jays, when the plan is to translocate all jays currently occupying the site to a different location.211 The HCP must address the specific impacts of mining on the Wingate East site to be legally valid under the ESA 212 Finally, the HCP fails to indicate the amount of scrub-jay take in terms of individuals, which would be necessary for Section 7 consultation and analysis unless it was demonstrated to be impractical. Second, the 2010 HCP fails to "specify . . . steps the applicant will take to monitor, minimize, and mitigate impacts."214 Although the 2010 HCP mentions "minimization" and "monitoring" in the form of translocating scrub-jays and maintaining the Wingate East Mine site prior to mining activities,215 it does not specify what steps are involved in successfully completing activities, including what types of habitat management measures will be used (e.g., prescribed fire, mechanical removal, herbicides). Likewise, although the 2010 HCP mentions reclamation, it does not specify a reclamation plan or otherwise include any details about what reclamation would entail. To be a valid HCP under the ESA, the 2010 HCP must specify the steps Mosaic will take to monitor, minimize, and mitigate impacts. Third, although the 2010 HCP states that Mosaic "will be responsible for all costs" associated with habitat enhancement and restoration, habitat reclamation, translocation, monitoring, and conservation easements, it does not "specify . . . the funding available to implement such measures," as required under the ESA 217 To be a valid HCP, it must specify the funding available to implement minimization, mitigation, and monitoring. Fourth, the 2010 HCP does not "specify . . . procedures to deal with unforeseen circumstances."218 Rather, the 2010 HCP quotes the legal definition of "unforeseen circumstances,"219 states that "unforeseen circumstances could arise and might affect the HCP," and states that there will be a monitoring program to track whether unforeseen circumstances has arisen.220 None of these observations constitute "procedures" to deal with unforeseen circumstances. Fifth, although the 2010 HCP specifies mentions action alternatives ("No Action," "Manage and Continue Current Land Use," and "Restore, Mine and Translocate the Texaco Tract Scrub-Jays), those alternatives are not comprehensively discussed. Further, the 2010 HCP does not consider a full or partial avoidance alternative. 6. The 2010 BiOp for the Florida Scrub Jay is Deficient and Violates The Service's reliance on the 2010 BiOp for the amended 2012 ITP was unlawful because the 2010 BiOp does not adequately assess currently anticipated impacts to the Florida scrub-jay. For example, the 2010 BiOp analyzed the impact to scrub-jays over a 24-year period while the amended ITP would impact scrub-jays for a longer duration—41 years from the ITP issuance in 2012. This constitutes a major change to the terms and impacts of the original ITP and warrants new consultation on the Florida scrub-jay. Because the 2012 ITP relies on this defunct BiOp, and the 2012 BiOp does not analyze impacts to the Florida scrub-jay, the 2012 ITP is deficient and violates Section 10 of the ESA. The 2010 BiOp must also meet all other requirements under Section 7 of the ESA, including appropriately considering all impacts to listed species, relying on the best scientific information available, and specifying take in the ITS. B. The Corps and Service must consult on Wingate East Mine The Corps has an independent duty to consult on its own federal actions; here, the issuance of a Clean Water Act Section 404 permit. The ESA requires consultation with the Fish and Wildlife Service for any "agency action" that "may affect" a listed species or its critical habitat.222 Clean Water Act Section 404 permits are considered "agency actions" under the ESA 223 Likewise, the Service itself has acknowledged that mining activities at Wingate East authorized under the Section 404 permit will affect the threatened eastern indigo snake and threatened Florida scrub jay and may affect the threatened wood stork and threatened Audubon's crested caracara.224 The project may also affect other listed species, as detailed below in Section IV(A)(1). Despite the clear requirement to consult on the Corps' Section 404 permit, the Corps and Service failed to consult. Rather, the Corps and Service miscomprehended, and thus violated, the requirements of the ESA by incorrectly concluding:	• The decision document describes how the Corps' review of the application for Wingate East complied with all relevant federal regulations, including Section 7 of the Endangered Species Act. • Section 10.1 of the decision document describes the Corps' final determinations for Wingate East pursuant to Section 7 of the Endangered Species Act. • Section 3 3 6.1 of the Final AEIS cites studies that looked at the habitat value of reclaimed vs. unmined lands for a variety of species. • Section 4 5 3 of the Final AEIS describes how the Corps considered direct and secondary impacts to wildlife habitat in the Final AEIS. • Section 4 5 3.4 of the Final AEIS describes the specific evaluation of wildlife habitat impacts associated with Wingate East conducted for the Final AEIS. • The decision document for Wingate East describes how the project complies with the applicable federal regulations. • Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively. These analyses include consideration of ecological resources and wildlife. • The Corps' consultation requirements under Section 7 of the ESA do not apply to the alligator.

The ESA consultation for Wingate East Mine is complete. That project was evaluated under section 10 of the ESA as part of the Wingate East Mine Habitat Conservation Plan and, in May 2012, the Service issued Mosaic an Incidental Take Permit for the Florida scrub-jay and the eastern indigo snake. Also in May 2012, pursuant to section 7 of the ESA, the Service concurred with the effects determinations of 'may affect, but is not likely to adversely affect' for the wood stork and Audubon's crested caracara.

The Service's decision to issue an ITP and the Corps' decision to issue a Section 404 permit are two separate agency actions relating to the Wingate East Mine. Consequently, the 2012 BiOp and concurrence letter on the Service's decision to issue an ITP for the eastern indigo snake do not satisfy the Corps' distinct duty to consult on its own separate decision to issue a Section 404 permit. Until the Corps and Service complete consultation on the Wingate East Mine they are in violation of Section 7 of the ESA.

As part of their consultation, the Corps and Service must consider the impacts of the Wingate East Mine on all listed species it may affect, including the wood stork, eastern indigo snake, crested caracara, Florida scrub jay, bald eagle, gopher tortoise, Florida sandhill crane, gopher frog, Sherman's fox squirrel, Florida burrowing owl, southeastern American kestrel, Florida mouse, snowy egret, little blue heron, tricolor heron, white ibis, American alligator, and the Florida panther. Additionally, it must comprehensively consider impacts to species from climate change, population growth, and other nearby development.

1. Service and Corps Must Evaluate Impacts of Wingate East Mine on Listed Species

Wingate East Mine will impact at least 3,500 acres of habitat for listed species, including the wood stork, eastern indigo snake, crested caracara, Florida scrub jay, bald eagle, gopher tortoise, Florida sandhill crane, gopher frog, Sherman's fox squirrel, Florida burrowing owl, southeastern American kestrel, Florida mouse, snowy egret, little blue heron, tricolor heron, white ibis, American alligator, and the Florida panther.

In addition to Wingate East Mine, the applicant is mining or in tends to mine an addition 45,000 acres of nearby land at Desoto, Ona, and South Pasture Mine. The Service must consider the cumulative effect of these mines on the species and their habitat at Wingate East Mine.

The leading cause of extinction is habitat loss (Harris 1984, Meffe 1997), and native habitats in Florida are rapidly disappearing (Kautz 2001 at 56). This has resulted in the extirpation or extinction of 13 vertebrates over the last 150 years (Kautz 2001 at 56). Habitat loss and fragmentation, coupled with human encroachment, have resulted in populations of species that are increasingly isolated from each other (Dobey 2002 at 68). Large mammalian carnivores, like the Florida panther, are particularly vulnerable to habitat loss and fragmentation because of their relatively low numbers, large home ranges, and interactions with humans (Noss 1996 entire, Woodroffe 1998 entire). Their low fecundity and long generation times result in reduced levels of genetic variation (Roekle 1993 entire, Lu 2001 entire). Habitat loss and fragmentation can lead to increased mortality (Jules 1998 entire); reduced abundance (Flather 2002 at 40-56); disruption of the social structure of populations (Ims 1999 at 839-849, Cale 2003 entire); reduced population viability (Harrison 1999 at 225-230, Srikwan 2000 entire, Cale 2003 entire, Lindenmayer 2006); isolated populations with reduced population sizes and decreased genetic variation (Frankham 1996 entire). Loss of genetic variation may reduce the ability of individuals to adapt to a changing environment; cause inbreeding depression (Ebert 2002 entire); reduce survival and reproduction (Frankham 1995 entire, Reed 2003 entire); and increase the probability of extinction (Saacheri 1998 entire, Westmeier 1998, Kramer-Schadt 2004 entire, Letcher 2007 entire, Ruiz-Gutierrez 2008 entire, Sherwin 2000).

A 2009 study concluded the anthropogenic influences—primarily road density and vehicular traffic—can substantially affect the population dynamics of large carnivores with large home ranges, like the Florida panther (Hostetler 2009 entire). Habitat fragmentation and anthropogenic barriers to movement have limited the dispersal capability of species, reducing gene flow among populations and resulting in genetically distinct populations (Dixon 2007 at 455-464). Large carnivores may be much more susceptible to losses in genetic variation due to habitat fragmentation because of their large home ranges, low population densities, and long generation times (Paetkau 1994 entire, Johnson 2001). Isolation is reinforced when travel between subpopulations is limited due to significant barriers, such as high-volume roads (Paetkau 1997 entire, Mader 1984 entire, Brody 1989, Proctor 2002 entire, Voss 2001 entire, Keller 2003 entire, Gerlach 2000 entire, Trombulak 2000 entire, Coffin 2007 at 396-403). Thus roads and other anthropogenic obstacles cans substantially reduce gene flow among populations (Dixon 2007 at 455-464, Kyle 2001 at 343-346, Walker 2001 entire, Ernest 2004).

The applicant must provide with sufficient specificity what effect the permanent loss of the original habitat will have, or the effect the modified (so-called "reclaimed") land will have after it is finally "reclaimed" many years after it is destroyed.
Florida panther

The Service originally listed the Florida panther as an endangered species in 1967.226 To this day the panther remains, "the most endangered mammal in the eastern [United States] . . . [with] only 120-180 left, all in South Florida."227 While the Project does not currently support a Florida panther population, Florida panthers have been observed in the area and it could serve as important dispersal habitat and wildlife corridor connecting habitat farther north (Pinnell 2015).

As recently as 2012, the Florida Fish and Wildlife Conservation Commission was considering relocating Florida panthers to Duette Park to help support the population (Morelli 2012). A Florida panther was spotted near Myakka State Park in 2010, and there is no doubt that panthers are in Sarasota and Polk counties and will continue to move from south Florida northward across the Caloosahatchee River (Spinner 2012). Indeed, as recent as March 2017, wildlife biologists announced that they have verified the presence of at least two Florida panther kittens north of Caloosahatchee.228 Just not too long before the kittens were spotted, Florida Fish and Wildlife Conservation Commission (FWC) announced on November 14, 2016, that a female Florida panther has crossed the Caloosahatchee river 229 In addition, the FWC reported on February 28, 2017 that a 3-year-old male Florida panther's body was found on a rural road in DeSoto County, east of Arcadia.230 Florida panther sightings have increased as the continued destruction of their habitat occurs. Panthers have been seen in Sarasota and Polk counties, and are likely moving through Manatee County.

Panthers have faced an uphill battle after their numbers declined to as few as 20-30 individuals. Despite the relative success of a genetic restoration project, only "a single wild population in south Florida" exists and it is "all that remains of [the] species."233 Development in south Florida has significantly increased in the area of suitable panther habitat and has led to increased panther mortalities from vehicle collisions, inbreeding, increased competition for food, and territorial disputes (Staletovich 2014).234 For example, it is estimated that male panthers travel and patrol a territory of several hundred square miles (Tingley 2015). The panther's large territory-needs and limited habitat has led to intraspecific aggression, which was responsible for approximately 42% of panther mortalities between 1990 and 2004.235

The biggest threat to the panther's existence is habitat destruction, thus any proposed conservation plan must be consistent with the panther's recovery plan to ensure that the action undertaken does not undermine the species' chances of recovery. The recovery plan sets forth a goal to "maintain, restore, and expand the panther population and its habitat in south Florida and expand the breeding . . . population in south Florida . . . ."236 The Project will negatively impact the recovery of the panther, whose greatest threats are habitat destruction and fragmentation 237

The Service's analysis of the environmental baseline will need to: 1) take into account the fact that there is currently not enough habitat available to support the existing panther population; and 2) analyze the impact of other projects in the area.
Wood stork

The Service listed the wood stork under the ESA as an endangered species in 1984, and it is the only species of stork "regularly occurring in the United States."238 In 2014, the Service upgraded the status of the species to "threatened" largely due to successful recovery efforts in Georgia. Although wood storks have seen some

improvements in their numbers overall, the species is still in decline, as evidenced by its numbers in Corkscrew Swamp, which until recently was considered "the most productive colony in the nation."240 Wood storks are found primarily in Florida, Georgia, and parts of South Carolina; however, there have been occasional sightings in North Carolina and as far west as Mississippi.241 t is suspected that the species migrates and spends its winters in south Florida, as there is an influx of storks during winter months.242 Wood storks can be observed in south Florida all year. Historically, the central and northern Everglades are among the areas where this population surge is most evident. Some years, the Everglades system has been documented to support approximately 55% of the entire U.S. population of the species.243 Unfortunately, south Florida colonies have been plagued with multi-year nest failures in recent years.

The wetlands and flow-way located on the project site support downstream regional wetland systems. In Southwest Florida, Lauritsen (2010) examined the importance of seasonal, short hydroperiod wetlands to foraging federally threatened wood storks, which supply most of the food energy for initiating reproduction and suggested that the loss of these wetlands are not being appropriately mitigated for under State wetlands permitting law. The impacts of the loss of these wetlands may result in no nesting or abandonment of nesting attempts by wood storks at sites such as Corkscrew Swamp Sanctuary. The Service will need to calculate the loss of wetlands and other surface waters (jurisdictional and non-jurisdictional) that will result from the project and the effect that will have on the wood stork.

Both freshwater and estuarine wetland ecosystems may serve as suitable wood stork habitat 244 Storks tend to nest in a variety of different trees depending on what is available within the habitat, including: cypress, black gum, southern willow, red mangroves, prickly pear cactus, Brazilian pepper, and Australian pine 245 Wood storks require nesting sites located in standing water throughout the nesting season to protect the nest from predators.246

For foraging, it is critical that the storks have access to shallow, open water.247 The species forages using tactilocation, a process where it wades through the water with its beak submerged and clamps down on prey, usually small fish, when they come in contact with its beak.248 Storks require shallow waters to wade in and fairly dense stocks of fish to support a colony's feeding habits.249 Storks' needs are somewhat less specific when it comes to roosting trees; although they look for similar sites as those used for nesting, they will roost in a greater variety of trees depending on the availability of food 250

The greatest threats to the wood stork's existence are the loss of adequate habitat for feeding, changes in water levels and hydrology (habitat modification), lack of nesting habitat, "human disturbance," and loss resulting from the adverse effects of pesticide and chemical contamination 251 As wetlands are drained and filled—primarily for development and agriculture—the stork's habitat is irreversibly destroyed. Because of the stork's specific foraging and nesting needs, changes in hydrology resulting from developmental impacts, both direct and indirect, can have a major effect on the species' ability to survive in a given area. The Project would impact 533 acres of Corps jurisdictional wetlands that likely provide foraging habitat for the wood stork. Nothing in the 2012 statement indicates that a temporary loss is not a take under the ESA. Furthermore, nothing in the 2012 statement demonstrates that the land will be reclaimed adequately and prey base restored, by for example, comparing to other reclaimed lands. The 2012 statement does not look at take from vehicle collision over the course of the Project, or the loss or reduction of foraging habitat. The Service and Corps must consider all of these factors during Section 7 consultation.
Audubon's crested caracara

The Service listed the Audubon (or Northern) crested caracara as a threatened species under the ESA in 1987.252 The species historically was found throughout peninsular south Florida in wet and dry prairie habitats featuring interspersed cabbage palm trees.253 Now, the caracara has somewhat adapted to land use changes, using pasturelands and in some cases citrus and other agricultural lands in place of its natural habitat.254 Still, caracaras nest almost exclusively in cabbage palms, and ideal habitat conditions for the species consists of these palms "surrounded by open habitats with low ground cover and low density of tall or shrubby vegetation."255 The species is an opportunistic hunter, seeking out prey "on the wing, from perches, and on the ground."256

The primary threat to the species is habitat loss 257 The majority of the caracara's habitat loss is attributable to agricultural and residential development.258 In addition to habitat destruction, the species has suffered from direct human impacts, including mortalities from vehicular collisions, traps, and intentional killings resulting from misplaced fear that the species preys on livestock.259 The Service's recovery plan for the northern crested caracara outlines specific measures that should be taken to protect the caracara including, efforts to "create, restore, or expand occupied habitat wherever possible."260 The plan further states that conservation goals may be met through the expansion of habitat in areas with individuals present, as well as restoration of habitat in vacant areas.

The 2012 statement does not evaluate the direct effects from the Project including mortality from vehicular traffic, harassment, and missed foraging and breeding opportunities; and that the indirect effects include post-construction maintenance. The Service and Corps will need to consider these impacts during Section 7 consultation.

The Project will harm amphibians and reptiles in particular

Reptiles and amphibians (herpetofauna) are in the midst of a global extinction crisis. In 2013, over 200 scientists published a study that found nearly one in five reptilian species are threatened with extinction globally, with the highest proportion of threatened reptile species living in freshwater environments (Bohm et al. 2014, Gibbons et al. 2000). Amphibians are also declining in the United States and globally (Adams et al. 2013, Gratwicke et al. 2012). These classes are particularly sensitive to changes in ecosystems because of their unique biology and life-history traits.

The state of Florida is blessed with a rich diversity of herpetofauna. According to Manatee County Mining Ordinance 04-039, 21 native amphibians and 49 native reptiles are known or suspected to occur in Manatee County on existing or future phosphate-mined lands.261 Several of these species are rare and receive either state or federal protection.

The proposed mine extension will affect many of the unique and sensitive reptiles and amphibians on the mining site and in the surrounding areas. The Project will destroy important habitats and microhabitat features, degrade and fragment the mining site and surrounding land, and disrupt essential species behaviors. Several rare and imperiled species have ranges that overlap with the proposed mine extension and will be harmed by mining activities. The proposed mine extension will detrimentally and irreparably harm the native herpetofauna by destroying their natural habitat during the mining process, degrading and fragmenting surrounding habitat, and disturbing the species' essential feeding, breeding, and sheltering behaviors. For reptiles and amphibians, which are tremendously sensitive to environmental change due to their biology and natural history traits, these changes can be devastating.

During the mining process, the loud noise and vibrations caused by the mining activities will likely interrupt essential amphibian and reptilian behaviors at the Project site and for great distances in the surrounding areas. For example, many frog species rely on "calling" or "chorusing" to successfully mate, and loud noises can interrupt their mating behaviors by causing physiological stress, altering the tone and sound of the frog's call (which can cause it to sound less attractive to prospective mates), or causing the frog to go silent (Tennessen et al. 2014; Parris et al. 2009; Thierry 2008; Bee & Swanson 2007). Likewise, vibrations and sounds may frighten or harass nearby reptiles and amphibians, causing them to travel out of their way to avoid the Project area, and thus disrupting their normal movement patterns as they seek out food and mates. Because the eastern indigo snake and Florida pine snake are wide-ranging species (USFWS 1999, Miller et al. 2009), it is possible the activities could even affect snakes that do not live on the site but instead use it as a travel corridor.

The Project will also destroy, degrade, and fragment suitable habitat the native herpetofauna relies on for survival. Phosphate mining completely alters Florida's natural landscape, which is an irreplaceable product of the slow,

steady interactions of geology, biology, and hydrology over thousands of years (Allen and Main 2005). Phosphate mining companies use heavy machinery to remove all native vegetation and dig deep into the ground, manipulating the natural topography and soil composition, compacting the earth, and forcing native species from their habitat. t is likely that smaller, slower amphibians and reptiles will be unable to avoid the mining activities, causing them to be buried or crushed in the process. Those that avoid the activity will be forced from their homes for decades and potentially displaced into areas that lack the microhabitat they need to survive.

Habitat loss is especially harmful to reptiles and amphibians because many species have very particular and interrelated habitat needs. For example, the gopher tortoise requires well-drained, sandy soil in areas with longleaf pine, wiregrass, and herbaceous plants to eat (FWC, undated b; FWS 2016). Gopher tortoises require these particular habitat conditions to dig their burrows. In turn, gopher tortoise burrows are their own important microhabitats, providing refuge to over 300 other species. If mining were to be permitted in suitable, occupied gopher tortoise habitat, the tortoises would be protected and relocated under Florida law; however, many of the over 300 other species that depend on their burrows would be displaced and without the burrow associates they rely on to excavate protective refuges. Those species include the imperiled eastern indigo snake, gopher frog, Florida pine snake, and eastern diamondback rattlesnake.

Reptiles and amphibians that are able to migrate from the mining site will be left vulnerable as they search for new habitat to suit their needs. Importantly, ectothermic reptiles and amphibians need cool microhabitats (thermal resources) they can use to regulate their body temperatures (thermoregulate) (Sears et al. 2016). The costs of seeking out these microhabitats include energy loss, risk of being eaten by predators, and missed opportunities to feed and breed (Sears et al. 2016). These opportunity costs greatly increase when species must travel farther to reach thermal resources. Thus, far-traveled reptiles and amphibians are more likely to be spotted by predators and more likely to be in a weakened state and vulnerable to capture when they are spotted. Reptiles' and amphibians' very abilities to regulate and maintain their body temperatures will be compromised when they are forced out of their natural habitat by mining activity. Reptiles and amphibians are ectotherms that depend on their surrounding environments to keep their bodies at stable, healthy temperatures. In a recent study, Sears et al. (2016) studied lizards' abilities to regulate their body temperatures in environments with small, evenly dispersed shaded areas against environments with large, irregularly distributed shaded areas. They found that the lizards were able to more accurately regulate their temperature using less energy in areas with evenly dispersed shaded areas (Sears et al. 2016). Because the phosphate mining operations will completely destroy any thermal resources on the Wingate East site, native reptiles and amphibians that are not buried or killed on site will have to travel great distances and expend enormous energy to seek out new thermal resources. This will disrupt their mating behaviors and subject them to increased predation as they travel in the open. It is also possible that smaller, slower, and weaker species will die from overheating or starvation before they find new habitat.

Even after mining activity is complete and the land is "reclaimed," the new landscape likely will not meet the needs of the varied herpetofauna that rely on it. Reclamation is not the same as habitat restoration, and there is no guarantee that the reclaimed land will have the same attributes it had before mining activity commenced, many of which are necessary to the viability of native reptiles and amphibians in the area.

Large-scale soil disturbance can cause ecological succession and encourage invasion of exotic species, which in turn lead to an entirely different vegetative structure than the previously sustained on a site (D'Antonio & Meyerson 2002, Davis et al. 2000, Sher & Hyatt 1999). For many species, native vegetation is key to their survival, and changes in vegetative structure will render the reclaimed site uninhabitable. For instance, gopher tortoises require specific sandy soils for digging burrows and herbaceous groundcover to eat (FWC, undated b; FWS 2016). Florida pine snakes can tolerate degraded habitats (to some degree) but may not use habitats where succession has led to closed canopy forests (FWC 2013b).

Moreover, phosphate mining companies have not demonstrated post-mining reclamation techniques that successfully restore the wide range of habitats, vegetation, and ecological functions needed to sustain the diverse range of species that once inhabited the site before mining activities began. This is particularly true for amphibians, which often have very particular and often diverse aquatic habitat requirements to maintain amphibian species composition, richness, and abundance (Brown et al. 2014). For example, some species prefer a long hydroperiod, which allows for longer breeding periods, while other species will not use wetlands with long hydroperiods because of the potential for predatory fish to colonize them (Brown et al. 2014).

Brown et al. (2014) reviewed 37 peer-reviewed studies of amphibian use of created and restored wetlands, within and outside the United States, which were produced to mitigate wetland habitat loss due to development or degradation. They found that species richness or abundance for some or all species was greater at created or restored sites (compared to reference sites) in 54% of studies, similar in 35% and lower in 11% (Brown et al. 2014). The scientists found that created and restored wetlands were typically larger, deeper, and had longer hydroperiods than natural wetlands, which generally resulted in greater species richness (Brown et al. 2014). However, the study also acknowledged that the rarest and most imperiled amphibian species are typically habitat specialists that are "unable to adapt to human-influenced terrestrial or aquatic habitat changes" and that "need and preferences of target species should be a major consideration in wetland creation and restoration" (Brown et al. 2014). Additionally, the scientists expressed concern that nearly every study in the literature review replaced seasonal wetlands with more permanent wetlands, noting that it "appear[ed] to be a common outcome of wetland creation projects" (Brown et al. 2014). For species like the gopher frog, which require temporary, fishless wetlands, this reclamation trend is troubling. Brown et al. (2014) also noted that in at least one study, these permanent wetlands created in mine tailing ponds at a California site provided ideal habitat for an invasive bullfrog. Moreover, the fact that the majority of wetland restoration and reclamation projects resulted in a single type of wetland (permanent) indicates that reclamation techniques have not yet demonstrated the ability to integrate diverse or specialized ecological attributes (such as ephemeral wetlands or longleaf pine uplands) (Brown et al. 2014).

Even studies conducted by FIPR have reflected the insufficiency of reclamation measures when it comes to restoring wildlife diversity. Mushinsky and McCoy (2001) compared vertebrate wildlife species found on reclaimed phosphate mined land (reclaimed land) with vertebrate wildlife species found on unmined land (reference land) in central Florida. They identified several species that were more commonly found at reference sites than at reclaimed sites, including the oak toad (Bufo quercicus), southern five-lined skink (Eumeces inexpectatus), pine woods treefrog (Hyla femoralis) (Mushinsky & McCoy 2001). However, this study did not analyze the difference in distribution at reference and reclaimed sites for the gopher frog, gopher tortoise, eastern indigo snake because they were too rare at the reference sites to determine a difference in distribution (Mushinsky & McCoy 2001, p. 67). They also found that although species of lizards and turtles were similarly represented at reference and reclaimed sites, species of amphibians and snakes that were widespread among reference sites were found at only a few reclaimed sites (Mushinsky & McCoy 2001). Likewise, species of amphibians and snakes found in relatively large numbers at reference sites were found in only small numbers at reclaimed sites (Mushinsky & McCoy 2001).

Though the study does show some similarities in species and prevalence between reference and reclaimed sites, it also clearly demonstrates that reclamation efforts do not fully restore the herpetofaunal diversity of comparable unmined lands. Furthermore, because it excluded rare species, the study has no bearing on the suitability of reclaimed lands for the most sensitive reptiles and amphibians. The scientists concluded that specific preferences for breeding sites and vegetation structure distinguished the species that were more commonly found at reference sites and made recommendations for future reclamation efforts incorporate more varied habitat types (Mushinsky & McCoy 2001). However, no matter how hopeful the recommendations are, they do not demonstrate the phosphate mining industry's ability to restore wildlife diversity at reclaimed sites.

The site of the proposed mine expansion overlaps with the ranges of several protected reptile and amphibian species including the eastern indigo snake, Florida pine snake, gopher tortoise, and gopher frog (see Figures 1 and 2, below). It also overlaps with the range of the eastern diamondback rattlesnake, which may be seen throughout the state and is currently under consideration for federal Endangered Species Act protection. The site may also fall within the range of the Suwannee cooter, which is a state species of special concern whose known range has been extended farther south by recent studies.
Gopher tortoise

In Florida, the gopher tortoise is a federal candidate species under the ESA and a highly valuable "keystone species" that benefits and ensures the survival of other species in its ecosystem 262 This tortoise is known to benefit over 300 different species, including eastern indigo snakes, foxes, skunks, and lizards, which use gopher tortoise burrows for shelter and for various parts of their lifecycles.263 The gopher tortoise is generally found in longleaf pine or oak sandhill ecosystems, but it may also be found in other dry, upland habitats within its historic range.264

The greatest threat to the gopher tortoise is habitat destruction, including habitat fragmentation and degradation, caused by urban development, agricultural conversion, forestry, and mining 265 Habitat fragmentation can lead to reproductive isolation, increased predation due to exposed habitat edges, and mortality resulting from vehicular collisions.266

Intraservice consultation and conference must consider effects on listed, proposed, and candidate species.267 "Candidate species are treated as if they are proposed for listing for purposes of conducting internal FWS conferencing." Therefore, must consider impacts to the gopher tortoise during consultation.
Gopher frog

The gopher frog is under review by the Service to be listed under the ESA. The gopher frog is a relatively large, brown-spotted frog that can grow to be between 2.5 and 4.4 inches long (FWC 2013). Their tadpoles are greenish gold with dark spots scattered over the body and tail (FWC 2013). Gopher frogs typically live in dry, well-drained upland habitats that are occupied by gopher tortoises and close to shallow, temporary, fishless breeding wetlands (FWC 2013). They have been found in a variety of habitats including sandhills, upland pine forests, scrub, flatwoods, dry prairies, pastures, and various other disturbed habitats that still host gopher tortoises (FWC 2013). Gopher frogs spend the majority of the year in the dry uplands, where they shelter in gopher tortoise burrows and hunt insects and small frogs (FWC 2013).

Gopher frogs have very specific habitat needs for breeding. They generally breed in the summer in central and south Florida, though they can breed any time of the year with heavy rains (FWC 2013). Male frogs attract females to the breeding pools by calling, and females deposit a fistsized mass of 500-5,000 eggs, which the male then fertilizes (FWC 2013). The eggs hatch in 4–5 days and develop as tadpoles for 3–7 months (FWC 2013). Newly metamorphosed frogs then migrate back into the uplands where they shelter in burrows (FWC 2013).

Even with the appropriate habitat conditions, successful reproduction—and thus population viability— can be difficult. Gopher frog longevity in the wild is unknown, though tadpoles face many predators, ranging from water snakes to predatory fish to insects, as they develop (FWC 2013). One study found that nearly 75% of froglets leaving a pond were killed by snakes or mammals (FWC 2013). Adult frogs are preyed upon by water snakes and possibly turtles (FWC
2013). Thus, having accessible, suitable wetland habitat for breeding and upland habitat for feeding and shelter is imperative to the gopher frog's survival.

Unfortunately, the gopher frog has experienced drastic population declines because of habitat loss and degradation, and the species now occurs only in scattered populations in the southern United States (Humphries & Sisson 2012). Populations in the Florida peninsula are relatively secure, but the species is declining in other parts of its range and in some parts of Florida (FWC 2013). Surdick (2013) studied gopher frogs in the Big Bend Wildlife Management Area on the Gulf Coast of Florida and remarked that the frog is "of conservation concern because most populations have gone locally extinct across the geographic distribution." Likewise, the gopher frog's range in North Carolina has contracted dramatically (Humphries 2012), and sparse records of the gopher frog exist in Tennessee (TWRA, undated).

Habitat loss leads to isolated populations, which itself is another threat to the survival of the gopher frog. Greenberg (2001) studied influences on success of juvenile recruitment for gopher frogs, and he found that the condition of longleaf pine-wiregrass sandhills surrounding ponds may influence levels of juvenile recruitment. Greenberg's study illustrates the role of multiple ponds in sustaining gopher frog populations. This finding is important, as roads often fragment essential amphibian habitats and can lead to road mortality. Cosentino et al. (2014) found that road disturbance was almost universally important in that it constrained total species richness and the distribution of most species" of amphibians they studied. Though not specifically covered in scientific literature, the excavation of a mining pit and clay settling pond could easily create similar impacts to a gopher frog's ability to access and use suitable breeding and sheltering habitat. Aside from destroying the utility of any habitat at the Project site itself, mining activities would also create a barrier between suitable isolated wetlands on adjacent land. It could also physically separate members of a gopher frog population, genetically isolating them.

Climate change is and will continue to be a major threat to the gopher frog, impacting availability of water and altering the frog's behavior. For amphibians, water availability is a key resource that affects survival, reproduction, activity levels, and dispersal, while temperature can affect timing of breeding, hibernation, and the ability to find food (Corn 2005; Blaustein et al. 2010, Lawler et al. 2010). Climate change is driving greater variability in precipitation, increasing the frequency of extreme weather events, and increasing surface water temperatures (Melillo et al. 2014). As a result, climate-change-related changes in hydrological regimes (i.e., alterations in stream flow, lake depth, amount and duration and winter snow pack, pond hydroperiods, soil moisture) and warming temperatures are predicted to have largely negative effects on amphibian breeding success and survival, dispersal, and habitat suitability (Blaustein et al. 2010, Walls et al. 2013).

Gopher frogs will likely experience a number of other behavioral shifts which could lead to climate-change induced population declines. Numerous studies have documented climateassociated shifts in amphibian phenology, range, and pathogen-host interactions (Corn 2005; Blaustein et al. 2010; Li et al. 2013), with emerging evidence for climate change-related declines (Lowe 2012, Rohr & Palmer 2013). Li et al. (2013) reported the results of 14 long-term studies of the effects of climate change on amphibian timing of breeding in the temperate zone of the U.S. and Europe. This meta-analysis indicated that more than half of studied populations (28 of 44 populations of 31 species) showed earlier breeding dates, while 13 showed no change, and 3 populations showed later breeding dates, where spring-breeding species tended to breed earlier and autumn-breeding species tended to breed later. Several studies indicate that shifts in timing of breeding can have fitness and population-level consequences. For example, amphibians that emerge earlier in the spring can be vulnerable to winter freeze events or dessication if they arrive at breeding sites prior to spring rains (Li et al. 2013).

In addition, global climate change poses a serious threat to terrestrial ectotherms like the gopher frog simply because they rely on the external environment to regulate and stabilize their body temperatures. Although Florida's climate is predicted to warm less than other regions in North America, a climate inventory over the past 35 to 108 years indicated Florida is experiencing greater climate extremes, with trends of increased summer and fall maximum temperatures and decreased winter and spring minimum temperatures (Reece et al. 2013). Because gopher frogs rely on the external environment to regulate and maintain their body temperatures (thermoregulate), they will have difficulty surviving as temperatures rise (Reece et al. 2013). This threat will only be compounded by habitat destruction and fragmentation, which will force gopher frogs to travel farther distances to concentrated areas of habitat with the appropriate microclimate to thermoregulate (Sears et al. 2016).

The gopher frog is also threatened by sea-level rise, which will cause human populations to move into previously unaltered habitats to escape coastal areas (Cameron Devitt et al. 2012; Mellilo et al. 2014; Karl et al. 2009; FWC, undated a). Because of declining gopher frog populations and the many threats they face, the gopher frog is listed as a Florida State Species of Special Concern (FWC 2013); however, it is proposed for delisting in Florida's Imperiled Species Management Plan as FWC intends to phase out the "Species of Special Concern" listing status by the end of 2017 (FWC 2016). In 2012, the Center for Biological Diversity and partners petitioned the U.S. Fish and Wildlife Service (FWS) to have the gopher frog listed under the federal Endangered Species Act (CBD et al. 2012), and it received a positive 90-day finding on July 1, 2015, indicating listing may be warranted 268

Intraservice consultation and conference must consider effects on listed, proposed, and candidate species.269 Therefore, the Service must consider impacts to the gopher frog during consultation. The Service should consider

	the effects of habitat destruction, degradation, and fragmentation on the gopher frog when considering the impacts of the Project. Specifically, it should consider how mining activities will destroy existing wetland and upland habitat, degrade surrounding habitat, and prevent movement between isolated habitat fragments surrounding the Project area. Likewise, the Service should take microhabitat into account—specifically, the need for shallow, fishless, ephemeral wetlands for mating, as well as dry, sandy gopher tortoise burrows in the uplands for shelter. The Service should also consider how the Project's impacts will exacerbate the effects of climate change on the gopher frog. The applicant must provide substantial and competent evidence proving that the Project is not incompatible with the gopher frog or its habitat needs. Eastern diamondback rattlesnake The eastern diamondback rattlesnake is currently under consideration for federal ESA listing after receiving a positive 90-day finding on May 10, 2012.270 Though the eastern diamondback rattlesnake's range once encompassed the Coastal Plain of the southeastern United States from North Carolina to south Florida, and west to Mississippi and the Florida parishes of Louisiana; its area of occupancy, number of subpopulations, and population sizes are declining throughout its range 271 This contraction in the snake's range is largely attributable to loss of its native longleaf pine ecosystems to agriculture, silviculture, urbanization, and plant succession resulting from fire suppression (Timmerman 2003). Florida encompasses half of the eastern diamondback rattlesnake's current range,272 which makes habitat preservation in this state critical to the species' survival. The eastern diamondback rattlesnake's survival is also crucially linked to the presence and welfare of the gopher tortoise, whose burrows provide essential microhabitat for the snake to use for shelter.273 Today the most significant threats to the eastern diamondback rattlesnake are habitat destruction and human exploitation. The species has sustained a 97% reduction in its native, longleaf-pine forest habitat, on which it relies for feeding, breeding, and sheltering (Van Lear 2005). This loss of longleaf pine ecosystems is the single most important factor affecting the survival of the eastern diamondback rattlesnake. Fragmentation of remaining suitable habitat also leads to road mortality, population isolation, and reduced genetic diversity, which is detrimental to the species' long-term viability (Andrews and Gibbons 2005 at 779). Rattlesnakes are particularly vulnerable to vehicle strikes because of their morphology and behavior. A study conducted by Andrews and Gibbons (2005) shows that venomous, heavy-bodied snakes like the eastern diamondback rattlesnake experience detrimentally high mortality levels even at medium traffic densities because, unlike other species of snake, they move at slow speeds and immobilize when confronted with vehicles. Eastern diamondback rattlesnakes are also threatened by human exploitation. Thousands of snakes are killed each year for meat, skin, and venom, with no limits on annual harvest (Means 2009). "Rattlesnake roundups," annual events that offer hunters prizes for capturing snakes, which are displayed and then killed, boost snake kills and foster negative attitudes that venomous reptiles like the rattlesnake are repugnant and must be removed from nature (Andrews and Gibbons 2005). Means (2009) collected data from these roundups, analyzed trends, and concluded that declining maximum size of snakes collected during roundups reflects possible age-class truncation.274 This troubling trend could lead to negative impacts on annual recruitment of young rattlesnakes, which in turn undermines the snake's ability to maintain viable populations (Means 2009). Because of negative attitudes toward rattlesnakes, the eastern diamondback is also at risk from isolated killings, independent of roundups, when snakes enter urban or suburban areas. Existing regulations are inadequate to address these significant threats to the eastern diamondback rattlesnake, so they are constantly at risk of human-caused mortality and may be taken in unlimited numbers. Intraservice consultation and conference must consider effects on listed, proposed, and candidate species.275 Therefore, the Service must consider impacts to the eastern diamondback rattlesnake during consultation. The Service should closely study the Project's potential impacts on the eastern diamondback rattlesnake, precisely estimate take associated with the project, and carefully consider more robust conservation measures than currently proposed in the plan, favoring use of avoidance measures over minimization or mitigation. American alligator The Service listed the American alligator as an endangered species in 1967 276 The alligator gained status as an endangered species in response to a massive decline in individuals, most of which was attributed to hunting and habitat destruction.277 In 1987, the Service determined that the species was recovered and removed it from the endangered species list; however, the alligator is still protected under the ESA as "threatened due to similarity of appearance," to the American crocodile 278 Due to its status as a threatened species, the Service continues to regulate the hunting, trade, and any goods made from the species.279 Within its ecosystem, alligators are greatly valuable to other animals that share its ecosystem. They create "gator holes," depressions in the marsh that retain water in the dry season 280 Other species, including snakes, birds, and fish, use the gator holes as a source of water during the dry season or times of drought.281 American alligators also play an important role in the native food webs as both predators and prey, linking aquatic and terrestrial food webs. Adult alligators are opportunistic feeders that prey on a wide range of species throughout their lives, including insects, mollusks, crustaceans, fish, amphibians, reptiles, birds, and mammals 282 Small alligators serve as prey for many species, including the northern crested caracara and the eastern indigo snake.283 The Service and Corps must evaluate the effect the clay pits and loss of habitat will have on alligators.	
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	2. The Corps and Service must evaluate population growth and other nearby Development A leading cause of habitat loss is human population growth and corresponding land uses. A 2000 analysis of potential ecological connectivity in Florida found that only about half the land identified for habitat connectivity was publically owned and managed (Hoctor 2000 at 984-999). Meanwhile, Florida 2060: A Population Distribution Scenario for the State of Florida predicts Florida's population will grow by 49 percent by 2060. The FWC's Wildlife 2060: What's at stake for Florida? estimates that such population increases could result in the conversion of 7 million acres from rural and natural to urban uses (Cerulean 2008 at 2). It predicts that nearly 3 million acres of existing agricultural lands and 2.7 million acres of native habitat will be claimed by roads, shopping malls and subdivisions; 1.6 million acres of woodland habitat may be lost; wetland habitat may become more isolated and degraded; 2 million acres of lands bears depend on may disappear; and gopher tortoises may lose a fifth of their existing range (Cerulean 2008 at 4). While Florida is projected to increase its population statewide by 50% by 2060, Hardee County is projected to grow from 31,242 residents in 2015 to 43,922 in 2060. Hardee is projected to have at least 14 times more urban development in 2060 than it does presently, making it one of the fastest growing counties. The Corps must consider the synergistic and cumulative effects of these planned nearby projects, along with all past land use projects. The Wingate East Mine is only one of several phosphate mines in the region that will impact listed species. The EA fails to consider the DeSoto, South Pasture Extension, and Ona mines' impacts on species at the Wingate East Mine site. For example the South Pasture Extension Mine will impact 1,218 acres of wetlands,284 the Ona Mine will impact 7,615 acres of wetlands,285 and the DeSoto mine will impact 3,253 acres of wetlands.286 The Corps must consider the cumulative impacts from all four mines on the environment.	• Section 4 5 3.4 of the Final AEIS considered direct, secondary, and cumulative effects of phosphate mining at Wingate East, on wildlife habitat. • Section 4 5.4.4 of the Final AEIS considered direct, secondary, and cumulative effects of phosphate mining at Wingate East, on listed species. • Section 4.12 of the Final AEIS describes the cumulative effects of phosphate mining, including ecological resources.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	3. The Corps and Service must evaluate climate change Climate change in south Florida could exacerbate current land management challenges involving habitat fragmentation and other threats, it refuses to attempt to analyze the specific impact it will have on the species and habitat impacted by this Project. The Service must consider all available climate change science in evaluating the effects of the Project. Climate models project continued warming in all seasons across the southeast United States and an increase in the rate of warming (Karl 2009 at 111-113). The warming of air and water temperatures projected for the southeast will create heat-related stress for fish and wildlife. Climate change will alter the distribution of native plants and animals and will lead to the local loss of imperiled species and the displacement of native species by invasive species (Karl 2009 at 113). Concerning the effects climate change is expected to have on southeastern environments, Karl (2009 at 115) states, "[e]cological thresholds are expected to be crossed throughout the region, causing major disruptions to ecosystems and to the benefits they provide to people."	• Section 4.1 8 3 of the Final AEIS describes the Corps' evaluation of the effects of phosphate mining on climate and sea level rise. • Section 10.1 of the decision document describes the Corps' final determinations for Wingate East pursuant to Section 7 of the Endangered Species Act.

	Climate change will increase the incidence and severity of both drought and major storm events in the southeast (Karl 2009 at 111-116). The percentage of the southeast region experiencing moderate to severe drought has already increased over the past three decades. Since the mid- 1970s, the area of moderate to severe spring and summer drought has increased by 12 percent and 14 percent, respectively. Fall precipitation tended to increase in most of the southeast, but the extent of region-wide drought still increased by nine percent (Karl 2009 at 111). Both drought and severe storms could threaten the Florida black bear with habitat alteration, altered vegetation, and altered prey base and food availability (Seager 2009 entire). The warming climate will likely cause ecological zones to shift upward in latitude and altitude and species' persistence will depend upon, among other factors, their ability to disperse to suitable habitat (Peters 1985 entire). Because of some of the species' already limited range and the high degree of development in the surrounding area, there is likely no suitable habitat where the species could disperse, making climate change a dire threat to its survival. Global average sea level rose by roughly eight inches over the past century, and sea level rise is accelerating in pace (Melillo 2014 at 373). As summarized by the Third National Climate Assessment, "Since the late 1800s, tide gauges throughout the world have shown that global sea level has risen by about 8 inches. A new data set shows that this recent rise is much greater than at any time in at least the past 2000 years. Since 1992, the rate of global sea level rise measured by satellites has been roughly twice the rate observed over the last century, providing evidence of additional acceleration" (Melillo 2014 at 44). Many areas of the Southeast Atlantic and Gulf of Mexico coasts have experienced significantly higher rates of relative sea-level rise than the global average during the past 50 years (Karl 2009 at 37). Large regions of Florida have elevations at or below 3 to 6 feet, making these areas particularly vulnerable to sea-level rise and flooding (Weiss 2011 entire, Strauss 2012 at 3-4). According to the Third National Climate Assessment, global sea level is projected to rise another 1 to 4 feet by 2100, with sea-level rise of 6.6 feet possible (Melillo 2014 at 589). Sea level rise could increase by another 6 inches in just the next decade (Melillo 2014 at 400). In its 2012 sealevel rise assessment, the National Research Council similarly estimated global sea-level rise at 8 to 23 cm by 2030, 18 to 48 cm by 2050, and 0.5 m to 1.4 m by 2100 (NRCNA 2012 at 4). The effects of sea-level rise will be long-lived. Scientists estimate that we lock in 8 feet of sea-level rise over the long term for every degree Celsius (1 8 degrees Fahrenheit) of warming (Levermann 2013 at 13746). Regional projections for Florida also indicate that sea level rise of three to four feet or more is highly likely within this century. The Southeast Florida Regional Climate Change Compact Counties—Monroe, Miami-Dade, Broward, and Palm Beach counties—released the Southeast Florida Regional Climate Change Action Plan in October 2012, which included a detailed "Unified Sea Level Rise Projection" for south Florida. The sea level rise projections for south Florida are similar what has been estimated globally by the National Research Council: 8 to 18 cm (3 to 7 inches) by 2030, 23 to 61 cm (9 to 24 inches) by 2060, and 48 cm to 1.45 m (19 to 57 inches) by 2100 (SFRCCC 2011 at 9-10). Increasingly intense storms and storm surge pose additional climate threats to coastal wildlife species in Florida. Studies have found that the frequency of high-severity hurricanes is increasing in the Atlantic (Elsner 2008 at 92-94, Bender 2010 at 454-458, Kishtawal 2012 at 1-6), along with an increased frequency of hurricane-generated large surge events and wave heights (Grinsted 2012 at 19601-19604, Komar 2008 entire). The risk of extreme storm surges has already doubled as the planet warms, and these events could become 10 times more frequent in the coming decades (Grinsted 2012 entire). High winds, waves, and surge from storms can cause significant damage to coastal habitat. When storm surges coincide with high tides, the chances for damage are greatly heightened (Cayan 2008 at 557). As sea levels rise, storm surge will be riding on a higher sea surface, which will push water further inland and create more flooding of coastal habitats (Tebaldi 2012 entire). For example, one study estimated that hurricane flood elevations along the Texas coast will rise by an average of 0 3 meters by the 2030s and 0.8 meters by the 2080s, with severe flood events reaching 0.5 meters and 1.8 meters by the 2030s and 2080s, respectively (Mousavi 2011 entire). Coastal species face significant risks from coastal squeeze that occurs when habitat is pressed between rising sea levels and coastal development that prevents landward movement (Scavia 2002 at 17-18, Fitzgerald 2008 at 601-634, Defeo 2009 at 6-7, LeDee 2010 entire, Menon 2010 entire, Noss 2011 entire). Human responses to sea-level rise including coastal armoring and landward migration pose significant risks to the ability of species threatened by sea-level rise to move landward, if other suitable habitats were even available (Defeo 2009 at 1-9). Projected human population growth and development in Florida may thus threaten the species with coastal squeeze (Zwick 2006 entire). The Corps and Service must consider the loss of habitat sea-level rise and climate change will cause and the pressure that will place on human and non-human populations and habitat, and how that will be effected by the Project.	
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	C. The Service must reinitiate consultation with itself and amend the 2012 ITP On May 18, 2012, the Service issued an amended ITP for the Florida scrub-jay and eastern indigo snake. The Service also issued a concurrence letter on May 24, 2012, which concurred with Mosaic's determination that the Wingate East Mine is not likely to adversely affect the wood stork or crested caracara and will have no effect on any other listed species. More than five years have passed since the Service issued the 2012 ITP and concurrence letter and the proposal for Wingate East Mine has changed during the intervening years. The Corps must consider new scientific and commercial data from the past five years to ensure that the loss of habitat of these species is adequately evaluated. In addition, we acknowledge that there were public hearings for Wingate East Mine held in 2012; however, because this project has changed since then, a new public hearing is warranted. Consultation must be reinitiated if, among other reasons, "new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered," "the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion," or "[i]f a new species is listed or critical habitat designated that may be affected by the identified action."287 In the intervening five years between the BiOp and the Supplemental Environmental Assessment for the Wingate East Mine, the mining plans have been modified substantially such that crucial aspects of the currently envisioned mining process were not considered in the BiOp.288 Likewise, a Corps' Request for Additional Information dated February 24, 2016 (2016 RAI), indicates that as recent as early 2016 Mosaic still had not provided adequate information about the mining, mitigation, and long-term management plans, including: whether it could legally place land it had proposed for conservation under easement289; what specific types of mitigation Mosaic proposes to implement290; how Mosaic proposes to achieve the claimed functional lift in wetlands it intends only to preserve, not restore291; and how it arrived at its exceedingly low risk scores for wetland enhancement and creation activities.292 Additionally, in the 2016 RAI, the Corps requests that Mosaic remove establishment of non-jurisdictional wetlands from the mitigation plan, thus requiring an overhaul of the original plan 293 Furthermore, following a public hearing before the Manatee County Board of County Commissioners, Mosaic was required to make significant changes to the master mining plan, including changes to the locations of pipes and a clay settling area. Furthermore, the study by Krysko et al. (2016) provides new information indicating the Wingate East Mine will impact the species to an extent not previously considered. As the study shows, the eastern indigo snake is in fact two, rarer species that inhabit even smaller ranges.295 Thus it is clear the impacts of the Wingate East mine will be felt by the species to a greater extent than previously thought. Consequently, the Service must reinitiate consultation to consider impacts on indigo snakes based on the new understanding of the ecology and conservation status of each distinct species.	• Section 10.1 of the decision document describes the Corps' final determinations for Wingate East pursuant to Section 7 of the Endangered Species Act.
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	D. Section 9 compliance Compliance with a BiOp protects federal agencies and others acting under the BiOp from enforcement action under Section 9's prohibition against take 296 Section 7(o)(2) provides that "any taking that is in compliance with	• Section 10.1 of the decision document describes the Corps' final determinations for Wingate East pursuant to Section 7 of the Endangered Species Act.

	the terms and conditions specified in a written statement under subsection (b)(4)[sic](iv) of this section shall not be considered to be a prohibited taking of the species concerned." However, take not in compliance with a BiOp or absent a BiOp or a lawful ITP is in violation of Section 9 of the ESA. The ESA "not only prohibits the acts of those parties that directly exact the taking, but also bans those acts of a third party that bring about the acts exacting a taking . . . a governmental third party pursuant to whose authority an actor directly exacts a taking of an endangered species may be deemed to have violated the provisions of the ESA."297 Accordingly, the Corps which authorizes activities that engage in activities that result in the unauthorized take of listed species, and the applicant itself, will be acting in violation of Section 9 of the ESA should mining commence without a valid ITP and/or BiOp on the Corps' authorization of the mining.	
Jaclyn Lopez/Elise Pautler Bennett, Center for Biological Diversity	V. Conclusion Thank you for the opportunity to comment on the Wingate East Mine proposal. Given the large scale impacts of the Project, we request a public hearing to present public comments that further demonstrate that this Project is not in the public interest. We respectfully request that the Corps deny the permit application for the Wingate East Expansion mine. Please keep us informed about the progress of these permit applications, including any future notices, announcements, EAs, EISs, or decision notices, and do not hesitate to contact us with any questions about this letter. We are submitting PDF copies of all literature cited in this comment via a document sharing service. If you have any questions regarding the document transfer, please contact Elise Bennett at (727) 775-6950 or ebennett@biologicaldiversity.org.	• The Corps has provided a separate, written response to the request for a public hearing.
Andy Mele, Suncoast Waterkeeper	Thank you for this opportunity to comment on permit application SAJ-2009-03221. On June 22, 2017, the Corps released a Supplemental Environmental Assessment, draft public interest review, and draft Clean Water Act ("CWA") 404(b)(1) Guidelines analysis for Wingate East Mine (collectively Supplemental Environmental Assessment or "EA"). Wingate East Mine would impact 553.1 acres of wetlands of the Wingate Creek Headwaters of the Myakka River Watershed and the West Fork Horse Creek Headwaters of the Peace River Watershed by mining phosphate ore from 3,137 acres within the 3,635-acre property over 20 years.	• Comment acknowledged. • All proposed impacts to wetlands and other surface waters of the United States are within the Upper Myakka River subwatershed.
Andy Mele, Suncoast Waterkeeper	1. Wetlands Wetlands are protected in the Clean Water Act (CWA), which states that healthy intact aquatic ecosystems are in the public interest. Wetlands considered to perform functions important to the public interest include: Wetlands which serve significant natural biological functions, including food chain production, general habitat and nesting, spawning, rearing and resting sites for aquatic or land species; Wetlands set aside for study of the aquatic environment or as sanctuaries or refuges; Wetlands the destruction of alteration of which would affect detrimentally natural drainage characteristics, sedimentation patterns, salinity distribution, flushing characteristics, current patterns, or other environmental characteristics; Wetlands which are significant in shielding other areas from wave action, erosion, or storm damage. Such wetlands are often associated with barrier beaches, islands, reefs and bars; Wetlands which serve as valuable storage areas for storm and flood waters; Wetlands which are ground water discharge areas that maintain minimum base flows important to aquatic resources and those which are prime natural recharge areas; Wetlands which serve significant water purification functions; and Wetlands which are unique in nature or scarce in quantity to the region or local area. Wetlands store 40% of Earth's carbon output, reduce storm surge, function as some of the most vibrant and diverse habitats on earth, and provide food and shelter for listed and many other species, filter out pollution, recharge aquifers, retain stormwater and help minimize flooding. There are 13,737 acres of wetlands in the four mines considered in the AEIS. The Corps must consider the cumulative impacts to hydrology and habitat of the wholesale landscape destruction and long-term degradation that will follow upon mining those wetlands.	• Comment acknowledged.
Andy Mele, Suncoast Waterkeeper	2. The Manatee County permit to mine Wingate East was gained in the face of clear and evident reasons to deny Over 2,000 speakers and writers submitted substantive comments in opposition, versus 17 in favor. At the very least, a full Environmental Impact Statement (EIS) should be required, because under the National Environmental Policy Act (NEPA), one of the criteria for requiring a full EIS instead of an Environmental Assessment (EA) is "the degree to which the effects on the human environment are likely to be highly controversial." Furthermore, the Manatee County permit is under legal challenge. In addition, the principal environmental staff member for Manatee County has been dismissed after a long and troubled employment history, for substance abuse. His work is being analyzed and reassessed by consultants, which may result in changes in permit status, or further challenges.	• As described in Section 1.1.1 of the Final AEIS, the Corps already determined that Wingate East, along with the other three phosphate mines then proposed, should be evaluated in an EIS. The Corps prepared the Final AEIS in compliance with NEPA.
Andy Mele, Suncoast Waterkeeper	3. Phosphate mining fails the Clean Water Act public interest test. Per 33 C F.R. § 325.1(d)(1), the Corps must deny a permit application if it is "contrary to the public interest." Fertilizer, the principal "public interest" justification alleged to offset the apocalyptic destruction of miles of whole landscapes, is not in the public interest, as claimed. The Corps improperly accepts the applicant's assertion that chemical phosphate fertilizer is the only reasonable alternative for the world's agricultural needs, but there is ample documentation available to demonstrate that this is far from the case. The U.N. itself is moving away from phosphate fertilizers, and toward Regenerative Agriculture, as well as minimizing phosphate fertilizer use, and/or recycling it. (see #5, below, and numerous reports such as Montgomery; Scientific American, April 2017). But if the Corps is determined to stand behind its acceptance of the applicant's allegation of phosphate as a public interest, then the Corps must reasonably include in its consideration all the impacts associated with the manufacturing of fertilizer. In other words, the Corps must either remove the alleged public benefit of fertilizer production from its consideration, or factor the impacts of transportation, fertilizer production, human health impacts and waste disposition into its consideration. The applicant and the Corps simply cannot have it both ways.	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively.
Andy Mele, Suncoast Waterkeeper	4. The applicant's four-page Statement of Need is spurious, and so narrow as to preclude all alternatives. Indeed, the whole Supplemental EA reads like a Mosaic business plan, not a document addressing a compelling need to protect treasured natural resources under the law. This is completely unacceptable, as numerous courts have ruled (Id. at 669; Citizens for Smart Growth v. Sec'y of Dep't of Transp., 669 F.3d 1203 (11th Cir. 2012); Davis v. Latschar, 202 F.3d 359, 367-68 D.C. Cir. 2000).	• Section 1 2 of the Final AEIS discusses how the Corps considers purpose and need under NEPA and the 404(b)(1) Guidelines. Section 1.2.1 of the Final AEIS describes the public's need. Section 1 2 2 of the Final AEIS describes the applicant's purpose and need statements for all four proposed actions. Section 1 2 3 of the Final AEIS describes the Corps-defined purpose and need, as considered in the AEIS. Section 1.7 of the decision document references the public and

	It demonstrates an unlawful willingness by the Corps to accept the applicant's facts and narrative without performing the required "probing, independent review" (Simmons v. United States Army Corps of Eng'rs, 120 F.3d 664, 669 n. 1 (7th Cir. 1997); Balt. Gas & Elec. Co. Natural Res. Def. Council Inc., 462 U.S. 87, 106-07 (1983)) By unlawfully allowing the existing Statement of Need to stand unquestioned, the Corps is assenting a priori to the applicant's assertion that their exact preferred alternative, and no other, is the only practicable alternative, which is, without question, not the case.	applicant's need discussion in the Final AEIS, and describes the project-specific basic and overall project purpose, and the applicant's need, for Wingate East.
Andy Mele, Suncoast Waterkeeper	5. Alternatives must be re-examined with full deference to the requirements of the CWA and the public interest (ibid), instead of the current inappropriate and unlawful over- weighting of Mosaic's spurious business needs and PR hype. Alternatives to chemical fertilizers must be acknowledged and considered in the Corps' approval calculus. Alternatives such as using less fertilizer, recycling fertilizer, and farming with more sustainable methods such as regenerative agriculture, which the UN is studying on a global scale (Montgomery; Scientific American, April 2017), and permaculture, have been unlawfully ignored, as the Corps again accepts the applicant's information without question, and without independent review. 25% of the world's food is thrown away. The world's small family farms produce more food than all the factory farms. Even organic farming is within 20% of industrial farm yields. Regenerative agriculture also conveys the additional benefits of fewer inputs, carbon sequestration, long-term soil regeneration (and the attendant higher yields), vastly improved soil retention and greatly decreased nutrient runoff into ground and surface waters, which has become a major problem in some areas – including Florida.	• Section 2 2 6 2 of the Final AEIS explains why avoiding the use of phosphate fertilizers is not a feasible alternative.
Andy Mele, Suncoast Waterkeeper	6. The AEIS separation of mining from processing and waste disposition is arbitrary and capricious. There would be no point to mining without turning the phosphate into a marketable product. Therefore, the processes that are essential to that transformation must not be omitted from any reasonable assessment of a strip-mining permit application. If Mosaic was shipping out the rock to other manufacturers or other countries, then mining would be a stand-alone consideration. But it isn't. It is a vertically-integrated company, and owns all the facilities needed to separate the ore, turn it into phosphoric acid, and handle the staggering quantities of waste, produced at a ratio of 5 tons phosphogypsum waste per 1 ton of product. Those facilities are located conveniently nearby, and Mosaic's stated waste disposal facility for the material mined at Wingate East will be at the Polk County New Wales south gypstack—the very same that experienced a catastrophic sinkhole in late 2015. How can the Corps of Engineers, charged with implementing the intent and authority of the Clean Water Act, and other federal laws as they apply, turn a blind eye and a deaf ear to the movement of phosphate from mine to market? To do so is a willful abdication of responsibility for the laws of our nation. NEPA says the severity of a project's impact includes the degree to which the proposed action affects public health or safety—issues that are exported, along with the phosphate ores, from Manatee County to other nearby counties, all in the AEIS study area. Mosaic is vertically- integrated, by the Corps' own admission. It owns the very facilities the AEIS ignores! Why would it own the facilities if they are not integral to the process that is only beginning with mining?	• Section 1 2 of the Final AEIS describes the need for phosphate rock. As explained in Section 1.3.1 of the Final AEIS, phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants.
Andy Mele, Suncoast Waterkeeper	The AEIS was prepared by CH2M Hill, a longtime consultant on the Mosaic payroll. No one outside of the Corps and Mosaic's sphere of influence trusts the objectivity of the AEIS and its content. This convenient separation, which disallows consideration of toxic waste disposal, also, of course, disallows consideration of public health impacts. To omit these issues is unlawful, by our reading of NEPA and the CWA. It is regrettable that there have been no comprehensive epidemiological studies performed among communities living in proximity to gypstacks, even though anecdotal reports of widespread illness abound, but it's not for lack of trying. The Corps could advance itself in the public perception by demanding a more thorough understanding of the health risks associated with phosphate mining, through studies performed by objective, independent third-parties, before issuance of any further permits.	• The Corps independently evaluated the information used in the preparation of the Final AEIS and in the evaluation of the application for Wingate East to ensure that it was technically adequate and not biased, and made the final determinations on whether the data provided was adequate and accurate.
Andy Mele, Suncoast Waterkeeper	7. Mosaic must not be allowed to self-monitor or self-regulate. Its representatives blatantly lied at least twice during hearings at Manatee County under oath on January 15, 2017, and it was caught cheating on toxic waste disposal by EPA, resulting in a $2 billion settlement, (United States v. Mosaic Co: https://www.epa.gov/sites/production/files/2016-03/documents/florida-cd.pdf) because 8 gypstacks are now thoroughly contaminated with a higher order of toxic waste than allowed by law. It waited three weeks to report a massive sinkhole in the south stack at New Wales, allowing a clear and present threat to public safety and health to escape from beneath the stack. Can Mosaic be trusted to accurately account for its water withdrawals and discharges, its accidental discharges, its operation of the toxic clay repositories (CSAs), its avoidance of wetlands or observance of buffers? Of course not. Mosaic thrives on deception. It continues to exist because it misleads the public through disinformation. An independent third-party must be required to perform monitoring, data collection and analysis of all subsequent mining operations.	• The DA permit will include a permit condition requiring Mosaic to provide yearly compliance reports on the status of the authorized activities, the FDEP-required reclamation, and the Corps required mitigation. The permit also includes a condition requiring a comprehensive compliance review every five years.
Andy Mele, Suncoast Waterkeeper	8. Reclamation and mitigation have improperly become the Corps' default alternatives for wetlands. Reclamation and mitigation have improperly displaced the primary wetlands protection mechanisms in the CWA: avoidance, followed by minimization. Reclamation and mitigation are by no means proven methodologies; system failure is more the norm than the exception. The public will not have access to the reclamation and mitigation plan prior to the Corps' decision. This is wholly unacceptable, and is itself in violation of NEPA, since the Corps must consider public input to qualify its decisions as "informed." In Kihslinger 2008 (National Wetlands Newsletter, Vol. 30 no. 2), it is reported that " compensatory wetland projects fail to replace lost wetland acres and functions even more often than they fail in their administrative performance [40%-60%]. In fact, permit compliance has been shown to be a poor indicator of whether or not mitigation projects are adequately replacing the appropriate habitat types and ecological function of wetlands." A review of a number of similar reports seems to indicate that the most common administrative causes of compensatory wetland failures are over-reliance on permittee follow-through, lack of long- term monitoring, lack of inspections, and generally limited oversight. Our experience has been that the Corps does not have the staff, the funding, the time or, with all due respect, the institutional sense of statutory responsibility required to conduct long-term compensatory wetlands monitoring or enforcement. So-called "built" wetlands have a very spotty track record of what might be called success. IN Florida, the FDEP will "release" a reclaimed wetland if the vegetation planted there appears to be holding its own after two or three years. There is no data, pro or con, that credibly demonstrates that either reclaimed or restored mined lands have been successfully returned to nature "better than before," as Mosaic frequently boasts. We only have Mosaic's assurances, which are redolent with conflict of interest, and hence wholly unreliable. Kihslinger (2008) reports, "Turner and colleagues (2001) found that an average of only 21% of mitigation sites met various tests of ecological equivalency to lost wetlands." Furthermore, a 2006 study showed that "Of the actual wetland acreage, 25% was considered in poor condition, 58% was fair, and 18% was good quality in terms of vegetation as compared to natural reference wetlands." Vegetation, however, does not correlate with actual replacement of wetland function. Mosaic's plan to replace wetlands on an approximate 1:1 basis does not provide anything near the cushion required to ensure no net loss. A ratio of 2:1 would be more appropriate, and 3:1 better. Its assertions that its built wetlands will have higher UMAM scores is indefensible, unsupportable, and not borne out by the historic record.	• Chapter 5 of the Final AEIS describes the compensatory mitigation process for the Corps and the state, and also describes the state's mandatory reclamation requirements. • Section 8 of the decision document and the approved compensatory mitigation plan explain how the applicant will compensate for unavoidable impacts to aquatic resources. • The DA permit will include a permit condition requiring Mosaic to provide yearly compliance reports on the status of the authorized activities, the FDEP-required reclamation, and the Corps required mitigation. The permit also includes a condition requiring a comprehensive compliance review every five years.

	According to Winchester (2013) there are some types of wetlands that simply cannot be credibly restored at all, once destroyed. Has the Corps physically inspected the totality of Mosaic's so-called reclaimed and restored lands, both released and unreleased? Or has the Corps just been shown Mosaic's demonstration projects, which are themselves the exception, having benefitted from millions in special restoration and maintenance expenditures? The average cost per acre of reclaimed land is just $5,000. Mitigated, or "built" wetlands, of course, cost much much more. The demonstration projects, with their grandstands and circular driveways, microphones and podiums, are lovingly tended on a daily basis, like an estate garden. Mosaic employees have told us (personal communication) that mining is done by the draglines in "cuts," or manageable segments within reach of the dragline. As the first layers of overburden–age-old topsoil, rich in bacteria and nutrients—get scraped off, they are not, as Mosaic claims, neatly stockpiled for use on the surface of reclaimed land, but are instead dumped into the adjacent, finished cuts, and buried under the lower-grade sand tailings that come out of the cut after the so-called overburden. The math doesn't lie. Thirty-to-forty percent of the material that comes out of a cut is phosphate rock. t is broken down under high pressure water and sent to the float plant as a slurry. The remaining material stays on-site, but clearly cannot backfill the land, having lost 40% of its mass. Therefore, the toxic clay repositories (CSAs) cover forty percent of the mined land, and can never be reclaimed. They take decades to fill, and to harden enough that men and machines can walk safely on top of the gelatinous slime. Backfill shortages are also dealt with by the creation of "lakes," which Mosaic does not have to reclaim. These "lakes" are a source of endless stories about two-headed frogs, mutated fish, and parasitic mega-worms. It should come as no surprise that reclamation is regarded as more of a bad and macabre joke than a socially-acceptable solution. The Corps could go a long way toward ensuring that mined land is returned to a more natural state within our lifetimes by requiring that 100% of mined land be fully restored, not reclaimed, and by requiring that an objective, independent third-party conduct site monitoring of compensatory wetlands for at least fifteen years after the completion of construction, with regulatory and enforcement authority.	
Andy Mele, Suncoast Waterkeeper	9. The economics of phosphate are misrepresented in AEIS and Supplemental EA. Phosphate mining, far from a public benefit, is a ruinous public liability, with the capacity to bankrupt the state one day. Economic grounds alone should be enough to justify a cessation of further permitting. Economics are part of the suite of metrics considered in a CWA Section 404 determination of public interest. Phosphate mining is not an economic benefit to the county, state or nation, and is in fact a net loss. It leaves behind a mountain of uncaptured costs for future generations to deal with. Mosaic stated under oath, before the Manatee County Commission, that there will be no new jobs created by mining Wingate East. Therefore, any claims of economic benefit from jobs is fallacious. The table of economic benefits (Table 1-4) in the AEIS, modified for the Wingate East EA, lists New or Retained Jobs, Annual Tax Revenue, and for the EA, a new item called "Value Added." "Value Added"—over $1 billion—appears to suggest that the entire net profit of the phosphate being mined somehow accrues to the public. There could be no other reason for listing it. It is not explained in the SEA, which is the only document where it appears. It is basically an applicant throwing numbers at a wall, and hoping they stick before somebody questions them. There is no established market, or market value, for separated slurries or any of the other intermediate stages between mining and the finished chemical product, phosphoric acid. That value-added includes, therefore, and should account for, the many uncaptured costs associated with ore separation and chemical processing, which Mosaic, Manatee County, the Corps and the AEIS dismiss as "irrelevant" (as articulated by Mosaic attorney McGuire, February 15) to the consideration of mining (see Manatee County Wingate East hearings, January 15, January 26, February 15, 2017, and #5 above), because these obvious factors are not explicitly demanded in the county's Mining Ordinance or the AEIS. There has been no attempt made to identify or quantify these "externalities" – uncaptured costs passed downstream by unscrupulous corporate actors. This is unethical and wholly unacceptable to the public, whether these costs are formally discussed in code or not, because they violate the letter and spirit of the Clean Water Act and NEPA. Furthermore, the table of economic benefits does not factor in agricultural and tourism jobs lost, today and in the future, as a result of mining. t does not account for the stark decline in taxable value of mined land, amply demonstrated in other counties, which can be as much as 75%, nor does it calculate those losses out over a 100-200-year time horizon, the minimum amount of time before these lands have any chance of returning to productivity, if ever. It does not account for wear and tear on the region's roads, which must endure tens of thousands of heavily-laded truck trips as ore is shipped to New Wales, and then waste phosphogypsum is sent to a gypstack. It does not admit that as a publicly traded company, Mosaic sends virtually all its revenues out of state, to corporate headquarters for eventual shareholder distribution. The only revenues that will stay in Florida from mining at Wingate East are the multipliers from perhaps 200 relocated employees (which will be a loss to other, adjacent counties, and hardly constitutes a benefit), sixty similarly recycled subcontractors, and a severance tax, a modest per-ton royalty paid to Tallahassee and shared among many counties. There is also a miniscule $2.5 million gift to the county to qualify as an "overriding public benefit," a justification for allowing destructive mining in the county's code that, unfortunately, does not contain any calculus for making such a determination. Again, throw a number at the wall and see if it sticks. Given Mosaic's unreliability and shaky financial underpinnings, the Corps should require financial assurance for a comprehensive remediation of impaired groundwater aquifers and the 16 phosphogypsum "stacks" not covered in the EPA consent decree, in collaboration with EPA per CERCLA and RCRA. As the last phosphate mining company standing, having acquired and merged with the last remaining companies, the corporate legacy of liability inherited by Mosaic is clear, no matter who owned those stacks to begin with.	• Section 4 6.4 of the Final AEIS describes the economic effects of Wingate East. • Section 7 0 of the decision document considers how changes to the Wingate East project identified in Section 1.4.1 of the decision document alter the economic resources determinations made in the Final EIS. • Section 4.14.4 of the Final AEIS describes the cumulative economic effects of phosphate mining.
Andy Mele, Suncoast Waterkeeper	Neither the AEIS nor the EA capture or even acknowledge the costs associated with phosphogypsum waste storage in "gypstacks," and the discharge of almost 5 million pounds per year of toxic and carcinogenic chemicals via its NPDES outfalls (EPA Toxic Release Inventory, 2016), where the toxic materials generated during processing of the very same permitted ores from Manatee County's Wingate East mine are diluted—"blended," in Mosaic doublespeak— until they meet regulatory standards (mosaicco com/FAQs), then discharged into the landscape. The same amount of toxic waste, just diluted. See attached Cost-Benefit table.	• As explained in Section 1.3.1 of the Final AEIS, phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants.
Andy Mele, Suncoast Waterkeeper	The phosphate industry is unpredictable, subject to boom-and-bust cycles. For this, and other reasons, phosphate mining stocks are among the worst-rated on Wall Street. Mosaic has not mined all the lands for which it has received permits, nor has it reclaimed more than 46% of all the lands it has finished mining. When added to the lands currently being mined, or permitted for mining, the percentage drops below 30%. When seeking delays, extensions and variances, as it does repeatedly, Mosaic cites lack of operating cash as a principal reason. In that light, it would make sense to hold any further permits, at the very least, until Mosaic catches up with its obligations.	• Section 5.7 of the Final AEIS describes reclamation as required by FDEP. FDEP, not the Corps, is responsible for determining compliance with reclamation requirements.
Andy Mele, Suncoast Waterkeeper	When Mosaic mines the last of the phosphate ore and leaves the state, it will leave behind 24 huge flat-topped mountains of radioactive, hazardous and toxic waste, with an EPA consent decree and, after 30 years, funds to remediate only 8 of them (DOJ/EPA, 2016). Future generations will inherit the rest, and the liability for tens of billions in remediation costs, to be borne by taxpayers.	• As explained in Section 1.3.1 of the Final AEIS, phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants.
Andy Mele, Suncoast Waterkeeper	10. The Endangered Species Act prohibits "takings," which include harm, harassment, and habitat modification or degradation. Mosaic, taking advantage of the indefensible contention in outdated FL legislative intent that phosphate mining is a "temporary land use," assumes that after 30-50 years, the land will once again be suitable habitat. There is no objective peer-reviewed science to support that contention and in fact all the evidence before our eyes appears	• Section 10.1 of the decision document describes the Corps' final determinations for Wingate East pursuant to Section 7 of the Endangered Species Act. • Section 4 5 3.4 of the Final AEIS considered direct, secondary, and cumulative effects of

	to indicate that mined land acquires a thin cover of nuisance vegetation, and remains unusable and uninhabitable (Jerue v. Drummond Company, Inc.) for an unknown period of time, perhaps centuries. Where exactly will the animals go during that time? How many will die from the disturbance, and from the animals' stubborn but innate instincts to remain at home? The lands inside the boundaries of the Wingate East mine are demonstrable habitat for the bald eagle, crested caracara, wood stork, Florida scrub jay, indigo snake, gopher tortoise, and many other listed, threatened, or species of concern. The region under study in the AEIS includes places from which there have been numerous Florida panther sightings. The panther was the first animal listed under the ESA. The Corps must study and base its decisions upon the cumulative impacts on listed or threatened species throughout the 51,755 acres in the four mines, which include 13,737 acres of wetlands, considered in the AEIS.	phosphate mining at Wingate East, on wildlife habitat. • Section 4 5.4.4 of the Final AEIS considered direct, secondary, and cumulative effects of phosphate mining at Wingate East, on listed species. • Section 4.12 of the Final AEIS describes the cumulative effects of phosphate mining, including ecological resources.
Andy Mele, Suncoast Waterkeeper	The Corps must deny the permit. It has absolute authority to do so. I further urge that he Corps host at least one public hearing per mine, in proximity to the mine locations.	• Comment acknowledged. The Corps has provided a separate, written response to the request for a public hearing.
Glen Gibellina	Added the following to comments provided Andy Mele, Suncoast Waterkeeper: The Corps must deny the permit. t has absolute authority to do so. I further urge that he Corps host a public hearing somewhere in or near the Bone Valley. Sincerely, Glen Gibellina....Community Activist The activist is not the man who says the river is dirty, The activist is the man who cleans up the river. Ross Perot Re: Z-14-09 Rezone request, and a request for Master Mining Plan approval; Wingate East/presentation to the Manatee County Board of County Commissioners Betsy Benac, Chair/January 30, 2017/The Myth of Economic Benefits from Phosphate Mining in Florida, and Manatee County/By Andy Mele, MSES (Environmental Economics)	• Comment acknowledged. The Corps has provided a separate, written response to the request for a public hearing. • Submitted documents attached.
Glen Gibellina	Re: Z-14-09 Rezone request, and a request for Master Mining Plan approval; Wingate East/presentation to the Manatee County Board of County Commissioners Betsy Benac, Chair/January 30, 2017/The Myth of Economic Benefits from Phosphate Mining in Florida, and Manatee County/By Andy Mele, MSES (Environmental Economics)	• Acknowledged (presentation attached)
Gina Coke	Added the following to comments provided Andy Mele, Suncoast Waterkeeper: The Corps must deny the permit. t has absolute authority to do so. I further urge that he Corps host a public hearing somewhere in or near the Bone Valley. Please read the attached letter on this urgent matter. As a resident and citizen, I have concerns to address. Respectfully, Ms Gina Coke	• Comment acknowledged. The Corps has provided a separate, written response to the request for a public hearing. • Submitted documents attached.
60 commenters provided a letter prepared by the Sierra Club and Andy Mele, Suncoast Waterkeeper.	1. Wetlands are protected in the Clean Water Act (CWA), which states that healthy intact aquatic ecosystems are in the public interest. Wetlands store 40% of Earth's carbon output, reduce storm surge, function as some of the most vibrant and diverse habitats on earth, and provide food and shelter for listed and many other species, filter out pollution, recharge aquifers, retain stormwater and help minimize flooding. 2. The Manatee County permit to mine Wingate East was gained in the face of clear and evident reasons to deny, with over 2,000 speakers and writers in opposition versus 17 in favor. At the very least, a full Environmental Impact Statement (EIS) should be required, because under the National Environmental Policy Act (NEPA), one of the criteria for requiring a full EIS instead of an Environmental Assessment (EA) is "the degree to which the effects on the human environment are likely to be highly controversial." The Manatee County permit is under legal challenge. Furthermore, the principal environmental staff member for Manatee County has been dismissed after a long and troubled employment history, for substance abuse. His work is being analyzed and reassessed by consultants, which may result in further challenges. 3. Phosphate mining fails the CWA public interest test. Per 33 C.F R. § 325.1(d)(1), the Corps must deny a permit application if it is "contrary to the public interest." Fertilizer, the principal justification alleged to offset the apocalyptic destruction of miles of whole landscapes, is not in the public interest, as claimed (see #5, below, and numerous reports such as Montgomery; Scientific American, April 2017). But if it is, then the Corps must open the door to inclusion of all the impacts associated with the manufacturing of fertilizer. The Corps must either remove the alleged public benefit of fertilizer production from its consideration, or factor the impacts of transportation, fertilizer production, human health impacts and waste disposition into its consideration. The applicant and the Corps simply cannot have it both ways. 4. The applicant's eight-page Statement of Need is spurious, and so narrow as to preclude all alternatives. This is completely unacceptable, as numerous courts have ruled (Id. at 669; Citizens for Smart Growth v. Sec'y of Dep't of Transp., 669 F.3d 1203 (11th Cir. 2012); Davis v. Latschar, 202 F 3d 359, 367-68 D.C. Cir. 2000), and demonstrates an unlawful willingness by the Corps to accept the applicant's facts and narrative without performing the required "probing, independent review" (Simmons v. United States Army Corps of Eng'rs, 120 F.3d 664, 669 n. 1 (7th Cir. 1997); Balt. Gas & Elec. Co. Natural Res. Def. Council Inc., 462 U.S. 87, 106-07 (1983)) By unlawfully allowing the existing Statement of Need to stand unquestioned, the Corps is assenting a priori to the applicant's assertion that their exact preferred alternative, and no other, is the only practicable alternative, which is, without question, not the case. 5. Alternatives must be re-examined without deferential consideration of Mosaic's business needs over the requirements of the CWA and the public interest. (ibid) Alternatives to chemical fertilizers must also be acknowledged and considered in the Corps' approval calculus. Alternatives such as using less fertilizer, recycling fertilizer, and farming with more sustainable methods such as regenerative agriculture, which the UN is studying on a global scale (Montgomery; Scientific American, April 2017), have been unlawfully ignored, as the Corps again accepts the applicant's information without question, without independent review. 6. The AEIS separation of mining from processing and waste disposition is arbitrary and capricious. There would be no point to mining without turning the phosphate into a marketable product. NEPA says the severity of a project's impact includes the degree to which the proposed action affects public health or safety—issues that are exported from Manatee County to other nearby counties, all in the AEIS study area. Mosaic is vertically-integrated, by the Corps' own admission. t owns the very facilities the AEIS ignores! The AEIS was prepared by CH2M Hill, a longtime consultant on the Mosaic payroll. No one outside of the Corps and Mosaic's sphere of influence trusts the objectivity of the AEIS and its content. This convenient separation, which disallows consideration of toxic waste disposal, also, of course, disallows consideration of public health impacts. There have been no comprehensive epidemiological studies performed among communities living in proximity to gypstacks, even though anecdotal reports of widespread illness continue to arrive every day. 7. Mosaic must not be allowed to self-monitor or self-regulate. Its representatives blatantly lied at least twice during hearings at Manatee County under oath on January 15, 2017, and it was caught cheating on toxic waste disposal by EPA, resulting in a $2 billion settlement, (United States v. Mosaic Co: Blockedhttps://www.epa.gov/sites/production/files/2016-03/documents/florida-cd pdf) because 8 gypstacks are now thoroughly contaminated with a higher order of toxic waste than before. An independent third-party must be secured to perform monitoring, data collection and analysis of all subsequent mining operations. 8. Reclamation and mitigation have improperly become the Corps' default alternatives for wetlands. They have improperly displaced the primary wetlands protection mechanisms in the CWA: avoidance, followed by minimization. Reclamation and mitigation are by no means proven methodologies; system failure is more the	• Comment acknowledged. • As described in Section 1.1.1 of the Final AEIS, the Corps already determined that Wingate East, along with the other three phosphate mines then proposed, should be evaluated in an EIS. The Corps prepared the Final AEIS in compliance with NEPA. • Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively. • Section 1 2 of the Final AEIS discusses how the Corps considers purpose and need under NEPA and the 404(b)(1) Guidelines. Section 1 2.1 of the Final AEIS describes the public's need. Section 1.2.2 of the Final AEIS describes the applicant's purpose and need statements for all four proposed actions. Section 1.2.3 of the Final AEIS describes the Corps-defined purpose and need, as considered in the AEIS. Section 1.7 of the decision document references the public and applicant's need discussion in the Final AEIS, and describes the project-specific basic and overall project purpose, and the applicant's need, for Wingate East. • Section 2 2 6 2 of the Final AEIS explains why avoiding the use of phosphate fertilizers is not a feasible alternative. • Section 1 2 of the Final AEIS describes the need for phosphate rock. As explained in Section 1.3.1 of the Final AEIS, phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants. •The Corps independently evaluated the information used in the preparation of the Final AEIS and in the evaluation of the application for Wingate East to ensure that it was technically adequate and not biased, and made the final determinations on whether the data provided was adequate and accurate. • The DA permit will include a permit condition requiring Mosaic to provide yearly compliance reports on the status of the authorized activities, the FDEP-required reclamation, and the Corps required mitigation. The permit also includes a condition requiring a comprehensive compliance review every five years. • Chapter 5 of the Final AEIS describes the compensatory mitigation process for the Corps and the state, and also describes the state's mandatory reclamation requirements. • Section 8 of the decision document and the approved compensatory mitigation plan explain how the applicant will compensate for unavoidable impacts to aquatic resources. • The DA permit will include a permit condition requiring Mosaic to provide yearly compliance reports on the status of the authorized activities, the FDEP-required reclamation, and the Corps required mitigation. The permit also includes a condition requiring a comprehensive compliance review every five years. • Section 4 6.4 of the Final AEIS describes the economic effects of Wingate East. • Section 7 0 of the decision document considers how changes to the Wingate East project

	norm than the exception. The public will not have access to the reclamation and mitigation plan prior to the Corps' decision. This itself is in violation of NEPA, since the Corps must consider public input to qualify its decisions as "informed." Has the Corps physically inspected the totality of Mosaic's so-called reclaimed lands, both released and unreleased? Or has the Corps just been shown Mosaic's demonstration projects, which are themselves the exception, having benefitted from millions in asymmetric restoration expenditures? 9. The economics of phosphate are misrepresented in AEIS and SEA. Economics are part of the suite of metrics considered in a CWA Section 404 determination of public interest. Phosphate mining is not an economic benefit to the county, state or nation, and is in fact a net loss. It leaves behind a mountain of uncaptured costs for future generations to deal with. Mosaic stated under oath that there will be no new jobs created by mining Wingate East. Therefore, any claims of economic benefit from jobs is fallacious. The table of economic benefits (Table 1-4) in the AEIS, modified for the Wingate East EA, lists New or Retained Jobs, Annual Tax Revenue, and for the EA, a new item called "Value Added." Value added—over $1 billion—appears to suggest that the entire net profit of the phosphate being mined somehow accrues to the public. There could be no other reason for listing it. t is not explained in the EA, which is the only document where it appears. Furthermore, there is no established market value for separated slurries or any of the other intermediate stages between mining and chemical processing, so the only marketable commodity other than raw phosphate rock is phosphoric acid, Mosaic's finished product. That value-added includes, therefore, the many uncaptured costs associated with ore separation and chemical processing, which Mosaic, Manatee County, the Corps and the AEIS dismiss as "irrelevant" (as articulated by Mosaic attorney McGuire, February 15) to the consideration of mining (see Manatee County Wingate East hearings, January 15, January 26, February 15, 2017, and #5 above). There has been no attempt to identify or quantify these "externalities" – uncaptured costs passed downstream by unscrupulous corporate actors. Furthermore, the table of economic benefits does not factor in agricultural and tourism jobs lost, today and in the future, as a result of mining. It does not account for the stark decline in taxable value of mined land, amply demonstrated in other counties, which can be as much as 90%, nor does it calculate those losses out over a 100-200- year time horizon, the minimum amount of time before these lands have any chance of returning to productivity, if ever. It does not account for wear and tear on the region's roads, which must endure tens of thousands of heavily- laded truck trips as ore is shipped to New Wales, and then waste phosphogypsum is sent to a gypstack. t does not admit that as a publicly traded company, Mosaic sends virtually all its revenues out of state, to corporate headquarters for eventual shareholder distribution. The only revenues that will stay in Florida from mining at Wingate East are the multipliers from perhaps 200 relocated employees (which will be a loss to other, adjacent counties, which hardly constitutes a benefit), sixty subcontractors, and a Severance Tax, a modest per-ton royalty paid to Tallahassee and shared among many counties. Neither the AEIS nor the EA capture or even acknowledge the costs associated with phosphogypsum waste storage in "gypstacks," and the discharge of almost 5 million pounds per year of toxic and carcinogenic chemicals via its NPDES outfalls (EPA Toxic Release Inventory, 2016), where the toxic materials are diluted—"blended," in Mosaic doublespeak—until they meet regulatory standards (Mosaicco.com/FAQs), then discharged into the landscape. The same amount of toxic waste, just diluted. When Mosaic mines the last of the phosphate ore and leaves the state, it will leave behind 24 huge flat-topped mountains of radioactive, hazardous and toxic waste, with an EPA consent decree and funds to remediate only 8 of them (DOJ/EPA, 2016). Future generations will inherit the rest, and the liability for tens of billions in remediation costs, to be borne by taxpayers. The phosphate industry is unpredictable, subject to boom-and-bust cycles. For this, and other reasons, phosphate mining stocks are among the worst-rated on Wall Street. Mosaic has not mined all the lands for which it has received permits, nor has it come close to reclaiming all the lands it has finished mining. When seeking delays, extensions and variances, as it does repeatedly, Mosaic cites lack of operating cash as a principal reason. In that light, it would make sense to hold any further permits, at the very least, until Mosaic catches up with its obligations. Phosphate mining, far from a public benefit, is a ruinous public liability, with the capacity to bankrupt the state one day. Economic grounds alone should be enough to stop phosphate mining in its tracks. At the very least, the Corps should require financial assurance for a comprehensive remediation of impaired groundwaters and the 16 phosphogypsum "stacks" not covered in the EPA consent decree, in collaboration with EPA per CERCLA and RCRA. As the last phosphate mining company standing, having acquired and merged with the remaining companies, the corporate legacy inherited by Mosaic is clear, no matter who owned those stacks to begin with. 10. The Endangered Species Act prohibits "takings," which include harm, harassment, and habitat modification or degradation. Mosaic, taking advantage of the indefensible contention in FL legislative intent that phosphate mining is a "temporary land use," assumes that after 30-50 years, the land will once again be suitable habitat. There is no objective, peer-reviewed science to support that contention, and in fact, all the evidence before our eyes appears to indicate that mined land acquires a thin cover of nuisance vegetation, and remains unusable and uninhabitable (Jerue v. Drummond Company, Inc.) for an unknown period of time, perhaps centuries. Where exactly will the animals go during that time? How many will die from the disturbance, and from the animals' stubborn but innate instincts to remain at home? The Corps must deny the permit. It has absolute authority to do so. I further urge that he Corps host a public hearing somewhere in or near the Bone Valley.	identified in Section 1.4.1 of the decision document alter the economic resources determinations made in the Final EIS. • Section 4.14.4 of the Final AEIS describes the cumulative economic effects of phosphate mining. • As explained in Section 1.3.1 of the Final AEIS, phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants. • Section 5.7 of the Final AEIS describes reclamation as required by FDEP. FDEP, not the Corps, is responsible for determining compliance with reclamation requirements. • As explained in Section 1.3.1 of the Final AEIS, phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants. • Section 10.1 of the decision document describes the Corps' final determinations for Wingate East pursuant to Section 7 of the Endangered Species Act. • Section 4 5 3.4 of the Final AEIS considered direct, secondary, and cumulative effects of phosphate mining at Wingate East, on wildlife habitat. • Section 4 5.4.4 of the Final AEIS considered direct, secondary, and cumulative effects of phosphate mining at Wingate East, on listed species. • Section 4.12 of the Final AEIS describes the cumulative effects of phosphate mining, including ecological resources. • Comment acknowledged. The Corps has provided a separate, written response to the request for a public hearing.
Dave Woodhouse	Added the following comments to the Sierra Club/Suncoast Waterkeeper letter: I am a hydrogeologist (P.G.) and have testified at public hearings of the Manatee County Board of Commissioners re: the Wingate mine expansion. My concern is the effects on the nearby headwaters of the Manatee, Peace, and Little Manatee Rivers as the water quality of nearby residents' wells. Migration of contamination to these rivers and wells appears inevitable. The permit should be denied.	• As stated in Section 10.11 of the decision document, the FDEP issued a Section 402 NPDES permit on November 21, 2012. The NPDES permit requires that discharges from the mine be monitored to ensure that water quality standards are not violated. • Section 4.4 of the Final AEIS describes the direct and indirect effects of phosphate mining on water quality. • 4.12.4 of the Final AEIS describes the cumulative effects of phosphate mining on surface water quality. • Section 4 2 of the Final AEIS describes the direct and indirect effects of phosphate mining on surface water hydrology. • Section 4 3 of the Final AEIS describes the direct and indirect effects of phosphate mining on groundwater. • Appendix F of the Final AEIS describes the development and application of a groundwater flow model to evaluate direct, indirect, and cumulative effects of phosphate mining on surficial, intermediate (2), and Floridan aquifer. This modeling was completed on a regional level. Additionally, the Corps considered local-scale modeling that compares pre-mining and post-mining hydrologic conditions, especially in relation to surface water flows and levels. Finally, the water use permit issued by

		SWFWMD includes permit conditions that protect adjacent water users, the affected aquifers, and onsite and adjacent aquatic resources.
Diana Cowans	Added the following comments to the Sierra Club/Suncoast Waterkeeper letter: Thank you for this opportunity to comment on permit application SAJ-2009-03221. This is a pre-written email from the Sierra Club - Manatee-Sarasota Group, of which I am a proud member. I can't explain my thoughts as well as the Club can, but my feelings on this subject are strong. I have lived in Florida most of my life and I will do all that I can to protect this beautiful state. t is incumbent upon humans, as stewards of this planet, to take care of the environment and all who live here. The harm that phosphate mining does is horrendous. We are intelligent, creative and resourceful and should be able to find ways to feed and care for ourselves that do not destroy our only home. Thank you for listening to all of our opinions.	• Section 5 of the decision document describes how the Corps considered project alternatives to avoid and minimize adverse impacts to waters of the United States in its review of Wingate East. • Section 8 of the decision document, and the attached approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources. • Comment acknowledged.
Dianne Ell	Added the following comments to the Sierra Club/Suncoast Waterkeeper letter: I guess we can't relax for a second without some group trying to pillage and rape our lands here in Florida. You've seen this letter from the Sierra Club before. Here it is again.	• Comment acknowledged.
Frances Knight Palmeri	Added the following comments to the Sierra Club/Suncoast Waterkeeper letter: Please DENY permit application SAJ-2009-03221.I have seen and photographed the damage Mosaic has done to the land in four Florida counties. Natural habitats have been destroyed by their mining operations negatively impacting wildlife, plants and people. Phosphate mining and Mosaic do not benefit Florida in any way.	• Section 8 of the decision document, and the approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources. • Section 4 5 3 of the Final AEIS describes how the Corps considered direct and secondary impacts to wildlife habitat in the Final AEIS. • Section 5 3.4 of the Final AEIS describes the specific evaluation of wildlife habitat impacts associated with Wingate East conducted for the Final AEIS. • Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively.
Lynn Hocker	Added the following comments to the Sierra Club/Suncoast Waterkeeper letter: As a resident of Manatee County I am more than concerned about the lands that Mosaic is applying to mine and urge you to truly do what is in the public, not the corporate, interest.	• Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively.
Margaret Tams	Provided a variation of the Sierra Club/Suncoast Waterkeeper letter: The Clean Water Act states that healthy intact aquatic ecosystems are in the public interest. There are many reasons for this, among them: Wetlands: store 40% of Earth's carbon output, reduce storm surge, function as some of the most vibrant and diverse habitats on earth, provide food and shelter for listed and many other species, filter out pollution, recharge aquifers, retain stormwater help minimize flooding. The Manatee County permit to mine Wingate East was granted in spite of many clear reasons to deny. A full Environmental Impact Statement should be required; under the National Environmental Policy Act, one of the criteria for requiring a full EIS instead of an Environmental Assessment (EA) is "the degree to which the effects on the human environment are likely to be highly controversial." With over 2,000 citizens opposing this permit and only 17 speaking for it, I believe that the criteria for a full impact statement has been met. Phosphate mining fails the public interest test. The Corps must deny a permit application if it is "contrary to the public interest." Fertilizer, the main justification alleged to offset the destruction of miles of landscapes, is not in the public interest, as claimed. But if it were deemed to be in the public interest, the Corps must include all the impacts associated with the manufacturing of fertilizer. The Corps must either remove the alleged public benefit of fertilizer production from its consideration, or factor the impacts of transportation, fertilizer production, human health impacts and waste disposal into its consideration. The applicant's Statement of Need is so narrow as to preclude all alternatives. This is unacceptable, as numerous courts have ruled. By allowing the existing Statement of Need to stand unquestioned, the Corps is assenting a priori to the applicant's assertion that their exact preferred alternative, and no other, is the only practicable alternative, which is not the case. Alternatives must be re-examined without consideration of Mosaic's business needs over the requirements of the CWA and the public interest. Alternatives to chemical fertilizers must be acknowledged and considered in the Corps' decision. Alternatives such as farming with more sustainable methods such as regenerative agriculture, which the UN is studying on a global scale (Montgomery; Scientific American, April 2017), must not be ignored. There have been no comprehensive epidemiological studies performed among communities living in proximity to gypstacks, even though anecdotal reports of widespread illness abound. Mosaic must not be allowed to self-monitor or self-regulate. It was caught cheating on toxic waste disposal by EPA, resulting in a $2 billion settlement, (United States v. Mosaic Co: Blockedhttps://www.epa.gov/sites/production/files/2016-03/documents/florida-cd pdf) because 8 gypstacks are now thoroughly contaminated with a higher order of toxic waste than before. An independent third-party must be secured to perform monitoring, data collection and analysis of all subsequent mining operations. Reclamation and mitigation have become the Corps' default alternatives for wetlands. They have displaced the primary wetlands protection mechanisms in the CWA: avoidance, followed by minimization. Reclamation and mitigation are by no means proven methodologies; system failure is more the norm than the exception. The public will not have access to the reclamation and mitigation plan prior to the Corps' decision. This itself is in violation of NEPA, since the Corps must consider public input to qualify its decisions as "informed." Has the Corps physically inspected all of Mosaic's "reclaimed" lands? Or has the Corps only been shown Mosaic's demonstration projects, which are themselves the exception, having benefitted from millions in asymmetric restoration expenditures? Phosphate mining is not an economic benefit to the county, state or nation, and is in fact a net loss. It leaves behind a mountain of costs for future generations to deal with. Mosaic stated under oath that there will be no new jobs created by mining Wingate East. Therefore, any claims of economic benefit from jobs is fallacious. The table of economic benefits does not factor in agricultural and tourism jobs lost, today and in the future, as a result of mining. t does not account for the stark decline in taxable value of mined land, amply demonstrated in other counties, which can be as much as 75%, nor does it calculate those losses out over a 100-200-year time horizon, the minimum amount of time before these lands have any chance of returning to productivity. The only revenues that will stay in Florida from mining at Wingate East are the multipliers from perhaps 200 relocated employees (which will be a loss to other, adjacent counties, which hardly constitutes a benefit), sixty recycled subcontractors, and a severance tax, a modest per-ton royalty paid to Tallahassee and shared among many counties. When Mosaic mines the last of the phosphate ore and leaves the state, it will leave behind 24 huge flat-topped mountains of radioactive, hazardous and toxic waste, with an EPA consent decree and funds to remediate only 8 of them (DOJ/EPA, 2016). Future generations will inherit the rest, and the liability for tens of billions in remediation costs, to be borne by taxpayers. The phosphate industry is unpredictable, subject to boom-and-bust cycles. For this, and other reasons, phosphate mining stocks are among the worst-rated on Wall Street. Mosaic has not mined all the lands for which it has received permits, nor has it come close to reclaiming all the lands it has finished mining. The Endangered Species Act prohibits "takings," which include harm, harassment, and habitat modification or degradation. Mosaic contends that phosphate mining is a "temporary land use," and assumes that after 30-50 years, the land will once again be suitable habitat. There is no objective, peer-reviewed science to support that contention, and in fact, all the evidence appears to indicate that mined land acquires a thin cover of nuisance vegetation, and remains unusable and uninhabitable for an unknown period of time, perhaps centuries. Where will the animals go during that time? How many will die from the disturbance?	• Comment acknowledged. • As described in Section 1.1.1 of the Final AEIS, the Corps already determined that Wingate East, along with the other three phosphate mines then proposed, should be evaluated in an EIS. The Corps prepared the Final AEIS in compliance with NEPA. • Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively. • Section 1.7 of the decision document references the public and applicant's need discussion in the Final AEIS, and describes the project-specific basic and overall project purpose, and the applicant's need, for Wingate East. • Section 5 of the decision document describes how the Corps considered project alternatives to avoid and minimize adverse impacts to waters of the United States in its review of Wingate East. • Section 2 2 6 2 of the Final AEIS explains why avoiding the use of phosphate fertilizers is not a feasible alternative. • The DA permit will include a permit condition requiring Mosaic to provide yearly compliance reports on the status of the authorized activities, the FDEP-required reclamation, and the Corps required mitigation. The permit also includes a condition requiring a comprehensive compliance review every five years. • Chapter 5 of the Final AEIS describes the compensatory mitigation process for the Corps and the state, and also describes the state's mandatory reclamation requirements. • Section 4 6.4 of the Final AEIS describes the economic effects of Wingate East. • Section 10.1 of the decision document describes the Corps' final determinations for Wingate East pursuant to Section 7 of the Endangered Species Act. • Section 4 5 3.4 of the Final AEIS considered direct, secondary, and cumulative effects of phosphate mining at Wingate East, on wildlife habitat. • Section 4 5.4.4 of the Final AEIS considered direct, secondary, and cumulative effects of phosphate mining at Wingate East, on listed species. • Section 4.12 of the Final AEIS describes the cumulative effects of phosphate mining, including ecological resources.

	The Corps must deny the permit. It has absolute authority to do so. I further urge that the Corps host a public hearing somewhere in or near the Bone Valley.	• The Corps has provided a separate, written response to the request for a public hearing.
Henry Kuhlman	Thank you for this opportunity to comment on permit application SAJ-2009- 03221. Manatee County Commissioners approved the permit to mine Wingate East in the face of overwhelming evidence for denial. Over 2,000 speakers and writers presented their opposition while only 17 spoke in favor. Quite simply, there is no viable economic or environmental reason a county could choose to permanently destroy their productive agriculture land and wetlands. The reason most given by Manatee County Commissioners for voting YES, was that they were afraid of being sued by Mosaic, if they didn't approve the permit. This is hardly in the best interest of the future generations who will suffer the lost jobs and benefits from housing, tourism, agricultural production stretching out 100-200 years. Not to mention the costs in tax revenue from the decreased appraised value of mined out land. Mined out land in Hardee County next door is valued from 50 to 85% less than productive native land. I drive by the Mosaic Four Corners Mine that borders State Road 62 in Manatee County. On one side of the highway are beautiful huge fields of bright red tomatoes and other crops being harvested by hundreds of employees (season after season). On the other side of the highway are the dead grey pits where Mosaic's dragline are digging up what used to be living farmland. This land will be less than half the value of the land across the highway and have no jobs and no productive uses for a hundred years. Not even housing is an option for Mosaic on their mined out land. A 1,400 acre housing area in Polk County developed on reclaimed land is under a huge federal lawsuit. The land beneath thousands of homes is contaminated with radon gamma radiation (https://goo.gl/ 5AqdrT). The product Mosaic makes from strip mining, phosphoric acid fertilizer, is far from certain to be the best option for sustainable agriculture (https //goo gl/iO3LCa). The byproducts of producing their fertilizer should in itself prevent mining. Mosaic will have 24 deadly gypsum stacks of radioactive, hazardous and toxic waste. The EPA has a consent decree and funds for remediation for only 8 of these permanent liabilities that Mosaic will walk away from (DOJ/EPA, 2016). The taxpayers will be stuck with billions and billions for hundreds of years trying to avoid one catastrophe after another (think Hurricane state). Mosaic has a long and sorry history denigrating the waters above and below the surface in Florida (https://goo.gl/1DUv5t and https://goo.gl/ry8nPQ). Mr. Peterson, the Corps must deny this permit. The long term best interest of the people of Florida comes first. Thank You	• Section 5 of the decision document describes how the Corps considered project alternatives to avoid and minimize adverse impacts to waters of the United States in its review of Wingate East. • Section 8 of the decision document, and the attached approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources. • Section 4.6.5 of the Final AEIS describes the economic effects of Wingate East. In addition, Section 7.0(p) of the decision document describes how the Corps updated the economic analysis to consider project changes since the Final AEIS. • Section 4 8 2 of the Final AEIS describes the expected effects of phosphate mining, including those associated with Wingate East, on radiation levels. • Section 1 3.1 of the Final AEIS, explains why phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants. • Section 7 of the decision document describes the Corps' evaluation of public interest pursuant to 33 CFR 320.4 and RGL 84-09.
Henry Kuhlman	Please accept the pictures in the attachment as my input for your review on the Permit requested by Mosaic Corp - -SAJ-2009-03221. They were taken by myself of their mines next door in Hardee County.	• Acknowledged (photographs attached)
Garrett Ramy	Thank you for this opportunity to hear from the Citizens of Manatee County. I would like to bring to your attention the fact that the applicant Mosaic SAJ-2009-03221 is lacking support and approval from the community and especially bordering residences as myself. I Garrett Ramy, currently have a pending lawsuit against Manatee county and Mosaic Wingate LLC. 1) There was a failure on behalf of the Applicant Mosaic to prove benefit to the county. 2) There were several violations within the hearings. 3) Violations from the Homesteading Act regarding land usage and seizure of land. 4) Impacted land values to worthless land. 5) No provisions or compensation has been made for bordering residences. At this time both Manatee county and Mosaic are tied up in these unresolved issues. In this email I have included an attachment of my testimony before the Manatee county commissioners on this issue. None of my questions or concerns were addressed, so I'm seeking clarification on this situation and my questions from the Army Corp of Engineers. We have no representation so I am personally reaching out to you Mr. Peterson for help. I also have additional concerns in reference to reclamation claims. To this date 5,145 acres have been reclaimed of approximately 300,000 acres mined. This ratio is extremely unproportionate. There is currently a pending lawsuit in Polk county regarding a housing development on reclaimed land from previously phosphate mined land with high levels of Radiation. exposure. Phosphate Mining in Florida must be reevaluated as a whole. More land is being occupied and yet there is no proof that land reclamation is successful. We have no security south of any mining operation in Florida, especially in the event of a catastrophic hurricane or natural disaster. Please review what I have provided as a citizen and be our advocacy.	• Comments Acknowledged • Section 4.1 8 of the Final AEIS addresses several of the issues related to community health, safety, and quality of life. • Section 4 6.4 of the Final AEIS describes the economic effects of Wingate East. In addition, Section 7 0(p) of the decision document describes how the Corps updated the economic analysis to consider project changes since the Final AEIS. • Section 5.7 of the Final AEIS describes reclamation as required by FDEP. FDEP, not the Corps, is responsible for determining compliance with reclamation requirements. • Section 4 8 2 of the Final AEIS describes the expected effects of phosphate mining, including those associated with Wingate East, on radiation levels. • Acknowledged (documents attached)
Dr. Linda T Jones Manatee Conservation Committee, Manatee-Sarasota Group of the Sierra Club	I respectfully submit the following comments to the U.S. Army Corps of Engineers for the above-referenced permit for the Wingate East Mine on behalf of the Manatee Conservation Committee, Manatee-Sarasota Group of the Sierra Club. Chair of the committee, Sandra Ripberger, is out of the country and requested I submit comments. 1. NEPA/Figures in EA. This project and all proposed strip mines are, by their nature, contrary to the purpose and goals of the National Educational Policy Act..."to declare a national policy which will encourage productive harmony between man and his environment, to promote efforts which will prevent or eliminate damage to the environment...to enrich understanding of the ecological systems and natural resources...and serve as trustee of the environment for succeeding generations. Establishing a project need and purpose that has as its only objective strip mining phosphate does not take into consideration the impacts on the environment in which the mining will take place and is inconsistent with the purpose of NEPA. Further, the off-site alternatives are limited to the other sites the applicant proposes to mine in the future so they are not alternatives at all. Of the 9 figures that are attached to the EA, Alternative 1A (Figure 2-Upland Only Mining) would prevent damage to the water resources and wetlands. t also, as pointed out, agrees with step 1 and 2 of the mitigation framework. The priority wetland scheme in the AEIS Chapter 5 is ignored and not being implemented. As for conflicting with the "current county permit" (p.18), the permit though approved in concept is still incomplete because the three setback changes Mosaic wanted were not approved by the Manatee BOCC and the CSA is being re-configured. Figures 5, 6, and 8 of the EA depict two CSAs and should be discounted. The County wrote a letter copied to the Corps indicating issues with a second CSA. Mosaic's preferred alternative (Figure 7) impacts too many wetlands and streams. 2. Wingate East Mine Is Strongly Opposed by Citizens/Not in the Public Interest. During three days of public hearings (January 26 and 30, February 15, 2017), over 2000 comments were made against approving this mine, while only 6 spoke for it, according to one count (Manatee BOCC records). Diverse comments were made, many focusing on environmental destruction and protection of the wetlands, streams and habitat. Also, residents living close to the proposed mine want the permit denied. 3. The level/percentage of avoidance of jurisdictional wetlands and streams is far too low. (about 17 6% impact). For comparison, 27% of Altman tract 4 wetlands (552 out of 2048) were avoided plus an enhancement included a 552-acre conservation easement. Sections 34, 27, and 26 contain many streams and connected high quality wetlands which could be avoided. The staff has expressed concerns about the ability to reclaim high quality wetlands, stating that forested wetlands may take 20-30 years to mature. Bay swamps found in these sections (20.4 acres: 26- 9C, 27-9A, 27-10B, 34-4B, and 34-16B) as well as gum swamps (6 acres) are locally quite rare.	• Section 1 2 of the Final AEIS discusses how the Corps considers purpose and need under NEPA and the 404(b)(1) Guidelines. • Section 1 2.1 of the Final AEIS describes the public's need. • Section 1 2 2 of the Final AEIS describes the applicant's purpose and need statements for all four proposed actions. • Section 1 2 3 of the Final AEIS describes the Corps-defined purpose and need, as considered in the AEIS. • Section 1.7 of the decision document references the public and applicant's need discussion in the Final AEIS, and describes the project-specific basic and overall project purpose, and the applicant's need, for Wingate East. • Chapter 2 of the Final AEIS describes how the Corps identified alternatives under NEPA. • Section 1.4.1(iv) of the decision document describes how Mosaic will utilize extra capacity of two existing clay settling areas on an adjacent mine. As a result, only one clay settling area will be constructed at Wingate East, occupying less than 20 percent of the mine site. • Section 5 3 of the decision document for Wingate East explains the criteria used by the Corps in evaluating onsite minimization alternatives and in making its determination of the LEDPA. • Section 5.4 of the decision document for the Wingate East explains how the Corps considered onsite minimization alternatives in its review, including the application of the Mitigation

	Wetland expert Brian Winchester indicated in his report for the AEIS that there is no evidence that bay swamps can be reclaimed. Consequently, they should be avoided. In addition, there are numerous stream segments in these sections. County staff also does not support mining in the 25-year floodplain of stream 100 because it provides water quality treatment, moderation of groundwater flow, nutrient processing, organic carbon export and flood storage. They state that moderate to high quality forested wetlands are hydrologically connected to stream 100 via natural stream segments I04a and I04b and altered stream segments 105b, I06, and I03b. Stream 107a is a first order stream channel where upstream waters have been diverted from this flow way. The USACE stream maps (2-2-A-ii-a) also show stream I06d extending into section 26 and northeast to the large area of wetlands in 26. The connections among the wetlands and streams in 26, 27, and 34 should be maintained. A recent 2015 EPA synthesis of research based on 1200 studies, "Connectivity of Streams and Wetlands to Downstream Waters," indicates that scientific evidence unequivocally demonstrates that small or temporary streams and wetlands, regardless of their size or frequency of flow, are connected to downstream waters and strongly affect their function and water quality. Further, floodplains and isolated wetlands, even when lacking surface connections, also provide biological functions that affect the integrity of downstream waters. The report strongly supports the conclusion that the incremental contributions of all these streams and wetlands, whether they are intermittent or not, are cumulative across watersheds (notably the Myakka in this landscape). In mining, there are also temporal impacts--the streams are wiped out for many years. In addition to avoiding valuable wetland and stream systems, xeric oak on the east side of the tract is another critically endangered habitat which supports many listed species such as the scrub jay and gopher tortoises whose incredible burrows support 200 or more other species. The AEIS recommended mining companies avoid and preserve these rare scrub habitats but fell short of saying how they can be adequately mitigated. They are also very slow growing and would take many years to replace. Why aren't they considered for avoidance? 4. The Manatee County staff report (Case Summary-p. 9) states: "Although Florida law treats mining as a temporary land use, Staff is of the opinion that mining of high quality wetlands and other sensitive native habitats, such as forested wetlands and scrub, results in the total destruction of all vegetation and long-lasting disturbance of soil. Mosaic has indicated that forested wetlands reclamation areas are typically planted 5 to 6 years after mining has commenced and that these areas are typically released after an additional 10 to 15 years. Release of reclamation areas does not indicate that the area will develop into a habitat with equivalent functions. Forested areas may not reach full maturity and replace lost functions for another 10-15 years. High quality, forested wetland functions can be lost for 20 to 30 years as a result of mining. Due to the duration in which functions and values are lost to the system, plant and animal species composition may not recover." Added note in margin: "Therefore, although mining is considered a 'temporary use' under Florida law, it can result in significant long-term impacts to the environment." While some mitigating factors were listed (p. 2,4), the Case Summary on Wingate East completed by the Manatee county staff, indicated a number of negative aspects of the application (p.2). Briefly: a. Construction of 595-acre clay settling area within 500 feet of Lake Manatee Watershed boundary (now changed to 588 acres) b. Winding Creek rural subdivision directly west of proposed mine c. Required modification to Southeast Tract Mine Master Plan for extension of mine life an additional 19 years, which includes the use clay settling areas FM-1 and FM-2 d. Mine and disturb 272.4 acres of upland habitat and 5.75 acres of isolated wetland habitat and 5.75 acres of isolated wet habitats in the Peace River WOD e. Impact 19,916 linear feet of natural streams channels, ditched stream channels and sloughs (see note in f) f. Mine and/or disturb 686 acres of jurisdictional waters: 37 acres of surface water features and 649 acres of wetlands (based on State determinations and including 661 extension acres; not the same as the USACE jurisdictional acres) g. Listed wildlife species observed on or near Wingate East Mine: 17 are named h. Request to mine wetlands encumbered by Texaco Wetland Contract which is based on demonstration of same quality of wetlands reclaimed on Altman 4 tract i. Proposing to impact 25 year floodplain of stream 100 (26 acres) and functionally integrated wetlands j. Requires a modification to the Wingate Creek Mine Master Mining Plan for the extension of mine life for an additional 17 years, which includes trucking and processing of phosphate ore at the beneficiation plant Staff also expressed concerns about the overriding public benefit proposal #2--a phosphate mining application does not meet this test based solely on the "strategic importance" of the mineral resource (phosphate), indicating therefore that the avoidance and minimization of "viable wetland systems" must be thoroughly addressed. 5. Similarly, Mosaic's business plan in the EA for mining as much phosphate ore as possible is not in the public interest when it involves impacting such a high percentage of the WOUS which could be avoided. Figure 4 of the EA shows the application of the mitigation framework and protects the forested wetlands which take so long to reach the functions and values associated with a fully developed canopy. The statement on p 33 of the EA, i.e., that the proposed project will cause the "short-term disruption" of the existing altered ecosystem, simply does not take into account the length of time required for forested wetlands to mature and doubts about Mosaic's ability to successfully reclaim high quality wetlands. 6. Mosaic already has enough acreage to mine in Manatee County (and other counties). In addition, only a small percentage of the acreage mined has been reclaimed or released. The attached annual chart provides the number of acres that have been mined and disturbed and the number of acres reclaimed and released. Of 16,532 acres mined since 1978, only 857 have been released and 6452 reclaimed. Projected mining for 2016/17 is 689 acres across 4 mines and projected reclamation for 2016/17 is only 320 acres across 4 mines. Note that the acreage to be reclaimed is minimal and less than half as much as the acres being mined. In the reclamation plan for Wingate East, the only section receiving new faster reclamation methods (muck and topsoil) is in the Peace River Watershed overlay--probably to focus attention away from mining which shouldn't be allowed in the watershed in the first place. The other types of habitats indicate overburden or overburden mixed with sand tailings when "practical" or "available"--an opt-out. What is not understood or discussed in the EA or AEIS are the thousands of acres of mine equipment, paraphernalia and CSAs which have not or are not being reclaimed. (shown on chart) 7. "No action" would prevent additional damage to the water resources and land from strip mining that devastates the landscape and has "significant long-term impacts" according to Manatee county staff. Alternatives such as no or upland only mining (Figure 2) and importation should be considered. The AEIS statements on pages 2-20 and 2-21 regarding importation are misleading. Mosaic did use rock imported from Morocco when the South Fort Meade Mine was shut down, but continues to import rock. According to the USGS minerals yearbook for 2015, the United States is "the leading importer of phosphate rock in the world." Further, "about 98% of imported phosphate rock was consumed by Mosaic and PCS Nitrogen at their phosphoric acid plants in Louisiana." Mosaic imports from its mine in Peru and from Morocco, and owns an interest in a mine in Saudi Arabia that is being developed. The latest USGS report (attached) indicates many countries with significant	Framework described in Section 5.4 of the Final AEIS. • Section 5.4.1 of the decision document explains why with the ability to produce a total of 12 2 MMT of phosphate, Alternative 1A (Upland Only Mining) is not a practicable alternative. • Section 5.4 6 (Applicant's Preferred Alternative) of the decision document explains that no streams prioritized by the mitigation framework will be impacted (100% avoidance). The avoided area includes the riparian corridors of all natural intact intermittent streams onsite (there are no perennial streams proposed for impact). • Section 8 of the decision document describes how the permittee incorporated the preservation and enhancement of key landscape systems, including upland, wetlands, and streams into the approved compensatory mitigation plan. • As described in the approved compensatory mitigation plan for Wingate East, implementation financial assurance covers all compensatory mitigation areas that have not yet achieved their performance standards for as long as it may take to do so. The financial assurance is updated on a yearly basis to include new mitigation areas and 'release' successful areas. • As described in Section 8.2.7 of the decision document and the approved compensatory mitigation plan, the functional analysis shows that the proposed mitigation replaces the lost aquatic resource functions, with consideration of time lag and risk. • Section 5.7 of the Final AEIS describes reclamation as required by FDEP. FDEP, not the Corps, is responsible for determining compliance with reclamation requirements. • Section 7 of the decision document describes the Corps' evaluation of public interest pursuant to 33 CFR 320.4 and RGL 84-09. • As stated in Section 10.11 of the decision document, the FDEP issued a Section 402 NPDES permit on November 21, 2012. The NPDES permit requires that discharges from the mine be monitored to ensure that water quality standards are not violated. • Section 4.4 of the Final AEIS describes the direct and indirect effects of phosphate mining on water quality. • 4.12.4 of the Final AEIS describes the cumulative effects of phosphate mining on surface water quality. • Section 4 2 of the Final AEIS describes the direct and indirect effects of phosphate mining on surface water hydrology. • Section 4 3 of the Final AEIS describes the direct and indirect effects of phosphate mining on groundwater. • Appendix F of the Final AEIS describes the development and application of a groundwater flow model to evaluate direct, indirect, and cumulative effects of phosphate mining on surficial, intermediate (2), and Floridan aquifer. This modeling was completed on a regional level. Additionally, the Corps considered local-scale modeling that compares pre-mining and post-mining hydrologic conditions, especially in relation to surface water flows and levels. Finally, the water use permit issued by SWFWMD includes permit conditions that protect adjacent water users, the affected aquifers, and onsite and adjacent aquatic resources. • Section 1 3.1 of the Final AEIS, explains why phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants. • Submitted documents attached.

	reserves, more than "300 billion tons." The report states: "There are no imminent shortages of phosphate rock." Morocco alone, a friendly country, has 50 times the phosphate Florida has and is expanding its mining and production. The USGS Phosphate Rock World Review section indicates major projects being developed and new mines in various stages of development in many countries. Therefore, as many other countries develop new mines and/or expand existing mines, it cannot be assumed that Mosaic's business will continue as usual. Phosphate mining is risky, markets can change rapidly; the business could go bad as it has in the past in Florida with similar devastating consequences. Mosaic also has not presented any need other than its own business plan and profits. Exporting its product to other countries is at the expense of massive groundwater withdrawals and destruction of valuable wetlands and water resources in Florida. This is not a sufficient justification and is not in the public interest. 8. The Reality of Phosphate Strip Mining Shown in Aerial photographs/Google Maps. Close-up aerials and videos of current and past mines depict the landscapes which have been strip mined. The AEIS consists of words, mostly from the mining industry's point of view and the consultants the contractor chose to convey minimal significance. The truth is on the ground and clearly visible from the air and Google maps. There appears to be little reclamation, mostly just scarred, often whitish landscapes, infestations of cogan grass and other invasive weeds, and slime ponds that are there for many years because so much earth was dug up and taken away and clays left in CSAs. There isn't enough soil or even sand to reclaim the land. Instead, deep pits (aka lakes) are created instead to fill the holes. A recent article in the Ledger, "What's Next for Bone Valley," inadvertently pointed out yet another long-term burden of phosphate mining in the southern part of Polk county--an astronomical 250,000 acres of old mining land that is not being used, much of it in long-term ownership by Mosaic. 9. Reclamation Delays/Variances. Mosaic doesn't keep the promises they make about reclamation. Their mine reclamation plans and timelines may have little meaning. They have been granted, according to a study by Norma Demers, 100 variances, for example for 10-year delays by DEP. Lack of enough sand is often cited as a reason. They should not be granted any permits for mining based on plans that have not been implemented according to schedule. The AEIS assumes that 8 years after mining completion the land is available for farming. This assumption is unsupported. The DEP state report includes 5-year blocks of time (20 years). The 2014 DEP report indicates that the percentage of mandatory acres of Mosaic mines reclaimed and released since 1975 is only 39%. Some say the areas will never be the same again, and others say it will take hundreds of years, if ever, for strip-mined areas to recover. 10. Clay Setting Areas. The waste clay disposal areas on approximately 40% of land are not temporary and constitute a significant impact which is ignored. The CSAs interfere with groundwater flow, ruin the land, are not readily reclaimed, and have little to no use after mining. No CSAs in Manatee County have even been reclaimed. 11. Losses of water resources are significant impacts and contrary to the public interest. Ecosystems are completely destroyed down to a depth of 40-60 feet by strip mining, including the surficial aquifer that cannot be reclaimed. The Peace River Manasota Water Authority expressed concerns about mining in the AEIS and in the South Pasture Extension comments. The water level is lowered by mining without even considering groundwater pumping. As mining occurs, groundwater moves into the mined area, permanently lowering the water in the surrounding areas. The mining excavations and pits also result in a greater loss of water through evaporation. We are in a water use caution area, yet millions of gallons of groundwater are used in the mining process that Mosaic obtains for free through a mega permit that allows for more water withdrawal than most municipalities use. Groundwater is being pumped from hundreds of wells. An unnecessary and destructive business is being subsidized; the water is a public resource. The Hydrologic Conditions Report (June 7, 2017) by Peace River Manasota Water Authority indicated that rainfall in the Peace River Basin for the past 12 months is nearly 20 inches below normal. Region-wide rainfall conditions reported by SWFWMD for the 12-month period ending April 2017 indicate dry to very dry conditions in most of the Peace River Basin and along the coast of west-central Florida. Manatee County is under water restrictions; is Mosaic? SWFWMD also cannot predict droughts: Southwest Florida Still in a Drought (Water Usage Report Card-2008-2009; Deepening Drought is On the Way--Forecast raises specter of strained supply and rising fire risks (Herald Tribune, March 16, 2012), Little Rain, Low Rivers--with Dry Spell Seen Ahead, Fears of a Drought Return (Herald Tribune, March 7, 2013) 12. Lack of Research Supporting Success of Reclamation/Mitigation. Valuable wetland functions are lost for many years during mining. Some types of wetlands are difficult to re- create or cannot be re-created according to experts who have testified. There was no field research in the AEIS in Chapter 5 to determine the success of reclamation or mitigation. For example, what is the actual time it takes for different wetland and habitat types and what is the actual fertility and performance of the "reclaimed" wetlands and land? Scientific evidence that reclamation or mitigation works and to what extent is lacking, yet the mine plan will includes written plans as though it does. 13. Economic Analysis Undervalues Ecosystem Services and Agriculture. The AEIS overestimates the value of mining, compared to the value of ecosystem services for forests and wetlands (AEIS treats them as though they have no value but research does indicate their value to society) and income to agriculture. Professor Weisskoff (see report submitted previously for AEIS) states that the income/revenue attributed to agriculture is grossly understated and that the methodology used by AEIS invalidates the agricultural contributions of all counties. The reason this is brought up is that it affects the outcome of the entire AEIS program, i e., if the No action alternative is multiplied by the US Ag census factor, then the No action alternative actually gives a higher value than the With Mine alternative. The undervaluation of agriculture lands materially impacts the AEIS economic calculation, giving a higher value to the No action alternative. This failing is due to the company the applicant used to provide the AEIS economic analysis. Further, the product sold by the mining companies benefits the company and its shareholders, not the local economies, citizens or the local environment. 14. Chemical Fertilizer Runoff Contributes to Blue-Green Algae. Chemical fertilizer is one of the contributors to the nutrient load and runoff of phosphorus and nitrogen from land that is causing the poisoning of the water and blue-green algae in South Florida. I respectfully request you deny this application. Loss of wetlands, natural resources and agricultural land to strip mining is the worst possible land use and is unsustainable. Thank you for your consideration.	
Nancy Armstrong	I am respectfully addressing the Army Corps of Engineers to deny the permit for Wingate East SAJ-2009-03221. I am a resident of the mining district. The Corps is under a significant obligation to protect the waters of the US. Wetlands have the highest priority and the mandate is to avoid or minimize impacts to these wetlands. Reclamation and mitigation should not improperly replace the primary wetland protection mechanisms in the Clean Water Act: avoidance followed by minimization. The public has not been allowed access to the reclamation and mitigation plan prior to the Corps approval. The Corps must consider public input to qualify it's decisions to fulfill NEPA. A public hearing in the Wingate/Ona/Desoto mine area is necessary. The Manatee County Commission approved Wingate East despite the public outcry to deny. Over 2000 people submitted presentations, emails and phone calls to deny this from happening. A mere 17 for approval. The Manatee County Staff report of September 2016 states "that mining of high quality wetlands and other sensitive	• Section 7 of the decision document describes the Corps' evaluation of public interest pursuant to 33 CFR 320.4 and RGL 84-09. • Section 5 of the decision document describes how the Corps considered project alternatives to avoid and minimize adverse impacts to waters of the United States in its review of Wingate East. • Section 8 of the decision document, and the attached approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources.

	native habitats, such as forested wetlands and scrub, results in the total destruction of all vegetation and long-lasting disturbance of soil." In that staff report, the mining industry purports that 15 to 25 years after mining they may have some reclaimed wetlands released. They do justify this by saying that they cannot claim that the area has replaced all lost functions but that there is a "reasonable expectation "that the area will develop into a habitat of equivalent function. This is acceptable? There is no guarantee because they cannot replace what was there before. It is forever changed. There are terms and phrases that come up frequently in the mining documents: reasonable assurances, if available, if practicable, reasonable expection. This is all fuzzy, non-commital, very subjective language. Destroying high grade wetlands is not as Mosaic puts it "a reasonable use of the land." They acknowledge their destruction by offering up mitigation but this mitigation has not been proven to function nor should it be allowed instead of avoidance. It seems that the applicants statement of need stands unquestioned and that their preferred alternative is the only practicable alternative. The requirements of the CWA and the public interest should not be subordinated to Mosaic's business needs. The applicant's project specific need is too narrow- it virtually eliminates consideration of other alternatives. Fertilizer is alleged to be the overall public need. I believe this is not for the public's benefit but for the industry's benefit. If the fertilizer "public benefit" is given credence all permitting must consider the whole fertilizer process from the mining of the rock through the processing of the rock. This includes all the hazardous waste left behind. Currently this is not considered at all. Mosaic states that the phosphate rock mined in Manatee county will be processed in Hillsborough and/or Polk county processing plants. There is an ever increasing awareness that regenerative agriculture will be what feeds the world - not a temporary amendment to the soil that adds to pollution. The massive sinkhole disaster in September 2016 still looms large and reminds us that the 24 gypstacks in central Florida have this potential which will affect all of Florida's water. The idea that phosphate mining is a temporary use of the land is totally absurd. The temporary use idea was initiated by the outdated grandfathered-in industry. Phosphate mining affects the whole Bone Valley area and affects every Floridian. Wingate East (Manatee), South Pasture Extension (Hardee), Ona (Hardee), Pine Level (Desoto) are up for permitting all at once. In the attached map you can see the whole scope of mining. This map is a compilation from the FDEP website. The safety of our waters are at risk. The people of Florida depend on our agencies to protect our waters. Please look at the big picture. I ask the ACOE to deny permitting Wingate East and to have a public hearing in the mining area. Thank you.	• A summary of the draft compensatory mitigation was included in Section 8 of the supplemental environmental assessment, published June 22, 2017. • As described in the approved compensatory mitigation plan for Wingate East, implementation financial assurance covers all compensatory mitigation areas that have not yet achieved their performance standards for as long as it may take to do so. The financial assurance is updated on a yearly basis to include new mitigation areas and 'release' successful areas. • As described in Section 8.2.7 of the decision document and the approved compensatory mitigation plan, the functional analysis shows that the proposed mitigation replaces the lost aquatic resource functions, with consideration of time lag and risk. • Section 5.7 of the Final AEIS describes reclamation as required by FDEP. FDEP, not the Corps, is responsible for determining compliance with reclamation requirements. • Section 1.7 of the decision document references the public and applicant's need discussion in the Final AEIS, and describes the project-specific basic and overall project purpose, and the applicant's need, for Wingate East. • Section 1 3.1 of the Final AEIS, explains why phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants. • Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively. These analyses include consideration of ecological resources, wildlife, surface water and groundwater. • Section 4.1 8 of the Final AEIS addresses several of the issues related to community health, safety, and quality of life, with consideration of federal, state and local requirements. • The Corps has provided a separate, written response to the request for a public hearing. Submitted documents attached.
Barbara Angelucci	I am submitted comments on SAJ -2009-03221, Supplemental Environmental Assessment, Draft Clean Water Act Section 404(b)(1) Guidelines Analysis, and Draft Public Interest Review for Department of the Army (DA) Permit Application SAJ-2009-03221 (SP-MEP) requesting that you deny the permit for Wingate East Mine and hold a Public Hearing in the location of the Wingate East, Ona and DeSoto Mines. Mr. Heinz J. Mueller, Chief of the NEPA Program Office in the Office of Policy and Management submitted very strong comments to the USACE regarding mining..."which may result in significant impacts to Aquatic Resources of National Importance, (ARNIs)." Since the date of that letter of 7/30/2012 nothing has changed except further pressures on our aquifers and waters of national importance with continued mining. Letters from the Region 4 EPA as well as the scientific Technical Comments of the USGS Florida Water Science Center all express concern about our rivers, streams, wetlands, and habitat which is impacted by all aspects of mining. Section 4.4.5 of the Final EIS describes the predicted effects of Wingate East on surface water quality. As stated there, Wingate East will have a minor to moderate degree of effect. How do you know that? Even the EPA and USGS Florida Water Science Center disagree with your statement. In an EPA Statement posted on August 6, 2014 on “EPA: Protecting Water; A Precious, Limited Resource by Gina McCarthy Head of the EPA stated “The new mines could significantly impact wetlands.” The USACE is doing just that as there is little to no evidence of protection of wetlands or water. Then there is the distinct problem of the Mitigation and Reclamation Plan which is not available to the Public. How do we know there will be “No net loss of Wetlands” and how will they compensate for removed wetlands. The USACE must make the Avoidance and Mitigation Plan available for public and other Regulatory review before any decision is made on this permit. Mosaic relies on ‘self-reporting’ and 'ghost writing' regulatory reports – which ring with their need for more and more mining. However, in accordance with Mosaic’s filing of SEC Form 10K 2016, Page 8 they ..“have a 35% economic interest in a joint venture which owns the Miski Mayo phosphate rock mine in the Bayovar region of Peru. Our investment in the Miski Mayo Mine and related commercial offtake supply agreement to purchase a share of the phosphate rock from the Miski Mayo Mine allows us to supplement our internally produced rock to meet our overall fertilizer production needs. The Miski Mayo Mine’s annual production capacity is 3.9 million tonnes.” .. .”An additional Joint Venture is “MWSPC (Ma'aden Wa'ad Al Shamal Phosphate Company) which is developing a mine and two chemical complexes that are presently expected to produce phosphate fertilizers and other downstream phosphates products in the Kingdom of Saudi Arabia.” “Our investment in the Miski Mayo Mine and related commercial offtake supply agreement to purchase a share of the phosphate rock allows us to supplement our overall phosphate rock needs. In addition, we expect that MWSPC will enable us to not only further diversify our sources of phosphates but also improve our access to key agricultural countries in Asia and the Middle East”. Mosaic – SEC 10K 2016 Page 8. According to the Wikipedia, approximately one third of Mosaic’s Florida phosphate is shipped within North America with the remainder exported globally. The bulk of our natural resource is needlessly exiting our State, leaving our lands devastated and our wetlands, rivers, and streams replaced with piles of toxic and radioactive materials all because the FAEIS did not consider importation of phosphate rock which Mosaic is actually doing. This disproves your or Mosaic’s Statement of Need in the Supplemental Assessments and in the FAEIS. It is apparent the company can do with imported rock as it has imported rock before, which the USACE refuses to recognize putting more stress on our aquifer to the tune of up to 70 million gallons of free water a day. Mosaic is permitted to pump the aquifer while citizens are on water restrictions. Something is not right with this picture, as with each mine permit more water is withdrawn, rivers, watersheds, streams, wetlands are under duress and are negatively impacted In Manatee County, the Wingate East Mine will impact the Myakka Watershed and Mosaic’s mining of a strawberry	• The Corps has provided a separate, written response to the request for a public hearing. • Section 5 of the decision document explains how the permittee avoided and minimized impacts to waters of the United States. • Mosaic has provided a mine plan as their preferred alternative that complies with both avoidance and minimization requirements of the Clean Water Act Section 404(b)(1) Guidelines and the Final EIS mitigation framework. • As stated in Section 10.11 of the decision document, the FDEP issued a Section 402 NPDES permit on November 21, 2012. The NPDES permit requires that discharges from the mine be monitored to ensure that water quality standards are not violated. • Section 5.7 of the Final AEIS describes reclamation as required by FDEP. • Section 8 of the decision document, and the approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources. • Section 1 2 of the Final AEIS discusses how the Corps considers purpose and need under NEPA and the 404(b)(1) Guidelines. • Section 1.7 of the decision document references the public and applicant's need discussion in the Final AEIS, and describes the project-specific basic and overall project purpose, and the applicant's need, for Wingate East. • Appendix F of the Final AEIS describes the development and application of a groundwater flow model to evaluate direct, indirect, and cumulative effects of phosphate mining on surficial, intermediate (2), and Floridan aquifer levels. This modeling was completed on a regional level. Additionally, the Corps considered local-scale modeling that compares pre-mining and post-mining hydrologic conditions, especially in relation to surface water flows and levels. Finally, the water use permit issued by SWFWMD includes permit conditions that protect adjacent water users, the affected aquifers, and onsite and adjacent aquatic resources. • The decision document for Wingate East describes how the project complies with the applicable federal regulations. • As explained in Section 1.3.1 of the Final AEIS, phosphogypsum stacks are associated with fertilizer production. The Corps considered the four phosphate mines reviewed under the AEIS to have independent utility from the fertilizer plants. • The DA permit will include a permit condition requiring Mosaic to provide yearly compliance reports on the status of the authorized activities, the FDEP-required reclamation, and the Corps

	Field as part of the Four Corners Mine, will also draw down and reduce flow in the Manatee River by 1.96 million gallons per day during mining which .. "shall continue until such time that Mosaic has completed reclamation of all mining activities constituting a part of the Four Corner Mine in the Watershed of Lake Manatee". We are talking decades! The Manatee River feeds into Lake Manatee our drinking water supply which we also sell to Sarasota County. Mosaic has said that they would augment the water quantity from their wells for these draw downs. However, Mosaic is diminishing our present water supply and replacing it with water from our future water supply. That means they get to draw even more water out of our aquifer to replace the reductions they incurred. (August 11, 2015 Manatee County Board of Commissioners meeting, item #33. Z-14-04 – Mosaic Fertilizer, LLC/Four Corners Mine – G & D Farms Addition –DTS20100222). No mention was made of the aquatic life in the river that would be affected by these draw downs. While this is not part of the USACE's jurisdiction, it is just another example of gambling with our greatest resource ..WATER. On the topic of water and Mosaic's use thereof, on February 23, 2012 a Petition for Hearing on the Approval of Mosaic's Individual Water Use Permit #20011400.025, aka "Integrated Water Use Permit (IWUP)" dated February 29, 2012 was submitted by T. Mims Corp. in Lakeland. His professional engineer, Mike Cotter, reviewed the water permit which was the basis for requesting an Administrative Hearing. State of Florida, Division of Administrative Hearings, Nichols Ranch, LLC; Mims Properties Investments, LLC; Mims Properties, LLC and Mims Hammocks, LLC, Petitioners VS Mosaic Fertilizer, LLC and Southwest Florida Water Management District. A web link is below if you wish to use it Respondents. Blockedhttp //www protectpeaceriver org/wp-contents/uploads/2012/04/mosaic_hearing_pdf.pdf <Blockedhttp //www protectpeaceriver org/wp-contents/uploads/2012/04/mosaic_hearing_pdf.pdf> On Page 9 of Cotter's report under "Statement of Disputed Issues of Material Fact" there was mention regarding the New Wales gypsum stack. The very same stack that recently developed a sinkhole which plundered unknown amounts of toxic chemicals into the aquifer. This was unavoidable and predictable, considering the following circumstances surrounding the issue. Some of the documents presented in the "Petition for an Administrative Hearing on Mosaic's mega water permit, identified FDEP mining water use permit #405417 for the New Wales Facility issued in 1989. It was discovered that this facility did not have any record of inspection since 1996 and no evidence of there being one submitted prior to the sinkhole fiasco. SEVEN (7) YEARS with no inspections which are usually done on an annual basis. I know the USACOE does not include gyp stacks in its review, but it should as they have a direct impact on our water, especially with self reporting by Mosaic and their neglect to inspect facilities. There are 24 gyp stacks in Florida And Mosaic has said that the Wingate East disposable products, spoils, will go to the New Wales 'stack' or another 'stack' north/outside of Manatee County which is more susceptible to sinkholes. The effects of phosphate mining have been well documented over the years. The extensive pollution, the enormous water usage, groundwater contamination, radioactive discharges and the failure to restore the land to its former use or even reclaim it are also well documented. Mosaic owns hundreds of acres in Central Florida and expects to mine all of them. Surely, the USACE will own the Environmental Risk from the cumulative impacts, it refused to examine. The USACE must deny this permit as our watersheds, rivers, streams, wildlife and wetlands must be protected. As Ansel Adams has said, "It is horrifying that we have to fight our own Government to save the environment".	required mitigation. The permit also includes a condition requiring a comprehensive compliance review every five years. • Chapter 5 of the Final AEIS describes the compensatory mitigation process for the Corps and the state, and also describes the state's mandatory reclamation requirements.
Leslie Harris-Senac	Please stop phosphate mining in beautiful Manatee County. Economics are part of the suite of metrics considered in a CWA Section 404 determination of public interest. Phosphate mining is not an economic benefit to the county, state or nation, and is in fact a net loss. The Corps must deny the permit. It has absolute authority to do so. Please host a public hearing in or near the Bone Valley. Do the right thing here. Consider grandchildren and their futures.	• The Corps has provided a separate, written response to the request for a public hearing. • Section 4 6.4 of the Final AEIS describes the economic effects of Wingate East. • Section 7 of the decision document describes the Corps' evaluation of public interest pursuant to 33 CFR 320.4 and RGL 84-09.
Hugh Richardson	I am writing as a personal appeal to you and the Army Corps of Engineers to refrain from issuing permit SAJ-2009-03221 for the Mosaic Wingate East Mine. At the very least, we need a Public Hearing to voice the myriad of objections to the continuing devastation Florida's wetlands and agricultural land. I am a native Floridian. My wife and I moved to Hardee County in 2013 to be close to family. We built a home in Ona, Florida to be next to family members who have lived and worked in Hardee County for 30 years. I knew about phosphate mining when we moved here. Its easy to see the results of the destruction of wetlands and pastureland in any aerial view of Polk, Hardee, and Manatee counties through Google Earth. But it was exciting to move to the area and look forward to retirement years in the real Florida, not along the overbuilt coast. Our 10 acres is in Ona, off SR 64, and, if Mosaic has its way, directly across from what might become a horrible example of humankind's complete lack of respect for the only inhabited planet that anyone knows of. We moved here from Oregon - a state known for environmental concerns such as clear cutting of forests. As bad as the result of a clearcut is though, it does not hold a candle to the incredible destruction of phosphate mining and the irreversible loss of wetland and animal habitat it leaves in its wake. This coupled with the fact that, while trees can be replanted, phosphate can not be recreated. I did not realize when we moved here in 2013 just how awful this is. It was when I began to understand the sheer magnitude of the problem and to research the history of mining and the future destruction of Florida's counties that I felt compelled to come forward with my concerns. We need a Public Hearing: * to remind decision-makes of the vital role wetlands play in the fragile environment that is Florida. * to show that, although Mosaic wants you to believe otherwise, it does Not have the support of citizens of Florida to extract the remaining non-replenishable resource that is phosphate with no regard to future needs and the devastation left behind. * to show that Mosaic's Statement of Purpose is so narrowly worded that it tries to make you believe everything Mosaic desires is inevitable and must be provided to it on a silver platter. This is not right. If wetlands are going to be destroyed, it has to be proven that it is for the public good or for some overriding public purpose. Where is the proof of a public good coming out of this self-serving destruction? * to find the support for claims that restored wetlands are better than they were. There seems to be nothing that demonstrates this contention. What happens to the aquifers that are destroyed? What plants and animals can live on the poor excuse for land that is put back after the draglines have finished destroying what took countless years to create? What about the loss of habitat now for plants and animals while Mosaic delays any remediation by continuing to expand mining so as to never shut down a site and have to actually clean up their mess. * to discuss the probable impact of depleting this nation of its primary phosphate reserves causing us to depend on other, possible not very friendly, nations to sell us fertilizer. Can you imagine getting into the same predicament for fertilizer for US crops as we have with oil for cars and industry? Just because relations with a country are okay now does not mean that will be the case in future years when the worlds population has increased even more and everyone is demanding fertilizer to support their own agricultural needs. Mosaic can import raw material to process. It does not have to use up all of America's resource now just to satisfy a quarterly earnings report and make shareholders happy. We need to pull back the reins of this phosphate-hungry horse and put some perspective into the discussion. There is so much more to say here but I know you will be receiving many comment letters and emails from concerned citizens and groups. Please consider our remarks, both backed by science and from the heart, as you move through this process. Consider that future generations will have to live with the results of the decisions made today. Thank you for your time.	• The Corps has provided a separate, written response to the request for a public hearing. • Comment acknowledged. • The decision document for Wingate East describes how the Corps evaluated Wingate East under NEPA, the Clean Water Act 404(b)(1) Guidelines, and the public interest test. • Sections 6 and 7 of the decision document address the 404(b)(1) Guidelines and public interest review, respectively. These analyses include consideration of ecological resources, wildlife, surface water and groundwater. • Section 4.1 8 of the Final AEIS addresses several of the issues related to community health, safety, and quality of life, with consideration of federal, state and local requirements. • Section 5 of the decision document describes how the Corps considered project alternatives to avoid and minimize adverse impacts to waters of the United States in its review of Wingate East. • Section 8 of the decision document, and the attached approved compensatory mitigation plan, describe how Mosaic will provide compensatory mitigation for unavoidable impacts to aquatic resources. • Section 4.6.5 of the Final AEIS describes the economic effects of Wingate East. In addition, Section 7.0(p) of the decision document describes how the Corps updated the economic analysis to consider project changes since the Final AEIS. • Section 1 2 of the Final AEIS discusses how the Corps considers purpose and need under NEPA and the 404(b)(1) Guidelines. • Section 7 of the decision document describes the Corps' evaluation of public interest pursuant to 33 CFR 320.4 and RGL 84-09.

Individual commenters who included a statement requesting a public hearing:

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CBD TYPE 1

John Fellows, Project Manager
U.S. Army Corps of Engineers

Dear Mr. John Fellows,

I am writing to let you know that I do not want one more square inch of Florida's precious land dug up and poisoned by phosphate strip mining. The state's already home to the world's largest phosphate mine, and Mosaic seeks to mine an additional 50,000 acres. I urge you to do everything in your power to stop this destructive industry.

Phosphate strip mining is not in the public interest. It completely destroys landscapes and wildlife habitat, including wetlands, forests and streams needed by endangered species. It uses exorbitant amounts of precious groundwater, jeopardizing future water supplies and depriving wetlands, streams and rivers of water. And it creates approximately 30 million tons of radioactive byproduct each year that must be stored in 200-foot-tall phosphogypsum stacks and toxic waste ponds called "clay settling areas," which are slime ponds that will permanently cover approximately 40 percent of an average mine site. These are the largest repositories of hazardous waste in the nation.

With Florida's phosphate a finite resource, the few mining jobs gained in the short term do not justify the permanent loss of agricultural and ranching jobs, the negative health effects or the profound environmental damage. Please -- lend your support to the growing movement to end phosphate strip mining and protect Floridians' health, lands and wildlife.

Sincerely,

CBD TYPE 2

John Fellows, Project Manager
U.S. Army Corps of Engineers

Dear Mr. John Fellows,

I am writing to let you know that I do not want one more square inch of Florida's precious land dug up and poisoned by phosphate strip mining. The state's already home to the world's largest phosphate mine, and now an application being reviewed by the U.S. Army Corps of Engineers seeks to mine 7,500 additional acres in the Peace River watershed as part of a plan to mine 52,000 acres in the region. I urge you to do everything in your power to stop this plan.

Phosphate strip mining is not in the public interest. It completely destroys landscapes and wildlife habitat, including wetlands, forests and streams. It can use an average of 69 million gallons of groundwater a day, jeopardizing future water supply and depriving wetlands, streams and rivers of water. It destroys thousands of acres of natural ecosystems, including wetlands, forests, streams and vital habitat for endangered plants and animals, resulting in a loss of genetic diversity, with no possibility of returning it to its pre-mining condition. And it creates approximately 30 million tons of radioactive byproduct each year that must be stored in 200-foot-tall gypstacks and toxic waste ponds called "clay settling areas," which are slime ponds that will permanently cover approximately 40 percent of an average mine site. These are the largest repositories of hazardous waste in the nation.

With Florida's phosphate projected to be depleted by 2035, the few mining jobs gained in the short term do not justify the permanent loss of agricultural and ranching jobs, the negative health effects or the profound environmental damage. Please -- lend your support to the growing movement to stop this project, end phosphate strip mining, and protect Florida's lands.

Sincerely,

CBD TYPE 3

John Fellows, Project Manager
U.S. Army Corps of Engineers

Dear Mr. John Fellows,

I am writing to let you know that I do not want one more square inch of Florida's precious land dug up and poisoned by phosphate strip mining. The state's already home to the world's largest phosphate mine, and now an application being reviewed by the U.S. Army Corps of Engineers (from the company Mosaic) seeks to mine 52,000 additional acres in the Myakka and Peace river watersheds. I urge you to do everything in your power to stop this plan.

Phosphate strip mining completely destroys landscapes and wildlife habitat, including wetlands, forests and streams. It can use an average of 69 million gallons of groundwater a day. And it creates approximately 30 million tons of radioactive byproduct each year that must be stored in 200-foot-tall gypstacks and toxic waste ponds called "clay settling areas." These are the largest repositories of hazardous waste in the nation.

With Florida's phosphate projected to be depleted by 2035, the few mining jobs gained in the short term do not justify the permanent loss of agricultural and ranching jobs, the negative health effects or the profound environmental damage. Please -- lend your support to the growing movement to stop this project, end phosphate strip mining, and protect Florida's lands.

Sincerely,

CBD TYPE 4

John Fellows, Project Manager
U.S. Army Corps of Engineers

Dear Mr. John Fellows,

I am writing to let you know that I do not want one more square inch of Florida's precious land dug up and poisoned by phosphate strip mining. The state's already home to the world's largest phosphate mine, and now an application being reviewed by the U.S. Army Corps of Engineers seeks to mine 7,500 additional acres in the Peace River watershed. I urge you to do everything in your power to stop this plan.

Phosphate strip mining completely destroys landscapes and wildlife habitat, including wetlands, forests and streams. It can use an average of 69 million gallons of groundwater a day. And it creates approximately 30 million tons of radioactive byproduct each year that must be stored in 200-foot-tall gypstacks and toxic waste ponds called "clay settling areas." These are the largest repositories of hazardous waste in the nation.

With Florida's phosphate projected to be depleted by 2035, the few mining jobs gained in the short term do not justify the permanent loss of agricultural and ranching jobs, the negative health effects or the profound environmental damage. Please -- lend your support to the growing movement to stop this project, end phosphate strip mining, and protect Florida's lands.

Sincerely,

CBD TYPE 5

From:
To: Peterson, Mark F CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Not One More Inch: End Phosphate Mining in Manatee County!
Date: Saturday, July 08, 2017 12:22:35 PM

Dear Mr. Peterson,

I'm writing to let you know that I don't want one more square inch of Florida's precious native land dug up and poisoned by phosphate mining. Florida is already the site of the world's largest phosphate mine -- but now the industry seeks to mine **3,635** additional acres in eastern Manatee County, threatening the **Myakka** and **Peace** River watersheds.

Phosphate strip mining completely destroys landscapes and wildlife habitat including wetlands, forests and streams. The so-called reclamation required by the state and authorized by the Corps has never been proven by anyone outside the industry to replace land that is lost.

Phosphate mining has already damaged the Peace and Myakka River basins. In some areas of the upper Peace River basin, the surficial aquifer does not even exist because phosphate mining has removed the surface sediments. The mining and fertilizer process put the Floridan aquifer, and the 10 million people who depend on it, at risk.

Not only does phosphate mining contaminate precious water resources, it also creates approximately 30 million tons of radioactive byproduct each year. This byproduct, phosphogypsum, is stored in 200-foot-tall stacks. The mining also results in the creation of clay settling or "slime" ponds, which make up a significant portion of the mined-out landscape and may also contain dangerous chemicals.

With Florida's phosphate projected to be depleted by 2035, the few mining jobs maintained in the short term do not justify the permanent loss of agricultural and ranching jobs, potential negative health effects, or the substantial risks to Florida's top economic earner: tourism. Please protect Florida's natural environment and don't allow this industry to take one more inch.

Thank you for your attention,

F&WW

From: Food & Water Watch on behalf of
To: Peterson, Mark F CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Re: Permit Application SAJ-2009-03221; Mosaic Wingate East Mine
Date: Thursday, July 20, 2017 3:52:16 PM

Jul 20, 2017

District Engineer Mark Peterson
U.S. Army Corps of Engineers

Dear District Engineer Peterson,

I urge you to protect Manatee County and its residents by rejecting Mosaic Company's proposed Wingate East Mine Extension.

Strip mining for phosphate has already ravaged hundreds of thousands of acres in Florida and turned wetlands and agricultural land into barren fields. In addition to stripping away Florida's natural habitats, phosphate mining puts our drinking water at risk. Less than a year ago, a sinkhole opened underneath a stack of phosphate mining waste and sent over 200 million gallons of contaminated water into the Floridan Aquifer.

Simply put, phosphate mining is too dangerous to allow it to continue expanding.

Please protect Manatee County residents and our environment by rejecting Mosaic Company's proposal to expand its mining for phosphate.

Sincerely,

From: Alice Newlon
To: Peterson, Mark E CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Wingate East Phosphate Mine
Date: Saturday, July 08, 2017 2:21:50 PM

Dear Mr Petersen,
The Wingate East mine expansion is at the headwaters of the drinking water sources for Manatee and Sarasota Counties. Our county, Manatee, seems to side with developers, no matter how dangerous it is to our population or how much destruction it does to the habitat of endangered species or even if it will permanently degrade the land, and thus the income base of the county.

I hope you have the power to stop this destruction. The world does not need THIS phosphate in a highly populated and growing state. The world has many other locations that can mine. If you have the ability, please deny the mining expansion by Mosaic in Manatee County, Florida. Thank you.

N. Alice Newlon
7524 3rd Ave W
Bradenton, FL 34209
(941) 778-4184

From: Candace Luther
To: Peterson, Mark E CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Stop the Wingate East Mine Extension
Date: Friday, July 07, 2017 11:58:27 PM

Dear Mr. Peterson,

I am asking you to please deny the expansion for the following reasons:
1. Post mined land is radioactive and dangerous to living beings both human and animal.
2. Mining produces acidic waste which must somehow be disposed of, typically by diluting and dumping into adjacent rivers and streams.
3.The possibility of runoff into nearby bodies of water is too great, especially in the Peace River watershed which supplies Sarasota, Desoto and Charlotte Counties with drinking water.
4. The phosphogypsum waste is being sent to neighboring counties to be stored forever in stacks that risk contamination of environment in he even of a natural disaster.
5. The possibility of sinkholes developing in this area risking contamination of the underlying aquifer is too great.
6. We all know the wildlife are killed off in the process. Mosaic officials are lying if they are saying all of the creatures are relocated. That would be impossible to do.
7. There has been no "successful" reclamation of forested wetlands to date. There have been unsuccessful attempts.
8. Regardless of the lies they spew in their commercials meant to brainwash the public into thinking they are good stewards of the environment, the fact remains that the land will never be of the same quality it once was.
9. Manatee County already has issues with illness as a result of environmental contamination on the west side of town in the Bayshore area. We don't need more.
10. The precious farmlands around the mines will be lost causing harm to our farming community, which is ironic since they claim to help grow the food we need. The truth is, their phosphate helps grow corn, which is fed to the factory farming animals, which people eat unless you are vegetarian. It is also used to make ethanol fuel. Most is shipped overseas.
11. By denying this, you have the ability to stand behind the hundreds of citizens who came before the commission to oppose this, and those who wrote letters if they could not attend. The commissioners voted against the will of the people of Manatee County when they approved this. If you look at who funded the campaigns of those on the dais, you will see that most took money from Mosaic, which gives the appearance of bribes to gain their approval. The well being of this county and it's citizens should not be sold to the highest bidder.
12. This case could set precedence for a new trend toward concern for the environment over dollars in someone's pocket.
There are more reasons, but I think I have stated enough to warrant a "No" vote on this issue. Thank you for your time and consideration, Candace Luther

Candace Luther

34243

From: Kathryn Dorn
To: Peterson, Mark E CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Stop the Wingate East Mine Extension, Please!
Date: Sunday, July 09, 2017 3:22:50 AM

Dear Mr. Peterson,

Do not allow any more phosphate mining in my home state! In particular, do not give Mosaic the 3,635 acres it wants to destroy in Manatee County! We still don't have a good way of dealing with the ridiculous phosphogypsum waste stacks; phosphate companies can't replace the wildlife they've annihilated during mining by their eventual reclamation attempts; and Florida's rivers, including the Peace and Myakka Rivers threatened by Mosaic's most recent plan, suffer enough from all of the phosphate-derived fertilizer we indirectly dump in them, along with the mines' land alteration.

I am sick of seeing phosphate companies punch holes in my state, only to sell us back the algae bloom-causing excessively rich fertilizers and claim that they're helping the world. We rely far too heavily on the finite resource of phosphate deposits; it's past time to wean ourselves off of them by developing other phosphate sources, such as omnivores' and carnivores' manure, and simultaneously stop suffering the damage caused by the phosphate mining process. Please deny Mosaic's request and do not let them permanently wreck one more piece of Florida.

Thank you for your time.

Kathryn Dorn

33613

From: Mari R.H.
To: Nobles, Nakeir L CIV USARMY CESAJ (US); Peterson, Mark E CIV USARMY CESAJ (US); Unger, Kelly E CIV USARMY CESAJ (US); Fellows, John P CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Framing Paper
Date: Friday, July 14, 2017 5:29:52 PM

Sure gain for the Mosaic company and an uncertain gamble for public health.

Sent from my iPhone

From: Rachel Garibay
To: Peterson, Mark E CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Deny Permit Application SAS2019-03221
Date: Sunday, July 23, 2017 5:52:42 PM

I believe the above permit should be denied for the following reasons.

A foreign entity, company wants to expand in Manatee County. Why should we cater to a company that robs our environment and sends their product all over the world. This company
Does not care about the quality of the water, animals, birds, environment or public health of the citizens that live in this area and beyond. Tampa already has piles of radioactive leftovers
Due to phosphate miining that nobody wants to take responsibility for. Occasionally, water has to be leaked into the bay because the holes are full. Florida is a tourist state and is the
Second now in population. Do you think we can continue to offer pristine water to swim in and drink in? At the very least, we need a ELS study to be required because of the effects of mining on the
Human environment are highly controversial. Future generations babies need to be protected !

Sincerely,

Mrs Rachel Garibay
Mr. Joe Wynnberry
Mr. John Balemenou

3342 Yonge Ave, Sarasota, Fl 34125

MANATEE COUNTY
FLORIDA

July 10, 2017

District Engineer
West Branch Mining Team
10117 Princess Palm Avenue, Suite 120
Tampa, Florida 33610

Re: Wingate East Mine - Supplemental Environmental Assessment, Draft Clean Water Act Section 404(b)(1) Guidelines Analysis, and Draft Public Interest Review for Permit Application SAJ-2009-03221 (MEP)

To the District Engineer:

Thank you for allowing Manatee County government to provide comments on the Supplemental Environmental Assessment, Draft Clean Water Act Section 404(b)(1) Guidelines Analysis, and Draft Public Interest Review for Department of the Army (DA) Permit Application SAJ-2009-03221 (Wingate East Mine). Staff has review the documents and are providing the following comments:

While the above-referenced documents correctly state that Manatee County has approved the Master Mining Plan for Wingate East there are particular Conditions and Restrictions that we would like to highlight. First, as previously mentioned in Manatee County comments made during the scoping process for the AEIS, the Manatee County Phosphate Mining Code (Ordinance 04-39) has restrictions on mining below the 25-year floodplain, mining in wetlands that are significantly dependent on the 25-year floodplain, and mining of perennial streams. Therefore, as a condition of the Master Mining Plan for Wingate East, there are additional permitting requirements for mining certain areas in the vicinity of Stream 100, in Sections 27 and 34. These areas include wetland systems that are identified as mitigation framework wetlands and streams and portions of the 25-year floodplain for Stream 100. As such, the applicant's preferred alternative, as depicted in Figure 7 of the Environmental Assessment, still requires additional Manatee County approvals.

Secondly, the applicant is requesting to use the Wingate Creek Mine beneficiation plant and transportation corridors for the processing and transportation of ore produced at Wingate East Mine. There are specific conditions associated with the transportation of ore on County roads

Parks & Natural Resources Department
Administrative Division
5502 33rd Avenue Drive West, Bradenton, FL 34209
Phone: (941)742-5923

PRISCILLA TRACE * CHARLES B. SMITH * STEPHEN JONSSON * ROBIN DiSABATINO * VANESSA BAUGH * CAROL WHITMORE * BETSY BENAC
District 1 District 2 District 3 District 4 District 5 District 6 District 7

within the Wingate Creek Mine Master Mining Plan which restrict truck traffic. The increase in production rate to 1.7 MM tons may exceed the amount of ore that the applicant is able to transport under the current County permit. The applicant's current application to modify the Wingate Creek Mine Master Mining Plan includes no request to modify the transportation conditions.

As described in Item (6)(c) of the Draft Public Interest Review, the Final EIS describes predicted effects of Wingate East on surface water quality on the Upper Myakka River and Horse Creek. It is recognized that the mine will need to comply with Section 401 water quality certification as part of ERP Permit 0095520-025 and Section 402 NPDES permit as it relates to these offsite and downstream waters. In addition to these requirements, surface water quality monitoring of Stream 100 and the West Fork of Horse Creek is required by Manatee County, in order to establish that degradation of preserved creeks and streams, as defined in Section 2-20-10 of the Phosphate Mining Code, is not occurring.

Thank you again for the opportunity to participate in the permitting process. If you have any questions or need any additional information, please feel free to contact me at 941-745-3727 or email: Charlie.Hunsicker@mymanatee.org.

Sincerely,

Charlie Hunsicker

Charlie Hunsicker
Director, Parks & Natural Resources Department

Cc: Ed Hunzeker, County Administrator
Rob Brown, Division Manager, PNRD
William Clague, CAO
Mark Peterson, ACOE
John Fellows, ACOE
Orlando Rivera, FDEP

RECEIVED
JUL 17 2017
Tampa Regulatory Office

ManaSota-88, Inc.

A 501.c3 Public Health and Environmental Organization

District Engineer
West Branch Meeting Team
10117 Princess Palm Avenue
Suite 120
Tampa, Florida 33610

Re: DA permit application SAJ-2009-03221; Mosaic – Wingate East Mine

ManaSota-88, Inc. submits the following comments and request for a public meeting concerning the draft CWA Section 404(b)(1) Guidelines analysis and public interest review for DA Permit Application SAJ-2009-03221.

Additionally, ManaSota-88, Inc. strongly recommends the Army Corps of Engineers (ACOE) deny DA permit application SAJ-2009-03221 and find the project ***Environmentally Unsatisfactory.***

During the permit decision process, the Corps must evaluate the project in relation to the public interest. The public benefits and detriments of all factors relevant to each case are to be carefully evaluated and balanced. Relevant factors may include conservation, economics, esthetics, wetlands, cultural values, fish and wildlife values, water supply, water quality, and any other factors judged important.

ManaSota-88, Inc. (hereinafter, "ManaSota-88"), is a public interest conservation and environmental protection organization which is a Florida not-for-profit corporation and a citizen of the State of Florida whose address is: ManaSota-88, P.O. Box 1728, Nokomis, Florida 34274. The corporate purposes of ManaSota-88 include the protection and preservation of water quality and wildlife habitat in Manatee and Sarasota Counties. ManaSota-88 is a citizen of the State of Florida pursuant to section 403.412(5), Florida Statutes.

ManaSota-88 and its members will be substantially and adversely affected by the conditions and activity which will result if this permit is issued, including by water pollution and degradation of the water quality of surface and ground waters. ManaSota-88 owns real property located in Manatee County, Florida.

GENERAL COMMENTS

Post - reclamation lands must not be permitted to exceed pre-mining, unenhanced natural background soil radium and gamma levels.

Best Possible Technologies can reclaim mined land to pre-mining soil radium and gamma levels. Since the future land uses of the reclaimed lands are not known, all potential radiation exposures should be avoided.

Since it is both economically and technically feasible, DA permit application SAJ-2009-03221 should require radiation levels after mining not exceed those that existed before mining.

Clay Settling Areas are one of the significant environmental and public health threats associated with the Wingate East Mine. Radioactive wastes from these ponds threaten surface and groundwater; the hazard of slime spills is a constant menace to essential public water supplies and natural systems. Elevated levels of fluorides, chromium, cadmium, arsenic and other toxins are commonly found in clay settling areas.

The possibility of a slime pond dam break cannot be ruled out. When a pond ruptures their earthen impoundment's, the highly acidic, highly radioactive slime effluents completely annihilate all aquatic life in the receiving waters.

The highly acidic slime ponds also emit fluoride and radon gases, which are harmful to humans, plants and animal tissues.

Even if all mining proposed for the Myakka River and Peace River watersheds goes according to plan with no unexpected problems or deliberate violations of ACOE permits, because of run-off from mining tracts, permitted and unregulated discharges to surface and groundwater, water quality will still be degraded.

Water quality protection won't be accomplished by permitting thousands of tons of toxic and radioactive sandy slimes to be deposited in mine cuts which cut through to the surficial aquifer and beyond or permitting sandy slimes to be dumped in surface impoundment's.

DISPUTED ISSUES OF LAW AND FACTS

ManaSota-88 alleges the following disputed issues of law and material fact for determination in the DA permit application SAJ-2009-03221; Mosaic – Wingate East Mine.

(a) Whether Mosaic Fertilizer, LLC (hereinafter "Applicant") has provided reasonable assurances that the applicable state and federal water quality standards will not be violated as a result of the discharge from Wingate outfalls;

(b) Whether Applicant has provided reasonable assurances that the Daily Maximum Discharge Limits of Total Suspended Solids, Fixed Suspended Solids, Total Phosphorus, Total Nitrogen, Total Radium 226 + Radium 228, Alpha, Gross Particle Activity and whole effluent acute toxicity limits will be in compliance with Clean Water Act Section 404 and Class III water quality standards;

(c) Whether Applicant has provided reasonable assurances of compliance with Clean Water Act Section 404 and Class III water quality standards for the direct, secondary and cumulative impacts of the proposed discharges. These include, but are not limited to, the water quality standards for: nutrients, turbidity transparency, biological integrity, nuisance conditions, heavy metals and other contaminants, and dissolved oxygen, and including the anti-degradation and public interest provisions;

(d) Whether Applicant has provided reasonable assurances that the proposed activity is not contrary to the public interest as set forth in Clean Water Act Section 404 and the rules promulgated thereunder;

(e) Whether Applicant has provided reasonable assurances that the cumulative impacts of the proposed project, including applicable past, present and foreseeable cumulative impacts, will not cause violations of any state or federal standard;

(f) Whether Applicant has provided reasonable assurances that no significant unpermittable adverse cumulative impacts on water quality, and conservation and protection of fish and wildlife resulting from the extraction of phosphate ore will occur;

(g) Whether Applicant has provided reasonable assurances there will be no unpermittable foreseeable adverse secondary impacts from the proposed extraction of phosphate ore;

(h) Whether Applicant has provided reasonable assurances the mitigation proposed will be viable after construction activities;

(i) Whether Applicant has provided reasonable assurances that the applicable state and federal water quality standards will not be violated as a result of the proposed extraction of phosphate ore;

(j) Whether Applicant has provided reasonable assurances that the proposed extraction of phosphate ore is in compliance with EPA approved water quality standards with regard to Section 404 of the Clean Water Act;

(k) Whether Applicant has provided reasonable assurances that the proposed activity is not contrary to the public interest as set forth in Section 404(b) of the Clean Water Act;

(l) Whether Applicant has provided reasonable assurances that the cumulative impacts of the proposed project, including applicable past, present and foreseeable cumulative impacts, will not cause violations of any state or federal standard;

(m) Whether Applicant has provided reasonable assurances that permanent impacts associated with the disturbance of jurisdictional wetlands and non-jurisdictional wetlands does not violate any state or federal standard;

(n) Whether Applicant has provided reasonable assurances that the proposed extraction of phosphate ore is in compliance with Section 7 of the Endangered Species Act.

APPLICABLE LAWS AND STATUTES

Federal Laws and Statutes:

-Section 404 of the Clean Water Act (33 U.S.C. 1344),
-Section 404(b) of the Clean Water Act,
-Coastal Zone Management Act and the National Environmental Policy Act.,
-Section 7 of the Endangered Species Act.

Florida Laws and Statutes:

-Section 62-302 F.S. - Surface Water Quality Standards,
-Section 62-302.530 F.S. - Table: Criteria for Surface Water Quality Classifications,
-Sections 62-4.242, 62-4.243, 62-4.244, and 62-4.246 F.S.- antidegradation permitting requirements.

WHEREFORE,

ManaSota-88, Inc., formally requests that ACOE hold a public hearing concerning DA permit application SAJ-2009-03221; Mosaic – Wingate East Mine.

Sincerely,

Glean Compton

Chairman, ManaSota-88, Inc.

RECEIVED
JUL 20 2017
Tampa Regulatory Office

July 14, 2017

West Branch Mining Team
10117 Princess Palm Avenue, Suite 120
Tampa, FL 33610

Re: SAJ-2009-03221 (MEP), Wingate East Mine Supplemental Environmental Assessment.

Dear Reviewers;

Please accept these comments, objections and request for hearing which are provided on behalf of the Phosphate Committee of the Florida Sierra Club regarding the Wingate East Supplemental Environmental Assessment (Supplemental EA or EA).

The Florida Sierra Phosphate Committee participated actively throughout your Areawide Environmental Impact Statement process, providing numerous comments and documentation. We incorporate those submissions into this response.

Your Supplemental EA confirms the validity of our prior objections. It demonstrates that the purpose and need statement on which the AEIS and this EA are based is fundamentally flawed and amounts to nothing more than a statement that the mining company needs what it says it needs and that is good enough for the National Environmental Policy Act (NEPA). It is not.

Purpose and Need Statement is Improper

We previously commented that the decision to allow the purpose and need for the project to be based solely on what the mining applicant says it wants to mine is improper. It is a purpose and need finding that can lead to only one result, the permit the applicant seeks. The current EA in fact provides an extreme demonstration of this problem. It provides Mosaic's demonstration, paragraphs long, of why it wants to mine 28 MMT, why it "needs" to mine 28MMT. And the need is apparently that it has already rebuilt a beneficiation plant and bought new dredges assuming that it would be allowed to mine 28 MMT. EA 6. Mosaic's business plan is all that is required to establish and justify the purpose and need. This turns the whole idea of purpose and need upside down.

Mosaic's past investment decisions simply illustrate that it knows that the Corps will give it a permit for whatever it wants and that the whole AEIS/EA process is preordained. The AEIS/EA is a post hoc rationalization for a corporate business decision. This is fundamentally contrary to NEPA and the Clean Water Act (CWA).

In fact, in explaining the revisions to the mining plan since the AEIS, the EA document states that the "inability to absorb increased mining cost and/or low sales prices have caused numerous U.S. mining operations to fail. The Applicant would face similar risks, including becoming an economically-marginal producer." EA 5. Rather than recognize the reality that there is plenty of phosphate on the world market and that the past claim by Mosaic that it is providing a crucially needed world product is no longer valid, if it

ever was, the Corps now sees its mission as propping up the economics of the company by lowering environmental compliance costs.

The purpose and need statement is fatally flawed and Mosaic's decision, prior to permitting, to invest in a revised beneficiation plant and new draglines is not a reason to issue it whatever permit it wants. It is simply an admission by Mosaic that it believes the permit process is one that it controls. We ask the Corps to revise the EA to reflect the purpose and need along the lines we have previously requested, to mine phosphate in a manner that protects the environment.

The Alternatives Analysis is Fatally Flawed

The Alternatives Analysis selects as alternatives other Mosaic mines and judges them by a set of criteria that require 28 MMT and compliance with Mosaic's mine development sequence. EA 10. Again, the alternatives are predesigned to reach only one outcome, the permitting of Wingate East. The process is improper but the stretch to reach this result leads to some upside-down reasoning.

For example, the Mosaic Ona mine is identified as an alternative but is rejected because it does not meet the Mosaic mine plan! EA 13.

The Mosaic Pioneer mine is identified as an alternative but is rejected as being more environmentally damaging! EA 16. We assume that Mosaic and the Corps will remember this when it comes time to permit Pioneer and reject any Pioneer permit.

To evaluate other possible alternatives the Corps assumes a preservation rate of 14%, making it perfectly clear that preservation is not driven by the actual analysis of the environmental characteristics of the property but by what Mosaic will agree to.

And several alternatives are rejected because they don't produce 28 MMT. In fact, an alternative which would protect important landscape features is rejected because it only produces 21.3 MMT, demonstrating that Mosaic's production plan is driving all decisions. EA 20. Note that if one used Mosaic's actual past production efficiency of 85%, rather than the hypothetical 100% now assumed in the EA, its "need" would be only 23.8 MMT, almost met by the 21.3 MMT alternative, demonstrating again that the EA is drafted to justify a decision to give Mosaic what it wants, rather than to comply with the NEPA required review.

Myakka Headwaters Offsite Mitigation Plan

The Mosaic offsite mitigation plan involves protection and enhancement of two parcels related to the headwaters of the Myakka River. We support this effort at mitigation and urge that mitigation in general, at this and other sites, focus on protection of the Myakka and Peace River systems, including as much preservation as possible, which will serve the hydrology of the rivers, the groundwater systems associated with the rivers, and the importance of the river systems as wildlife corridors.

Adaptive Management and Financial Assurances

The EA assumes there will be a requirement for adaptive management and we strongly endorse that idea, including the availability of results so that the public can participate in that process.

We believe, however, that the assumption that financial assurances will be limited to 110% of 3 years of obligations is entirely insufficient. Hardwood systems are hard to replace and, even where successful, take extended periods of time. The Corps, or Mosaic, or both, have already identified the risk of company failure due to lower prices. Mosaic's recent well-publicized gypstack failure demonstrates the costs faced by the company for its many high-risk operations. (This ongoing event has been widely covered in the press and is illustrated in detail by Mosaic at http://www.mosaicco.com/florida/new_wales_water_loss_incident.htm. We understand the current amount of the repair cost is $70 million. We are supplying a limited sample of the some of the coverage here: http://www.theledger.com/news/20170302/mosaic-sinkhole-repair-on-schedule-for-june-finish; http://www.tampabay.com/news/environment/water/filling-sinkhole-taking-longer-than-expected-mosaic-says/2327294).

We have previously contended that fertilizer plants and gypstacks should be included in the AEIS and EA analyses. That discussion is included in the material we have asked to be incorporated. We simply point out here, in addition, that Mosaic and the Corps have themselves referred to the risk of failure. It is important that the public interest be protected from any failure of obligation due to insufficient financial assurances. Mitigation, reclamation, monitoring, adaptive management and possible gypstack failure costs, looking out over the period of operation and closure, should be covered by an actual bond.

Further, the evidence that gypstack failure is a real and existing possibility requires that comprehensive gypstack monitoring be a part of the permit for any mine which will send material to that gypstack and its fertilizer plant. In this case we understand that the Riverview and New Wales gypstacks will be receiving wastes from management of the Wingate East mine materials and should be monitored as part of mine permitting.

In summary, the Supplemental EA is nothing more than a post hoc rationalization for a decision to permit whatever Mosaic says it wants. We object to the EA and ask that an adequate supplemental EIS and CWA analysis be performed before permitting. Further we request that a public hearing be held to address the deficiencies in the proposed EA and obtain input to support the review required by statute.

Thank you for your service and for this opportunity to comment.

Beverly Griffiths, on behalf of the Florida Sierra Club Phosphate Committee

The Ledger

Mosaic sinkhole repair on schedule for June finish

By Kevin Bouffard
Follow

Posted Mar 2, 2017 at 3:13 PM
Updated Mar 3, 2017 at 11:29 AM

MULBERRY – Sealing the sinkhole that caused a major environmental accident during the fall should finish by June as scheduled, but the project's estimated cost could balloon by $20 million.

Mosaic Co. officials on Thursday updated local media on the remediation project, which could cost up to $70 million, said Herschel Morris, the company's vice president of phosphate operations, in a news conference from the New Wales fertilizer manufacturing plant, where the accident occurred.

The company also allowed news media access to the sinkhole site for the first time since the accident.

"There's been plenty of challenges, but our timeline is consistent with what we expected originally," said Morris, referring to a completion by the middle of June. "I can tell you I believe we can seal this hole. It's been done before."

About 215 million gallons of contaminated water drained into the Floridan Aquifer after a sinkhole opened up beneath a gypsum stack at Mosaic New Wales plant south of Mulberry. The acidic water came from a pond on top of the stack.

Gypsum is a slightly radioactive byproduct of fertilizer manufacturing and must be stored in stacks that reach hundreds of feet above the ground. The water also picks up radioactivity and also contains high concentrations of the contaminants such as sodium and sulfate.

The stack at the site of the accident reached about 200 feet above ground, and the sinkhole extends about 125 feet below ground level. At the bottom of the hole is a layer of brick-sized chunks of solid gypsum that allow water through.

About 80 workers from Mosaic and outside contractors are pouring a concrete mixture, similar to the base of a residential patio, into the gypsym layer into order to seal it off, Morris said. So far they've poured more than 10,000 cubic yards, equivalent to 1,000 truckloads, into the sinkhole.

Once testing shows the bottom of the sinkhole is completely impervious to water, the hole will be filled with gypsum to ground level, he said.

Mosaic hopes to return the 80-acre area around the sinkhole to a working gypsum stack, Morris said, but it would need approval from state and federal environmental agencies.

Meanwhile the company continues to test water from more than 80 monitoring wells around the site to ensure contaminated water does not migrate to nearby residential water wells, he said. Mosaic has paid for independent testing of more than 1,300 local wells, the closest one about three miles away from the site.

Mosaic has agreed to test about 200 residential wells within a four-mile radius of the sinkhole on a quarterly basis this year and twice in 2018. No decision has been made to test beyond next year.

Tests from monitoring wells at the New Wales site show water in the Floridan Aquifer in that area flows east to west at a rate of 250 to 300 feet a month, Morris said.

But the contaminated gypsum water may be flowing at a slower rate because Mosaic has been using recovery wells since the accident to pump it up and treat it, he added.

Mosaic cannot tell how far contaminated water actually has spread in the aquifer, Morris said.

The recovery wells will continue operating until monitor wells show no traces of contaminated gypsum water in the aquifer, which could take years, he said.

Mosaic officials last year estimated the cost of the clean up at $50 million, but Morris on Thursday estimated the cost could reach $70 million, including the continued water monitoring and treatment.

One factor contributing to the rising cost is that Mosaic had to build a small concrete mixing facility at the site, Morris said.

About 80 people are working on the cleanup project 24 hours a day on every day but Sunday, said Jeff Golwitzer, general manager of projects at Mosaic in charge of the remediation effort.

"We've made significant progress in remediation of the sinkhole," he told the media at the site.

The experience cleaning up the sinkhole will be used to build better gypsum stacks in the future, said Morris and David Jellerson, Mosaic's senior director for environmental and phosphate projects.

Advances in geology and equipment, such as ground-penetrating radar, since the New Wales stack was permitted in the 1970s will allow the company to avoid placing new stacks in areas with a greater likelihood of sinkholes, they said.

"With respect to future gypstacks, the standards and practices will change," Jellerson said.

A Mosaic technician monitoring the stack noticed a substantial drop of about two feet in the pond level on Aug. 27, according to the company. Mosaic immediately notified the Florida Department of Environmental Protection.

The sinkhole probably began then, Morris said, but Mosaic officials didn't realize it until Sept. 5 when the pond drained completely, revealing the 45-foot-wide sinkhole.

The company did not notify the public of the accident until Sept. 16, when it contacted The Ledger and other local media. After facing a storm of criticism from local residents and public officials and the environmental community, Mosaic officials acknowledged they erred in withholding the information and apologized.

The controversy led Gov. Rick Scott to implement a new state regulation requiring that companies and public utilities notify the public within 24 hours of a significant environmental accident. Scott has also asked the Legislature, which opens next week, to enact the notification requirement into law.

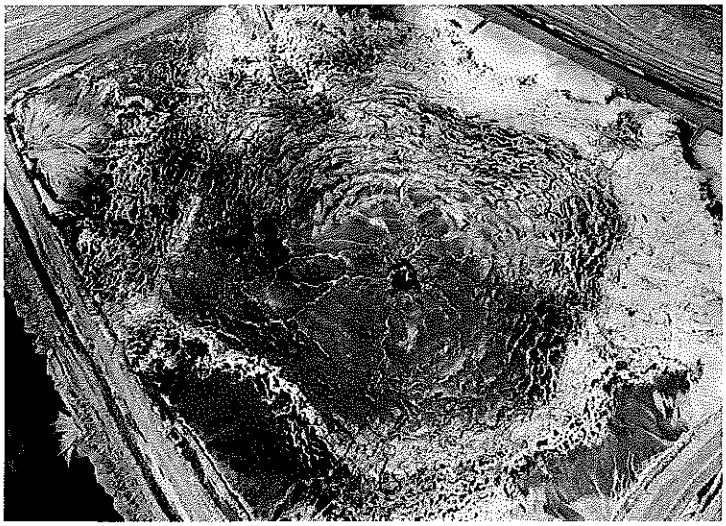
*— Kevin Bouffard can be reached at **kevin.bouffard@theledger.com** or at 863-401-6980.*

Tampa Bay Times
WINNER OF 12 PULITZER PRIZES

Filling sinkhole taking longer than expected, Mosaic says

Craig Pittman, Times Staff Writer

Wednesday, June 14, 2017 6:41pm



Phosphate giant Mosaic expected to be finished by now with filling in the massive sinkhole that opened up at its Mulberry processing plant last August. But it's not.

Company officials announced Wednesday that the hole beneath its phosphogypsum stack is wider than they had thought — 80 to 100 feet wide, instead of 45.

That means it will take a lot more grout than expected, which means completely filling in the hole will take longer. No one knows how much longer.

"We really can't forecast a date," David Jellerson, Mosaic's senior director for environmental and phosphate projects, said during a news conference.

Another factor: the weather. Now that the rainy season has started, Mosaic has sometimes had to pull its workers off the site because of lightning and wind risks, he said.

The cost to fix the sinkhole is likely to go up by an unknown amount, company spokeswoman Jackie Barron said. Officials initially estimated the cost to range from $20 million to $50 million, and more recently they raised that to $70 million, Barron said.

Jellerson said the larger size of the sinkhole became clear as the company drilled out more and more of the hole to pour in grout.

Meanwhile the recovery well has been pumping 4,200 gallons a minute out of the aquifer trying to recover all the pollution that fell in, he said.

The company is certain that it has contained the contamination on its own site, he said.

State Department of Environmental Protection officials told Mosaic it had a week to provide a new timetable for cleaning up the 215 million gallons of contaminated water that fell into the aquifer when the sinkhole opened.

A consent order, signed by the DEP and Mosaic in October, required the company to put up $40 million in financial assurances to guarantee it would fill the sinkhole.

If it fails to follow through on the entire order, the company will face fines of up to $10,000 per day.

Mosaic did get some good news. A federal lawsuit filed against Mosaic last year by neighbors was dismissed this week. After meetings at which Mosaic shared well monitoring data and other information, the neighbors agreed to drop the case, according to court papers.

This was not the first sinkhole to occur at the Mulberry plant near the border between Hillsborough and Polk counties. Another one, 200 feet wide and 100 feet deep, opened up there in 1994.

The new one opened on Aug. 27, gulping down the lake full of contaminated water that pooled atop the phosphogypsum stack. The acidic water that fell into the hole was laced with sulfate and sodium. The acid level is roughly equivalent to vinegar or lemon juice. An unknown amount of gypsum, a fertilizer byproduct with low levels of radiation, also fell in.

Jellerson said so far they have seen no indication of further sinkholes developing.

Times senior news researcher Caryn Baird contributed to this report. Contact Craig Pittman at craig@tampabay.com. Follow @craigtimes.

Filling sinkhole taking longer than expected, Mosaic says 06/14/17
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From:	Dennis Mader
To:	Peterson, Mark E CIV USARMY CESAJ (US)
Cc:	Nancy and Brooks Armstrong; Andre Mele; Barbara Angelucci; Anna Serena; Al Behrens; Linda T. Jones; Jacki Lopez; Sarah Hollinhorst; Hugh Richardson; Glenn Compton
Subject:	[Non-DoD Source] 3PR SEA Comments Wingate East 404 Permit Application SAJ-2009-03221
Date:	Monday, July 24, 2017 5:37:40 PM
Attachments:	USACE Comment Letter Wingate East.docx

Dear Mr. Peterson,

Attached please find a letter of comment from 3PR (People for Protecting Peace River, Inc) regarding Wingate East 404 Permit Application SAJ-2009-03221

Please acknowledge by return email the timely receipt of this letter.

Yours Truly

Dennis Mader

Executive Director 3PR

3PR REVIEW COMMENTS:

Draft Public Interest Review for Department of the Army (DA)Permit Application SAJ-2009-03221
US Army Corps of Engineers, Jacksonville District

Re: Environmental Assessment and Draft Public Interest Review
404 Dredge and Fill Wingate East

Submitted By: People for Protecting Peace River, Inc., 4224 Solomon Rd, Ona, FL 33865

To: Mark E. Peterson, West Branch Mining Team, Jacksonville District Corps of Engineers, 10117 Princess Palm Ave., Suite 120, Tampa, FL 33610

Date Submitted: 24-July-2017

Dear Mr. Peterson,

Our organization (People for Protecting Peace River or 3PR) is once again appreciative for the opportunity to offer comments on the Supplemental Environmental Assessment (SEA). It is our sincere hope that the USACOE will duly consider the input of the public sector in determining the appropriateness of allowing the presence of yet another phosphate strip mine in west central Florida.

Please note that our organization is a signatory to the very detailed and comprehensive review of the SEA prepared by the Center for Biological Diversity, and we concur absolutely with their comments.

Also, note that 3PR submitted into the public record a very lengthy review (133 pp) of the FAEIS, June 3, 2013, and we have not departed significantly from our thoughts or opinions on the unacceptable and deleterious effects of phosphate mining on the natural environment or the economy of west central Florida. Since all phosphate strip-mining operations in Florida are *prima facie* the same, the comments we made in our review of the AEIS hold true for the proposed operations of Wingate East. It differs only in the most minute of details.

Therefore we would like to make it unmistakably clear that based on the tainted and indeed shameful record of the phosphate industry over the past century we as an organization would implore you to **deny this permit**.

1. The first and most basic flaw of the SEA is the state of purpose and need; it is too narrow and precludes a fair examination of alternatives, including the No-Action / no permit alternative. This critical short-coming was addressed in our comments on the AEIS:

> The Applicants' purpose and need forms the basis for the alternatives analysis. The purpose and need for an Environmental Impact Statement is "***Protection of the Environment***" in federal actions. Nowhere is this NEPA directive found in the FAEIS. The FAEIS therefore completely obfuscates and fails to acknowledge the primary purpose and legal basis upon which it, by law, must be founded and developed.
>
> The position taken by the USACE is inconsistent with federal law, and has the effect not only of promoting phosphate strip mining, but to virtually ensure and predetermine that alternatives proposed by the Applicants are approved (permitted). This position taken by the USACE effectively excludes Alternative-1 ("No Action" / "no permit"). It is clear that all of the other alternatives are merely additional scenarios acceptable to the Applicants. None were formulated by the 3rd party public at large. In actuality, NEPA requires that "***the agency***" propose the "***alternatives, including the proposed action***", not the Applicants. And, "the agency", is required to do this by "*affirmatively soliciting comments from those persons or organizations which may be interested or affected*".
>
> > *40 CFR 1502.13 Purpose and need.*
> >
> > *The statement shall briefly specify the underlying purpose and need to which the* ***agency is responding in proposing the alternatives including the proposed action****.*
>
> The "Purpose and Need" should be changed to: "**The purpose of the proposed action is "*Protection of the Environment*" via independent comprehensive analysis of the direct and cumulative environmental impacts of phosphate strip mining throughout the CFPD, while ensuring protection of all natural environmental assets, conservation of water and air, public health safety and welfare**". (p. 25 3PR Comments FAEIS)

2. Wingate East would destroy (or impact) a high percentage of the wetlands and streams on the site. These are significant impacts to the water resources of the United States that belong to the people. Mosaic should not be allowed to destroy these water resources. Mining phosphate rock for their own corporate gains is not in the public interest. Again, this is a point that we expressed repeatedly in our comments to the AEIS:

> 3PR questions the adequacy of the environmental analyses in the FAEIS because it does not consider the irreplaceable values of natural wetlands systems, or the essential role of native

soils relative to ecosystem function and hydrology. Evaluations of the important dynamics of surface water, groundwater and soil interaction are completely omitted. And, the FAEIS does not appropriately recognize and consider: (1) the regional (CFPD) and statewide cumulative impacts of area-wide destruction of entire classes of native wetlands, such as isolated wetlands, and the concomitant loss of genetic diversity and long-term loss of habitat for dependent animals and other biota; (2) the fact that wetlands systems are complex and may have taken hundred or even thousands of years to develop, and that the phosphate industry does not have the technology (presuming it could exist), the resources, or the will to properly construct and manage, in perpetuity (or until stable and self-sustaining) hundreds of isolated wetlands, many miles of creeks, streams and tributaries; and, (3) that the processes required for wetlands to establish, stabilize, and begin to efficiently remove nutrients requires time — a long time in the case of forested wetlands, and this with constant maintenance.

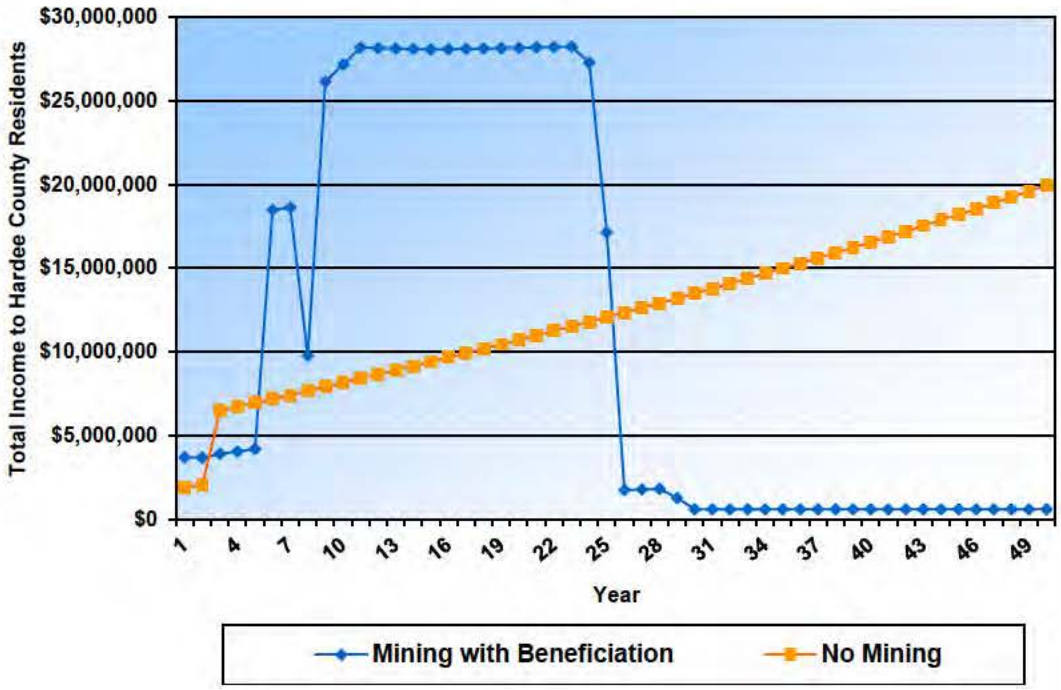
The phosphate industry's track record of restoring the natural environment is dismal. In most phosphate strip mining operations the natural surficial aquifer system (SAS) is completely or mostly removed. The SAS is the unconsolidated zone or strata important in formation of seepage slopes and seep springs in Florida. It is generally of little or limited interest to most hydrologists due to small discharge or diffuse nature of seepage, but invaluable to the residents of rural areas such as Hardee, DeSoto, and western Manatee counties because SAS wells are the primary source of drinking water, household water, and often irrigation water for these regions. There are many unanswered public health questions, both chemically and radiological, having to do with consuming water from shallow wells located on or near land formerly strip mined. There are also unanswered questions regarding the economic impact of mitigating these concerns, especially in the low-income and minority communities which dominate these regions.

An independent scientific committee should be established to comprehensively and exhaustively evaluate the impacts which phosphate strip mining causes, and has caused, to native soils, natural aquifers, wetlands, native ecosystems, regional aesthetics, and public health. Nowhere in the FAEIS are these impacts or natural resources properly evaluated, cumulatively evaluated, or their values genuinely considered as required by NEPA. The FAEIS, throughout, is directly inconsistent with NEPA's legally authorized mission and "*Basic National Charter*" of "*Protection of the Environment*". The protection of ecosystems and ecosystem services is essential for the protection of all aspects of Florida's precious water resources, and for the protection public health, the economy and human society. (pp 71-72 3PR Comments FAEIS)

3. Because of its wholesale destruction of land for the purpose of agricultural production, as well as residential and commercial development, further phosphate mining is not in the public interest generally; it particularly violates the interests of the less advantaged segment of the Florida population and thereby becomes an issue of environmental justice. This issue was thoroughly addressed in 3PR's response to the AEIS. Allow me to quote here from our comments:

> … it is certain that wide-spread destruction of native agriculture soils and potential farmlands, some of which have been in production for decades, and extensive alterations of topography and water resources, will negatively impact rural communities whose residents traditionally derive their livelihoods from local agriculture which historically has been the dominant industry of the region… Many decades are required to build the infrastructure necessary to sustain such regionally specialized agriculture as citrus farming, truck (vegetable) farming, berry farming, cattle ranching, and others. Area-wide phosphate strip mining is an exploitive, short-sighted industry, out for huge profits at the expense of lands, traditions, and communities. Mining erodes agricultural infrastructure and the rural way of life by temporarily moving part of the economy to an industry which merely passes through, destroying tremendous tracts of agricultural land as it proceeds. The industry quickly mines its way through communities leaving perpetual, incomprehensible liabilities in its wake. Some agricultural lands which have been recently mined had been in almost continuous agricultural production for nearly 100 years. The traditional way of life and otherwise prosperous future of (predominantly rural agricultural) counties are thus threatened by the permanent and multifaceted devastation imparted by phosphate strip mining.
>
> When communities become reliant on a polluting and environmentally destructive industry for jobs and tax revenues, local governments become more reluctant to take actions which would avoid risks to health and the environment that cost the industry money. Many public health risks are not visible or apparent to the general public or the elected bodies which represent them. In this scenario, minority and low-income communities usually do not enjoy the benefits of their labor in proportion to the health risks and economic impacts they are forced to bear. Although a great body of science exists which provides technologies for efficient, profitable, and safe farming in areas supported by native soils, much less is known concerning the unnatural rocky/marl/sand/clay/etc (Arents-Hydraquents-Neilhurst) substrates resulting from phosphate strip mining. (3PR Comments FAEIS pp 12-13)

The following is a graph derived from a study commissioned by Hardee County in 2002 provided by the environmental engineering firm Hazen and Sawyer:



4. There is no credible third-party study proving the viability of reclaimed phosphate for any commercial purpose due to the presence of radioactivity caused by the concentration and removal of natural radioactive elements in the phosphate matrix. Therefore phosphate mining is not in the public interest.

> At issue are approximately 10 square miles of former phosphate mining lands near Lakeland, FL, where EPA has taken no cleanup action despite concerns since the late 1970s that the indoor air of homes built on the lands are contaminated with cancer-causing levels of radiation.
>
> The overwhelming cost of cleaning up the sites -- as much as $11 billion by some estimates -- has been a factor in the lack of action, agency officials admit in documents *Inside EPA* recently obtained under the Freedom of Information Act (*Superfund Report*, Sept. 6). In addition, sources have said a potentially precedent-setting fight between EPA and the state over the appropriate cleanup standard for the sites is another major reason for the agency's inaction (*Superfund Report*, Jan. 25).
>
> The main concern with the Florida sites is that former phosphate mining lands tend to have elevated levels of naturally occurring radium-226 due to past mining activity, and that thousands of people now live in homes built on top of the former mines. "Many of

these homes are believed to have elevated levels of [radium-226] or gamma radiation that exceeds EPA's safe standards," according to the EPA documents. (Superfund Report - 10/04/2010)

Over the years, residential development on the former phosphate mining lands has continued, and sources say approximately 40,000 people could now be exposed to dangerous levels of radiation. According to a 1994 Federal Register notice, some people in the area are exposed to up to 500 millirems (mrem) per year of radiation, which environmentalists argue is a level significantly higher than the 15 mrem levels EPA has historically considered safe. Based on current EPA Superfund standards, about 1 in 40 people would be expected to develop cancer at the 500 mrem dose level, according to a 2006 internal concept paper the federal Agency for Toxic Substances & Disease Registry (ATSDR) developed regarding the Florida situation, which Inside EPA recently obtained. This is a risk approximately 250 times greater than the 1-in-10,000 cancer risk level that EPA typically considers the worst acceptable scenario at a Superfund cleanup site. (Daily News from InsideEPA.com - Thursday, January 21, 2010)

Teneroc Fish Management Area (TFMA): The site is a 6,000-acre tract of partially reclaimed phosphate strip mines that the Borden Chemical Company donated to the state of Florida in 1982 to create TFMA. The site consists of approximately 1,000 acres of former phosphate mining pit lakes and 5,000 acres of reclaimed recreational areas for picnicking, hiking, horseback riding, shooting, fishing and small game hunting.

The groundwater migration pathway is of some concern because of the proximity of the Auburndale municipal wells, which are located within 4 miles of on-site sources. Due to the presence of karst topography surrounding the site, the surficial and Floridan aquifers are hydraulically connected and consider to be one hydrogeologic unit. An observed release to groundwater has not been established at the site. Radium-226 andradium-228 have been identified at levels above the cancer risk screening concentrations of 0.16 and 0.19 pCi/L in the on-site TFMA private well and nearby private wells. The nearby private wells are located southeast of the on-site source areas; groundwater flow in the/Floridan acquifer is reported to be toward the southwest. (Draft Expanded Site Inspection Report. Borden Chemical Company/Tenoroc Mine, Auburndale, Polk County, Florida U.S. EPA ID No. FLD98727432

5. Reclaimed phosphate mine is not suitable for agricultural purposes, due to the degradation of natural soil layers.

… very little acreage of reclaimed land have (sic) been used for commercial agriculture (e.g. row or field crops) or citriculture. The predominant agricultural use is improved pasture. According to SWFMWD's 1999-2000 land use/land cover mapping, of the estimated 48,775 acres of mined soils in Hillsborough and Polk counties, only 6785 acres (just over 1%) are in citrus, 33 acres in row crops, and six acres in nurseries/vinyards probably sod farms). Roughly 3,510 acres (7.2%) is classifed cropland/pastureland (a

catch-all category that SWFWMD GIS staff has suggested is largely pasture land) , and 202 acres is classified as open rural land….

…Simply stated, agricultural production on phosphatic clays is a risky venture.

(Land Use Suitability Index for Use in Hardee County.2002. Carter and Wharton)

6. It is prohibitively expensive to return reclaimed phosphate land to its natural eco-systems.

The strip mining process completely alters soils and hydrology. Strip mining's complete disturbance of the land represents a significant challenge to restore the natural system, type for type, function for function—but it's the law. In Florida, land is reclaimed after mining through the construction of upland and wetland habitats, but successfully reclaiming strip-mined land is an expensive undertaking. The costs to do it right can easily exceed $25,000 per acre.

It was my responsibility to review IMC-Cargill's reclamation plan and budget for the proposed 20,000 acre Ona Mine in Hardee County. In virtually every area, IMC-Cargill has grossly underestimated the costs of successful reclamation. Their failure to plan and budget properly will be reflected in the failure of their "restoration" of the natural system. IMC-Cargill has not been able to demonstrate that their plan to reclaim the land will offset the adverse impacts associated with strip mining. Their failure may ultimately put the public at risk for the cost of the proper restoration and maintenance of these lands.

In 2003, I evaluated fifty IMC-Cargill reclamation projects. I have observed <u>no improvement in conditions</u> since the completion of our 1997 study for the Florida Institute of Phosphate Research (FIPR). The very poor conditions I observed on most of IMC-Cargill's reclamation projects means that their methods and budgets for reclamation, management and monitoring are inadequate. In short, neither their budgets nor methods are working—and haven't for years.

If the mining process does not provide the basic ingredients required for successful restoration, then success is not possible. Without soil, habitat restoration is destined to fail. The natural relationship between the soil and water table elevations does not exist in IMC-Cargill reclamation sites. IMC-Cargill needs to strip, segregate, relocate, and protect/stockpile the native soils and properly relocate and contour these soils after mining

There are typically two levels of plantings, the canopy (trees) and the undergrowth (ground cover). The demands of restoring different habitats such as oak scrub, freshwater swamps, pine flatwoods, prairies and streams are very different. The difference between doing it right and doing it as IMC-Cargill proposes, amounts to thousands of dollars per acre—millions of dollars for a project. In their reclamation budget, IMC-Cargill assumes the same cost per plant per acre with no budget for supplemental planting as a site matures, nor for replanting in response to mortalities.

The major form of maintenance performed by IMC-Cargill on their reclaimed lands is the application of herbicides to remove exotic and problematic nuisance plant species. Given the very poor condition of IMC-Cargill's reclamation projects, it is doubtful that their reported maintenance schedules—those they provide to DEP—are followed. Many of the

unmined (preserved) lands adjacent to reclaimed strip mine areas are being impacted by over-drainage and exotic plant infestations. Vast areas reclaimed by IMC-Cargill are now fields of cogon grass, producing very little value to wildlife.

The current lack of adequate monitoring has resulted in a very serious reporting problem for IMC-Cargill. IMC-Cargill is required to provide DEP monitoring reports to demonstrate the progress of their restoration efforts. Absent from this reporting requirement is monitoring of groundwater hydrology, surface water hydrology, water quality, soils, aquatic fauna, wildlife, and ecosystem diversity. Even so, the quality of the reports that are provided is poor. It's difficult to see the real problems and conditions, based on the reports. Again, the cost of doing it right far exceeds what IMC-Cargill currently proposes to spend.

(Charlotte Sun. By Kevin Erwin, Certified Senior Ecologist
Kevin L. Erwin Consulting Ecologist, Inc. May, 2005)

Phosphate strip mining extensively alters the physical, chemical, and hydrologic properties of surficial aquifers and water tables. It is well documented that native upland ecosystems and vegetative communities are precisely adapted and require these special natural attributes (Orzell & Bridges 2006) (Cole et al 1994) (Huck 1987). Natural native ecosystems and their specific vegetative communities are therefore precluded from re-establishment as a result of the native soil destruction caused by phosphate strip mining, phosphate processing waste disposal, and so-called reclamation.

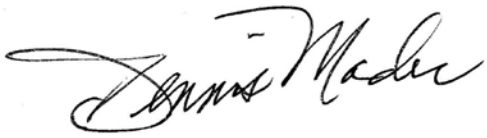
The effects of converting vast areas of native soils to unnatural post-mining Arents-Hydraquents-Neilhurst substrates, which cannot support native upland ecosystems, including "dry prairie, pine/palmetto flatwoods" vegetative communities, are devastating to vast areas of the natural environment. These essential ecological assets must be thoroughly analyzed and assessed, providing special attention to the cumulative negative impacts which area-wide phosphate strip mining has imparted, and will impart, on the regional ecology, native biota, genetic diversity (genetic erosion), natural hydrology, and critical bio-hydrologic regimes of the Southwestern Florida Flatwoods Ecoregion. The aerial extent of each native soil type must be correlated to the amount of each native vegetative community which has been lost, and would be lost if phosphate strip mining is allowed to continue. Each native vegetative community must be fully characterized as in Orzell & Bridges (2006) because little is known of ecosystem structure in the regions west of the Lake Wales Ridge, and because numerous plant species have been recently discovered in that region which were formerly unknown to science, and which are planned to be proposed for federal listing. Evaluations must be conducted for each alternative, and for lands which have already been mined, so that negative environmental impacts may be evaluated separately, and then cumulatively.

> Additionally, destruction of native soils, especially those supporting, or formerly supporting, dry prairie, pine/palmetto flatwoods, precludes traditional agriculture, both private and commercial agribusiness. The agricultural infrastructure within west central Florida is based on nearly 100 years of technology developed specifically to farm on native soils. (p. 50 3PR Comments FAIS)

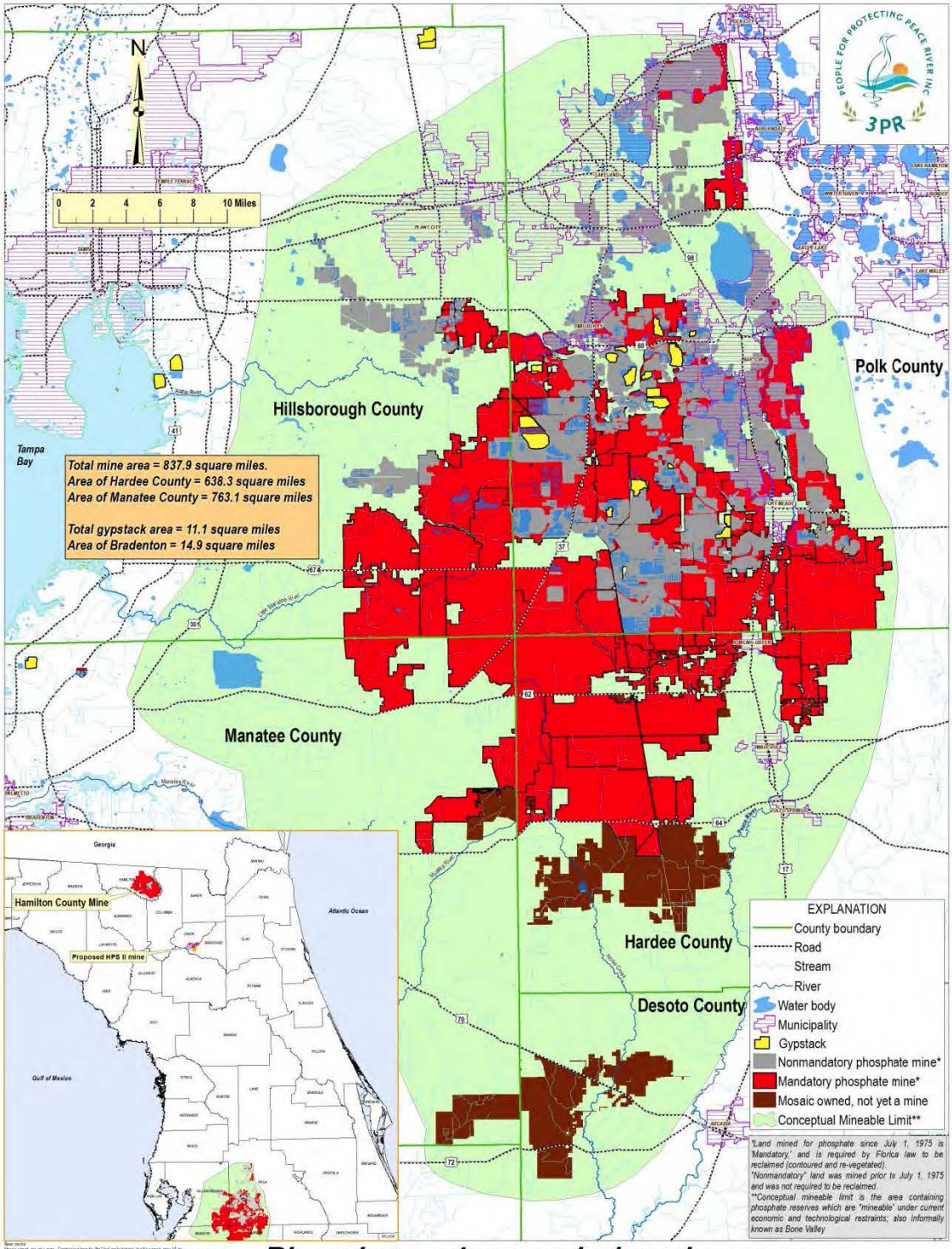
3PR contends that our conclusions about the monumental and numerous destructive impacts of phosphate strip mining in general and the proposed Wingate East Mine in particular - which is characterized by the same unacceptable elements which have created the impacts that we have summarized in this brief letter of comment would indicate that if the USACE were to fairly consider our input and the more detailed and lengthier narrative of our Review Comments of the AEIS you could not in good faith proceed to grant the applicant the 404 Dredge and Fill Permit. The proposed project does not pass the standard of public benefit. The only conceivable benefit is limited to the economic aspirations of the applicant itself which is not sufficient to allow the project to move forward.

We thereby submit our comments with sincerity and respect in hopes that the USACE will fulfill its mandate to uphold the CWA, NEPA and ESI and refuse to allow this project to see the light of day.

Yours Truly,



Dennis Mader, Executive Director 3PR



Phosphate mines and phosphogypsum stacks (gypstacks) of Florida

From: Elise Bennett
To: Peterson, Mark E CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Comments on Mosaic Fertilizer, LLC Permit Application SAJ-2009-03221, Wingate East Mine
Date: Monday, July 24, 2017 4:54:25 PM
Attachments: 2017_07_24 Center comments on Wingate East Mine FINAL.pdf

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Mr. Peterson,

On behalf of the Center for Biological Diversity, ManaSota-88, People for Protecting Peace River, Inc., and Suncoast Waterkeeper, please accept the attached comments on Mosaic Fertilizer, LLC's Permit Application SAJ-2009-03221 for Wingate East Mine. We submit these comments on behalf of our staff and members, many of whom live and recreate in Manatee County and nearby counties. As explained in detail in our attached comments, we have reviewed the Public Notices, Areawide Environmental Impact Statement, Supplemental Environmental Assessment, Draft Clean Water Act Section 404(b)(1) Guidelines Analysis, Draft Public Interest Review, and Endangered Species Act analyses in related Incidental Take Permits, Habitat Conservation Plans, and Biological Opinions, and we conclude the Project is not in the public interest, will have significant environmental impacts on wetlands, and will likely harm endangered species and their habitats. For these reasons, we respectfully request the Corps deny the permit application. Also, given the substantial interest in holding a hearing and public opposition to Wingate East Mine, we request a public meeting to help ensure informed and transparent environmental decisionmaking.

Shortly, you will also receive PDF copies of all literature cited in the comment via the document-sharing service wetransfer.com. We request that you please confirm receipt of this comment and the literature cited. If necessary, please also indicate whether you prefer to receive the literature cited another way.

Thank you for the opportunity to submit these comments.

Sincerely,

Elise P. Bennett

Reptile and Amphibian Staff Attorney

Center for Biological Diversity

(727) 755-6950

ebennett@biologicaldiversity.org

CENTER for BIOLOGICAL DIVERSITY Because life is good.

Sent via email

July 24, 2017

Mark E. Peterson
West Branch Mining Team
Jacksonville District Corps of Engineers
10117 Princess Palm Avenue, Suite 120
Tampa, Florida 33610
mark.e.peterson@usace.army.mil

Re: Comments on Mosaic Fertilizer, LLC Permit Application SAJ-2009-03221, Wingate East Mine

Dear Mr. Peterson:

On behalf of the staff and members of the Center for Biological Diversity, ManaSota-88, People for Protecting Peace River, Inc., and Suncoast Waterkeeper, we respectfully submit the following comments to the U.S. Army Corps of Engineers (Corps) regarding the June 22, 2017 Public Notice for SAJ-2009-03221 (MEP) also known as Wingate East Mine, in Manatee County, Florida (Project).[1] We submit these comments on behalf of our members, including our thousands of members and supporters who recreate and live in Manatee, and nearby counties. We have reviewed the Public Notices, Areawide Environmental Impact Statement (AEIS), Supplemental Environmental Assessment, Draft Clean Water Act Section 404(b)(1) Guidelines Analysis, and Draft Public Interest Review and conclude the Project is not in the public interest, will have significant environmental impacts on wetlands, and will likely harm endangered species and their habitats. For these reasons, we respectfully request the Corps deny the permit application. Also, given the substantial interest in holding a hearing and public opposition to Wingate East Mine,[2] we request a public meeting to help ensure informed and transparent environmental decisionmaking.[3]

I. Wingate East Mine Application Background

On May 3, 2013, the Corps published a notice of availability for the Final Areawide Environmental Impact Statement on Phosphate Mining in the Central Florida Phosphate District (FAEIS).[4] On July 13, 2013, the Corps released an Addendum to the FAEIS that corrected its

[1] Also known as SAJ-2009-03221 (SP-MEP); and SAJ-2009-03221.
[2] AEIS at Chp. 1, 43-46; Manatee County Public Comments 1-7; Manatee County BOC Transcript.
[3] 33 U.S.C. §§ 1251, 1344(a); 42 U.S.C. § 4332(2)(C); 33 C.F.R. § 327.4(b); 33 C.F.R. Part 325, App. B § 11; 40 C.F.R. § 1506.6 (c)(1).
[4] The draft AEIS purported to analyze SAJ-2011-01968 – Desoto Mine; SAJ-2011-01869 – Ona Mine; SAJ-2009-

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surface water hydrology analysis, included public comments received during the comment period for the Draft AEIS but not responded to in the FAEIS, and included a Spanish language translation of the Executive Summary.

On June 22, 2017, the Corps released a Supplemental Environmental Assessment, draft public interest review, and draft Clean Water Act 404(b)(1) Guidelines analysis for Wingate East Mine (collectively Supplemental Environmental Assessment or EA).[5]

Wingate East Mine would impact 553.1 acres of wetlands of the Wingate Creek Headwaters of the Myakka River Watershed and the West Fork Horse Creek Headwaters of the Peace River Watershed by mining phosphate ore from 3,137 acres within the 3,635-acre property over 20 years.

II. The Corps Must Deny the Clean Water Act Permit Application for the Wingate East Mine

In enacting the Clean Water Act in 1972, Congress sought "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[6] The statute provides that "the discharge of any pollutant by any person shall be unlawful" absent a permit.[7] A section 404 permit must satisfy regulations promulgated by the Corps and the Environmental Protection Agency (EPA).[8] Notably, a permit will not be granted if contrary to public interest.[9] The regulations under section 404(b)(1) of the Clean Water Act further provide that adverse impacts to wetlands must be avoided to the extent that practicable alternatives are available that will result in less adverse impacts.[10] A "practicable" alternative is one that is "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes."[11] The 404(b)(1) Guidelines establish a presumption that all practicable alternatives that do not involve a discharge into wetlands have less adverse impact on the environment "unless clearly demonstrated otherwise."[12]

To determine whether a practicable alternative exists, the Corps must undertake a multi-step analysis.[13] The Corps must first determine whether the project is water dependent. A water-dependent project is one that "requires access or proximity to or siting within the special aquatic

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03221- Wingate East Mine; SAJ-1993-01395 – South Pasture Extension Mine. The Corps received over four thousand public comments during the 60-day comment period.

[5] The document title describes itself as a Supplemental Environmental Assessment, but the document itself states "pursuant to 40 C.F.R. §§ 1501.3(b) and 1502.9(c)(2), the Corps is also exercising its discretion to prepare an environmental assessment (EA) . . . in order to assist with the permit decision and further the purposes of NEPA. Because there have been no substantial changes to the proposed action that are relevant to environmental concerns and no significant new circumstances or information since the project was analyzed in the Final EIS, supplemental NEPA was not required under 40 C.F.R. § 1502.9(c)(1)."

[6] 33 U.S.C. § 1251(a).

[7] 40 C.F.R. § 230.10(a).

[8] *Friends of the Earth v. Hintz*, 800 F.2d 822, 831 (9th Cir. 1986).

[9] 33 C.F.R. § 320.4.

[10] 40 C.F.R. § 230.10(a).

[11] 40 C.F.R. § 230.10(a)(2).

[12] *Id.*; 40 C.F.R. §§ 230.2(q-1), 230.41.

[13] 40 C.F.R. § 230.5.

site in question to fulfill its basic purpose."[14] If the Corps determines that the project is not water-dependent, it then must presume that practicable alternatives not involving wetlands exist.[15] The Corps may not grant a permit unless the presumption is rebutted by a clear contrary demonstration by the Project applicant.[16] Where no practicable alternative sites exist that would avoid filling or have a less adverse impact on wetlands, the Corps must consider whether "appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem."[17]

Corps regulations require the Corps to evaluate the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest weighing foreseeable benefits against foreseeable detriments using all factors that may be relevant.[18] Relevant factors are numerous and include wetlands impacts, fish and wildlife habitat values, and recreational, aesthetic, and economic values.[19]

The Corps must deny the Clean Water Act 404 permit as contrary to the public interest and because it is not the least environmentally damaging alternative available and does not adequately compensate to damage to waters of the United States. First, Wingate East Mine is contrary to the public interest, as evidenced by the widespread opposition to phosphate mining in the region, which is based on the perceptions and opinions of the impacted communities, the science and observations offered by experts, and the economic analysis provided by the public. It is beyond dispute that Wingate East Mine's supposed public benefits do not outweigh the damage that will be done to the water resources the Clean Water Act is intended to protect. It is also undisputable that Wingate East Mine is not water dependent, and that the Corps and applicant have not overcome the presumption that a practicable alternative that does not involve a discharge into wetlands exists. Even if the Corps could conclude that practicable alternatives that meet the overall purpose of the project do not exist, it cannot ignore the comments by expert agencies and individuals— and the paucity of information provided by the applicant—that indicates that phosphate mine reclamation does not deliver the promised mitigation or compensation.

A. The Wingate East Mine is Contrary to the Public Interest

When evaluating a permit application, the Corps shall evaluate the probable impacts of the proposed activity on the public interest.[20] This public interest review requires weighing all relevant factors in a general balancing process. These factors include conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, energy needs, safety, and the broader "needs and welfare of the people."[21] The Corps

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[14] *Id.*
[15] *Id.* at §§ 230.10(a)(3); 230.5.
[16] *Id.*
[17] *Id.* at § 230.10(d); *see also Fund for Animals, Inc. v. Rice*, 85 F.3d 535, 544 (11th Cir. 1996) (indicating that where "filling of wetlands cannot be avoided, the 'appropriate and practicable steps' must be taken to minimize the potential adverse impacts of the discharge on wetlands.").
[18] 33 C.F.R. §§ 320.4; 320.4(a)(1).
[19] *Id.*; 40 C.F.R. § 230.10(c).
[20] 33 C.F.R. § 325.1(f).
[21] 33 C.F.R. § 325.1(d)(1).

must deny a permit application if it is "contrary to the public interest."[22] In order to perform this public interest review, the permit application must contain a complete description of the proposed activity, including information on the location, purpose, and need for the activity.[23] This description must be thorough enough to provide public notice.[24]

An agency must exercise independent judgment in defining the purpose and need of a project and cannot rely exclusively on the statements and opinions of the applicant.[25] Additionally, the Corps may not put forward a purpose and need statement that is so narrow as to "define competing 'reasonable alternatives' out of consideration."[26]

The Corps' regulations state "the unnecessary alteration or destruction of [wetlands] should be discouraged as contrary to the public interest."[27] Wetlands considered to perform functions important to the public interest include:[28]

- Wetlands which serve significant natural biological functions, including food chain production, general habitat and nesting, spawning, rearing and resting sites for aquatic or land species;
- Wetlands set aside for study of the aquatic environment or as sanctuaries or refuges;
- Wetlands the destruction of alteration of which would affect detrimentally natural drainage characteristics, sedimentation patterns, salinity distribution, flushing characteristics, current patterns, or other environmental characteristics;
- Wetlands which are significant in shielding other areas from wave action, erosion, or storm damage. Such wetlands are often associated with barrier beaches, islands, reefs and bars;
- Wetlands which serve as valuable storage areas for storm and flood waters;
- Wetlands which are ground water discharge areas that maintain minimum baseflows important to aquatic resources and those which are prime natural recharge areas;
- Wetlands which serve significant water purification functions; and
- Wetlands which are unique in nature or scarce in quantity to the region or local area.[29]

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[22] *Id.*
[23] 33 C.F.R. § 325.2(a).
[23] 42 U.S.C. § 4321.
[25] *Simmons v. United States Army Corps of Eng'rs*, 120 F.3d 664, 669 n. 1 (7th Cir. 1997); *Balt. Gas & Elec. Co. Natural Res. Def. Council Inc.*, 462 U.S. 87, 106-07 (1983).
[26] *Id.* at 669; *Citizens for Smart Growth v. Sec'y of Dep't of Transp.*, 669 F.3d 1203 (11th Cir. 2012); *Davis v. Latschar*, 202 F.3d 359, 367-68 (D.C. Cir. 2000).
[27] 33 C.F.R. § 320.4(b)(1).
[28] 33 C.F.R. § 320.4(b)(2).
[29] *Id.* § 320.4(b)(2)(i)-(viii).

The regulations further provide that "[n]o permit will be granted which involves the alteration of wetlands identified as important by paragraph (b)(2) of this section . . . unless the district engineer concludes, on the basis of the analysis required in paragraph (a) of this section, that the benefits of the proposed alteration outweigh the damage to the wetlands resource."[30] Courts have upheld permit denials based on findings that wetlands were important within the meaning of 33 C.F.R. § 320.4(b)(2).[31]

In considering whether a project is in the public's interest, the Corps must refer back to purpose and need for the project. In this instance neither the EA nor the FEIS state a *public* need for mining phosphate in wetlands. The EA refers the public back to Section 1.2.1 of the Final EIS,[32] while the FEIS states that there is a public need for phosphate rock, but then concedes that more than 95 percent of the U.S. phosphate rock mined is used to manufacture fertilizer.[33] The balance of the six-page public need statement is dedicated to describing the public need for and economic benefits of fertilizer, not mined phosphate ore.

1. The public benefits of fertilizer production are in dispute

To begin with, the supposed economic benefit of fertilizer production and the phosphate industry more broadly is disputed. A review of the Corps' economic analysis by Richard Weiskoff in 2012 found that the AEIS economic analysis uses an inappropriate model and fails to take into account the full cost of displacing the dynamic and growing agricultural sectors, especially agricultural services, and their linkages. (Weiskoff 2012). In addition, it found that the quality and productiveness of the reclaimed land cannot be determined. Therefore, the real cost to the region is the loss of farm land, depletion of the aquifer, the accumulation of toxic waste, and the potential destruction of the downstream water supply.

2. If fertilizer is in the public interest, the Corps should have evaluated its impacts

Next, if the public need were truly for fertilizer, as opposed to just phosphate ore, then the EA or the FAEIS should have also evaluated the impacts of the growth or addition of phosphogypsum stacks that would result from approval of the Wingate East Mine. However, in its 2013 AEIS, the Corps stated that "the four proposed phosphate mines have independent utility from the existing fertilizer plants and that the mining operations are single and complete projects"[34] and that the Corps does not consider the phosphogypsum stacks to be a component of the direct and indirect effects of the four proposed mines. Aside from the Corps' failure to evaluate this indirect impact, it is difficult to believe the applicant would invest in a mine expansion for the stated purpose of obtaining phosphate ore for phosphate fertilizer production if it could not also rely on its ability to expand its phosphogypsum management system. The dredge and fill activities of the Wingate East Mine are inextricably related to any future phosphogypsum stack management expansion.

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[30] 33 C.F.R. § 320.4(b)(4).
[31] *See, e.g., Shoreline Assoc. v. Marsh*, 555 F. Supp. 169, 179 (4th Cir. 1984).
[32] EA at 4.
[33] AEIS 1-13.
[34] AEIS ES-5.

Phosphogypsum is a byproduct of the process that converts mined phosphate rock into the compounds used in fertilizer. The desired phosphorous content of the mined phosphate rock is in the form of calcium phosphate which is not readably useable as fertilizer because it does not dissolve in water and cannot be metabolized by crops.[35] In order to create its ultimate sellable product, the applicant separates phosphoric acid in a slurry using sulfuric acid,[36] the slurry is then stored in open-air storage stacks known as phosphogypsum stacks or gypstacks which are often created on unused or mined-out land on the processing site.[37] Phosphogypsum is radioactive, containing uranium, radium-226, and thorium. It may also contain high levels of cadmium, plus any chemicals used in the slurry.

Numerous commenters provided information on phosphogypsum stacks that should have been included in the AEIS, noting that:

> Phosphogypsum stacks are located in the study area and their number and extent are directly a result of past and future phosphate mining. The proposed mines will increase the need for such facilities and add to the recently observed impacts/costs of stack closures. They have not only environmental impacts on water quality, but also potential economic impacts for existing/future public utilities using surface water supplies downstream of mining in the [Central Florida Phosphate District] . . . .[38]

The Corps dismissed the comments, stating "[p]hosphogypsum stacks are not specifically address [sic] in the Final AEIS except as an industrial aspect of the cumulative impacts."[39] According to the Corps, "[a]lthough they are not included as part of the Proposed Action, they are included in the scope of the cumulative impacts analysis"[40] and that the Final AEIS "took into account the impacts of phosphogypsum stacks – as it does other past, present, and reasonably foreseeable actions in addition to the Applicants' Preferred Alternatives – in determining cumulative impacts of the Proposed Action and other reasonably foreseeable actions."[41] The Corps concluded that "the mineral processing plants that produce phosphogypsum as a byproduct, and the phosphogypsum stacks associated with those facilities, are considered by the USACE to have independent utility from the phosphate mining activity."[42]

The stacks are not in the public interest as they are radioactive and there's no long term solution for what will be done with the 1 billion tons (and growing) of radioactive waste generated by the process. Indeed, the EPA's 2015 settlement agreement with Mosaic, calling for $2 billion to remedy violations with respect to existing phosphogypsum stacks calls into question whether the applicant is fit to continue to put entire communities at risk with its waste production. The

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[35] AEIS 1-30.
[36] *National Emission Standards for Radon Emissions From Phosphogypsum Stacks*, EPA, https://www.epa.gov/radiation/subpart-r-national-emission-standards-radon-emissions-phosphogypsum-stacks.
[37] 1-30.
[38] Appendix A, at 233
[39] Appendix A, at 599
[40] AEIS ES-5.
[41] AEIS ES-5-6.
[42] AEIS 3-6.

consent decree that resulted from the settlement agreement also calls for a Resource Conservation and Recovery Act (RCRA) hazardous waste determination for eight phosphogypsum stacks. If any of the phosphate mined from Wingate East Mine would contribute to one of those stacks, operations must not begin until a RCRA plan is in place.

The threats these phosphogypsum stacks create for local communities is imminent. On September 15, 2016, news broke that a sinkhole had opened up below and in a phosphogypsum stack at Mosaic's New Wales plant.[43] The sinkhole had allowed at least 215 million gallons of water to pour into the Floridan aquifer. It appears Mosaic knew about the spill and sinkhole for three weeks before the media broke the story (Bernard 2016). This is not the first time a sinkhole has opened up the stacks at this location, with sink holes occurring in 2013, 2004, and 1994.[44] The New Wales phosphogypsum stack is the destination site of the radioactive phosphogypsum that will be generated by the proposed Project. Beyond New Wales, in 2009 a sinkhole at the PCS White Springs facility released more than 90 million gallons of hazardous wastewaters into the Floridan aquifer.

To further show how dangerous phosphogypsum stacks are, a leading global specialty minerals and specialty chemicals company, Israel Chemicals Ltd., reported on June 30, 2017, that a dike that is used for the accumulation of phosphogypsum water, a byproduct of phosphate fertilizer production processes conducted at the plant, partially collapsed.[45] The environmental damage is still yet to be determined while the company is continuing its efforts to remedy the immediate environmental effect and damages resulting from the phosphogypsum water spill. The Corps must take these threats to the region seriously and evaluate them as indirect impacts of authorizing phosphate mining in the region.

B. The Corps Must Comply with its Mandate to Avoid, Minimize, and Select the Least Environmentally Damaging Alternative Practicable

Under the Clean Water Act the Corps has the responsibility of evaluating permit applications for the discharge of fill into waters of the U. S. The Clean Water Act gave the EPA the task of developing the 404 (b)(1) Guidelines (Guidelines) with the specific goal of providing the environmental criteria and framework by which the Corps evaluates dredge and fill applications.

40 C.F.R. Part 230 - Section 404 (b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material, Subpart A - General, Section 230.1 Purpose and policy states:

> (a) The purpose of these Guidelines is to restore and maintain the chemical, physical, and biological integrity of waters of the United States through the control of discharges of dredged or fill material.

. . .

[43] Mellissa Marino, *Mosaic Begins Work on Massive Sinkhole*, Channel 8 News, (Feb. 3, 2017 6:23 PM), http://wfla.com/2017/02/03/mosaic-begins-work-on-massive-polk-sinkhole/.
[44] 2004 Anomaly at 25.
[45] PR Newswire, *Update On The Phosphogypsum Spill At ICL's Rotem Phosphate Fertilizers Plant In Israel's Negev Region*, http://news.sys-con.com/node/4116058.

> (c) Fundamental to these Guidelines is the precept that dredged or fill material should not be discharged into the aquatic ecosystem, unless it can be demonstrated that such a discharge will not have an unacceptable adverse impact either individually or in combination with known and/or probable impacts of other activities affecting the ecosystems of concern.
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> (d) From a national perspective, the degradation or destruction of special aquatic sites, such as filling operations in wetlands, is considered to be among the most severe environmental impacts covered by these Guidelines. The guiding principle should be that degradation or destruction of special sites may represent an irreversible loss of valuable aquatic resources.

Nichols et al. (2008) succinctly describe the role of the Guidelines in framing the Corps' review of permit applications for discharges of fill in wetlands:

> Central to the Guidelines is the fundamental requirement for an alternatives analysis. "[N]o discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the environment, so long as the alternative does not have other significant adverse environmental consequences . . . . [T]he application is required in every case (irrespective of whether the discharge site is a special aquatic site or whether the activity associated with the discharge is water dependent) to evaluate opportunities for the use of non-aquatic areas and other aquatic sites that would result in less adverse impact on the aquatic ecosystem." Thus, applicants must demonstrate that for any discharge or fill activity there is no practicable alternative site for the proposed activity that will have less adverse environmental impacts.

For special aquatic sites such as wetlands, however, the Guidelines propose a more difficult test for avoidance with two presumptions. For proposed discharges to special aquatic sites there is a presumption that an alternative site that is not a special aquatic site exists and a presumption that such a site will result in less adverse environmental impacts on the aquatic ecosystem. These rebuttable presumptions clarify how to determine if discharges proposed for special aquatic sites meet the requirement that the practicable alternatives have less significant adverse impact on the environment and do not have other significant environmental impacts.

Furthermore, the Clean Water Act and EPA's Guidelines make mitigation a requirement of the Section 404 program through standards set at 40 C.F.R. §§ 230.10 (a)-(d). The Memorandum of Agreement between EPA and the Corps concerning mitigation under the Clean Water Act 404 (b)(1) Guidelines (Mitigation MOA) defines the three steps of mitigation - the first two being avoidance and minimization of impacts:

> 1. Section 230.10(a) allows permit issuance for only the least environmentally damaging practicable alternative. The thrust of this section on alternatives is *avoidance of impacts*. Section 230.10(a)(1) requires that to be permittable, an

> alternative must be the least environmentally damaging practicable alternative *(LEDPA)*. In addition, Section 230.10(a)(3) sets forth rebuttable presumptions that 1) alternatives for non-water dependent activities that do not involve special aquatic sites are available…
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> 2. Minimization. Section 230.10(d) states that appropriate and practicable steps to *minimize* the adverse impacts will be required through project modifications and permit conditions.

Sequencing requires the applicant must first demonstrate impacts to wetlands have been *avoided*. Next the applicant must demonstrate any remaining unavoidable impacts have been *minimized*. Lastly, and only after avoidance and minimization of impacts has occurred, the applicant must compensate for any remaining impacts [i.e. compensatory mitigation].

Nichols et al. (2008) provides an excellent description of the avoidance requirement:[46]

> Avoidance is the first step in the sequencing process by which the Corps determines whether or not the proposed project is the least environmentally damaging practicable alternative (LEDPA). The LEDPA is identified by an evaluation of the direct, secondary, and cumulative impacts on the aquatic ecosystem and "other ecosystems" of each alternative under consideration.

The Guidelines state:

> *[N]o discharge of dredged or fill material shall be permitted* if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem so long as the alternative does not have other significant adverse environmental consequences.

The universality of the requirement to evaluate opportunities for use of non-aquatic areas and other aquatic sites that would result in less adverse impact on the aquatic ecosystem was reiterated in a EPA and Army guidance memo in 1993.[47]

The Corps formalized the requirement for sequencing in its regulations regarding Compensatory Mitigation for Losses of Aquatic Resources, 33 C.F.R. § 332.1:

> (2) Pursuant to these requirements, the district engineer will issue an individual section 404 permit only upon a determination that the proposed discharge complies with applicable provisions of 40 C.F.R. part 230, including those which require the permit applicant to take all appropriate and practicable steps to avoid and minimize adverse impacts to waters of the United States. Practicable means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. Compensatory mitigation for unavoidable impacts may be required to

[46] *Id.* at 6.
[47] Regulatory Guidance Letter 93-02.

> ensure that an activity requiring a section 404 permit complies with the Section 404(b)(1) Guidelines.
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> (3) Compensatory mitigation for unavoidable impacts may be required to ensure that an activity requiring a section 404 permit complies with the Section 404(b)(1) Guidelines. During the 404(b)(1) Guidelines compliance analysis, the district engineer may determine that a DA permit for the proposed activity cannot be issued because of the lack of appropriate and practicable compensatory mitigation options.

Therefore, based on the detailed description of the Clean Water Act's requirements, the 404 (b)(1) Guidelines, the mitigation sequencing requirement, and the least environmentally damaging practicable alternative are fundamental to the federal review of permit applications for the discharge of fill into wetlands.

Here, the Corps does not discuss the public's need to mine phosphate ore or the public's need for the applicant to have a mine in close proximity to its existing beneficiation plant infrastructure, nor does it explain the public's interest in the applicant meeting its desired production output. Since the purpose of the proposed action informs the alternatives analysis, and since the purpose and need statement are not in the public's interest, proper consideration has not been given to alternatives that were not the applicant's preferred alternative, especially the No Action Alternative. The Corps should independently address the purpose and need of the proposed project in its EA to better inform its alternatives analysis.

1. Practicable alternatives exist

The Clean Water Act (as well as the National Environmental Policy Act) require the Corps to analyze the alternatives to the proposed project. The regulations provide that adverse impacts to wetlands must be avoided to the extent that practicable alternatives are available which will result in less adverse impacts.[48] A "practicable" alternative is one that is "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes." If it is otherwise a practicable alternative, an area not presently owned by the applicant which could reasonably be obtained, utilized, expanded or managed in order to fulfill the basic purpose of the proposed activity may be considered."[49] Guidelines establish a presumption that all practicable alternatives that do not involve a discharge into wetlands have less adverse impact on the environment "unless clearly demonstrated otherwise."[50] The applicant has failed to demonstrate that the proposed project is in fact needed, much less that there are no practicable alternatives.

Alternatives explore other ways of meeting the purpose and need. Proposing alternatives that are actually projects slated for another time—like the Ona Mine, Pioneer Tract, and Site W-2—circumvents the purpose of an alternatives analysis, which is to consider other actions. The Corps summarized the need and therefore used in its evaluation of the least environmentally damaging

[48] 40 C.F.R. § 230.10(a).
[49] 40 C.F.R. § 230.10(a)(2).
[50] *Id.*; 40 C.F.R. §§ 230.2(q-1), 230.41.

practicable alternative, the need to produce 28 million metric tons of phosphate ore, with a maximum production level of 1.7 million metric tons per year, taking into account required infrastructure—namely being within 10 miles of the beneficiation plant.[51] Based on that criteria, the Corps evaluated a No Action Alternative, the preferred alternative, Ona Mine, Pioneer Tract, and Site W-2.[52] The Corps concedes that there is no mine plan for the Pioneer Tract or Site W-2 mine so the applicant provided estimated plans.[53] The Corps purports to have also evaluated seven minimization alternatives, including a No Action Alternative/Upland Mining; Upland Mining with Crossings of water of the United States (WOUS); Priority Avoidance; Initial Landscape Systems Avoidance; Avoidance of Key Landscape Systems; the preferred alternative; and the original mine plan.[54]

The Corps rejected the Upland Mining alternative, which would avoid 100 percent of the WOUS and streams, because it would only recover 34 percent of the totally commercially mineable phosphate reserves.[55] It also states that the Project would "conflict with the current County permit" but that ignores the fact that the County itself had to grant exemptions from mining in the watershed and still has not approved the final Master Mining Plan.[56] The Corps rejected the Upland Mining with WOUS Crossings alternative, which would only impact 2.1 acres of WOUS, because it would only allow recovery of 35 percent of commercially mineable phosphate reserves. The Corps rejected the Priority Avoidance alternative, which would only impact 327.6 acres of WOUS and would avoid 100 percent of the resources prioritized by the mitigation framework, because it would only allow recovery of 59 percent of the total commercially mineable phosphate reserves.[57] The fact that the Project purpose was so narrowly drawn precluded other alternatives that would have resulted in less environmentally damaging effects.

The Corps should consider other alternatives that would satisfy the project need, like importing the phosphate ore or using less fertilizer in general. There is consensus that the world's phosphate rock supply is finite and that in order to meet global demand for the agricultural sector, greater recycling of and sustainable use of phosphorus will be necessary (Cordell and White 2013). Proposals that look at non-phosphate fertilizers could be examined if the purpose of the Project were more broadly drawn.

2. The proposed mitigation does not compensate for the Project's impacts

The Clean Water Act requires applicants to first avoid wetlands through a practicable alternative. If all efforts have been made to avoid impacts, the Act requires the applicant to minimize impacts through project modifications. If—and only if—all efforts have been made to avoid and minimize impacts, may the applicant compensate for the loss through mitigation.[58] As explained

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[51] EA at 9.
[52] EA at 9.
[53] EA at 11.
[54] EA at 16.
[55] EA at 18.
[56] *Id.*
[57] EA at 20.
[58] 33 C.F.R. § 332.1(c) codifies a 1989 Memorandum of Agreement between the Corps and the EPA that sets forth the multi-step sequencing scheme of addressing wetland impacts. Memorandum of Agreement Between the U.S. Environmental Protection Agency and U.S. Department of the Army, Determination of Mitigation Under the Clean

above there are numerous practicable alternatives to the proposed project that would avoid significantly impacting these important resources. Further, there is no evidence that the applicant has minimized impacting these resources through project modifications.

Minkin and Ladd (2003) conducted a study of the effectiveness of compensatory mitigation projects (creation and restoration) required for permitted impacts in New England and to determine what programmatic improvements might be necessary. Their study found that "[f]orty of the mitigation projects (67%) were determined to meet permit conditions and would be considered successful by that standard[; h]owever, only 10 (17%) were considered to be adequate functional replacements for the impacted wetlands." They attribute the failure of mitigation projects to compensate for wetlands losses in part to "inadequate mitigation amounts for permitted impacts and also for inappropriate functional replacements, e.g., replacing forested wetlands with open water, emergent, and/or scrub-shrub systems." They also raised the issue of whether created or restored wetlands could replace those of natural systems and concluded that 1:1 mitigation ratios were inadequate.

The study also seems to indicate that insufficient compensatory mitigation has been required to offset project impacts. With impacts to 352.31 acres of wetlands and proposed compensatory mitigation of 324.12, of which no more than 317.65 became wetland, there would be an overall net loss in acreage of wetlands. Since there was considerable out-of-kind mitigation, there were increased losses in the more complex wetland types. The general replacement of forested wetlands with open water and emergent systems has resulted in considerable loss of function, particularly forested wildlife habitat and water quality functions such as denitrification, which occur best in seasonally saturated wetlands.

They also considered the results of other studies in reaching a conclusion that greater mitigation ratios are required:

> He [Whigham] questioned whether there is any scientific justification for the underlying assumption of mitigation, that restored and created wetlands function similarly to natural wetlands with regard to biodiversity and nutrient cycling. He also noted that concentrating on replacing lost acreage amounts fails to account for the wetland degradation and functional loss resulting from creation and restoration of mitigation wetlands of lower functional value. In this regard, *greater compensatory mitigation acreage is required to replace the lost functions of impacted systems, i.e., mitigation to impact ratio must be greater than 1:1*.

Minkin and Ladd (2003) concluded that there is a need for higher mitigation ratios if preservation and enhancement are proposed as compensatory mitigation.

An examination of enhancement and preservation, included in the overall mitigation proposals for several of the study projects was not reviewed in this study. Although preservation and enhancement can be important parts of a mitigation proposal, they do not prevent a net loss in wetland acreage and may not prevent a net loss in wetland function.

Water Act 404(b)(1) Guidelines. *See* Margaret N. Strand, Wetlands Deskbook, 93 (3rd Ed. 1997).

Mitigation banks might do no better in providing compensation for lost wetland functions and values. Kihslinger (2008) reported that:

> A recent more comprehensive review of 12 mitigation bank sites in Ohio found that *25% of the bank areas studied did not meet the definition of wetlands* (Mack and Micacchion 2006*). Of the actual wetland acreage, 25% was considered in poor condition, 58% was fair*, and 18% was good quality in terms of vegetation as compared to natural reference wetlands. *The study also found that amphibian community composition and quality was significantly lower at banks than at natural forest, shrub, or emergent wetlands and that pond-breeding salamanders and forest-dependent frogs were virtually absent from the bank sites*. A recent study from Florida found that of the 29 banks evaluated, 70% fell within the moderate to optimal range of function. Although the baseline conditions of most sites were in the high functional range, most of the projects relied upon enhancement, rather than restoration, as the mitigation method (Reiss et al 2007).

It must be noted that while the findings of the Florida study are more encouraging, these banks employed enhancement, rather than restoration, and that raises the concern that wetlands functions and values continue to be lost.

Brown and Lant (1999) conducted a survey of whether 68 mitigation banks within the United States, as of January 1996, were achieving no-net-loss of wetland acreage nationally and regionally. Their review revealed that:

> Although 74% of the individual banks achieve no-net-loss by acreage, *overall, wetland mitigation banks are projected to result in a net loss of 21,328 acres of wetlands nationally*, 52% of the acreage in banks, as already credited *wetland acreages are converted to other uses*. While most wetland mitigation banks are using appropriate compensation methods and ratios, *several of the largest banks use preservation or enhancement, instead of restoration or creation*. *Most of these preservation/enhancement banks use minimum mitigation ratios of 1:1, which is much lower than ratios given in current guidelines*. Assuming that mitigation occurs in these banks as preservation at the minimum allowable ratio, ten of these banks, concentrated in the western Gulf Coast region, will account for over 99% of projected net wetland acreage loss associated with banks.

Sufficient evidence exists to demonstrate the general failure of compensatory mitigation in replacing lost wetlands functions and values. For this reason, an emphasis should be placed on avoidance and minimization of impacts to waters of the state.

Beyond so-called "white papers" provided by the applicant, which appear to be little more than the applicant's own propaganda, the AEIS and EA present no information that past reclamation has produced adequate compensation or that future mitigation or reclamation will be adequate to

compensate for impacts to wetlands and species' habitats. However, information to the contrary has been provided by several expert agencies and individuals. For example, USGS critiques the DAEIS for not basing its assumptions about surface and groundwater impacts in logic or science.[59] Likewise, the Florida Association of Mitigation Bankers found that "predicting the post-reclamation hydrology has been a challenge historically"; that "the risk of unsuccessful mitigation on mined site is understated in the Draft AEIS"; and that the analysis "should reflect the issues that have plagued the industry's post-reclamation (on-site) mitigation in the past, rather than optimistic speculation about the ability of new technology to resolve these issues."[60]

Experts on behalf of the Sarasota County Board of Commissioners informed the Corps that:

> the discussion of mitigation gives a conclusory assertion of an 'evolution' in technology, but does not explain how this evolution took place, and gives no empirical data which demonstrates that the post-reclamation wetlands and streams resemble native habitats in soil type, soil pH, dominant vegetative species composition, species richness or diversity, use by wetland dependent species, microtopography, or hydroperiods. Despite assertions by the industry that undesirable vegetative species in restored wetlands will inevitably die out and give way to desired species, some of the oldest reclamation sites are still dominated by wax myrtle. Given the doubts expressed again and again about the efficacy of past reclamation and restoration technologies . . . the Draft AEIS should provide an in depth discussion as to the reasons why it is believed that current technology will correct past failures.[61]

Brian Winchester, President and Technical Director of Winchester Environmental Associates, Inc., with more than 40 years as professional Florida ecologist specializing in wetlands ecology with emphasis on wetland creation and restoration cautioned that "over the last two decades there have been thousands of wetland acres released by agencies as being successfully reclaimed that in fact never demonstrated the type and function characteristics comparable to the native wetland systems they were intended to replace."[62]

Furthermore, while the EA states that the applicant will implement a monitoring program, it does not provide details about that program, other than that the applicant itself will monitor and periodically report to the Corps, allowing the fox to guard the henhouse.

The Corps must seriously consider the concerns of these expert agencies and individuals. It cannot accept the applicant's promises of doing reclamation better in the future than it has done in the past as scientific evidence that promised mitigation in the form of state-mandated reclamation will rise to the task of compensating for the wetlands that will be lost to phosphate mining.

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[59] Appendix A to the FAEIS at 361.
[60] Appendix A to the FAEIS at 12.
[61] Appendix A to the FAEIS at 84.
[62] Appendix A to the FAEIS at 276.

III. The Corps must comply with the National Environmental Policy Act

Congress provided a broad environmental purpose in the National Environmental Policy Act (NEPA):[63]

> [t]o declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation…. [I]t is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.

In that regard, NEPA is America's "basic national charter for protection of the environment."[64] NEPA ensures that federal agencies "will have available, and will carefully consider, detailed information concerning significant environmental impacts" and that such information "will be made available to the larger [public] audience."[65]

To this end, NEPA requires federal agencies to prepare a detailed EIS for any "major Federal actions significantly affecting the quality of the human environment."[66] The issuance of a Section 404 by the Corps is a "federal action" to which NEPA applies.[67] To determine whether the environmental impact of a proposed project is significant enough to warrant the preparation of an Environmental Impact Statement (EIS), the agency may prepare an Environmental Assessment (EA). An EA is "a concise public document that briefly provides evidence and analysis for determining whether to prepare an EIS or a finding of no significant impact."[68]

When an EA is performed on a project, the Corps must take a "hard look" and "must make a convincing case" for a Finding of No Significant Impact (FONSI) and decision not to perform an EIS.[69] The fundamental objective of NEPA is to ensure that an "agency will not act on incomplete information only to regret its decision after it is too late to correct."[70] Therefore, if "substantial questions as to whether a project . . . may cause significant degradation of some

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[63] 42 U.S.C. § 4321; 42 U.S.C. § 4331(a).
[64] 40 C.F.R. § 1500.1(a).
[65] *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989).
[66] 42 U.S.C. § 4332(2)(C).
[67] *United States v. South Florida Water Management District*, 28 F.3d 1563 (11th Cir. 1994); *Sierra Club v. Sigler*, 695 F.2d 957, 964 (5th Cir. 1983); *Fla. Wildlife Fed'n v. Army Corps of Eng'rs*, 401 F. Supp.2d 1298 (S.D. Fla. 2005).
[68] 40 C.F.R. § 1508.9; 33 C.F.R. § 230.10.
[69] *Hill v. Boy*, 144 F.3d 1446, 1450 (11th Cir. 1990).
[70] *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 371 (1990).

human environmental factor," an EIS must be prepared.[71]

The Council on Environmental Quality (CEQ) has promulgated regulations to guide agencies in determining whether a proposed project will have "significant" impacts to the environment.[72] Whether an action will have a "significant" impact on the environment, thus warranting the preparation of an EIS, requires considerations of both "context" and "intensity." "Context" means that the significance of an action must be analyzed in several different contexts (i.e. national, regional, and local significance of the action). "Intensity" refers to the severity of the impact. The CEQ regulations set forth several factors for the Corps to consider when evaluating intensity, including, but not limited to:

- The degree to which the proposed action affects public health or safety
- Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas
- The degree to which the effects on the quality of the human environment are likely to be highly controversial
- The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks
- The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration
- Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts
- The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act

Courts have held that a plaintiff need not show that significant effects will in fact occur, but if a plaintiff raises substantial questions whether a project *may* have a significant effect, an EIS must be prepared.[73]

Completing an EIS is important because the Corps must go beyond the analysis of an EA and describe: (1) the "environmental impact of the proposed action"; (2) any "adverse environmental effects which cannot be avoided should the proposal be implemented"; (3) alternatives to the proposed action; (4) "the relationship between local short-term uses of man's environment and

[71] *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 1149 (9th Cir. 1998); *Greenpeace Action v. Franklin*, 14 F.3d 1324, 1332 (9th Cir. 1992); *Sierra Club v. United States Forest Serv.*, 843 F.2d 1190, 1193 (9th Cir. 1988).
[72] *See* 40 C.F.R. § 1508.27.
[73] *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 1150; *Klamath Siskiyou Ctr. v. Boody*, 468 F.3d 549, 562 (9th Cir. 2006) (holding the standard for preparing an EIS is low).

the maintenance and enhancement of long-term productivity"; and (5) any "irreversible or irretrievable commitment of resources which would be involved in the proposed action should it be implemented."[74]

As part of the EIS, each federal agency must "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources."[75] An agency must "rigorously explore and objectively evaluate all reasonable alternatives."[76] In addition, an agency "shall state how alternatives . . . will or will not achieve the requirements of section 101 and 102(1) of the Act" which requires agencies to "use all practicable means" to "assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings" and to "preserve important historic, cultural, and natural aspects of national heritage" as well as how alternatives "will or will not achieve the requirements of . . . other environmental laws and policies."[77] Until an agency issues a Record of Decision (ROD) pursuant to NEPA, no action concerning a proposal may be taken that would have an adverse environmental impact, or limit the choice of reasonable alternatives.[78]

NEPA requires the consideration of reasonably foreseeable, direct, indirect, and cumulative impacts to the natural and physical environment.[79] Cumulative impacts are impacts that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.[80] Federal agencies have a continuing obligation to gather and evaluate new information relevant to the environmental impact of its actions. "An agency that has prepared an EIS cannot simply rest on the original document. The agency must be alert to new information that may alter the results of its original environmental analysis, and continue to take a 'hard look' at the environmental effects of [its] planned action, even after a proposal has received initial approval.[81]

Here, the Corps has clearly predetermined the outcome of its NEPA review. In its EA for Wingate East Mine, the Corps states that despite the fact that the draft analysis "does not include any of the final determinations" required by the Clean Water Act (because "the Corps cannot make such determination until the conclusion of the permit application review process"), those conclusions will be published in the record of decision and statement of findings (RODSOF) (as opposed to a FONSI or determination that an EIS is needed), and that the Corps "plans to adopt the Final EIS and this EA in the RODSOF."[82]

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[74] 40 C.F.R. § 4332.
[75] 42 U.S.C. § 4332(2)(E).
[76] 40 C.F.R. § 1502.14(a)-(c).
[77] 40 C.F.R. § 1502.2(d).
[78] 40 C.F.R. § 1506.1(a).
[79] *See* 40 C.F.R. §§ 1508.7, 1508.8.
[80] 40 C.F.R. § 1508.7.
[81] *Marsh v. Oregon Natural Res. Council*, 490 U.S. 360, 373-74 (1989).
[82] EA at 1.

Instead, the Corps must complete a site-specific evaluation of the Project and must evaluate the significant impacts will have on the human environment.

A. The Corps must complete a site-specific Environmental Impact Statement before rendering a final permit decision for the Wingate East Mine

The FAEIS does not alone satisfy NEPA requirements for individual projects within its scope. CEQ regulations indicate when tiering from a broader environmental impact statement to a subsequent narrower statement is appropriate, and specifically give the example of a regional or basinwide program statement and the ultimate site-specific statements.[83]

Manifesting this intent, the EA incorporates by reference the FAEIS and provides no further discussion of the Wingate East Mine's impacts. For example, in its factual determinations under the Clean Water Act 404(b)(1) Guidelines for physical substrate, the EA states that "mining leads to a moderate to major degree of effect on surficial geology and soils, including soils and substrate present in wetlands and waterbodies. However, the reclamation required by the state, and the mitigation required by the state and the Corps, will offset the adverse direct impacts of mining."[84]

Despite the 1975 Florida law requiring that all lands mined for phosphate after July 1, 1975, be reclaimed, it has been estimated that there are 200,000-300,000 acres of lands yet to be reclaimed. It is important to note the meaning of the word "reclaimed," especially in the context of the word "restored." Restored lands are ones that assist in the reestablishment of natural communities, habitat, species, or other ecological attributes that have been eliminated or greatly reduced by phosphate mining. In contrast, reclaimed lands are lands disturbed by phosphate mining that are rebuilt to provide some beneficial land use. Reclamation has not been proven to provide the same ecosystem benefits as restoration. At least one author has compared the restoration of phosphate mined lands to Everglades restoration, saying that "the restoration of phosphate mined lands may be a far greater challenge."[85]

With respect to mitigation, the Corps reports that the applicant's proposed mitigation plan includes: the preservation of 292 acres of on-site wetlands; the enhancement and preservation of 27 acres of on-site wetlands; the "reestablishment" of 598 acres of on-site wetlands; the "establishment" of 45 acres of off-site herbaceous wetlands; the preservation of 37 acres of off-site forested wetlands; the enhancement and preservation of 8 acres of off-site wetlands; and the "establishment" of 4 acres of off-site wetlands.

A 1993 study comparing non-mined river basins with reclaimed river basins in west central Florida found the following (Lewelling 1993):

- Peak runoff rates from the reclaimed basins generally were higher than those from the unmined basins during intense, short-duration storms;

[83] 40 C.F.R. § 1508.28.
[84] EA at 25.
[85] Brown, M.T. 2005. Landscape restoration following phosphate mining: 30 years of co-evolution of science, industry and regulation. Ecological Engineering 24 (2005) 309-329.

- Reclaimed basins backfilled with clay sustained no base flow to streams;
- The depth to the water table in the surficial aquifer in the three reclaimed basins was greater than the unmined basins; and
- Recharge from the surficial aquifer to the underlying aquifer was greatly reduced.

Other studies have found impacts to water quality. FIPR (2001) explains that the major reagents used in phosphate beneficiation include fatty acid (to collect the phosphate), amine (to collect the sand), fuel oil (as an extender), sodium silicate (to depress sand), soda ash or ammonia (to modify pH), and sulfuric acid (for washing away the collector on the rough concentrate). Multiple pounds of each of the above additives are used per each ton of phosphate, and since phosphate operations produce millions of tons annually, millions of pounds of the reagents are used annually. It is estimated that 30 percent of the reagents are unaccounted for and may be released into the environment. This same study detected fuel oil in groundwater samples of surficial aquifer and intermediate aquifer wells that had been installed in active and inactive sand tailing areas (FIPR 2001).

Zhang (2012) found that "[c]lay-settling areas (CSAs) are one of the most conspicuous and development-limiting landforms remaining after phosphate mining" (Zhang 2012). The clay-lined bottom of the CSA limit their recharge capacity, evaporating instead of recharging the groundwater system, which is a loss of water from the upper Peace River basin that did not occur before mining operations began (Metz 2009). This Project calls for the construction of a clay settling area.

To be clear, the applicant has proposed to mine in the 25-year floodplain of Stream 100, a tributary of the Myakka River, impacting 4.8 acres of wetlands, and 21.3 acres of uplands. The applicant has also proposed to mine wetlands that are functionally integrated with the 25-year floodplain of Stream 100. Stream 100 connects headwater wetlands to the upper Myakka River downstream of the Wingate East Mine. As the staff report for R-16-132, the Manatee County permit, stated: "[t]he 25-year floodplain of stream 100 provides water quality treatment, energy dissipation, moderation of groundwater flow, nutrient cycling, organic carbon export, flood storage during flood events and habitat functions."[86] The staff recommendation found that the applicant had not demonstrated by competent and substantial evidence that the Project can satisfy the requirements of Manatee County Ordinance 04-39 and required a stipulation that no mining would be allowed until wetlands on the Altman Tract, Parcel No. 4 have been reclaimed, and a 30-foot buffer zone around the no mining area.

The land has characteristics that are unique, including wetlands, particularly riparian forests. Riparian forests have been found to reduce delivery of nonpoint-source pollution to streams and lakes in many types of watersheds (Vellidis 2002, Vellidis 2003, Lowrance 1984, Lu 1985). Riparian forest ecosystems are excellent nutrient and herbicide sinks that reduce the pollutant discharge from surrounding agroecosystems (Peterjohn 1984). For example, studies from coastal plain agricultural watersheds reveal that riparian forest ecosystems are excellent nutrient sinks and buffer the discharge from surrounding agroecosystems (Lowrance 1984). Riparian buffers are especially important on small streams where intense interaction between terrestrial and

[86] Staff Report for R-16-123, Master Mining Plan – Mosaic Fertilizer, LLC – Wingate East Mine at 9.

aquatic ecosystems occurs (Vellidis 2003), because first- and second-order streams comprise nearly three-quarters of the total stream length in the U.S. (Leopold 1964).

During the Planning Commission meeting August 18, 2016, a representative of the applicant, Shannon Gonzalez of Flatwoods Consulting Group hired by Mosaic, stated that there was peer reviewed scientific information indicating that reclaimed lands provide the ecosystem benefits promised. This individual referenced, but did not offer into evidence, an unnamed 2008 report by the Florida Institute of Phosphate Research (FIPR).

The 2008 study co-authored by Shannon Gonzalez, commissioned by FIPR, reviewed 62 mined lands comprised of 24 upland, 18 wetland, and 20 mixed sites and found five classes of vertebrates, including 299 individual species (BRA 2008). The report did not however, rate how well the reclaimed areas fared using any metric.

Regarding impacts to surface water quality and suspended particulate/turbidity, the Corps states that Wingate East will have a minor to moderate degree of effect, but appears to attempt to discount that impact stating that discharges will need to comply with 402 permits.[87] Regarding impacts to aquatic ecosystem effects, the EA only generally cites to Corps' obligations to avoid, minimize, and compensate, and states that with mitigation, Wingate East would have no impact to a minor impact on wetlands. Regarding cumulative effects, the Corps states that it performed a cumulative effects analysis in the FAEIS, despite not having site-specific analysis for any of the proposed mines at the time. It also states that since the FAEIS, the applicant has identified multiple additional parcels that will be or are proposed to be part of phosphate mines within the study area, but that this does not alter the cumulative effects determinations made in the FAEIS. The level of analysis performed by the Corps falls far short of the "hard look" required of NEPA. The conclusions the Corps reaches are not supported by the information in front of it and are therefore arbitrary and capricious.

Regarding secondary impacts, the EA simply states: "the evaluations of impacts described in the Final EIS included both direct and indirect, or secondary, impacts. Therefore, Chapter 4 of the Final EIS describes the secondary effects of the Wingate East project." However, neither Chapter 4 of the FEIS, nor the EA by incorporating the FEIS, specifically discuss site-specific secondary effects caused by the Wingate East Mine. The purpose of an areawide impact statement is to facilitate the evaluation of cumulative impacts, and should not be a shortcut designed to eliminate in-depth, site-specific scientific evaluation of direct and secondary impacts for each permitted project.

B. The Corps cannot issue a Finding of No Significant Impact.

The Project meets several of the significance factors warranting an EIS.

Phosphate mining in Florida is open pit strip mining where a company strips approximately 10 meters of so-called overburden[88] and removes the matrix below which contains the phosphoric

[87] EA at 26.
[88] Overburden: Layers of soil or rock overlaying a deposit of useful materials or ores.

ore.[89] Beneficiation[90] of the matrix separates the phosphoric ore from the sand and the clay. The sand tailings are set aside for use in recontouring the land once mining is completed. The clay is returned to the empty pits and stored in elevated clay settling ponds (the clay is now swollen with water and chemicals used in beneficiation) where they wait to drain. These clay settling areas occupy about 40 percent of post-mining lands.[91]

The phosphoric ore is treated with sulfuric acid to produce phosphoric acid, which is used in fertilizer.[92] This process creates phosphogypsum, a radioactive byproduct for which the Environmental Protection Agency requires that it be stored in stacks indefinitely because of its radioactivity. It is radioactive due to the presence of naturally occurring, but artificially concentrated and released, uranium, radium-226, and thorium. It may also contain high levels of cadmium.

In 2003, Judge Johnston, in adjudicating a case regarding phosphate mining in neighboring Charlotte County found that "phosphate mining in this area is accomplished through utter destruction of the local natural environment from ground surface down to a depth of approximately 50 feet."[93] Unfortunately, this observation is true wherever phosphate is mined in Florida. The Peace and Myakka river basins have been substantially altered by open pit mining for phosphate, changes in land use for mining, and groundwater use for phosphate mining.[94] It is beyond dispute that phosphate mining has forever altered the natural landscape, including streams and drainage. For example, in some areas of the upper Peace River basin, the surficial aquifer does not even exist because phosphate mining has removed the surface sediments.[95] In addition to scarring the landscape, groundwater pumping for phosphate mining has been implicated in the creation of sinkholes in the upper Peace River,[96] and storage of the acidic, radioactive waste generated by the process has also caused sinkholes.[97]

1. The proposed action may affect public health or safety

Phosphate rock mining leads to reallocation and exposure of several heavy metals and radionuclides that become airborne or enter waterbodies. Some of this information is described above in the public interest section regarding phosphogypsum stacks, which has grave health

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[89] Matrix: a mixture of phosphate pebbles, sand and clay.
[90] Beneficiation: A mechanical process called washing is used to separate the larger phosphate pebbles from the ore. A process called flotation is used to recover the finer particles of phosphate from sand.
[91] Brown, M.T. 2005. Landscape restoration following phosphate mining: 30 years of co-evolution of science, industry and regulation. Ecological Engineering 24 (2005) 309-329.
[92] *National Emission Standards for Radon Emissions From Phosphogypsum Stacks,* EPA, https://www.epa.gov/radiation/subpart-r-national-emission-standards-radon-emissions-phosphogypsum-stacks.
[93] *Charlotte Co. v. IMC-Phosphates Company*, Case No. 02-4134 (Aug. 1, 2003), Recommended Order.
[94] The surficial aquifer is a vital component of the groundwater system; Rain recharges the surficial aquifer which then percolates downward to the water table. Metz, P.A. and B.R. Lewelling. 2009. Hydrologic Conditions that Influence Streamflow Losses in a Karst Region of the Upper Peace River, Polk County, Florida: U.S. Geological Survey Scientific Investigations Report 2009-5140, 82 p. at 1, 2.
[95] Metz 2009.
[96] *Id*.
[97] Peter Brenard, *Massive sinkhole drains contaminated water into Floridan aquifer*, CHANNEL 8 NEWS (Sept. 15, 2016 7:02 PM), http://wfla.com/2016/09/15/contaminated-water-flows-into-floridan-aquifer-after-sinkhole-opens-at-mosaic-facility/.

effects; however, in addition, several studies have indicated that phosphate mining poses human health risks.

Yang (2014) found elevated levels of lead, manganese, and mercury in house dust, attributable to nearby phosphate mines. Abdalla (2011) found wells downstream of phosphate mining activities had high concentrations of heavy metals, such as lead, cadmium, zinc, and nickel, when compared with upstream wells. In general, the release of these heavy metals can have serious health implications (Al-Hwaiti 2013).

Also submitted to the Corps via public comments on its DEIS, members of the public adjacent to mine sites report loss of springs and ecosystem benefits of wetlands that were destroyed and/or moved by mining practices.[98] Likewise, neighboring property owners have complained of fugitive dust. In addition, once the land has been used for phosphate mining, the land can no longer be used for economic development such as agriculture, commercial or residential uses.

For example, John Jerue, a resident of South Lakeland, who filed a suit against developer Drummond Co., seeking damages suffered as a result of the contamination to his and several other residents' properties by the phosphate mining and reclamation activities of Drummond and its real estate division.[99] After reclaiming the land, Drummond developed the land into residential properties and sold it without warning of, or disclosing to the buyers, the hazardous radiation and substances it knew emanated from the contaminated property.[100] Reclaimed phosphate land has dangerously high levels of radiation that drastically raise the risk of many cancers.[101] In 2003, EPA officials considered that land so radioactive that it was a candidate for emergency cleanup action,[102] but local politics intervened and EPA never moved forward.[103]Such serious health and environmental concerns are clearly contrary to the public interest.

Phosphogypsum stacks

Phosphate ores are comprised of fluorapatite, goethite, quartz, Al-phosphates, anatase, magnetite, monazite, barite, cadmium, nickel (and other heavy metals and trace elements), uranium, thorium, and radium. Phosphogypsum is a waste by-product of processing phosphate ore by "wet acid method." Phosphogypsum is largely comprised of gypsum, but may also contain phosphoric acid, monocalcium phosphate, dicalcium phosphate, calcium phosphate, residual acids, flourides,

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[98] DAIS at Chp. 1 p. 39

[99] Complaint at ¶ 1, Jerue v. Drummond Co. Inc., (2017), https://www.plainsite.org/dockets/34gtcrcon/florida-middle-district-court/jerue-v-drummond-company-inc/.

[100] *See* Kate Bradshaw, *Suit alleges phosphate company knowingly developed homes on contaminated land in Polk County*, CL TAMPA (March 14, 2017 5:00 PM) http://www.cltampa.com/news-views/environment/article/20854874/suit-alleges-phosphate-company-knowing-developed-homes-on-contaminated-land-in-polk-county.

[101] *Id.*

[102]*EPA Abandons Major Radiation Cleanup Florida Despite Cancer Concerns,* https://www.publicintegrity.org/2014/01/30/14190/epa-abandons-major-radiation-cleanup-florida-despite-cancer-concerns.

[103] Douglas P. Guarino, *EPA Abandons Major Radiation Cleanup in Florida, Despite Cancer Concerns*, PUBLICINTEGRITY.ORG (Jan. 30, 2014 12:31 PM) https://www.publicintegrity.org/2014/01/30/14190/epa-abandons-major-radiation-cleanup-florida-despite-cancer-concerns.

sulphate ions, trace metals (arsenic, silver, barium, cadmium , chromium, lead, mercury, and selenium, and organic matter. The wet processing also concentrates naturally occurring radium, uranium, polonium, and thorium.

Depending on the phosphoric ore, processed phosphogypsum can have 60 times the radioactivity as the level found prior to processing. Radium and lead are the major radionuclides with activity concentrations high compared to recommended normal levels (Afifi 2009). In a 2009 review of literature on the environmental impact and management of phosphogypsum, Tayibi et al. found that radon from Ra-226 decay is a significant environmental problem, as is exposure to local gamma radiation levels many times more than normal, background rates. It also found stack solutions and wells monitoring surface waters had elevated uranium and radium. Bolivar (2000) likewise identified estuary contamination of polonium, uranium, barium, zinc, nickel, copper, cadmium, and strontium from near phosphogypsum stacks. Wang (2014) found uranium in river sediments near phosphate mines. Duenas (2007) found significant radon exhalation from phosphogypsum stacks and nearby lands.

For every one ton of phosphoric acid produced, five tons of phosphogypsum are produced. The phosphate industry in Florida produces about 30 million tons of phosphogypsum each year.[104] Approximately 15 percent of phosphogypsum worldwide is recycled as building materials, fertilizer, or soil stabilizers, the remaining 85 percent are stored untreated in stacks. There are 25 gypstacks scattered around Florida, and just one stack can cover 500 acres wide and 240 feet tall. These gypstacks contain about 1 billion tons of radioactive phosphogypsum. That's enough to give every man, woman and child in Indonesia, Brazil and Pakistan, one ton of phosphogypsum each.

Tayibi et al. (2009) conducted a review of the environmental impact and management of phosphogypsum, noting that about 5 tons of phosphogypsum are generated for every one ton of phosphoric acid produced. This by-product is usually disposed into large stock piles in coastal areas without any treatment, causing serious environmental damage. Phoshpogypsum contains high levels of impurities such as phosphates, fluorides and sulphates, naturally occurring radionuclides, heavy metals, and other race elements.

Sahu et al. (2014) found that phosphate ore processing and disposal of phosphogypsum contributes to enhanced levels of natural radionuclides and heavy metals in the environment, and that the resulting environmental impact should be considered carefully to ensure safety. They found that gypstacks can cause serious environmental contamination of soils, water, and the atmosphere through gypstack erosion and the release of heavy metals, sulphates, fluorosilicates, hydrogen fluorides, phosphorus, cadmium and radium-226.

Borylo et al. (2012) found elevated levels of metals in plants nearby phosphogypsum stacks, some higher than permissible levels in food. They calculated that the factor contamination for the plants were 2.1 for Pb, 3.7 for Zn, 2.8 for Ni, and 3.2 for Fe for green parts, to 11.8 for Pb, 12.2 for Zn, 9.4 for Ni, and 5.5 for Fe in root times higher in comparison to non-contaminated plants. They concluded that the subject gypstack may pose a health risk to the local population through

[104] *Phosphogypsum and the EPA Ban,* FIPR, www.fipr.state fl.us/about-us/phosphate-primer/phosphogypsum-and-the-EPA-ban/.

consumption of the vegetables.

Borylo et al. (2013) found elevated levels of Po and Pb in soil near a phosphogypsum stack. They theorized that heavy rainfall for a long time may cause infiltration of radionuclides from phosphogypsum stacks to nearby soils and waterways.

Al Attar et al. (2011) found elevated levels of fluoride in air and soil sampling near phosphogypsum stacks. Da Silva (2010) found that phosphate mining and processing (where phosphogypsum was created) enriched cadmium was enriched 105-208 times and uranium was enriched 18-44 times. It also found a general trend of an increase in heavy metals content with decreasing particle size.

There are 25 gypsum stacks in the region, including the New Wales stack that recently caused at least 215 million gallons of radioactive hazardous waste to spill into the Floridan aquifer.[105] This is not the first time a sinkhole has opened up below a radioactive phosphogypsum stack, it's not even the first time a sinkhole has opened up at this site. In 1994, a sinkhole formed under the north stack, and in 2004 and 2013, two other "anomalies" were remediated.[106]

Furthermore, in 2009 a sinkhole at the PCS White Springs facility released more than 90 million gallons of hazardous wastewaters into the Floridan aquifer.[107] In October 2015, the EPA and Mosaic settled a lawsuit regarding a series of alleged violations of how Mosaic handles and stores its hazardous waste.

The Southwest Florida Water Management District believes that sinkholes may form when "industrial phosphate run-off and materials settlement storage ponds are created . . . . The substantial weight of the new material can trigger an underground collapse of supporting material, thus creating a sinkhole."[108]

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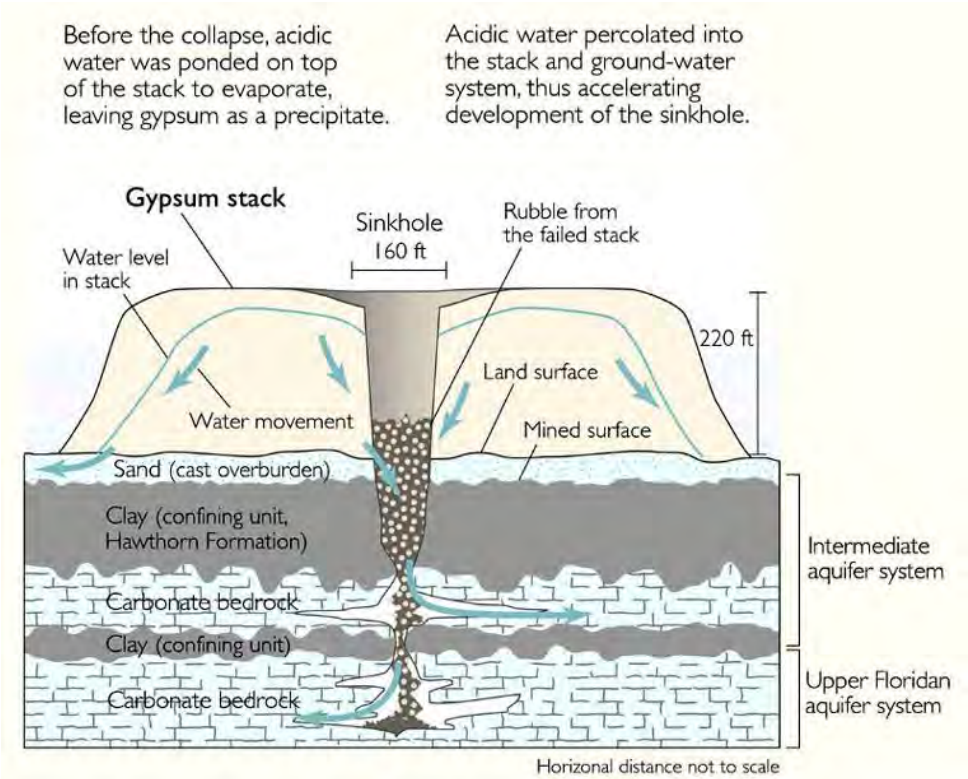
[105] AEIS 3-6.
[106] Fuleihan, N.F. 2013. Investigation of 2013 Anomaly New Wales Plan Closed North Gypstack.
[107] *Learn About Sinkholes: Sinkhole Collapse Beneath a Gypsum Stack*, SINKHOLE.ORG, www.sinkhole.org/facts10.php.
[108] *Florida Phosphate Mines Linked to Sinkholes*, FLMINES, https://www.flmines.com/sinkHoles.html.



2. The land has unique characteristics such as proximity to wetlands

The land has characteristics that are unique, including wetlands, particularly riparian forests. The proposed alternative will impact over 553 acres of Corps' wetlands. The wetlands and adjacent lands support a host of imperiled and iconic species including wood stork, eastern indigo snake, crested caracara, Florida scrub jay, bald eagle, gopher tortoise, Florida pine snake, gopher frog, Florida sandhill crane, Sherman's fox squirrel, Florida burrowing owl, southeastern American kestrel, Florida mouse, snowy egret, little blue heron, tricolor heron, white ibis, and American alligator.

Haag (2010) found wetlands are a dominant feature in Florida's landscape and represent a greater percentage of the land surface in Florida than in any other state in the conterminous United States. There are an estimated 11.4 million acres of wetlands, occupying 29% of the area of the State.[109] As Semlitsch and Bodie (1999) argue, small wetlands are crucial for maintaining regional biodiversity in a number of plant, invertebrate, and vertebrate taxa (e.g. amphibians). A consequence of losing these wetlands lies in potential changes to the metapopulation dynamics of the remaining wetlands.[110] The consequences could be a reduction in the number or density of individuals dispersing and an increase in dispersal distances among wetlands.[111] A reduction in wetland density can decrease the probability that a population can be "rescued" from extinction by a neighboring source population because of lower numbers of available recruits and greater

[109] *Id.*
[110] *Id.* at 1131.
[111] *Id.*

distances between wetlands.[112] Remaining wetlands could face increased probabilities of population extinctions.[113]

While wetlands provide numerous services to human society, perhaps one of the easiest to quantify is flood protection. A Washington State Department of Ecology evaluation of the economic worth of this single function produced values ranging from $8,000 to $51,000 per acre (Leschine 1997). The study points out that "policies which permit wetlands to disappear that are presently contributing little to stem flood protection, but which have the potential to do so in the future, could lead to rapidly rising values for the remaining wetlands for flood protection, as increasingly marginal wetlands are called into service. At some point the 'next best' alternatives to enhanced flood protection will not involve wetlands at all, and the purely engineered systems that might have to be built could prove very expensive indeed."[114] Of course any analysis that included economic values of the full range of wetland functions including pollutant removal, flood protection, recreation, species protection, groundwater recharge, and others would obviously derive much higher values.

3. The effects on the quality of the human environment are likely to be highly controversial

The Corps has already received thousands of comment letters from concerned and impacted citizens of Florida.[115] Furthermore, the byproduct of the process the Corps is considering permitting is radioactive, with no real solution for permanent storage. These two factors alone warrant an Environmental Impact Statement and make a FONSI a factual and legal impossibility.

4. The possible effects on the human environment are highly uncertain or involve unique or unknown risks

This topic is covered in the public interest and public health and safety sections above.

5. The action is related to other actions with individually insignificant but cumulatively significant impacts

The FEIS details, and the Corps is currently considering, associated projects that cumulatively have significant impacts.

6. The action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act

This topic is covered in the following section.

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[112] *Id.* at 1131-32.
[113] *Id.* at 1132.
[114] *Id.*
[115] AEIS at Chp. 1 p. 43-46; Manatee County Public Comments 1-7.

IV. The Corps and U.S. Fish and Wildlife Service must comply with the Endangered Species Act

Congress enacted the ESA to provide a "means whereby the ecosystems upon which endangered species and threatened species depend may be conserved . . . [and to implement] a program for the conservation of such endangered species and threatened species."[116] At its core, the ESA prohibits any person from taking any species listed as endangered, and empowers the Service to promulgate regulations prohibiting the taking of any species listed as threatened.[117] "Take" is defined broadly to include all manner of harm or harassment to protected species, including both direct injury or mortality and also acts and omissions which disrupt or impair significant behavioral patterns.[118] Similarly, federal agencies are required to "carry[] out programs for the conservation of endangered species and threatened species,"[119] and to "insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the adverse modification of [the critical] habitat of such species."[120]

Section 7 Consultation

Section 7 consultation is required for "any action [that] may affect listed species or critical habitat."[121] If the action agency determines its action "may affect" a listed species, the agency must initiate formal consultation with an expert agency (in this case, the Service).[122] Once the action agency has initiated formal consultation, the Service is required to complete a biological opinion (BiOp) for that proposed action.[123] The BiOp summarizes the Service's findings and determines whether the proposed agency action will jeopardize the continued existence of any species or result in adverse modification of critical habitat.[124] If the Service determines the agency action is likely to jeopardize the continued existence of a listed species or result in adverse modification, the BiOp impacts such that the agency action may avoid jeopardizing listed species.[125]

Pervading the Section 7 consultation process is the mandate for "each agency [to] use the best scientific and commercial data available."[126] Importantly, each federal agency has an independent duty to "use the best scientific and commercial data available" to ensure any action it authorizes "is not likely to jeopardize the continued existence . . . or result in the destruction or adverse modification of [the critical] habitat" of any listed species.[127] Section 7(a)(1) of the ESA requires the Corps, in consultation with and with the assistance of the Service, to utilize its

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[116] 16 U.S.C. § 1531(b).
[117] 16 U.S.C. §§ 1538(a)(1); 1533(d); 50 C.F.R. § 222.101.
[118] "Take" is defined by the ESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." 16 U.S.C. § 1532(19); 50 C.F.R. § 222.102.
[119] 16 U.S.C. § 1536(a)(2).
[120] *Id*.
[121] 50 C.F.R. § 402.14(a).
[122] *Id.*; JOINT CONSULTATION HANDBOOK at 2-6.
[123] 16 U.S.C. § 1536(b)(3)(A).
[124] 50 C.F.R. § 402.14(h).
[125] 16 U.S.C. § 1536(b)(3)(A).
[126] *Id.*
[127] 16 U.S.C. § 1536(a)(2).

authorities in furtherance of the purposes of the ESA by carrying out programs for the conservation of endangered and threatened species.[128] Federal agencies have an independent and substantive obligation to insure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or adversely modify critical habitat.[129] Indeed, a "no jeopardy" BiOp from the Fisheries Service does not absolve the action agency of its duty to insure that its actions comply with the ESA.[130]

Section 10 Incidental Take Permit and Habitat Conservation Plan

The ESA, by way of its "language, history, and structure . . . indicates beyond doubt that Congress intended endangered species to be afforded the highest of priorities" for protection under the law.[131] Thus, the ESA prohibits the "take" of a listed species.[132] Section 10 of the ESA provides an exception to the take prohibition by allowing the incidental take of a listed species where, "such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity."[133] An "incidental take permit" (ITP) will not be granted unless the applicant submits a habitat conservation plan (HCP) to the Service, who receives delegated authority from the Secretary of the Department of Interior. The Service then makes a determination that the "impact which will likely result from such taking" and the "steps the applicant will take to minimize and mitigate such impacts . . . will not appreciably reduce the likelihood of the survival and recovery of the species in the wild."[134] Before issuing an ITP, the Service must make a finding that the application and conservation plan provide:

1) the taking will be incidental;
2) the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking;
3) the applicant will ensure that adequate funding for the plan will be provided;
4) the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and
5) the measures, if any, required under subparagraph (A)(iv) will be met . . . .[135]

Prior to granting an ITP application, the Service must also undergo the consultation process with itself, as outlined in Section 7 of the ESA, to assure that granting the permit "is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species."[136] To jeopardize the

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[128] 16 U.S.C. § 1536(a)(1).
[129] 16 U.S.C. § 1536(a)(2); *See Pyramid Lake Paiute Tribe of Indians v. United States Dep't of the Navy*, 898 F.2d 1410, 1415 (9th Cir. 1990).
[130] *Res. Ltd., Inc. v. Robertson*, 35 F.3d 1300, 1304 (9th Cir. 1994).
[131] *Tennessee Valley Authority v. Hill*, 437 U.S. 153, 174 (1978).
[132] To "take" a species is to "harass, harm, pursue, hunt, shoot, wound kill, trap, capture, or collect, or to attempt to engage in any conduct. 16 U.S.C. § 1532(19).
[133] 16 U.S.C. § 1539(a)(1)(B).
[134] 16 U.S.C. § 1539(a)(2)(A)(i–iv).
[135] 16 U.S.C. § 1539(a)(2)(B). The term "measures" in subsection (v) refers to "any additional measures the Secretary may require as being necessary or appropriate for the purposes of the plan." *Id.* at § 1539 (a)(2)(A)(iv).
[136] *Id.* at § 1536(a)(2).

continued existence of the species is to engage in an activity that either, "directly or indirectly . . . reduces appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species."[137]

When engaging in Section 7 consultation to determine whether the approval of an ITP will cause jeopardy, the Service is required to render its decision by evaluating the "best scientific and commercial data available."[138] If the Service determines the project is unlikely to cause jeopardy to the species or adverse modification of its habitat, the agency must provide a statement specifying the impact of the incidental take on the listed species, outlining "reasonable and prudent measures" to minimize the impact from incidental take, and setting forth any conditions the agency and applicant must follow in accordance with the ITP.[139]

In addition to its obligations under the ESA, the Service also must satisfy its obligations under NEPA before it may issue an ITP. NEPA requires that all federal agencies carrying out "major Federal actions significantly affecting the quality of the human environment" produce a "detailed statement" that specifies the impact the proposed action will have on the environment, the adverse effects resulting from the proposed action that cannot be avoided, and any alternative actions.[140] Under NEPA, the agency must also consider "any irreversible . . . commitments of resources," such as the loss of a protected species caused by the proposed action.[141]

Federal agencies, like the Service here, must prepare an EIS prior to engaging in "major Federal actions" that significantly affects the environment.[142] An agency's decision to grant a permit may constitute "major federal action," triggering the need for an EIS.[143]

U.S. Fish and Wildlife Service engagement on Wingate East Mine

In the course of approving an ITP for Wingate East Mine, on May 24, 2012, the U.S. Fish and Wildlife Service (Service) transmitted a letter to the applicant purporting to make a "determination" for federally listed species on the property.[144] It states that on some unidentified date, Cardno Entrix evaluated the Project for potential impacts to federally-listed species and determined that the Project occurs within the range of the wood stork and Audubon's crested caracara and determined that the project is not likely to adversely affect ether species. It also stated that no other listed species of plant or animal are known to occur on the property and that "therefore the project will not affect any other listed species."

A. The 2012 ITP is invalid

The May 18, 2012 ITP (permit number TE236128-1) is legally and scientifically deficient and

[137] *Florida Key Deer v. Brown*, 364 F.Supp.2d 1345, 1359 (U.S. Dist. Ct. S.D. Fla. 2005) (*citing* 50 C.F.C. § 402.02).
[138] 16 U.S.C. § 1536(a)(2).
[139] *Id.* at § 1536(b)(4)(A–C).
[140] 42 U.S.C. § 4332(C)(i–iii).
[141] *Id.* at § 4332(c)(iv–v).
[142] 42 U.S.C. § 4332(c).
[143] *Sierra Club v. Van Antwerp*, 526 F.3d 1353, 1361 (11th Cir. 2008).
[144] David Hankla letter to Diana Jagielia, May 24, 2012.

violates Section 10 of the ESA because: 1) the underlying ITP, habitat conservation plans, and BiOps on which the 2012 ITP relies are deficient; and 2) new information and amendments to the mining plans warrant reinitiation of consultation and an amended ITP.

The Service and Mosaic relied on a convoluted mix of HCPs, ITPs, ITP amendments, and BiOps—many of which are legally and scientifically deficient—in an attempt to analyze and cover anticipated take incidental to mining activities at Wingate East Mine. This haphazard patchwork of analyses has led to legal, scientific, and procedural deficiencies in the overall review of species impacts under the ESA.

1. Background

ESA Permitting History

In September 2009, Mosaic submitted to the Service an application for an ITP and a supporting HCP for the take of Florida scrub-jays (*Aphelocoma coerulescens*) on approximately 4,345 acres at the "Texaco Tract" (later known as the "Wingate East Tract," which includes both the 661-acre Wingate Extension Mine and the 3,684-acre Wingate East Mine) in Manatee County for a period of 24 years.[145] On September 28, 2010, the Service issued Mosaic an ITP for take of Florida scrub-jays in connection with clearing and mining activities on the Wingate East Tract (ITP No. TE236128-0, hereinafter "2010 ITP").[146] Concurrent with the ITP, the Service authorized translocation of scrub-jays from the Wingate East site to the 1,000-acre Mosaic Wellfield in Manatee County (TE051429-0).[147] On September 27, 2010, the Service issued an ESA Section 7 BiOp on its decision to issue the 2010 ITP.

On October 5, 2011, Mosaic submitted to the Service an application and HCP for amendment of the 2010 ITP to cover additional listed species; namely, the eastern indigo snake (*Drymarchon couperi*).[148] Additionally, Mosaic sought to extend the duration of the permit to 41 years from the date of amendment.[149] The application and HCP for the permit amendment almost exclusively analyze impacts to the eastern indigo snake.[150]

On May 18, 2012, the Service issued a modified version of ITP Number TE236128-0 (2012 ITP), which covered the take of Florida scrub-jay and eastern indigo snake on the Wingate East Tract.[151] As part of the permit-amendment process, on May 15, 2012, the Service issued an ESA Section 7 BiOp, which constituted the Service's opinion of the 2012 ITP's impacts to the eastern

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[145] *See* Mosaic Fertilizer, LLC, *Incidental Take Permit Application & Habitat Conservation Plan Endangered Species Act, Section 10(a)(1)(B)* (March 2010) [*hereinafter* 2010 HCP].
[146] *See* 2010 HCP at 1-4; *see also* Memorandum from U.S. Fish and Wildlife Service to File, *Final Biological Opinion: Mosaic Fertilizer, LLC: Issuance of an Incidental Take Permit for the Eastern indigo snake (Drymarchon couperi*) in Manatee County, Florida (May 15, 2012). [*hereinafter* 2012 BiOp].
[147] *See* Cardno Entrix, *Wingate East Tract*: *Amendment to Incidental Take Permit TE236128-0* (Oct. 2011) [*hereinafter* 2011 HCP].
[148] 2011 HCP.
[149] *Id.* at 1.
[150] *See, e.g., id.* at 8-22.
[151] *See* 2012 ITP.

indigo snake only.[152] Although the modified 2012 ITP also authorized take of the Florida scrub-jay, the Service did not appear to initiate consultation on the modification or reinitiate consultation on the 2010 ITP. Rather, the Service decided "[t]he [BiOp] dated September 28, 2010 will continue to be the Service's [BiOp] for the scrub-jay" and declined to further address Florida scrub-jays in the 2012 BiOp.[153]

Eastern indigo snake

The Service listed the eastern indigo snake as threatened under the ESA in 1978.[154] Historically, the species was found throughout Florida, Alabama, Mississippi, and portions of Florida; however, the species is now only found within Georgia and Florida.[155] Eastern indigo snakes are more often "found in pinelands, tropical hardwood hammocks, and mangrove forests," as they are more inclined to upland habitats and ecosystems.[156] The most frequent used types of habitat where the indigo is found includes "pine flatwoods, scrubby flatwoods, dry prairie, tropical hardwood hammocks, edges of freshwater marshes, agricultural fields, coastal dunes, and human-altered habitat"; however, the species needs a variety of these habitats to complete its life cycle.[157] The eastern indigo snake shares a special relationship with the gopher tortoise, which is critical in northern portions of the snake's range because it will take refuge in the tortoise's burrows to weather the cold.[158] This relationship is somewhat less critical in the milder south Florida climate where indigo snakes have been documented using manmade refugia and disturbed habitats.[159] The snakes are still known to use the underground burrows of these tortoises and other species in the region of the Project.[160] Thus, the survival of the indigo snake is essentially tied to the health and survival of the gopher tortoise.

The eastern indigo snake was initially listed as threatened as the result of several activities including, habitat destruction and fragmentation, "over-collecting for the pet trade, and mortality from gassing gopher tortoise burrows to collect rattlesnakes."[161] Presently, the species is vulnerable to habitat destruction and fragmentation associated with "residential and commercial construction, agriculture, and timbering."[162] Development will continue to impact the eastern indigo snake because it permits increasing human populations in indigo snake habitat, which leads to an increased risk of snake mortality resulting from vehicular collisions and contact with property owners and domestic animals.[163] The indigo snake is also subject to harm from the bioaccumulation of pesticides in its prey, which results from the use of pesticides in agricultural

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[152] 2012 BiOp.
[153] 2012 BiOp at 1.
[154] U.S. Fish & Wildlife Service, *Multiple Species Recovery Plan for South Florida: Eastern Indigo Snake,* Drymarchon corasi couperi, U.S. DEPARTMENT OF INTERIOR, 4-567, http://www.fws.gov/verobeach/msrppdfs/easternindigosnake.pdf [hereinafter *Eastern Indigo Snake*].
[155] *Id*. at 4-568.
[156] *Id*.
[157] *Id*. at 4-568–4-569.
[158] *Everglades Eastern Indigo Snake*.
[159] *Id*.
[160] *Id*. The use of gopher tortoise and other species' burrows by indigos is often considered taking "refuge." *Eastern Indigo Snake* at 4-572.
[161] *Eastern Indigo Snake* at 4-572.
[162] *Id*.
[163] *Id*.

and silvicultural activities, and from contact with rodenticide used to control rat populations within its range.[164]

On July 18, 2016, Krysko et al. published a peer-reviewed article identifying a new, cryptic species of indigo snake in the United States, the Gulf Coast indigo snake (*Drymarchon kolpobasileus*).[165] The study distinguishes the new species from the federally threatened eastern indigo snake (*Drymarchon couperi*) using morphological and molecular analyses, and it identifies new distributions for each discrete species based on their observed morphological and genetic differences.[166]

This study has several implications for the conservation of the species as a whole, the Central Florida Phosphate District, and in the South Pasture Extension project area. On a broad scale, this study takes an already rare and imperiled species of snake and effectively splits it into two separate species that inhabit even smaller ranges. As a result of splitting the species in two, these species are of increased rarity, and thus any proposed impact on "eastern indigo snakes" will need to be reassessed based on the ecology and conservation status of each distinct species. Locally, the study reveals that the species in Manatee County is not the eastern indigo snake, but rather the cryptic Gulf Coast indigo snake.

Climate change and sea-level rise also threaten the eastern indigo snake. Amphibians and reptiles are considered to be highly sensitive to anthropogenic climate change (Corn 2005, Blaustein et al. 2010, Mitchell & Janzen 2010, Li et al. 2013). As ectothermic animals, all aspects of their life history are strongly influenced by the external environment, particularly temperature and moisture (Case et al. 2015). Climate change is expected to affect amphibians and reptiles at the individual and population levels though a number of pathways including shifts in phenology (seasonal life-cycle events) and range; habitat alterations including changes in hydrology, vegetation, and soil; changes in pathogen-host dynamics, predator-prey relationships, and competitive interactions which can alter community structure, all of which can affect a species' survival, growth, reproduction and dispersal capabilities (Corn 2005; Blaustein et al. 2010; Mitchell & Janzen 2010; Li et al. 2013).

In addition, global climate change poses a serious threat to terrestrial ectotherms like the eastern indigo snake simply because they rely on the external environment to regulate and stabilize their body temperatures. It is predicted that large areas of the planet will experience a variance in thermal regimes, mean temperatures, and precipitation (Aubret & Shine 2009). Although Florida's climate is predicted to warm less than other regions in North America, a climate inventory over the past 35 to 108 years indicated Florida is experiencing greater climate extremes, with trends of increased summer and fall maximum temperatures and decreased winter and spring minimum temperatures (Reece et al. 2013). Terrestrial ectotherms in particular are at risk from these changes because they are less effective at buffering their body temperature than other creatures. Changes in ambient temperature have been shown to impact growth, locomotion, and reproduction in terrestrial ectotherms because these processes are strongly dependent on

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[164] *Id.*
[165] Krysko, K.L., M.C. Granatosky, L.P. Nuñez & D.J. Smith. 2016. A cryptic new species of Indigo Snake (genus *Drymarchon*) from the Florida Platform of the United States. Zootaxa 4138(3): 549–569.
[166] *Id.*

body temperature (Reece et al. 2013). An inability to buffer body temperature may alter essential behaviors of reptiles like the eastern indigo snake, including feeding, breeding, and searching for shelter, and alterations could result in increased vulnerability to predators and extreme climate. The future survival of these species will be entirely dependent on their ability to adapt to a rapidly changing climate. Sears et al. 2016 recently found ectothermic species' success at regulating their body temperatures in a warming climate also depends on the distribution and accessibility of cool microclimates, factors previous reptile studies have failed to assess. Thus, it is possible that estimates of future reptile extinctions are much higher than previously thought.

Though past studies of reptiles indicate they will have difficulty adapting to warmer climates in the future, these studies may underestimate the full impact to these ectothermic species. Sears et al. (2016) recently found ectothermic species' success at regulating their body temperatures in a warming climate depends not only on the availability of cool microclimates but also on the distribution and accessibility of those microclimates, factors previous reptile studies have failed to assess. Specifically, the study found that when shaded areas were liberally interspersed with nonshaded areas, reptiles were able to successfully maintain stable temperatures; however, when shaded areas were clumped together, reptiles had a difficult time regulating and maintaining stable temperatures (Sears et al. 2016). Because the location and proximity of shaded and nonshaded areas for thermoregulation is key for ectotherms like the eastern indigo snake, the Board should consider the Project's impact on accessibility of appropriate microhabitat for thermoregulation. It is likely that the large footprint of the Project will create a barrier, causing snakes to expend excess energy and subject themselves to increased risk of predation to travel from one "clump" of microhabitat to another.

Because eastern indigo snakes are rare and face numerous threats, they are listed as Threatened under the federal Endangered Species Act[167] and Florida's Endangered and Threatened Species Act. Despite these protections, habitat loss and degradation throughout the eastern indigo snake's range continues to cause the decline of this rare, beautiful, and important snake (Johnson & McGarrity 2016).

The Service's recovery plan for the eastern indigo snake highlights monitoring as an essential tool for attaining the snake's recovery.[168] The Project area should be resurveyed to determine the relevant locations and habitat use of eastern indigo snakes. The Project should also impose a monitoring plan for the life of the permit, which would allow the Service to identify severe population declines and take action.

Breininger et al. (2012) have concluded that habitat fragmentation is likely a critical factor for the eastern indigo snake's persistence and that eastern indigo snakes are vulnerable to extinction in conservation areas bordered by roads and developed areas. Though the snake's chances of survival can be quite high in conservation core areas, its survival rates significantly decline in conservation areas along highways and in suburbs.[169] More than half of known snake mortalities documented in the study were caused by humans, directly or indirectly, along roads.[170]

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[167] 43 Fed. Reg. 4026 (Jan. 31, 1978).
[168] *Eastern Indigo Snake* at 4-579, 4-581.
[169] *Id.*
[170] *Id.*

Additionally, the Service should consider whether "corridors" between protected areas are wide enough to provide adequate protection for eastern indigo snakes.[171]

When assessing the Project's impacts on eastern indigo snake habitat, the Service should not only consider broad habitat types used by the eastern indigo snake (e.g., upland habitat) but also availability of essential microhabitat required by the species. For example, Hyslop et al. (2009) found that "[r]eduction in suitable underground shelters caused by habitat degradation and loss, which reduces or eliminates populations of [gopher tortoise], is likely an important factor in extirpation of the species from areas *otherwise perceived as suitable habitat*."

Florida scrub jay

The Service listed the Florida scrub jay as a threatened species under the ESA in 1987.[172] The species is endemic to Florida and requires specific habitat features with "well drained to excessively well-drained sandy soils… [and] oak-dominated scrub, or xeric oak scrub . . . [that is] adapted to nutrient poor soils, periodic drought, high seasonal rainfall and frequent fires."[173] Due to the scrub jay's particular habitat needs, the primary threats to its survival are habitat destruction, including both loss and fragmentation, and habitat degradation.[174] Given these threats the Service must better explain why the Project is not likely to adversely affect the Florida scrub jay.

About 16 percent (650 pairs) of the existing scrub jay population face an extinction probability of 3-50 percent. These subpopulations primarily occur in Manatee and Sarasota counties (FWS 2016). Eleven of the remaining 21 metapopulations are highly vulnerable to quasi-extinction, including populations in Manatee County (FWS 2015).

2. *The 2012 BiOp for the Eastern Indigo Snake is Deficient and Violates Section 7 of the ESA*

The 2012 BiOp is deficient because: (1) it does not adequately consider all impacts to affected species; (2) it does not rely on the best available science and does not draw rational connections between the facts found and the choices made; (3) it fails to address impacts to Florida scrub-jays, which are also covered under the amended permit; and (4) it does not have a valid incidental take statement (ITS).

First, the 2012 BiOp fails to consider all impacts to listed species affected by the ITP. The 2012 BiOp fails to provide a detailed analysis of all the impacts of the action, including but not limited to: the steps of the mining process and how it will impact the species, including timelines, intensity of the actions, and what types of take the will cause (i.e. killing, injuring, harming,

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[171] *See id.*
[172] U.S. Fish & Wildlife Service, *ECOS: Environmental Conservation Online System, Florida scrub-jay* (Aphelocoma coerulescens), U.S. DEPT. OF INTERIOR, http://ecos fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B082.
[173] U.S. Fish & Wildlife Service, *Florida Scrub-jay*, U.S. DEPT. OF INTERIOR, 2-264, https://www.fws.gov/verobeach/MSRPPDFs/FloridaScrubJay.pdf.
[174] *Id*. at 4-270. Approximately 70–80% of the scrub jay's habitat has been destroyed when compared to estimates of existing habitat prior to major settlement in Florida.

harassing); the purported efficacy of mine reclamation and whether peer-reviewed science supports Mosaic's claims that it will mitigate impacts to listed species; claims that mining will occur in a fashion that allows snakes to move safely from one unmined area to another; and claims that eastern indigo snakes will return to the site following reclamation. Although the 2012 BiOp states that "[m]ining will take approximately 36 years, followed by reclamation, for a total 41-year period,"[175] it does not analyze how the time lag between mining and reclamation will impact species. Additionally, although the 2012 BiOp mentions that juvenile indigo snakes may hide in temporarily established sheltering areas during construction, such as brush piles, equipment stock piles, and dirt mounds, it fails to include that as an "impact of the action."[176]

Additionally, although the 2012 BiOp rightly states that "[t]he mine will represent a permanent change to roughly 4,073 acres . . . of the project landscape for eastern indigo snakes,"[177] it does not evaluate what the significance of this permanent change is with regard to the eastern indigo snake. For instance, it does not analyze whether the species will ever return following mining, instead simply concluding—with no supporting science—that the species "should recolonize the site as reclamation is completed and gopher tortoises are restocked to the reclaimed upland habitats."[178]

Moreover, it appears the Service did not have the final mitigation plan before it when it considered impacts to species—including purported beneficial impacts of reclamation.[179] Without the precise reclamation and mitigation plans before it, the Service was precluded from performing an informed analysis of proposed reclamation based on the best available science, which is required under Section 7 of the ESA.

The 2012 BiOp also considers mitigation for the Florida scrub-jay at the off-site Mosaic Wellfield mitigation area as a "beneficial effect" for the eastern indigo snake.[180] Although the two species sometimes exist in the same habitats, there is no indication that any conservation measures will be undertaken specifically for the eastern indigo snake at the mitigation site. The Service cannot rightly rely on mitigation for one species to offset impacts for another.

The 2012 BiOp also fails to consider fertilizer production plants as activities that are interrelated or interdependent to mining at the Wingate East Mine.[181] "The test for interrelatedness or interdependentness is 'but for' causation: but for the federal project, these activities would not occur."[182] It is clear that fertilizer production at Mosaic's facilities, and thus creation of phosphogypsum waste, will not proceed but for the economically viable phosphate rock supplied

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[175] 2012 BiOp at 9.
[176] *Id.* at 8, 9.
[177] *Id.* at 11.
[178] *Id.*
[179] *See* Letter from Diana Jagiella, Mosaic Fertilizer, LLC, to Charles Schnepel, U.S. Army Corps of Engineers, *Application for Department of Army Permit for Wingate East Mine*, Section 4 (June 29, 2011) [*hereinafter* Initial Wingate East Application]("The mitigation plan is dependent on a final approved impact analysis fo llowing submittal of the initial application and discussions with [Corps] staff. . . . Due to the complexity of the document, the mitigation plan will be submitted as a stand-alone document *at a later date*." (emphasis added)).
[180] *Id.* at 10.
[181] *See id.* at 12.
[182] *Sierra Club v. Marsh*, 816 F.2d 1376, 1387 (9th Cir. 1987).

by the SPE Mine.[183] More specifically, phosphate extraction at the Wingate East Mine and fertilizer processing are interrelated actions that are jointly justified by the larger action of creating and selling synthetic fertilizers.[184] Likewise, based on Defendants' own representations, fertilizer production plants would have no independent utility apart from the "economically viable" phosphate rock supplied from the SPE Mine.[185]

The 2012 BiOp also inappropriately characterizes private and local actions as federal actions to avoid analyzing them as cumulative impacts.[186]

The 2012 BiOp is not based on the best available science and does not make a rational connection between facts found and decision made. For example the BiOp failed to include all the best available science on the eastern indigo snake's home range, omitting a study by Smith 2003 demonstrating that in Florida, home ranges for female and male snakes range from 5 to 371 ac and 4 to 805 ac, respectively.[187] Although it cites to Breininger et al. (2004), it fails to acknowledge the most important conclusion from that study—that eastern indigo snakes require large, interconnected, upland systems with few fragmenting effects from roads to persist. Likewise, in its climate change analysis, it failed to assess the full projected impacts of climate change by failing to acknowledge that Titus and Narayanan's (1995) worst-case scenario is premised on a 1 percent chance that global warming would raise sea level, that most climate change researchers agree with the findings in the IPCC Report (2007), and that more recent scientific evidence indicates an increase in the speed and scale of changes affecting global climate.

Additionally, the BiOp uses information from surveys on the Wingate East site to determine the number of indigo snakes present, stating that "in roughly 1,318 hours of field effort over a 7-year period in the action area of Wingate East mine over a total of 50 days."[188] However, the BiOp does not indicate whether surveying occurred during the appropriate times of day and year. As the BiOp indicates, eastern indigo snakes are cryptic and difficult to find during surveys. Consequently, the Service has concluded that surveys should be conducted October 1 through April 30 during daylight hours.[189] If the surveying did not occur during this time, it could be

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[183] *See, e.g.,* AEIS at 1-12—1-20 (discussing phosphate fertilizers as an "essential" end-result of phosphate mining, and defining the purpose of the SPE Mine as "to economically extend the operational life of its existing South Pasture mining facilities and beneficiation plant" by mining commercially available and practicable phosphate reserves).

[184] 50 C.F.R. § 402.02 (Interrelated activities "are part of a larger action and depend on the larger action for their justification.").

[185] *Id.*(Interdependent activities "have no independent utility apart from the action under consideration."); AEIS at 2-19–2-21 (reporting the applicant's representations that importing phosphate rock from outside Bone Valley would be cost prohibitive and operationally difficult).

[186] *See, e.g.,* 2012 BiOp at 12 ("Many of the construction projects impacting eastern indigo snake habitat in the action area will require both a county building permit and a Corps permit, which will require consultation under section 7 of the Act."), 13 (indicating that even construction that is not in wetlands, thus not subject to Corps' Section 404 permits, would require Section 10 take permits); *see also* 50 C.F.R. § 402.02 (defining cumulative effects).

[187] *See* Letter from Craig Aubrey, U.S. Fish and Wildlife Service, to Col. Alan M. Dodd, U.S. Army Corps of Engineers, *Biological Opinion for South Pasture Extension Mine* 11 (June 9, 2014) [*hereinafter* South Pasture BiOp] (citing personal communication from B. Smith in 2003).

[188] 2012 BiOp at 7.

[189] U.S. Fish and Wildlife Service, *Survey Protocol for the Eastern Indigo Snake, Drymarchon couperi, in North and*

inaccurately indicating a smaller eastern indigo snake population that actually exists on site. Using this flawed information to estimate density of snakes at the Wingate East site[190] would be arbitrary and capricious and not based on the best scientific information available.

Assuming estimates of snake presence at the Wingate East site are accurate, the 2012 BiOp fails to make a rational connection between that information and the decision to allow take of 3 snakes per each 5-year period during the duration of the permit. Analysis in the 2012 BiOp concludes that there are between 2.1 and 3.2 individual eastern indigo snakes in the action area for the Wingate East Mine.[191] It is arbitrary and capricious to allow take of more snakes than exist on the Wingate East site. Moreover, the "3 snakes per each 5-year period" limit apparently allows the take of 27 snakes over the 41-year period of the ITP, which appears especially unreasonable in light of the small number of eastern indigo snakes anticipated to use the site.

The 2012 BiOp also fails to cite any scientific information showing that phosphate mine reclamation can successfully reclaim land to a point where it will support threatened and endangered species. To the extent it relies on data outside the 2012 BiOp, it fails to cite any reliable, unbiased, peer-reviewed data on the purported efficacy of phosphate mine reclamation. Consequently, its determination that reclamation will mitigate impacts to species is not based on a rational connection between "facts found" and the decision made.

The 2012 BiOp fails to analyze impacts to Florida scrub jays, despite new impacts presented by the amended 2012 ITP, presumably because the Service believed "[t]he applicant . . . is otherwise not proposing any changes to the amount of take for the scrub-jay." The new ITP imposes impacts on the scrub-jay and its habitat for a longer duration than the original 2010 ITP.[192] Additionally, at the time the 2012 ITP was approved there was new information about the species, the mining plan, and the impact of mining on the species, which should have been considered in the BiOp before the permit was amended.

The ITS in the 2012 BiOp also fails to specify take and develop a "trigger" to ensure reinitiation of consultation should anticipated take be exceeded.[193] Although the BiOp recognizes potential take in the form of harassment to eastern indigo snakes,[194] it fails to specify whether that take is included in the 3-snakes-per-five-year-period take limitation. Even if take in the form of harassment is included in that limit, the ITS fails to implement monitoring and reporting requirements that would capture such forms of take—namely, a requirement that workers immediately report any sighting of an indigo snake leaving the site in response to clearing, mining, or reclamation activities.

For all the above-stated reasons, the 2012 BiOp inadequately assessed impacts to eastern indigo snakes from issuing the 2012 ITP for the Wingate East Mine. Consequently, the Service's conclusion that the 2012 ITP is not likely to jeopardize the continued existence of a listed species

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Central Florida 7 (Sept. 2011) (available at https://www.fws.gov/northflorida/indigosnakes/20110930_NFESO_EIS_survey_protocol_no_appendices.pdf).

[190] *See* 2012 BiOp at 7-8.

[191] 2012 BiOp at 8.

[192] *Compare* 2010 ITP with 2012 ITP.

[193] *See* 50 C.F.R. § 402.14(i)(1)(i).

[194] *See, e.g.,* 2012 BiOp at 6, 11.

is arbitrary and capricious. Because the underlying 2012 BiOp is deficient, the 2012 ITP is deficient.

3. The 2012 Concurrence Letter is Deficient and Violates Section 7 of the ESA

The Service did not adequately consider impacts to all listed species within the action area of the Wingate East Mine when it concurred that the project is not likely to adversely affect the wood stork and Audubon's crested caracara. It also did not adequately consider impacts to other federally listed species that occur in Manatee County when it found that there would be "no effects to any other listed species."[195]

Specifically, the Wingate East Mine will impact wood storks because it appears to fall within the species' core foraging areas.[196] The Wingate East Mine will also impact Northern crested caracaras. Caracaras, and a known nest, have been observed adjacent to Wingate East Mine,[197] and the site contains open pastureland, which caracaras use for hunting and nesting (when appropriate nesting trees are available).

Mining at the Wingate East Mine site will have unquestionable impacts on the hydrology of the region, which is interconnected with the coastal estuaries through the Peace River watershed, the Little Manatee River watershed, and the Myakka River watershed. Consequently, the Service should not have hastily written off impacts to coastal species such as the gulf sturgeon (*Acipenser oxyrinchus desotoi*), loggerhead turtle (*Caretta caretta*), piping plover (*Charadrius melodus*), green sea turtle (*Chelonia mydasi),* leatherback sea turtle (*Dermochelys coriacea*), Kemp's ridley sea turtle (*Lepidochelys kempii*), smalltooth sawfish (*Pristis pectinata*), and West Indian manatee (*Trichechus manatus*).

Intraservice consultation and conference must consider effects on listed, proposed, and candidate species.[198] "Candidate species are treated as if they are proposed for listing for purposes of conducting internal FWS conferencing." Therefore, the Service must also consider impacts to candidate species including the gopher tortoise, gopher frog, and eastern diamondback rattlesnake.

4. The 2012 HCP Must Meet the Requirements of Section 10 of the ESA

The 2012 ITP requires a new HCP that ensures the conservation of both the eastern indigo snake and the Florida scrub-jay, which are both covered in the ITP, and that accounts for new information and impacts presented at the time the permit amendment was sought. If the Service received an HCP for the 2012 ITP amendment, the HCP must meet all the requirements of ESA Section 10 and its implementing regulations, including the requirements discussed in the introduction to this section and those discussed in the next subsection (in the context of the 2010

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[195] *See* Letter from David L. Hankla, U.S. Fish and Wildlife Service, to Diana Jagielia, Mosaic Fertilizer, LLC, *Concurrence Letter for Wingate East* (May 24, 2012) [*hereinafter* 2012 Concurrence].
[196] South Pasture BiOp at 65 (providing map of core foraging areas for the wood stork, which overlap with Wingate East Mine).
[197] *See* Cardno Entrix, *Listed Species Report, Wingate East Extension, Manatee County, FL* (Jan. 2011).
[198] Handbook at 1-5.

HCP). The Service cannot rely on the 2010 HCP to support the 2012 ITP because the 2010 HCP only addresses impacts to the Florida scrub-jay, to the exclusion of the eastern indigo snake.

5. The 2010 HCP for the Florida Scrub-Jay is Deficient and Violates Section 10 of the ESA

The 2012 ITP is invalid because it relies on an adequate and outdated HCP for the take of scrub jays.[199] The 2010 HCP for scrub jays is legally deficient because it fails to meet the minimum criteria required under the ESA.[200] Specifically, it fails to specify: the likely impact of the taking; the funding available to implement mitigation, minimization, and monitoring measures; and the procedures to deal with unforeseen circumstances.[201] It also fails to analyze all alternatives available to the proposed mine.[202]

First, the 2010 HCP fails to "specify . . . the likely impact of the taking."[203] "To fully identify all sources of take that may result in an impact, it is necessary to consider each component of the proposed activity in detail."[204] Additionally, the HCP must describe "the impacts of the taking should . . . in the HCP relative to a species['] reproduction, numbers, and distribution, which are usually interdependent."[205] Although the HCP generally mentions "Land clearing activities associated with phosphate mining"[206] and "[a]ctivities normally conducted in the recovery of phosphate,"[207] it wholly fails to specifically describe the process involved in land clearing and phosphate mining and how that will impact listed species like the Florida scrub-jay. Rather, the 2010 HCP simply states that "no direct take of the species is anticipated from mining activities,"[208] and that the permit only implicates incidental take of occupied Florida scrub-jay habitat.

Additionally, the 2010 HCP conclusorily finds that "reclamation activities will restore the upland habitats acre for acre, replacing those lost to mining,"[209] without specifying whether and how reclamation activities purportedly mitigate impacts to Florida scrub-jays. In fact, there is no specific discussion of what reclamation of the Wingate East Mine entails. Moreover, the 2010 HCP fails to acknowledge what the 2012 ITP itself recognizes—that scrub-jay habitat "would be permanently eliminated" due to phosphate mining activities.[210] Without a detailed analysis of the impacts of phosphate mining and the purported effects of reclamation, the 2010 HCP cannot possibly specify the likely impact of the taking. Moreover, even if the conclusion that reclamation will "replace" habitat lost to mining were true, the 2010 HCP does not explain how

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[199] *See* 50 C.F.R. § 17.32(b)(1)(iii)(C) (requiring that an application for an ITP must have an HCP that meets certain criteria).
[200] *See* Mosaic Fertilizer, LLC, *Incidental Take Permit Application & Habitat Conservation Plan, Endangered Species Act, Section 10(a)(1)(B)* (March 2010) [*hereinafter* 2010 HCP].
[201] *See* 50 C.F.R. § 17.32 (b)(1)(iii)(C).
[202] *See id.*
[203] *Id.*
[204] *See* U.S. Fish and Wildlife Service, *Habitat Conservation Plan Handbook* 8-1 (Dec. 21, 2016).
[205] Habitat Conservation Plan Handbook at 12-3.
[206] *Id.* at 2.
[207] *Id.* at 8.
[208] *Id.*
[209] *Id.* at 9.
[210] *See* 2012 ITP.

reclamation would benefit Florida scrub-jays, when the plan is to translocate all jays currently occupying the site to a different location.[211] The HCP must address the specific impacts of mining on the Wingate East site to be legally valid under the ESA.[212] Finally, the HCP fails to indicate the amount of scrub-jay take in terms of individuals, which would be necessary for Section 7 consultation and analysis unless it was demonstrated to be impractical.[213]

Second, the 2010 HCP fails to "specify . . . steps the applicant will take to monitor, minimize, and mitigate impacts."[214] Although the 2010 HCP mentions "minimization" and "monitoring" in the form of translocating scrub-jays and maintaining the Wingate East Mine site prior to mining activities,[215] it does not specify what steps are involved in successfully completing activities, including what types of habitat management measures will be used (e.g., prescribed fire, mechanical removal, herbicides). Likewise, although the 2010 HCP mentions reclamation, it does not specify a reclamation plan or otherwise include any details about what reclamation would entail. To be a valid HCP under the ESA, the 2010 HCP must *specify* the steps Mosaic will take to monitor, minimize, and mitigate impacts.

Third, although the 2010 HCP states that Mosaic "will be responsible for all costs" associated with habitat enhancement and restoration, habitat reclamation, translocation, monitoring, and conservation easements,[216] it does not "specify . . . the funding available to implement such measures," as required under the ESA.[217] To be a valid HCP, it must specify the funding available to implement minimization, mitigation, and monitoring.

Fourth, the 2010 HCP does not "specify . . . *procedures* to deal with unforeseen circumstances."[218] Rather, the 2010 HCP quotes the legal definition of "unforeseen circumstances,"[219] states that "unforeseen circumstances could arise and might affect the HCP," and states that there will be a monitoring program to track whether unforeseen circumstances has arisen.[220] None of these observations constitute "procedures" to deal with unforeseen circumstances.

Fifth, although the 2010 HCP specifies mentions action alternatives ("No Action," "Manage and Continue Current Land Use," and "Restore, Mine and Translocate the Texaco Tract Scrub-Jays), those alternatives are not comprehensively discussed. Further, the 2010 HCP does not consider a full or partial avoidance alternative.

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[211] *See id.* at 4.
[212] Habitat Conservation Plan Handbook at 5-2 ("The HCP must also describe activities that may result in all effects to covered species or their habitats, including any effects that do not rise to the level of take. The HCP needs to describe the effects and how they may or may not impact the covered species, because the Services must consider this information when analyzing effects in their section 7 biological opinions, National Environmental Policy Act (NEPA), and findings documents.").
[213] 50 C.F.R. § 17.14(i)(1)(i).
[214] 50 C.F.R. § 17.32(b)(1)(iii)(C).
[215] 2010 Habitat Conservation Plan at 1, 4.
[216] *Id.* at 12.
[217] *See* 50 C.F.R. § 17.32(b)(1)(iii)(C).
[218] *Id.* (emphasis added).
[219] 2010 Habitat Conservation Plan at 13.
[220] *Id.* at 14.

6. The 2010 BiOp for the Florida Scrub Jay is Deficient and Violates Section 7 of the ESA

The Service's reliance on the 2010 BiOp for the amended 2012 ITP was unlawful because the 2010 BiOp does not adequately assess currently anticipated impacts to the Florida scrub-jay. For example, the 2010 BiOp analyzed the impact to scrub-jays over a 24-year period while the amended ITP would impact scrub-jays for a longer duration—41 years from the ITP issuance in 2012. This constitutes a major change to the terms and impacts of the original ITP and warrants new consultation on the Florida scrub-jay. Because the 2012 ITP relies on this defunct BiOp, and the 2012 BiOp does not analyze impacts to the Florida scrub-jay, the 2012 ITP is deficient and violates Section 10 of the ESA.

The 2010 BiOp must also meet all other requirements under Section 7 of the ESA, including appropriately considering all impacts to listed species, relying on the best scientific information available, and specifying take in the ITS.[221]

B. The Corps and Service must consult on Wingate East Mine

The Corps has an independent duty to consult on its own federal actions; here, the issuance of a Clean Water Act Section 404 permit. The ESA requires consultation with the Fish and Wildlife Service for any "agency action" that "may affect" a listed species or its critical habitat.[222] Clean Water Act Section 404 permits are considered "agency actions" under the ESA.[223] Likewise, the Service itself has acknowledged that mining activities at Wingate East authorized under the Section 404 permit will affect the threatened eastern indigo snake and threatened Florida scrub jay and may affect the threatened wood stork and threatened Audubon's crested caracara.[224] The project may also affect other listed species, as detailed below in Section IV(A)(1).

Despite the clear requirement to consult on the Corps' Section 404 permit, the Corps and Service failed to consult. Rather, the Corps and Service miscomprehended, and thus violated, the requirements of the ESA by incorrectly concluding:

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[221] *See* 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14.

[222] 16 U.S.C. § 1536(a)(2) ("Each Federal agency shall, in consultation with and with the assistance of the [Service], insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered . . . or threatened species or result in the destruction or adverse modification of [critical] habitat . . . ."); 50 C.F.R. § 402.14(a).

[223] *See Nat'l Wildlife Fed'n v. Norton*, 332 F. Supp. 2d 170, 175 (D.D.C. 2004) (explaining that the Corps must consult with the Service on Clean Water Act Section 404 dredge-and-fill permits); *see also P'ship for a Sustainable Future v. United States Fish & Wildlife Serv.*, 2002 U.S. Dist. LEXIS 28031, *12-13 (M.D. Fla. July 11, 2002) ("Agency actions include . . . granting permits."); *D'Olive Bay Restoration & Pres. Comm., Inc. v. United States Army Corps of Eng'rs*, 513 F. Supp. 2d 1261, 1287 (S.D. Ala. 2007) (holding the ESA requires federal agencies to "ensure that an action authorized, funded, or carried out by such agency (including permit actions) is not likely to jeopardize listed species).

[224] *See* Memorandum to File, David L. Hankla, Field Supervisor, U.S. Fish and Wildlife Service, *Final Biological Opinion: Mosaic Fertilizer, LLC: Issuance of an Incidental Take Permit for the Eastern indigo snake (Drymarchon couperi*) in Manatee County 1 (May 15, 2012) [*hereinafter* 2012 BO); Letter from David L. Hankla, Field Supervisor, U.S. Fish and Wildlife Service, to Diana Jagielia, Mosaic Fertilizer, LLC, *Correspondence Transmitting Service's Concurrence on Mosaic's "Not Likely to Adversely Affect" Determination for the Wood Stork and Audubon's Crested Caracara* 1 (May 24, 2012) [*hereinafter* 2012 Concurrence Letter].

> The ESA consultation for Wingate East Mine is complete. That project was evaluated under section 10 of the ESA as part of the Wingate East Mine Habitat Conservation Plan and, in May 2012, the Service issued Mosaic an Incidental Take Permit for the Florida scrub-jay and the eastern indigo snake. Also in May 2012, pursuant to section 7 of the ESA, the Service concurred with the effects determinations of 'may affect, but is not likely to adversely affect' for the wood stork and Audubon's crested caracara.[225]

The Service's decision to issue an ITP and the Corps' decision to issue a Section 404 permit are two separate agency actions relating to the Wingate East Mine. Consequently, the 2012 BiOp and concurrence letter on the Service's decision to issue an ITP for the eastern indigo snake do not satisfy the Corps' distinct duty to consult on its own separate decision to issue a Section 404 permit. Until the Corps and Service complete consultation on the Wingate East Mine they are in violation of Section 7 of the ESA.

As part of their consultation, the Corps and Service must consider the impacts of the Wingate East Mine on all listed species it may affect, including the wood stork, eastern indigo snake, crested caracara, Florida scrub jay, bald eagle, gopher tortoise, Florida sandhill crane, gopher frog, Sherman's fox squirrel, Florida burrowing owl, southeastern American kestrel, Florida mouse, snowy egret, little blue heron, tricolor heron, white ibis, American alligator, and the Florida panther. Additionally, it must comprehensively consider impacts to species from climate change, population growth, and other nearby development.

1. The Service and Corps Must Evaluate Impacts of Wingate East Mine on Listed Species

Wingate East Mine will impact at least 3,500 acres of habitat for listed species, including the wood stork, eastern indigo snake, crested caracara, Florida scrub jay, bald eagle, gopher tortoise, Florida sandhill crane, gopher frog, Sherman's fox squirrel, Florida burrowing owl, southeastern American kestrel, Florida mouse, snowy egret, little blue heron, tricolor heron, white ibis, American alligator, and the Florida panther.

In addition to Wingate East Mine, the applicant is mining or in tends to mine an addition 45,000 acres of nearby land at Desoto, Ona, and South Pasture Mine. The Service must consider the cumulative effect of these mines on the species and their habitat at Wingate East Mine.

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[225] *See* Letter from Larry Williams, State Supervisor, U.S. Fish and Wildlife Service, and Jason A. Kirk, Colonel, Army Corps of Engineers to Jaclyn Lopez, Staff Attorney, Center for Biological Diversity, *Response to Center for Biological Diversity's Notice of Endangered Species Act Violations in the Central Florida Phosphate District* 2–3 (Feb. 16, 2017).

The leading cause of extinction is habitat loss (Harris 1984, Meffe 1997), and native habitats in Florida are rapidly disappearing (Kautz 2001 at 56). This has resulted in the extirpation or extinction of 13 vertebrates over the last 150 years (Kautz 2001 at 56). Habitat loss and fragmentation, coupled with human encroachment, have resulted in populations of species that are increasingly isolated from each other (Dobey 2002 at 68). Large mammalian carnivores, like the Florida panther, are particularly vulnerable to habitat loss and fragmentation because of their relatively low numbers, large home ranges, and interactions with humans (Noss 1996 entire, Woodroffe 1998 entire). Their low fecundity and long generation times result in reduced levels of genetic variation (Roekle 1993 entire, Lu 2001 entire). Habitat loss and fragmentation can lead to increased mortality (Jules 1998 entire); reduced abundance (Flather 2002 at 40-56); disruption of the social structure of populations (Ims 1999 at 839-849, Cale 2003 entire); reduced

population viability (Harrison 1999 at 225-230, Srikwan 2000 entire, Cale 2003 entire, Lindenmayer 2006); isolated populations with reduced population sizes and decreased genetic variation (Frankham 1996 entire). Loss of genetic variation may reduce the ability of individuals to adapt to a changing environment; cause inbreeding depression (Ebert 2002 entire); reduce survival and reproduction (Frankham 1995 entire, Reed 2003 entire); and increase the probability of extinction (Saacheri 1998 entire, Westmeier 1998, Kramer-Schadt 2004 entire, Letcher 2007 entire, Ruiz-Gutierrez 2008 entire, Sherwin 2000).

A 2009 study concluded the anthropogenic influences—primarily road density and vehicular traffic—can substantially affect the population dynamics of large carnivores with large home ranges, like the Florida panther (Hostetler 2009 entire). Habitat fragmentation and anthropogenic barriers to movement have limited the dispersal capability of species, reducing gene flow among populations and resulting in genetically distinct populations (Dixon 2007 at 455-464). Large carnivores may be much more susceptible to losses in genetic variation due to habitat fragmentation because of their large home ranges, low population densities, and long generation times (Paetkau 1994 entire, Johnson 2001). Isolation is reinforced when travel between subpopulations is limited due to significant barriers, such as high-volume roads (Paetkau 1997 entire, Mader 1984 entire, Brody 1989, Proctor 2002 entire, Voss 2001 entire, Keller 2003 entire, Gerlach 2000 entire, Trombulak 2000 entire, Coffin 2007 at 396-403). Thus roads and other anthropogenic obstacles cans substantially reduce gene flow among populations (Dixon 2007 at 455-464, Kyle 2001 at 343-346, Walker 2001 entire, Ernest 2004).

The applicant must provide with sufficient specificity what effect the permanent loss of the original habitat will have, or the effect the modified (so-called "reclaimed") land will have after it is finally "reclaimed" many years after it is destroyed.

Florida panther

The Service originally listed the Florida panther as an endangered species in 1967.[226] To this day the panther remains, "the most endangered mammal in the eastern [United States] . . . [with] only 120-180 left, all in South Florida."[227] While the Project does not currently support a Florida panther population, Florida panthers have been observed in the area and it could serve as important dispersal habitat and wildlife corridor connecting habitat farther north (Pinnell 2015).

As recently as 2012, the Florida Fish and Wildlife Conservation Commission was considering relocating Florida panthers to Duette Park to help support the population (Morelli 2012). A Florida panther was spotted near Myakka State Park in 2010, and there is no doubt that panthers are in Sarasota and Polk counties and will continue to move from south Florida northward across the Caloosahatchee River (Spinner 2012). Indeed, as recent as March 2017, wildlife biologists announced that they have verified the presence of at least two Florida panther kittens north of Caloosahatchee.[228] Just not too long before the kittens were spotted, Florida Fish and Wildlife

[226] U.S. Fish & Wildlife Service, *ECOS: Environmental Conservation online System, Florida panther* (Puma(=felis) concolor coryi), http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A008.
[227] *Florida Panther: National Wildlife Refuge, Florida*, U.S. FISH & WILDLIFE SERV., http://www.fws.gov/refuge/florida_panther/.
[228] Craig Pittman, *Florida panther kittens found north of Caloosahatchee River for first time in decades*, TAMPA

Conservation Commission (FWC) announced on November 14, 2016, that a female Florida panther has crossed the Caloosahatchee river.[229] In addition, the FWC reported on February 28, 2017 that a 3-year-old male Florida panther's body was found on a rural road in DeSoto County, east of Arcadia.[230] Florida panther sightings have increased as the continued destruction of their habitat occurs. Panthers have been seen in Sarasota and Polk counties, and are likely moving through Manatee County.[231]

Panthers have faced an uphill battle after their numbers declined to as few as 20-30 individuals.[232] Despite the relative success of a genetic restoration project, only "a single wild population in south Florida" exists and it is "all that remains of [the] species."[233] Development in south Florida has significantly increased in the area of suitable panther habitat and has led to increased panther mortalities from vehicle collisions, inbreeding, increased competition for food, and territorial disputes (Staletovich 2014).[234] For example, it is estimated that male panthers travel and patrol a territory of several hundred square miles (Tingley 2015). The panther's large territory-needs and limited habitat has led to intraspecific aggression, which was responsible for approximately 42% of panther mortalities between 1990 and 2004.[235]

The biggest threat to the panther's existence is habitat destruction, thus any proposed conservation plan must be consistent with the panther's recovery plan to ensure that the action undertaken does not undermine the species' chances of recovery. The recovery plan sets forth a goal to "maintain, restore, and expand the panther population and its habitat in south Florida and expand the breeding . . . population in south Florida . . . ."[236] The Project will negatively impact the recovery of the panther, whose greatest threats are habitat destruction and fragmentation.[237]

The Service's analysis of the environmental baseline will need to: 1) take into account the fact that there is currently not enough habitat available to support the existing panther population; and 2) analyze the impact of other projects in the area.

BAY TIMES (March 27, 2017 11:12 AM), http://www.tampabay.com/news/environment/wildlife/florida-panther-kittens-found-north-of-caloosahatchee-river-for-first-time/2318043.

[229] FWC,*FWC collects evidence of a female panther north of Caloosahatchee River* (Nov. 14, 2016 1:09 PM) https://content.govdelivery.com/accounts/FLFFWCC/bulletins/172613c.

[230] *Panther Found Dead in Southwest Florida*, USNEWS (March 3, 2017 2:06 AM), https://www.usnews.com/news/best-states/florida/articles/2017-03-03/panther-found-dead-in-southwest-florida.

[231]Isabel Mascareñas**,** *Panther sightings increase as development takes habitat***,** WTSP (March 31, 2016 7:08 PM) http://www.wtsp.com/life/animals/panther-sightings-increase-as-development-takes-habitat/112576382.

[232] *Florida Panther: National Wildlife Refuge, Florida*, U.S. FISH & WILDLIFE SERV., http://www.fws.gov/refuge/florida_panther/wah/panther html.

[233] *Id*.

[234] *Id*. In 2014, thirty panthers were killed, and the majority of these deaths resulted from vehicle collisions. *Id*.

[235] The Florida Panther Recovery Team & South Florida Ecological Services Office, U.S. Fish & Wildlife Serv., *Panther recovery plan* (Puma concolor coryi), U.S. FISH & WILDLIFE SERV., at 17 [hereinafter *Panther Recovery Plan*]; Tingley at 26.

[236] *Id.* at (IV)(1), 101.

[237] *Everglades, Florida Panther: Species Profile*, NAT. PARK SERV., U.S. DEPT. OF INTERIOR, http://www.nps.gov/ever/learn/nature/floridapanther.htm.

Wood stork

The Service listed the wood stork under the ESA as an endangered species in 1984, and it is the only species of stork "regularly occurring in the United States."[238] In 2014, the Service upgraded the status of the species to "threatened" largely due to successful recovery efforts in Georgia.[239] Although wood storks have seen some improvements in their numbers overall, the species is still in decline, as evidenced by its numbers in Corkscrew Swamp, which until recently was considered "the most productive colony in the nation."[240] Wood storks are found primarily in Florida, Georgia, and parts of South Carolina; however, there have been occasional sightings in North Carolina and as far west as Mississippi.[241] It is suspected that the species migrates and spends its winters in south Florida, as there is an influx of storks during winter months.[242] Wood storks can be observed in south Florida all year. Historically, the central and northern Everglades are among the areas where this population surge is most evident. Some years, the Everglades system has been documented to support approximately 55% of the entire U.S. population of the species.[243] Unfortunately, south Florida colonies have been plagued with multi-year nest failures in recent years.

The wetlands and flow-way located on the project site support downstream regional wetland systems. In Southwest Florida, Lauritsen (2010) examined the importance of seasonal, short-hydroperiod wetlands to foraging federally threatened wood storks, which supply most of the food energy for initiating reproduction and suggested that the loss of these wetlands are not being appropriately mitigated for under State wetlands permitting law. The impacts of the loss of these wetlands may result in no nesting or abandonment of nesting attempts by wood storks at sites such as Corkscrew Swamp Sanctuary. The Service will need to calculate the loss of wetlands and other surface waters (jurisdictional and non-jurisdictional) that will result from the project and the effect that will have on the wood stork.

Both freshwater and estuarine wetland ecosystems may serve as suitable wood stork habitat.[244] Storks tend to nest in a variety of different trees depending on what is available within the habitat, including: cypress, black gum, southern willow, red mangroves, prickly pear cactus, Brazilian pepper, and Australian pine.[245] Wood storks require nesting sites located in standing water throughout the nesting season to protect the nest from predators.[246]

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[238] U.S. Fish & Wildlife Service, *Wood Stork Recovery Plan: Revised Recovery Plan for the U.S. Breeding Population of the Wood Stork*, http://ecos.fws.gov/docs/recovery_plan/970127.pdf, at 1 (Jan. 27, 1997) [hereinafter *Wood Stork Recovery Plan*].
[239] *Endangered and Threatened Wildlife and Plants; Reclassification of the U.S. Breeding Population of the Wood Stork From Endangered to Threatened*, 79 Fed. Reg. 37078 (June 30, 2014).
[240] National Audubon Society, Inc., *Audubon: Corkscrew Swamp Sanctuary, Wood Storks* (*Mycteria americana*) [hereinafter, *Audubon: Corkscrew Swamp*]. In the first decade of monitoring at Corkscrew Swamp, from 1958–1967, there was an average of 5,450 wood stork chicks a year, compared to the years 2003–2012, which experienced an average of 540 chicks.
[241] *Wood Stork Recovery Plan* at 2.
[242] *Id*.
[243] *Id*.
[244] *Id*. at 3.
[245] *Id*.
[246] *Id*.

For foraging, it is critical that the storks have access to shallow, open water.[247] The species forages using tactilocation, a process where it wades through the water with its beak submerged and clamps down on prey, usually small fish, when they come in contact with its beak.[248] Storks require shallow waters to wade in and fairly dense stocks of fish to support a colony's feeding habits.[249] Storks' needs are somewhat less specific when it comes to roosting trees; although they look for similar sites as those used for nesting, they will roost in a greater variety of trees depending on the availability of food.[250]

The greatest threats to the wood stork's existence are the loss of adequate habitat for feeding, changes in water levels and hydrology (habitat modification), lack of nesting habitat, "human disturbance," and loss resulting from the adverse effects of pesticide and chemical contamination.[251] As wetlands are drained and filled—primarily for development and agriculture—the stork's habitat is irreversibly destroyed. Because of the stork's specific foraging and nesting needs, changes in hydrology resulting from developmental impacts, both direct and indirect, can have a major effect on the species' ability to survive in a given area.

The Project would impact 533 acres of Corps jurisdictional wetlands that likely provide foraging habitat for the wood stork. Nothing in the 2012 statement indicates that a temporary loss is not a take under the ESA. Furthermore, nothing in the 2012 statement demonstrates that the land will be reclaimed adequately and prey base restored, by for example, comparing to other reclaimed lands. The 2012 statement does not look at take from vehicle collision over the course of the Project, or the loss or reduction of foraging habitat. The Service and Corps must consider all of these factors during Section 7 consultation.

Audubon's crested caracara

The Service listed the Audubon (or Northern) crested caracara as a threatened species under the ESA in 1987.[252] The species historically was found throughout peninsular south Florida in wet and dry prairie habitats featuring interspersed cabbage palm trees.[253] Now, the caracara has somewhat adapted to land use changes, using pasturelands and in some cases citrus and other agricultural lands in place of its natural habitat.[254] Still, caracaras nest almost exclusively in cabbage palms, and ideal habitat conditions for the species consists of these palms "surrounded by open habitats with low ground cover and low density of tall or shrubby vegetation."[255] The species is an opportunistic hunter, seeking out prey "on the wing, from perches, and on the ground."[256]

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[247] *Id*. at 4.
[248] *Id*.
[249] *Id*.
[250] *Id*.
[251] *Id*. at 10–12.
[252] U.S. Fish & Wildlife Service, *Multiple Species Recovery Plan for South Florida: Audubon's Crested Caracara:* Polyborus plancus audubonii, U.S. DEPT. OF INTERIOR, 4-219, http://www.fws.gov/southeast/vbpdfs/species/birds/acca.pdf.
[253] *Id*. at 4-221–4-222.
[254] *Id*. at 4-222.
[255] *Id*.
[256] *Id*. at 4-223.

The primary threat to the species is habitat loss.[257] The majority of the caracara's habitat loss is attributable to agricultural and residential development.[258] In addition to habitat destruction, the species has suffered from direct human impacts, including mortalities from vehicular collisions, traps, and intentional killings resulting from misplaced fear that the species preys on livestock.[259] The Service's recovery plan for the northern crested caracara outlines specific measures that should be taken to protect the caracara including, efforts to "create, restore, or expand occupied habitat wherever possible."[260] The plan further states that conservation goals may be met through the expansion of habitat in areas with individuals present, as well as restoration of habitat in vacant areas.

The 2012 statement does not evaluate the direct effects from the Project including mortality from vehicular traffic, harassment, and missed foraging and breeding opportunities; and that the indirect effects include post-construction maintenance. The Service and Corps will need to consider these impacts during Section 7 consultation.

The Project will harm amphibians and reptiles in particular

Reptiles and amphibians (herpetofauna) are in the midst of a global extinction crisis. In 2013, over 200 scientists published a study that found nearly one in five reptilian species are threatened with extinction globally, with the highest proportion of threatened reptile species living in freshwater environments (Bohm et al. 2014, Gibbons et al. 2000). Amphibians are also declining in the United States and globally (Adams et al. 2013, Gratwicke et al. 2012). These classes are particularly sensitive to changes in ecosystems because of their unique biology and life-history traits.

The state of Florida is blessed with a rich diversity of herpetofauna. According to Manatee County Mining Ordinance 04-039, 21 native amphibians and 49 native reptiles are known or suspected to occur in Manatee County on existing or future phosphate-mined lands.[261] Several of these species are rare and receive either state or federal protection.

The proposed mine extension will affect many of the unique and sensitive reptiles and amphibians on the mining site and in the surrounding areas. The Project will destroy important habitats and microhabitat features, degrade and fragment the mining site and surrounding land, and disrupt essential species behaviors. Several rare and imperiled species have ranges that overlap with the proposed mine extension and will be harmed by mining activities. The proposed mine extension will detrimentally and irreparably harm the native herpetofauna by destroying their natural habitat during the mining process, degrading and fragmenting surrounding habitat, and disturbing the species' essential feeding, breeding, and sheltering behaviors. For reptiles and amphibians, which are tremendously sensitive to environmental change due to their biology and natural history traits, these changes can be devastating.

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[257] *Id*. at 4-225.
[258] *Id*.
[259] *Id*.
[260] *Id*. at 4-234.
[261] Manatee County Ordinance No. 04-039, Table 5, pp. 86, 88–100.

During the mining process, the loud noise and vibrations caused by the mining activities will likely interrupt essential amphibian and reptilian behaviors at the Project site and for great distances in the surrounding areas. For example, many frog species rely on "calling" or "chorusing" to successfully mate, and loud noises can interrupt their mating behaviors by causing physiological stress, altering the tone and sound of the frog's call (which can cause it to sound less attractive to prospective mates), or causing the frog to go silent (Tennessen et al. 2014; Parris et al. 2009; Thierry 2008; Bee & Swanson 2007). Likewise, vibrations and sounds may frighten or harass nearby reptiles and amphibians, causing them to travel out of their way to avoid the Project area, and thus disrupting their normal movement patterns as they seek out food and mates. Because the eastern indigo snake and Florida pine snake are wide-ranging species (USFWS 1999, Miller et al. 2009), it is possible the activities could even affect snakes that do not live on the site but instead use it as a travel corridor.

The Project will also destroy, degrade, and fragment suitable habitat the native herpetofauna relies on for survival. Phosphate mining completely alters Florida's natural landscape, which is an irreplaceable product of the slow, steady interactions of geology, biology, and hydrology over thousands of years (Allen and Main 2005). Phosphate mining companies use heavy machinery to remove all native vegetation and dig deep into the ground, manipulating the natural topography and soil composition, compacting the earth, and forcing native species from their habitat. It is likely that smaller, slower amphibians and reptiles will be unable to avoid the mining activities, causing them to be buried or crushed in the process. Those that avoid the activity will be forced from their homes for decades and potentially displaced into areas that lack the microhabitat they need to survive.

Habitat loss is especially harmful to reptiles and amphibians because many species have very particular and interrelated habitat needs. For example, the gopher tortoise requires well-drained, sandy soil in areas with longleaf pine, wiregrass, and herbaceous plants to eat (FWC, undated b; FWS 2016). Gopher tortoises require these particular habitat conditions to dig their burrows. In turn, gopher tortoise burrows are their own important microhabitats, providing refuge to over 300 other species. If mining were to be permitted in suitable, occupied gopher tortoise habitat, the tortoises would be protected and relocated under Florida law; however, many of the over 300 other species that depend on their burrows would be displaced and without the burrow associates they rely on to excavate protective refuges. Those species include the imperiled eastern indigo snake, gopher frog, Florida pine snake, and eastern diamondback rattlesnake.

Reptiles and amphibians that are able to migrate from the mining site will be left vulnerable as they search for new habitat to suit their needs. Importantly, ectothermic reptiles and amphibians need cool microhabitats (thermal resources) they can use to regulate their body temperatures (thermoregulate) (Sears et al. 2016). The costs of seeking out these microhabitats include energy loss, risk of being eaten by predators, and missed opportunities to feed and breed (Sears et al. 2016). These opportunity costs greatly increase when species must travel farther to reach thermal resources. Thus, far-traveled reptiles and amphibians are more likely to be spotted by predators and more likely to be in a weakened state and vulnerable to capture when they are spotted.

Reptiles' and amphibians' very abilities to regulate and maintain their body temperatures will be compromised when they are forced out of their natural habitat by mining activity. Reptiles and amphibians are ectotherms that depend on their surrounding environments to keep their bodies at

stable, healthy temperatures. In a recent study, Sears et al. (2016) studied lizards' abilities to regulate their body temperatures in environments with small, evenly dispersed shaded areas against environments with large, irregularly distributed shaded areas. They found that the lizards were able to more accurately regulate their temperature using less energy in areas with evenly dispersed shaded areas (Sears et al. 2016). Because the phosphate mining operations will completely destroy any thermal resources on the Wingate East site, native reptiles and amphibians that are not buried or killed on site will have to travel great distances and expend enormous energy to seek out new thermal resources. This will disrupt their mating behaviors and subject them to increased predation as they travel in the open. It is also possible that smaller, slower, and weaker species will die from overheating or starvation before they find new habitat.

Even after mining activity is complete and the land is "reclaimed," the new landscape likely will not meet the needs of the varied herpetofauna that rely on it. Reclamation is not the same as habitat restoration, and there is no guarantee that the reclaimed land will have the same attributes it had before mining activity commenced, many of which are necessary to the viability of native reptiles and amphibians in the area.

Large-scale soil disturbance can cause ecological succession and encourage invasion of exotic species, which in turn lead to an entirely different vegetative structure than the previously sustained on a site (D'Antonio & Meyerson 2002, Davis et al. 2000, Sher & Hyatt 1999). For many species, native vegetation is key to their survival, and changes in vegetative structure will render the reclaimed site uninhabitable. For instance, gopher tortoises require specific sandy soils for digging burrows and herbaceous groundcover to eat (FWC, undated b; FWS 2016). Florida pine snakes can tolerate degraded habitats (to some degree) but may not use habitats where succession has led to closed canopy forests (FWC 2013b).

Moreover, phosphate mining companies have not demonstrated post-mining reclamation techniques that successfully restore the wide range of habitats, vegetation, and ecological functions needed to sustain the diverse range of species that once inhabited the site before mining activities began. This is particularly true for amphibians, which often have very particular and often diverse aquatic habitat requirements to maintain amphibian species composition, richness, and abundance (Brown et al. 2014). For example, some species prefer a long hydroperiod, which allows for longer breeding periods, while other species will not use wetlands with long hydroperiods because of the potential for predatory fish to colonize them (Brown et al. 2014).

Brown et al. (2014) reviewed 37 peer-reviewed studies of amphibian use of created and restored wetlands, within and outside the United States, which were produced to mitigate wetland habitat loss due to development or degradation. They found that species richness or abundance for some or all species was greater at created or restored sites (compared to reference sites) in 54% of studies, similar in 35% and lower in 11% (Brown et al. 2014). The scientists found that created and restored wetlands were typically larger, deeper, and had longer hydroperiods than natural wetlands, which generally resulted in greater species richness (Brown et al. 2014). However, the study also acknowledged that the rarest and most imperiled amphibian species are typically habitat specialists that are "unable to adapt to human-influenced terrestrial or aquatic habitat changes" and that "need and preferences of target species should be a major consideration in wetland creation and restoration" (Brown et al. 2014).

Additionally, the scientists expressed concern that nearly every study in the literature review replaced seasonal wetlands with more permanent wetlands, noting that it "appear[ed] to be a common outcome of wetland creation projects" (Brown et al. 2014). For species like the gopher frog, which require temporary, fishless wetlands, this reclamation trend is troubling. Brown et al. (2014) also noted that in at least one study, these permanent wetlands created in mine tailing ponds at a California site provided ideal habitat for an invasive bullfrog. Moreover, the fact that the majority of wetland restoration and reclamation projects resulted in a single type of wetland (permanent) indicates that reclamation techniques have not yet demonstrated the ability to integrate diverse or specialized ecological attributes (such as ephemeral wetlands or longleaf pine uplands) (Brown et al. 2014).

Even studies conducted by FIPR have reflected the insufficiency of reclamation measures when it comes to restoring wildlife diversity. Mushinsky and McCoy (2001) compared vertebrate wildlife species found on reclaimed phosphate mined land (reclaimed land) with vertebrate wildlife species found on unmined land (reference land) in central Florida. They identified several species that were more commonly found at reference sites than at reclaimed sites, including the oak toad (*Bufo quercicus*), southern five-lined skink (*Eumeces inexpectatus*), pine woods treefrog (*Hyla femoralis*) (Mushinsky & McCoy 2001). However, this study did not analyze the difference in distribution at reference and reclaimed sites for the gopher frog, gopher tortoise, eastern indigo snake because they were too rare at the reference sites to determine a difference in distribution (Mushinsky & McCoy 2001, p. 67). They also found that although species of lizards and turtles were similarly represented at reference and reclaimed sites, species of amphibians and snakes that were widespread among reference sites were found at only a few reclaimed sites (Mushinsky & McCoy 2001). Likewise, species of amphibians and snakes found in relatively large numbers at reference sites were found in only small numbers at reclaimed sites (Mushinsky & McCoy 2001).

Though the study does show some similarities in species and prevalence between reference and reclaimed sites, it also clearly demonstrates that reclamation efforts do not fully restore the herpetofaunal diversity of comparable unmined lands. Furthermore, because it excluded rare species, the study has no bearing on the suitability of reclaimed lands for the most sensitive reptiles and amphibians. The scientists concluded that specific preferences for breeding sites and vegetation structure distinguished the species that were more commonly found at reference sites and made recommendations for future reclamation efforts incorporate more varied habitat types (Mushinsky & McCoy 2001). However, no matter how hopeful the recommendations are, they do not demonstrate the phosphate mining industry's ability to restore wildlife diversity at reclaimed sites.

The site of the proposed mine expansion overlaps with the ranges of several protected reptile and amphibian species including the eastern indigo snake, Florida pine snake, gopher tortoise, and gopher frog (see Figures 1 and 2, below). It also overlaps with the range of the eastern diamondback rattlesnake, which may be seen throughout the state and is currently under consideration for federal Endangered Species Act protection. The site may also fall within the range of the Suwannee cooter, which is a state species of special concern whose known range has been extended farther south by recent studies.

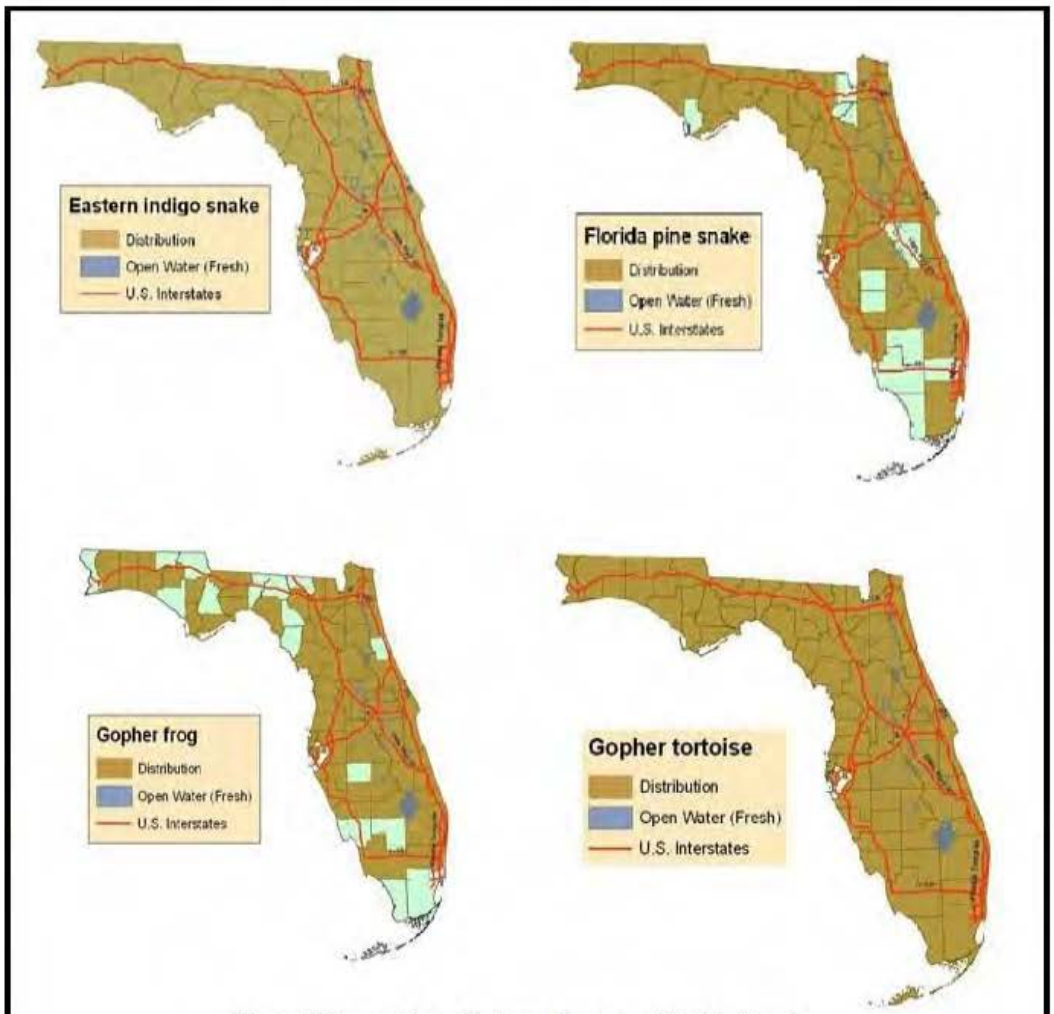

Figure 2: Range Maps for Four Protected Florida Species
(Maps courtesy of Florida Fish and Wildlife Conservation Commission)

Figure 1: Approximate location of Wingate East Expansion in relation to the State of Florida
(Sources: Google Maps and Manatee County Property Appraiser website)

Gopher tortoise

In Florida, the gopher tortoise is a federal candidate species under the ESA and a highly valuable "keystone species" that benefits and ensures the survival of other species in its ecosystem.[262] This tortoise is known to benefit over 300 different species, including eastern indigo snakes, foxes, skunks, and lizards, which use gopher tortoise burrows for shelter and for various parts of their lifecycles.[263] The gopher tortoise is generally found in longleaf pine or oak sandhill ecosystems, but it may also be found in other dry, upland habitats within its historic range.[264]

The greatest threat to the gopher tortoise is habitat destruction, including habitat fragmentation and degradation, caused by urban development, agricultural conversion, forestry, and mining.[265] Habitat fragmentation can lead to reproductive isolation, increased predation due to exposed habitat edges, and mortality resulting from vehicular collisions.[266]

Intraservice consultation and conference must consider effects on listed, proposed, and candidate species.[267] "Candidate species are treated as if they are proposed for listing for purposes of conducting internal FWS conferencing." Therefore, must consider impacts to the gopher tortoise during consultation.

Gopher frog

The gopher frog is under review by the Service to be listed under the ESA. The gopher frog is a relatively large, brown-spotted frog that can grow to be between 2.5 and 4.4 inches long (FWC 2013). Their tadpoles are greenish gold with dark spots scattered over the body and tail (FWC 2013). Gopher frogs typically live in dry, well-drained upland habitats that are occupied by gopher tortoises and close to shallow, temporary, fishless breeding wetlands (FWC 2013). They have been found in a variety of habitats including sandhills, upland pine forests, scrub, flatwoods, dry prairies, pastures, and various other disturbed habitats that still host gopher tortoises (FWC 2013). Gopher frogs spend the majority of the year in the dry uplands, where they shelter in gopher tortoise burrows and hunt insects and small frogs (FWC 2013).

Gopher frogs have very specific habitat needs for breeding. They generally breed in the summer in central and south Florida, though they can breed any time of the year with heavy rains (FWC 2013). Male frogs attract females to the breeding pools by calling, and females deposit a fist-sized mass of 500-5,000 eggs, which the male then fertilizes (FWC 2013). The eggs hatch in 4–5

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[262] U.S. Fish & Wildlife Service, *Range-Wide Conservation Strategy for the Gopher Tortoise*, U.S. DEPT. OF INTERIOR, 4, http://www.fws.gov/southeast/candidateconservation/pdf/FinalGopherTortoiseStrategy.pdf [hereinafter *Conservation Strategy for Gopher Tortoise*].
[263] *Id*.
[264] U.S. Fish & Wildlife Service: North Florida Ecological Services Office, *Gopher Tortoise* (*Gopherus polyphemus*), U.S. FISH & WILDLIFE SERVICE, http://www.fws.gov/northflorida/gophertortoise/gopher_tortoise_fact_sheet html.
[265] *Conservation Strategy for Gopher Tortoise* at 9; NatureServe. 2015. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia, http://www.natureserve.org/explorer.
[266] *Conservation Strategy for Gopher Tortoise* at 9.
[267] Consultation Handbook at 1-5.

days and develop as tadpoles for 3–7 months (FWC 2013). Newly metamorphosed frogs then migrate back into the uplands where they shelter in burrows (FWC 2013).

Even with the appropriate habitat conditions, successful reproduction—and thus population viability— can be difficult. Gopher frog longevity in the wild is unknown, though tadpoles face many predators, ranging from water snakes to predatory fish to insects, as they develop (FWC 2013). One study found that nearly 75% of froglets leaving a pond were killed by snakes or mammals (FWC 2013). Adult frogs are preyed upon by water snakes and possibly turtles (FWC 2013). Thus, having accessible, suitable wetland habitat for breeding and upland habitat for feeding and shelter is imperative to the gopher frog's survival.

Unfortunately, the gopher frog has experienced drastic population declines because of habitat loss and degradation, and the species now occurs only in scattered populations in the southern United States (Humphries & Sisson 2012). Populations in the Florida peninsula are relatively secure, but the species is declining in other parts of its range and in some parts of Florida (FWC 2013). Surdick (2013) studied gopher frogs in the Big Bend Wildlife Management Area on the Gulf Coast of Florida and remarked that the frog is "of conservation concern because most populations have gone locally extinct across the geographic distribution." Likewise, the gopher frog's range in North Carolina has contracted dramatically (Humphries 2012), and sparse records of the gopher frog exist in Tennessee (TWRA, undated).

Habitat loss leads to isolated populations, which itself is another threat to the survival of the gopher frog. Greenberg (2001) studied influences on success of juvenile recruitment for gopher frogs, and he found that the condition of longleaf pine-wiregrass sandhills surrounding ponds may influence levels of juvenile recruitment. Greenberg's study illustrates the role of multiple ponds in sustaining gopher frog populations. This finding is important, as roads often fragment essential amphibian habitats and can lead to road mortality. Cosentino et al. (2014) found that "road disturbance was almost universally important in that it constrained total species richness and the distribution of most species" of amphibians they studied. Though not specifically covered in scientific literature, the excavation of a mining pit and clay settling pond could easily create similar impacts to a gopher frog's ability to access and use suitable breeding and sheltering habitat. Aside from destroying the utility of any habitat at the Project site itself, mining activities would also create a barrier between suitable isolated wetlands on adjacent land. It could also physically separate members of a gopher frog population, genetically isolating them.

Climate change is and will continue to be a major threat to the gopher frog, impacting availability of water and altering the frog's behavior. For amphibians, water availability is a key resource that affects survival, reproduction, activity levels, and dispersal, while temperature can affect timing of breeding, hibernation, and the ability to find food (Corn 2005; Blaustein et al. 2010, Lawler et al. 2010). Climate change is driving greater variability in precipitation, increasing the frequency of extreme weather events, and increasing surface water temperatures (Melillo et al. 2014). As a result, climate-change-related changes in hydrological regimes (i.e., alterations in stream flow, lake depth, amount and duration and winter snow pack, pond hydroperiods, soil moisture) and warming temperatures are predicted to have largely negative effects on amphibian breeding success and survival, dispersal, and habitat suitability (Blaustein

et al. 2010, Walls et al. 2013).

Gopher frogs will likely experience a number of other behavioral shifts which could lead to climate-change induced population declines. Numerous studies have documented climate-associated shifts in amphibian phenology, range, and pathogen-host interactions (Corn 2005; Blaustein et al. 2010; Li et al. 2013), with emerging evidence for climate change-related declines (Lowe 2012, Rohr & Palmer 2013). Li et al. (2013) reported the results of 14 long-term studies of the effects of climate change on amphibian timing of breeding in the temperate zone of the U.S. and Europe. This meta-analysis indicated that more than half of studied populations (28 of 44 populations of 31 species) showed earlier breeding dates, while 13 showed no change, and 3 populations showed later breeding dates, where spring-breeding species tended to breed earlier and autumn-breeding species tended to breed later. Several studies indicate that shifts in timing of breeding can have fitness and population-level consequences. For example, amphibians that emerge earlier in the spring can be vulnerable to winter freeze events or dessication if they arrive at breeding sites prior to spring rains (Li et al. 2013).

In addition, global climate change poses a serious threat to terrestrial ectotherms like the gopher frog simply because they rely on the external environment to regulate and stabilize their body temperatures. Although Florida's climate is predicted to warm less than other regions in North America, a climate inventory over the past 35 to 108 years indicated Florida is experiencing greater climate extremes, with trends of increased summer and fall maximum temperatures and decreased winter and spring minimum temperatures (Reece et al. 2013). Because gopher frogs rely on the external environment to regulate and maintain their body temperatures (thermoregulate), they will have difficulty surviving as temperatures rise (Reece et al. 2013). This threat will only be compounded by habitat destruction and fragmentation, which will force gopher frogs to travel farther distances to concentrated areas of habitat with the appropriate microclimate to thermoregulate (Sears et al. 2016).

The gopher frog is also threatened by sea-level rise, which will cause human populations to move into previously unaltered habitats to escape coastal areas (Cameron Devitt et al. 2012; Mellilo et al. 2014; Karl et al. 2009; FWC, undated a). Because of declining gopher frog populations and the many threats they face, the gopher frog is listed as a Florida State Species of Special Concern (FWC 2013); however, it is proposed for delisting in Florida's Imperiled Species Management Plan as FWC intends to phase out the "Species of Special Concern" listing status by the end of 2017 (FWC 2016). In 2012, the Center for Biological Diversity and partners petitioned the U.S. Fish and Wildlife Service (FWS) to have the gopher frog listed under the federal Endangered Species Act (CBD et al. 2012), and it received a positive 90-day finding on July 1, 2015, indicating listing may be warranted.[268]

Intraservice consultation and conference must consider effects on listed, proposed, and candidate species.[269] Therefore, the Service must consider impacts to the gopher frog during consultation. The Service should consider the effects of habitat destruction, degradation, and fragmentation on the gopher frog when considering the impacts of the Project. Specifically, it should consider how mining activities will destroy existing wetland and upland habitat, degrade surrounding habitat,

[268] 80 Fed. Reg. 37568 (July 1, 2015).
[269] Handbook at 1-5.

and prevent movement between isolated habitat fragments surrounding the Project area. Likewise, the Service should take microhabitat into account—specifically, the need for shallow, fishless, ephemeral wetlands for mating, as well as dry, sandy gopher tortoise burrows in the uplands for shelter. The Service should also consider how the Project's impacts will exacerbate the effects of climate change on the gopher frog. The applicant must provide substantial and competent evidence proving that the Project is not incompatible with the gopher frog or its habitat needs.

Eastern diamondback rattlesnake

The eastern diamondback rattlesnake is currently under consideration for federal ESA listing after receiving a positive 90-day finding on May 10, 2012.[270] Though the eastern diamondback rattlesnake's range once encompassed the Coastal Plain of the southeastern United States from North Carolina to south Florida, and west to Mississippi and the Florida parishes of Louisiana; its area of occupancy, number of subpopulations, and population sizes are declining throughout its range.[271] This contraction in the snake's range is largely attributable to loss of its native longleaf pine ecosystems to agriculture, silviculture, urbanization, and plant succession resulting from fire suppression (Timmerman 2003). Florida encompasses half of the eastern diamondback rattlesnake's current range,[272] which makes habitat preservation in this state critical to the species' survival. The eastern diamondback rattlesnake's survival is also crucially linked to the presence and welfare of the gopher tortoise, whose burrows provide essential microhabitat for the snake to use for shelter.[273]

Today the most significant threats to the eastern diamondback rattlesnake are habitat destruction and human exploitation. The species has sustained a 97% reduction in its native, longleaf-pine forest habitat, on which it relies for feeding, breeding, and sheltering (Van Lear 2005). This loss of longleaf pine ecosystems is the single most important factor affecting the survival of the eastern diamondback rattlesnake. Fragmentation of remaining suitable habitat also leads to road mortality, population isolation, and reduced genetic diversity, which is detrimental to the species' long-term viability (Andrews and Gibbons 2005 at 779). Rattlesnakes are particularly vulnerable to vehicle strikes because of their morphology and behavior. A study conducted by Andrews and Gibbons (2005) shows that venomous, heavy-bodied snakes like the eastern diamondback rattlesnake experience detrimentally high mortality levels even at medium traffic densities because, unlike other species of snake, they move at slow speeds and immobilize when confronted with vehicles.

Eastern diamondback rattlesnakes are also threatened by human exploitation. Thousands of snakes are killed each year for meat, skin, and venom, with no limits on annual harvest (Means 2009). "Rattlesnake roundups," annual events that offer hunters prizes for capturing snakes, which are displayed and then killed, boost snake kills and foster negative attitudes that venomous reptiles like the rattlesnake are repugnant and must be removed from nature (Andrews and Gibbons 2005). Means (2009) collected data from these roundups, analyzed trends, and

[270] 77 Fed. Reg. 27403–27411 (May 10, 2012).
[271] Natureserve.
[272] *Id.*
[273] *Id.*

concluded that declining maximum size of snakes collected during roundups reflects possible age-class truncation.[274] This troubling trend could lead to negative impacts on annual recruitment of young rattlesnakes, which in turn undermines the snake's ability to maintain viable populations (Means 2009). Because of negative attitudes toward rattlesnakes, the eastern diamondback is also at risk from isolated killings, independent of roundups, when snakes enter urban or suburban areas. Existing regulations are inadequate to address these significant threats to the eastern diamondback rattlesnake, so they are constantly at risk of human-caused mortality and may be taken in unlimited numbers.

Intraservice consultation and conference must consider effects on listed, proposed, and candidate species.[275] Therefore, the Service must consider impacts to the eastern diamondback rattlesnake during consultation. The Service should closely study the Project's potential impacts on the eastern diamondback rattlesnake, precisely estimate take associated with the project, and carefully consider more robust conservation measures than currently proposed in the plan, favoring use of avoidance measures over minimization or mitigation.

American alligator

The Service listed the American alligator as an endangered species in 1967.[276] The alligator gained status as an endangered species in response to a massive decline in individuals, most of which was attributed to hunting and habitat destruction.[277] In 1987, the Service determined that the species was recovered and removed it from the endangered species list; however, the alligator is still protected under the ESA as "threatened due to similarity of appearance," to the American crocodile.[278] Due to its status as a threatened species, the Service continues to regulate the hunting, trade, and any goods made from the species.[279]

Within its ecosystem, alligators are greatly valuable to other animals that share its ecosystem. They create "gator holes," depressions in the marsh that retain water in the dry season.[280] Other species, including snakes, birds, and fish, use the gator holes as a source of water during the dry season or times of drought.[281] American alligators also play an important role in the native food webs as both predators and prey, linking aquatic and terrestrial food webs. Adult alligators are opportunistic feeders that prey on a wide range of species throughout their lives, including insects, mollusks, crustaceans, fish, amphibians, reptiles, birds, and mammals.[282] Small alligators serve as prey for many species, including the northern crested caracara and the eastern indigo snake.[283] The Service and Corps must evaluate the effect the clay pits and loss of habitat will

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[274] *Id.*
[275] Consultation Handbook at 1-5.
[276] U.S. Fish & Wildlife Service, *American Alligator:* alligator mississippiensis, DEPT. OF INTERIOR, https://www.fws.gov/endangered/esa-library/pdf/alligator.pdf (Feb. 2008).
[277] *Id.*
[278] *Id.*
[279] *Id.*
[280] *Id.*
[281] *Id.*
[282] NatureServe. 2015. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia, http://www natureserve.org/explorer.
[283] National Park Service, *Everglades National Park, Eastern Indigo Snake: Species Profile*, U.S. DEPT. OF INTERIOR, http://www.nps.gov/ever/learn/nature/easternindigosnake.htm [hereinafter *Everglades Eastern Indigo*

have on alligators.

2. *The Corps and Service must evaluate population growth and other nearby development*

A leading cause of habitat loss is human population growth and corresponding land uses. A 2000 analysis of potential ecological connectivity in Florida found that only about half the land identified for habitat connectivity was publically owned and managed (Hoctor 2000 at 984-999). Meanwhile, *Florida 2060: A Population Distribution Scenario for the State of Florida* predicts Florida's population will grow by 49 percent by 2060. The FWC's *Wildlife 2060: What's at stake for Florida?* estimates that such population increases could result in the conversion of 7 million acres from rural and natural to urban uses (Cerulean 2008 at 2). It predicts that nearly 3 million acres of existing agricultural lands and 2.7 million acres of native habitat will be claimed by roads, shopping malls and subdivisions; 1.6 million acres of woodland habitat may be lost; wetland habitat may become more isolated and degraded; 2 million acres of lands bears depend on may disappear; and gopher tortoises may lose a fifth of their existing range (Cerulean 2008 at 4). While Florida is projected to increase its population statewide by 50% by 2060, Hardee County is projected to grow from 31,242 residents in 2015 to 43,922 in 2060. Hardee is projected to have at least 14 times more urban development in 2060 than it does presently, making it one of the fastest growing counties.

The Corps must consider the synergistic and cumulative effects of these planned nearby projects, along with all past land use projects. The Wingate East Mine is only one of several phosphate mines in the region that will impact listed species. The EA fails to consider the DeSoto, South Pasture Extension, and Ona mines' impacts on species at the Wingate East Mine site. For example the South Pasture Extension Mine will impact 1,218 acres of wetlands,[284] the Ona Mine will impact 7,615 acres of wetlands,[285] and the DeSoto mine will impact 3,253 acres of wetlands.[286] The Corps must consider the cumulative impacts from all four mines on the environment.

3. *The Corps and Service must evaluate climate change*

Climate change in south Florida could exacerbate current land management challenges involving habitat fragmentation and other threats, it refuses to attempt to analyze the specific impact it will have on the species and habitat impacted by this Project. The Service must consider all available climate change science in evaluating the effects of the Project.

Climate models project continued warming in all seasons across the southeast United States and an increase in the rate of warming (Karl 2009 at 111-113). The warming of air and water temperatures projected for the southeast will create heat-related stress for fish and wildlife. Climate change will alter the distribution of native plants and animals and will lead to the local loss of imperiled species and the displacement of native species by invasive species (Karl 2009

Snake]; U.S. Fish & Wildlife Service at 4-223.
[284] AEIS at Chp. 1 p 26.
[285] *Id.*
[286] *Id.* at p. 23.

at 113). Concerning the effects climate change is expected to have on southeastern environments, Karl (2009 at 115) states, "[e]cological thresholds are expected to be crossed throughout the region, causing major disruptions to ecosystems and to the benefits they provide to people."

Climate change will increase the incidence and severity of both drought and major storm events in the southeast (Karl 2009 at 111-116). The percentage of the southeast region experiencing moderate to severe drought has already increased over the past three decades. Since the mid-1970s, the area of moderate to severe spring and summer drought has increased by 12 percent and 14 percent, respectively. Fall precipitation tended to increase in most of the southeast, but the extent of region-wide drought still increased by nine percent (Karl 2009 at 111). Both drought and severe storms could threaten the Florida black bear with habitat alteration, altered vegetation, and altered prey base and food availability (Seager 2009 entire).

The warming climate will likely cause ecological zones to shift upward in latitude and altitude and species' persistence will depend upon, among other factors, their ability to disperse to suitable habitat (Peters 1985 entire). Because of some of the species' already limited range and the high degree of development in the surrounding area, there is likely no suitable habitat where the species could disperse, making climate change a dire threat to its survival.

Global average sea level rose by roughly eight inches over the past century, and sea level rise is accelerating in pace (Melillo 2014 at 373). As summarized by the Third National Climate Assessment, "Since the late 1800s, tide gauges throughout the world have shown that global sea level has risen by about 8 inches. A new data set shows that this recent rise is much greater than at any time in at least the past 2000 years. Since 1992, the rate of global sea level rise measured by satellites has been roughly twice the rate observed over the last century, providing evidence of additional acceleration" (Melillo 2014 at 44). Many areas of the Southeast Atlantic and Gulf of Mexico coasts have experienced significantly higher rates of relative sea-level rise than the global average during the past 50 years (Karl 2009 at 37). Large regions of Florida have elevations at or below 3 to 6 feet, making these areas particularly vulnerable to sea-level rise and flooding (Weiss 2011 entire, Strauss 2012 at 3-4).

According to the Third National Climate Assessment, global sea level is projected to rise another 1 to 4 feet by 2100, with sea-level rise of 6.6 feet possible (Melillo 2014 at 589). Sea level rise could increase by another 6 inches in just the next decade (Melillo 2014 at 400). In its 2012 sea-level rise assessment, the National Research Council similarly estimated global sea-level rise at 8 to 23 cm by 2030, 18 to 48 cm by 2050, and 0.5 m to 1.4 m by 2100 (NRCNA 2012 at 4). The effects of sea-level rise will be long-lived. Scientists estimate that we lock in 8 feet of sea-level rise over the long term for every degree Celsius (1.8 degrees Fahrenheit) of warming (Levermann 2013 at 13746).

Regional projections for Florida also indicate that sea level rise of three to four feet or more is highly likely within this century. The Southeast Florida Regional Climate Change Compact Counties—Monroe, Miami-Dade, Broward, and Palm Beach counties—released the Southeast Florida Regional Climate Change Action Plan in October 2012, which included a detailed "Unified Sea Level Rise Projection" for south Florida. The sea level rise projections for south Florida are similar what has been estimated globally by the National Research Council: 8 to 18

cm (3 to 7 inches) by 2030, 23 to 61 cm (9 to 24 inches) by 2060, and 48 cm to 1.45 m (19 to 57 inches) by 2100 (SFRCCC 2011 at 9-10).

Increasingly intense storms and storm surge pose additional climate threats to coastal wildlife species in Florida. Studies have found that the frequency of high-severity hurricanes is increasing in the Atlantic (Elsner 2008 at 92-94, Bender 2010 at 454-458, Kishtawal 2012 at 1-6), along with an increased frequency of hurricane-generated large surge events and wave heights (Grinsted 2012 at 19601-19604, Komar 2008 entire). The risk of extreme storm surges has already doubled as the planet warms, and these events could become 10 times more frequent in the coming decades (Grinsted 2012 entire). High winds, waves, and surge from storms can cause significant damage to coastal habitat. When storm surges coincide with high tides, the chances for damage are greatly heightened (Cayan 2008 at 557). As sea levels rise, storm surge will be riding on a higher sea surface, which will push water further inland and create more flooding of coastal habitats (Tebaldi 2012 entire). For example, one study estimated that hurricane flood elevations along the Texas coast will rise by an average of 0.3 meters by the 2030s and 0.8 meters by the 2080s, with severe flood events reaching 0.5 meters and 1.8 meters by the 2030s and 2080s, respectively (Mousavi 2011 entire).

Coastal species face significant risks from coastal squeeze that occurs when habitat is pressed between rising sea levels and coastal development that prevents landward movement (Scavia 2002 at 17-18, Fitzgerald 2008 at 601-634, Defeo 2009 at 6-7, LeDee 2010 entire, Menon 2010 entire, Noss 2011 entire). Human responses to sea-level rise including coastal armoring and landward migration pose significant risks to the ability of species threatened by sea-level rise to move landward, if other suitable habitats were even available (Defeo 2009 at 1-9). Projected human population growth and development in Florida may thus threaten the species with coastal squeeze (Zwick 2006 entire).

The Corps and Service must consider the loss of habitat sea-level rise and climate change will cause and the pressure that will place on human and non-human populations and habitat, and how that will be effected by the Project.

C. The Service must reinitiate consultation with itself and amend the 2012 ITP

On May 18, 2012, the Service issued an amended ITP for the Florida scrub-jay and eastern indigo snake. The Service also issued a concurrence letter on May 24, 2012, which concurred with Mosaic's determination that the Wingate East Mine is not likely to adversely affect the wood stork or crested caracara and will have no effect on any other listed species. More than five years have passed since the Service issued the 2012 ITP and concurrence letter and the proposal for Wingate East Mine has changed during the intervening years. The Corps must consider new scientific and commercial data from the past five years to ensure that the loss of habitat of these species is adequately evaluated. In addition, we acknowledge that there were public hearings for Wingate East Mine held in 2012; however, because this project has changed since then, a new public hearing is warranted.

Consultation must be reinitiated if, among other reasons, "new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously

considered," "the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion," or "[i]f a new species is listed or critical habitat designated that may be affected by the identified action."[287]

In the intervening five years between the BiOp and the Supplemental Environmental Assessment for the Wingate East Mine, the mining plans have been modified substantially such that crucial aspects of the currently envisioned mining process were not considered in the BiOp.[288] Likewise, a Corps' Request for Additional Information dated February 24, 2016 (2016 RAI), indicates that as recent as early 2016 Mosaic still had not provided adequate information about the mining, mitigation, and long-term management plans, including: whether it could legally place land it had proposed for conservation under easement[289]; what specific types of mitigation Mosaic proposes to implement[290]; how Mosaic proposes to achieve the claimed functional lift in wetlands it intends only to preserve, not restore[291]; and how it arrived at its exceedingly low risk scores for wetland enhancement and creation activities.[292] Additionally, in the 2016 RAI, the Corps requests that Mosaic remove establishment of non-jurisdictional wetlands from the mitigation plan, thus requiring an overhaul of the original plan.[293] Furthermore, following a public hearing before the Manatee County Board of County Commissioners, Mosaic was required to make significant changes to the master mining plan, including changes to the locations of pipes and a clay settling area.[294]

Furthermore, the study by Krysko et al. (2016) provides new information indicating the Wingate East Mine will impact the species to an extent not previously considered. As the study shows, the eastern indigo snake is in fact two, rarer species that inhabit even smaller ranges.[295] Thus it is clear the impacts of the Wingate East mine will be felt by the species to a greater extent than previously thought. Consequently, the Service must reinitiate consultation to consider impacts on indigo snakes based on the new understanding of the ecology and conservation status of each distinct species.

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[287] 50 C.F.R. § 402.16.
[288] *Compare* Initial Wingate East Application *with* AEIS and Supplemental Environmental Assessment for Wingate East Mine.
[289] *See* Letter from Krista Sabin, U.S. Army Corps of Engineers, to Mike DeNeve, Mosaic Fertilizer, LLC, *Request for Additional Information regarding Mosaic's Application to Mine Wingate East* 2 (Jan. 24, 2016).
[290] *Id.*
[291] *Id.*at 3.
[292] *Id.* at 4.
[293] *Id.* at 3.
[294] *See* Resolution No. 17-017, Resolution of the Manatee County Board of County Commissioners Granting Mosaic Fertilizer, LLC, a Master Mining Plan for the Wingate East Mine, Part 21(c) (Jan, 26, 2017) ("Changes deemed significant by the County to the 596-acres footprint of [Clay Settling Area] WE-1 will require a significant amendment to the Master Mining Plan.").
[295] Krysko, K.L., M.C. Granatosky, L.P. Nuñez & D.J. Smith. 2016. A cryptic new species of Indigo Snake (genus *Drymarchon*) from the Florida Platform of the United States. Zootaxa 4138(3): 549–569.

D. Section 9 compliance

Compliance with a BiOp protects federal agencies and others acting under the BiOp from enforcement action under Section 9's prohibition against take.[296] Section 7(o)(2) provides that "any taking that is in compliance with the terms and conditions specified in a written statement under subsection (b)(4)[sic](iv) of this section shall not be considered to be a prohibited taking of the species concerned." However, take not in compliance with a BiOp or absent a BiOp or a lawful ITP is in violation of Section 9 of the ESA.

The ESA "not only prohibits the acts of those parties that directly exact the taking, but also bans those acts of a third party that bring about the acts exacting a taking . . . a governmental third party pursuant to whose authority an actor directly exacts a taking of an endangered species may be deemed to have violated the provisions of the ESA."[297] Accordingly, the Corps which authorizes activities that engage in activities that result in the unauthorized take of listed species, and the applicant itself, will be acting in violation of Section 9 of the ESA should mining commence without a valid ITP and/or BiOp on the Corps' authorization of the mining.

V. Conclusion

Thank you for the opportunity to comment on the Wingate East Mine proposal. Given the large-scale impacts of the Project, we request a public hearing to present public comments that further demonstrate that this Project is not in the public interest. We respectfully request that the Corps deny the permit application for the Wingate East Expansion mine. Please keep us informed about the progress of these permit applications, including any future notices, announcements, EAs, EISs, or decision notices, and do not hesitate to contact us with any questions about this letter.

We are submitting PDF copies of all literature cited in this comment via a document sharing service. If you have any questions regarding the document transfer, please contact Elise Bennett at (727) 775-6950 or ebennett@biologicaldiversity.org.

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[296] *See* 16 U.S.C. § 1536(o)(2); 16 U.S.C. § 1538(a); 50 C.F.R. § 17.31 (a).
[297] *Strahan v. Coxe, et al.*, 127 F.3d 155 (1st Cir. 1997); 16 U.S.C. 1538(g).

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From: Andre Mele
To: Peterson, Mark E CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] SAJ-2009-03221
Date: Monday, July 24, 2017 5:27:00 PM
Attachments: Wingate East full SCWK ACOE comments.docx

Dear Mr. Peterson:

Please accept the attached document from Suncoast Waterkeeper, PO Box 1028, Sarasota, FL 3420, in comment upon the Mosaic Fertilizer LLC application to mine a parcel referred to as Wingate East.

Suncoast Waterkeeper is a not-for-profit 501 c 3 organization incorporated in the state of Florida, with the mission to preserve and protect the central Florida Gulf coast, its waterways, tributaries, ecosystems and watersheds.

Thank you for this opportunity to weigh in on behalf of the public interest in clean water and a healthy environment.

Best wishes,

Andy Mele
Suncoast Waterkeeper
914-204-0030

Mark E. Peterson
West Branch Mining Team
Jacksonville District Corps of Engineers
10117 Princess Palm Ave., Suite 120
Tampa, FL 33610
Mark.e.peterson@usace.army.mil

Dear Mr. Peterson:

Thank you for this opportunity to comment on permit application SAJ-2009-03221.

On June 22, 2017, the Corps released a Supplemental Environmental Assessment, draft public interest review, and draft Clean Water Act ("CWA") 404(b)(1) Guidelines analysis for Wingate East Mine (collectively Supplemental Environmental Assessment or "EA").

Wingate East Mine would impact 553.1 acres of wetlands of the Wingate Creek Headwaters of the Myakka River Watershed and the West Fork Horse Creek Headwaters of the Peace River Watershed by mining phosphate ore from 3,137 acres within the 3,635-acre property over 20 years.

1. Wetlands

Wetlands are protected in the Clean Water Act (CWA), which states that healthy intact aquatic ecosystems are in the public interest. Wetlands considered to perform functions important to the public interest include:

> Wetlands which serve significant natural biological functions, including food chain production, general habitat and nesting, spawning, rearing and resting sites for aquatic or land species;
>
> Wetlands set aside for study of the aquatic environment or as sanctuaries or refuges;
>
> Wetlands the destruction of alteration of which would affect detrimentally natural drainage characteristics, sedimentation patterns, salinity distribution, flushing characteristics, current patterns, or other environmental characteristics;
>
> Wetlands which are significant in shielding other areas from wave action, erosion, or storm damage. Such wetlands are often associated with barrier beaches, islands, reefs and bars;
>
> Wetlands which serve as valuable storage areas for storm and flood waters;

Wetlands which are ground water discharge areas that maintain minimum baseflows important to aquatic resources and those which are prime natural recharge areas;

Wetlands which serve significant water purification functions; and

Wetlands which are unique in nature or scarce in quantity to the region or local area.

Wetlands store 40% of Earth's carbon output, reduce storm surge, function as some of the most vibrant and diverse habitats on earth, and provide food and shelter for listed and many other species, filter out pollution, recharge aquifers, retain stormwater and help minimize flooding.

There are 13,737 acres of wetlands in the four mines considered in the AEIS. The Corps must consider the cumulative impacts to hydrology and habitat of the wholesale landscape destruction and long-term degradation that will follow upon mining those wetlands.

2. **The Manatee County permit to mine Wingate East was gained in the face of clear and evident reasons to deny**

Over 2,000 speakers and writers submitted substantive comments in opposition, versus 17 in favor.

At the very least, a full Environmental Impact Statement (EIS) should be required, because under the National Environmental Policy Act (NEPA), one of the criteria for requiring a full EIS instead of an Environmental Assessment (EA) is "the degree to which the effects on the human environment are likely to be highly controversial."

Furthermore, the Manatee County permit is under legal challenge.

In addition, the principal environmental staff member for Manatee County has been dismissed after a long and troubled employment history, for substance abuse. His work is being analyzed and reassessed by consultants, which may result in changes in permit status, or further challenges.

3. **Phosphate mining fails the Clean Water Act public interest test.**

Per 33 C.F.R. § 325.1(d)(1), the Corps must deny a permit application if it is "contrary to the public interest."

Fertilizer, the principal "public interest" justification alleged to offset the apocalyptic destruction of miles of whole landscapes, is not in the public interest, as claimed. The Corps improperly accepts the applicant's assertion that chemical phosphate fertilizer is the only

reasonable alternative for the world's agricultural needs, but there is ample documentation available to demonstrate that this is far from the case. The U.N. itself is moving away from phosphate fertilizers, and toward Regenerative Agriculture, as well as minimizing phosphate fertilizer use, and/or recycling it. (see #5, below, and numerous reports such as Montgomery; Scientific American, April 2017).

But if the Corps is determined to stand behind its acceptance of the applicant's allegation of phosphate as a public interest, then the Corps must reasonably include in its consideration all the impacts associated with the manufacturing of fertilizer. In other words, the Corps must either remove the alleged public benefit of fertilizer production from its consideration, or factor the impacts of transportation, fertilizer production, human health impacts and waste disposition into its consideration.

The applicant and the Corps simply cannot have it both ways.

4. **The applicant's four-page Statement of Need is spurious, and so narrow as to preclude all alternatives.**

Indeed, the whole Supplemental EA reads like a Mosaic business plan, not a document addressing a compelling need to protect treasured natural resources under the law.

This is completely unacceptable, as numerous courts have ruled (*Id.* at 669; *Citizens for Smart Growth v. Sec'y of Dep't of Transp.*, 669 F.3d 1203 (11th Cir. 2012); *Davis v. Latschar*, 202 F.3d 359, 367-68 D.C. Cir. 2000).

It demonstrates an unlawful willingness by the Corps to accept the applicant's facts and narrative without performing the required "probing, independent review" (*Simmons v. United States Army Corps of Eng'rs*, 120 F.3d 664, 669 n. 1 (7th Cir. 1997); *Balt. Gas & Elec. Co. Natural Res. Def. Council Inc.*, 462 U.S. 87, 106-07 (1983))

By unlawfully allowing the existing Statement of Need to stand unquestioned, the Corps is assenting *a priori* to the applicant's assertion that their exact preferred alternative, and no other, is the only practicable alternative, which is, without question, *not* the case.

5. **Alternatives must be re-examined with full deference to the requirements of the CWA and the public interest (ibid), instead of the current inappropriate and unlawful over-weighting of Mosaic's spurious business needs and PR hype.**

Alternatives to chemical fertilizers must be acknowledged and considered in the Corps' approval calculus. Alternatives such as using less fertilizer, recycling fertilizer, and farming with more sustainable methods such as regenerative agriculture, which the UN is studying on a global scale (Montgomery; Scientific American, April 2017), and permaculture, have been

unlawfully ignored, as the Corps again accepts the applicant's information without question, and without independent review.

25% of the world's food is thrown away. The world's small family farms produce more food than all the factory farms. Even organic farming is within 20% of industrial farm yields. Regenerative agriculture also conveys the additional benefits of fewer inputs, carbon sequestration, long-term soil regeneration (and the attendant higher yields), vastly improved soil retention and greatly decreased nutrient runoff into ground and surface waters, which has become a major problem in some areas – including Florida.

6. **The AEIS separation of mining from processing and waste disposition is arbitrary and capricious.**

There would be no point to mining without turning the phosphate into a marketable product. Therefore, the processes that are essential to that transformation must not be omitted from any reasonable assessment of a strip-mining permit application. If Mosaic was shipping out the rock to other manufacturers or other countries, then mining would be a stand-alone consideration. But it isn't. It is a vertically-integrated company, and owns all the facilities needed to separate the ore, turn it into phosphoric acid, and handle the staggering quantities of waste, produced at a ratio of 5 tons phosphogypsum waste per 1 ton of product. Those facilities are located conveniently nearby, and Mosaic's stated waste disposal facility for the material mined at Wingate East will be at the Polk County New Wales south gypstack—the very same that experienced a catastrophic sinkhole in late 2015.

How can the Corps of Engineers, charged with implementing the intent and authority of the Clean Water Act, and other federal laws as they apply, turn a blind eye and a deaf ear to the movement of phosphate from mine to market? To do so is a willful abdication of responsibility for the laws of our nation.

NEPA says the severity of a project's impact includes the degree to which the proposed action affects public health or safety—issues that are exported, along with the phosphate ores, from Manatee County to other nearby counties, all in the AEIS study area. Mosaic is vertically-integrated, by the Corps' own admission. It owns the very facilities the AEIS ignores! Why would it own the facilities if they are not integral to the process that is only beginning with mining?

The AEIS was prepared by CH2M Hill, a longtime consultant on the Mosaic payroll. No one outside of the Corps and Mosaic's sphere of influence trusts the objectivity of the AEIS and its content.

This convenient separation, which disallows consideration of toxic waste disposal, also, of course, disallows consideration of public health impacts. To omit these issues is unlawful, by our reading of NEPA and the CWA. It is regrettable that there have been no comprehensive

epidemiological studies performed among communities living in proximity to gypstacks, even though anecdotal reports of widespread illness abound, but it's not for lack of trying. The Corps could advance itself in the public perception by demanding a more thorough understanding of the health risks associated with phosphate mining, through studies performed by objective, independent third-parties, before issuance of any further permits.

7. **Mosaic must not be allowed to self-monitor or self-regulate.**

Its representatives blatantly lied at least twice during hearings at Manatee County under oath on January 15, 2017, and it was caught cheating on toxic waste disposal by EPA, resulting in a $2 billion settlement, (United States v. Mosaic Co: https://www.epa.gov/sites/production/files/2016-03/documents/florida-cd.pdf) because 8 gypstacks are now thoroughly contaminated with a higher order of toxic waste than allowed by law. It waited three weeks to report a massive sinkhole in the south stack at New Wales, allowing a clear and present threat to public safety and health to escape from beneath the stack.

Can Mosaic be trusted to accurately account for its water withdrawals and discharges, its accidental discharges, its operation of the toxic clay repositories (CSAs), its avoidance of wetlands or observance of buffers? Of course not. Mosaic thrives on deception. It continues to exist because it misleads the public through disinformation. An independent third-party must be required to perform monitoring, data collection and analysis of all subsequent mining operations.

8. **Reclamation and mitigation have improperly become the Corps' default alternatives for wetlands.**

Reclamation and mitigation have improperly displaced the primary wetlands protection mechanisms in the CWA: avoidance, followed by minimization. Reclamation and mitigation are by no means proven methodologies; system failure is more the norm than the exception.

The public will not have access to the reclamation and mitigation plan prior to the Corps' decision. This is wholly unacceptable, and is itself in violation of NEPA, since the Corps must consider public input to qualify its decisions as "informed."

In Kihslinger 2008 (*National Wetlands Newsletter*, Vol. 30 no. 2), it is reported that "…compensatory wetland projects fail to replace lost wetland acres and functions even more often than they fail in their administrative performance [40%-60%]. In fact, permit compliance has been shown to be a poor indicator of whether or not mitigation projects are adequately replacing the appropriate habitat types and ecological function of wetlands." A review of a number of similar reports seems to indicate that the most common administrative causes of

compensatory wetland failures are over-reliance on permittee follow-through, lack of long-term monitoring, lack of inspections, and generally limited oversight.

Our experience has been that the Corps does not have the staff, the funding, the time or, with all due respect, the institutional sense of statutory responsibility required to conduct long-term compensatory wetlands monitoring or enforcement.

So-called "built" wetlands have a very spotty track record of what might be called success. IN Florida, the FDEP will "release" a reclaimed wetland if the vegetation planted there appears to be holding its own after two or three years. There is no data, pro or con, that credibly demonstrates that either reclaimed or restored mined lands have been successfully returned to nature "better than before," as Mosaic frequently boasts. We only have Mosaic's assurances, which are redolent with conflict of interest, and hence wholly unreliable.

Kihslinger (2008) reports, "Turner and colleagues (2001) found that an average of only 21% of mitigation sites met various tests of ecological equivalency to lost wetlands." Furthermore, a 2006 study showed that "Of the actual wetland acreage, 25% was considered in poor condition, 58% was fair, and 18% was good quality in terms of vegetation as compared to natural reference wetlands." Vegetation, however, does not correlate with actual replacement of wetland function.

Mosaic's plan to replace wetlands on an approximate 1:1 basis does not provide anything near the cushion required to ensure no net loss. A ratio of 2:1 would be more appropriate, and 3:1 better. Its assertions that its built wetlands will have higher UMAM scores is indefensible, unsupportable, and not borne out by the historic record.

According to Winchester (2013) there are some types of wetlands that simply cannot be credibly restored at all, once destroyed.

Has the Corps physically inspected the totality of Mosaic's so-called reclaimed and restored lands, both released and unreleased? Or has the Corps just been shown Mosaic's demonstration projects, which are themselves the exception, having benefitted from millions in special restoration and maintenance expenditures? The average cost per acre of reclaimed land is just $5,000. Mitigated, or "built" wetlands, of course, cost much much more. The demonstration projects, with their grandstands and circular driveways, microphones and podiums, are lovingly tended on a daily basis, like an estate garden.

Mosaic employees have told us (personal communication) that mining is done by the draglines in "cuts," or manageable segments within reach of the dragline. As the first layers of overburden–age-old topsoil, rich in bacteria and nutrients—get scraped off, they are not, as Mosaic claims, neatly stockpiled for use on the surface of reclaimed land, but are instead dumped into the adjacent, finished cuts, and buried under the lower-grade sand tailings that come out of the cut after the so-called overburden.

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The math doesn't lie. Thirty-to-forty percent of the material that comes out of a cut is phosphate rock. It is broken down under high pressure water and sent to the float plant as a slurry. The remaining material stays on-site, but clearly cannot backfill the land, having lost 40% of its mass. Therefore, the toxic clay repositories (CSAs) cover forty percent of the mined land, and can never be reclaimed. They take decades to fill, and to harden enough that men and machines can walk safely on top of the gelatinous slime. Backfill shortages are also dealt with by the creation of "lakes," which Mosaic does not have to reclaim. These "lakes" are a source of endless stories about two-headed frogs, mutated fish, and parasitic mega-worms. It should come as no surprise that reclamation is regarded as more of a bad and macabre joke than a socially-acceptable solution.

The Corps could go a long way toward ensuring that mined land is returned to a more natural state within our lifetimes by requiring that 100% of mined land be fully restored, not reclaimed, and by requiring that an objective, independent third-party conduct site monitoring of compensatory wetlands for at least fifteen years after the completion of construction, with regulatory and enforcement authority.

9. The economics of phosphate are misrepresented in AEIS and Supplemental EA.

Phosphate mining, far from a public benefit, is a ruinous public liability, with the capacity to bankrupt the state one day. Economic grounds alone should be enough to justify a cessation of further permitting.

Economics are part of the suite of metrics considered in a CWA Section 404 determination of public interest. Phosphate mining is not an economic benefit to the county, state or nation, and is in fact a net loss. It leaves behind a mountain of uncaptured costs for future generations to deal with.

Mosaic stated under oath, before the Manatee County Commission, that there will be no new jobs created by mining Wingate East. Therefore, any claims of economic benefit from jobs is fallacious.

The table of economic benefits (Table 1-4) in the AEIS, modified for the Wingate East EA, lists New or Retained Jobs, Annual Tax Revenue, and for the EA, a new item called "Value Added." "Value Added"—over $1 billion—appears to suggest that the entire net profit of the phosphate being mined somehow accrues to the public. There could be no other reason for listing it. It is not explained in the SEA, which is the only document where it appears. It is basically an applicant throwing numbers at a wall, and hoping they stick before somebody questions them.

There is no established market, or market value, for separated slurries or any of the other intermediate stages between mining and the finished chemical product, phosphoric acid. That value-added includes, therefore, and should account for, the many uncaptured costs associated with ore separation and chemical processing, which Mosaic, Manatee County, the Corps and

the AEIS dismiss as "irrelevant" (as articulated by Mosaic attorney McGuire, February 15) to the consideration of mining (see Manatee County Wingate East hearings, January 15, January 26, February 15, 2017, and #5 above), because these obvious factors are not explicitly demanded in the county's Mining Ordinance or the AEIS. There has been no attempt made to identify or quantify these "externalities" – uncaptured costs passed downstream by unscrupulous corporate actors. This is unethical and wholly unacceptable to the public, whether these costs are formally discussed in code or not, because they violate the letter and spirit of the Clean Water Act and NEPA.

Furthermore, the table of economic benefits does not factor in agricultural and tourism jobs lost, today and in the future, as a result of mining. It does not account for the stark decline in taxable value of mined land, amply demonstrated in other counties, which can be as much as 75%, nor does it calculate those losses out over a 100-200-year time horizon, the minimum amount of time before these lands have any chance of returning to productivity, if ever. It does not account for wear and tear on the region's roads, which must endure tens of thousands of heavily-laded truck trips as ore is shipped to New Wales, and then waste phosphogypsum is sent to a gypstack. It does not admit that *as a publicly traded company, Mosaic sends virtually all its revenues out of state, to corporate headquarters for eventual shareholder distribution.*

The only revenues that will stay in Florida from mining at Wingate East are the multipliers from perhaps 200 relocated employees (which will be a loss to other, adjacent counties, and hardly constitutes a benefit), sixty similarly recycled subcontractors, and a severance tax, a modest per-ton royalty paid to Tallahassee and shared among many counties. There is also a miniscule $2.5 million gift to the county to qualify as an "overriding public benefit," a justification for allowing destructive mining in the county's code that, unfortunately, does not contain any calculus for making such a determination. Again, throw a number at the wall and see if it sticks.

Neither the AEIS nor the EA capture or even acknowledge the costs associated with phosphogypsum waste storage in "gypstacks," and the discharge of almost 5 million pounds per year of toxic and carcinogenic chemicals via its NPDES outfalls (EPA Toxic Release Inventory, 2016), where the toxic materials generated during processing of the very same permitted ores from Manatee County's Wingate East mine are diluted—"blended," in Mosaic doublespeak—until they meet regulatory standards (mosaicco.com/FAQs), then discharged into the landscape. The same amount of toxic waste, just diluted.

See attached Cost-Benefit table.

When Mosaic mines the last of the phosphate ore and leaves the state, it will leave behind 24 huge flat-topped mountains of radioactive, hazardous and toxic waste, with an EPA consent decree and, after 30 years, funds to remediate only 8 of them (DOJ/EPA, 2016). Future generations will inherit the rest, and the liability for tens of billions in remediation costs, to be borne by taxpayers.

The phosphate industry is unpredictable, subject to boom-and-bust cycles. For this, and other reasons, phosphate mining stocks are among the worst-rated on Wall Street. Mosaic has not mined all the lands for which it has received permits, nor has it reclaimed more than 46% of all the lands it has finished mining. When added to the lands currently being mined, or permitted for mining, the percentage drops below 30%. When seeking delays, extensions and variances, as it does repeatedly, Mosaic cites lack of operating cash as a principal reason. In that light, it would make sense to hold any further permits, at the very least, until Mosaic catches up with its obligations.

Given Mosaic's unreliability and shaky financial underpinnings, the Corps should require financial assurance for a comprehensive remediation of impaired groundwater aquifers and the 16 phosphogypsum "stacks" not covered in the EPA consent decree, in collaboration with EPA per CERCLA and RCRA. As the last phosphate mining company standing, having acquired and merged with the last remaining companies, the corporate legacy of liability inherited by Mosaic is clear, no matter who owned those stacks to begin with.

10. The Endangered Species Act prohibits "takings," which include harm, harassment, and habitat modification or degradation.

Mosaic, taking advantage of the indefensible contention in outdated FL legislative intent that phosphate mining is a "temporary land use," assumes that after 30-50 years, the land will once again be suitable habitat. There is no objective, peer-reviewed science to support that contention, and in fact, all the evidence before our eyes appears to indicate that mined land acquires a thin cover of nuisance vegetation, and remains unusable and uninhabitable (Jerue v. Drummond Company, Inc.) for an unknown period of time, perhaps centuries. Where exactly will the animals go during that time? How many will die from the disturbance, and from the animals' stubborn but innate instincts to remain at home?

The lands inside the boundaries of the Wingate East mine are demonstrable habitat for the bald eagle, crested caracara, wood stork, Florida scrub jay, indigo snake, gopher tortoise, and many other listed, threatened, or species of concern. The region under study in the AEIS includes places from which there have been numerous Florida panther sightings. The panther was the first animal listed under the ESA.

The Corps must study and base its decisions upon the cumulative impacts on listed or threatened species throughout the 51,755 acres in the four mines, which include 13,737 acres of wetlands, considered in the AEIS.

The Corps must deny the permit. It has absolute authority to do so.

I further urge that he Corps host at least one public hearing per mine, in proximity to the mine locations.

Sincerely,

Andy Mele
Suncoast Waterkeeper
PO Box 1028
Sarasota, FL 34230

Costs Borne by Manatee County Residents	Benefits to Manatee County Residents
3,600 acres of land taken out of production, for all practical purposes, forever	A very few new jobs
Reclamation, little more than backfilling and grading, is a wholly inadequate replacement for native soils, native species, native habitat	$5 million in "overriding public benefit" payments
Many animals, and certainly plants, do not simply "go somewhere else." They are locally extirpated. Moving endangered animals around traumatizes them and does not ensure they will survive	Involuntary severance tax payments
Traditional, multi-generational agricultural jobs lost forever, along with payrolls and multipliers	Compulsory reclamation @ $5,000 per acre
Community character lost	Select modest payments to a few local cultural institutions for naming rights and propaganda value
Habitat for listed species lost	Port fees and onshore shipping expenses
Diminished taxable value to 25-30% of pre-mining levels	

Lost food independence Lost tourism potential County's reputation as one big mine will impair tourism No, or very few new jobs Depressed real estate values because of proximity to mining Local towns and governments increasingly dependent on mining Dependence and impoverishment lead to increased potential for corruption in local institutions Wetlands destroyed and ecological services lost. Built wetlands and mitigation bank purchases DO NOT replace the work of God Potential for drinking water contamination on a vast scale Profits and dividends leave the state Transaction costs borne by county taxpayers: staff time, legal time Toxic waste settling pools (aka CSAs) left behind in perpetuity. Risk of CSA breach Risk of pipeline breach Risk of other transportation accident Burden on roadways, infrastructure from hundreds of thousands of heavily-laden truck trips	

Takings of adjacent property owners' property rights, hopes, dreams Downstream impacts of Manatee's waste on other counties, other neighborhoods. Risks associated with export of waste to other counties: chronic exposure, sinkholes, disease, loss of tourism revenue, diminished air quality and water quality Possibility of legal action from destination counties Lands are released from reclamation if they just show some indication of short-term vegetative success. There is no follow-up. Mosaic tends its reclaimed lands, then walks away once released.	

Reserve estimates for the world's top 10 PR reserve holders and their percent of world reserves held (Source: USGS Mineral Commodity Summary, 2013).

Country	Reserves, 2012 billion t	World total %
Morocco and Western Sahara	50,000	75
China	3,700	6
Algeria	2,200	3
Syria	1,800	3
Jordan	1,500	2
South Africa	1,500	2
United States	1,400	2
Russia	1,300	2
Peru	820	1
Saudi Arabia	750	1

From:	Florida Solar Cooperative
To:	Peterson, Mark E CIV USARMY CESAJ (US)
Cc:	Glen Gibellina; FOGWatch of Manatee County
Subject:	[Non-DoD Source] Windgate East
Date:	Friday, July 21, 2017 11:44:52 AM
Attachments:	Wingate East letter to ACOE.docx Mine.png

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mark.e.peterson@usace.army.mil <mailto mark.e.peterson@usace.army mil>

Please enter this into the Public Record

Letter for Public Comment on the Wingate East Mining Application Currently Before the Army Corps of Engineers.

Prepared by Andy Mele, Suncoast Waterkeeper, in collaboration with Center for Biological Diversity, People for Protecting Peace River (3PR), and the Sierra Club Manatee-Sarasota Group.

Refer to Permit SAJ-2009-03221

Mark E. Peterson
West Branch Mining Team
Jacksonville District Corps of Engineers
10117 Princess Palm Ave., Suite 120
Tampa, FL 33610
Mark.e.peterson@usace.army.mil <mailto:Mark.e.peterson@usace.army mil>

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Refer to Permit SAJ-2009-03221

Deadline July 24

Send to: Mark Peterson, mark.e.peterson@usace.army.mil

FYI, here is a link to the Corps' public notice for comments on Wingate East. Refer to it by number in your email subject line, and body text heading. The Supplemental Environmental Assessment can be downloaded through this notice.
http://www.saj.usace.army.mil/Missions/Regulatory/Public-Notices/Article/1225926/saj-2009-03221-mep/

Attach any cited documents in PDF. Links will not be read, and linked documents will not move on to become part of the administrative record. YOUR GOAL IN SENDING PUBLIC COMMENT IS TO BE READ AND COUNTED, BUT ALSO TO BECOME PART OF THE ADMINISTRATIVE RECORD, WHICH MUST BE INCLUSIVE AND COMPREHENSIVE TO SUPPORT ANY SUBSEQUENT LITIGATION.

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42

From: Glen Gibellina
To: Peterson, Mark E CIV USARMY CESAJ (US)
Cc: Glen Gibellina
Subject: [Non-DoD Source] Mosaic
Date: Friday, July 21, 2017 9:58:33 PM

Re: Z-14-09 Rezone request, and a request for Master Mining Plan approval; Wingate East

A presentation to the Manatee County Board of County Commissioners
Betsy Benac, Chair

January 30, 2017

The Myth of Economic Benefits from Phosphate Mining in Florida, and Manatee County

By Andy Mele, MSES (Environmental Economics)

What is in front of you

The first economic matter I will discuss today is what you see with your own eyes right now. There are probably two dozen Mosaic employees and consultants in suits in the front rows. The house is half-filled with Mosaic employees in day-glo yellow safety attire. This is meant to impress and intimidate the Commission.

But they are all paid. 100% are paid to be here.

I could live for a year on what they are being paid to attend this hearing.

Without that pay, do you think they would be here? As volunteers?

Not a chance.

Now look at the rest of the people. 99% of them oppose the applications before you today. They are unpaid. They are volunteers. And yet they are here. For the day. Many were here last Thursday as well. Apparently, the non-monetary value of a healthy public and an intact environment far outweighs the economics of destructive agrochemical farming methods and the collective business models of Mosaic and its partners, such as Monsanto and Nestle, to monopolistically dominate the world's food supply.

I urge you, on economic grounds, to dismiss the show of force before you, and consider this issue on its merits alone.

There is a fundamental difference between economics and business.

Economics concerns itself with societal optimums, ethics, long-range outcomes and the quest for economic efficiency as reflected in societal wellbeing. Economics is about the whole system, and making it as sustainable as possible within the parameters of whatever sect one follows: Friedman's neoliberalism, Daly's steady-state economics, and all points in between.

Business concerns itself solely with short-term profits. In fact, the sole ethical constraint on a business is the short-

term maximization of profits, whether as dividends, growth, or both, to the shareholder.

Therefore, the CEO, or in this case, the row of guys in suits before you, is concerned only with getting the mines on line and on schedule, and that's all. They are not being paid to care about you or your families, or about the long-term future of the county.

Your priorities, as elected officials in the state of Florida, are simply stated in Article II, Section 8 of the State Constitution: "A public office is a public trust." Further, "The people shall have the right to secure and sustain that trust against abuse."

The people who put you in office are counting on you to work for their best interests with a long-term view. The people who put you in office have children and grandchildren, and they want their descendants to have a safe, healthy and productive environment in which to thrive. Those values and desires are called ethics.

Mosaic per se does not have children or grandchildren. Mosaic does not have ethics, beyond the one: short-term profits.

I labor the point on ethics by way of saying that we expect good things from you where ethical matters are concerned, but we do not expect anything from Mosaic. In their world view, we would just leave the county and let the draglines scour the earth and leave the rubble in lifeless piles. That is not to impugn these people. They are just doing their jobs, as our neoliberal economic system demands it.

But we must keep the distinction clear in our minds.

Supply and Demand

To justify expansionism, a corporation representative will shrug his shoulders and say, simply, "supply and demand." That, apparently, explains everything.

Actually, it explains nothing.

Every Econ 101 textbook talks about the supply-and-demand curve. Most students internalize that curve, and use it to justify whatever business decisions they make later in life, whether as a small entrepreneur or CEO of a major corporation. But the supply and demand curve is simply a theoretical model of market behavior under certain highly restrictive – and virtually nonexistent – circumstances: perfect information and perfect competition.

In the absence of perfect information and perfect competition, the relationship between supply and demand breaks down, and exhibits behavior as chaotic as the multitude of variables that influence both demand-side and supply-side.

Mosaic's manipulation of supply and demand should become a case study in universities everywhere. By virtually creating its own public opinion with massive advertising buys, glossy four-color brochures and self-serving disinformation or outright falsehoods, Mosaic owns the information stream about phosphate mining. It has transformed an industrial process into its message of warm, caring environmentalism, jobs, and "feeding the world." So much for perfect information.

And perfect competition? Its monopolistic acquisition of almost all the remaining phosphate mining companies has eliminated competition altogether.

The resulting market distortions are manifest in the lopsided bargains Mosaic cuts with state and county, and with Floridians' willingness to accept mils on the dollar in exchange for total, permanent destruction of the very land its residents have worked for generations, with the sacrifice of thousands of sustainable, traditional jobs in agriculture, and the potential for rolling back the economic gains that have resulted from tourism.

Land

All wealth, it is said, comes from the land. A firm that rents will always be on precarious footing, and growth may well be like building a house of cards, whereas a firm that owns its land will have a strong foundation upon which to build.

For Manatee County to give up its land forever defies all sense and logic.

By now, Mosaic will be planning to refute these claims of permanent destruction as soon as I am done, citing the successes of its reclamation – required by law, and performed to minimum standards, not done out of altruistic goodness – and yet, when pressed by the Planning Commission to cite examples of economic activity on reclaimed land, a Mosaic representative said, and this is close to a direct quote, "We built a firehouse." And with that the Planning Commission was satisfied. Are you satisfied? Has Mosaic met its burden of proof to demonstrate that after some 50-plus years of mining and reclamation, the land is, as it often claims, better than original? Better than the hand of God made it?

Be aware that, from a scientific perspective, and even to the untrained eye, reclamation is far from restoration. The soils of reclaimed land are among the lowest quality in Florida, unsuitable for crops, grazing, or home building, depauperate in nutrients and necessary minerals, and radioactive from concentrated radionuclides brought to the surface by processing.

Is reclaimed mined land as valuable as native, non-mined land?

It is difficult to compare post-reclamation land values and taxable revenues with pre-mining lands because of the variations in land value evident in the tax assessors' maps and data sets. One textbook comparison does stand out, and may serve as a surrogate for land values in general throughout the mined lands. A significant parcel north of SR 62, west of Hardee Lakes Park, has been mined and reclaimed, and is valued by the Hardee County tax appraiser at $1,700 per acre, while a comparable parcel directly across the road, on the south side of SR 62, never mined, is in full agricultural production – citrus – and is valued around $7,500 per acre by the same appraiser.

It is worth noting that Mosaic-owned lands appear to consistently carry a significantly lower taxable value than comparable non-Mosaic lands.

Residential valuations would run much higher.

Vast regions of Polk County, which allowed itself to become almost 50% mined, have been mined and remain unsold, out of production. It even faces an acute water shortage, since the mines drew down its water table faster than the aquifer can recover.

Is Manatee County headed in the same direction?

Jobs

Mosaic claims it creates jobs. Undoubtedly it has created jobs, past-tense, to run the draglines, process the chemicals, run some offices, maintain the stream of propaganda and ship both feedstocks and waste around the region to their final destinations, whether port or gypstack.

But it does not fire its crews once a mine is finished. Highly-trained crews are prized by any firm, and retained with good wages.

Mosaic choreographs the movement of its teams and crews. As one section's phosphate deposits have been harvested, the dragline crews move to the next section. As a mine is being worked, the transactional team – the one before you today – is hard at work completing permit applications and meeting with county staff. You can be certain that the rows of guys in suits in front of you will not be fired, and new suits hired for the next permit. Of course not. They are a skilled team, skilled in the unique arts of misinformation, threats, propaganda and even purchasing good will with Mosaic's checkbook. By the time one mine is completed, the reclamation crews move in from a reclaimed mine, and the dragline crews move to another mine that has been permitted, burned off, and awaits

the first bite of the dragline shovel. And our suits are off to another county.

None of these jobs are new jobs. They reflect a steady state of mining operations, interrupted only by normal attrition. A look at Mosaic's earnings charts shows a steady decline in economic activity. There have been reports from current and former Mosaic employees that even the propaganda division is cutting back, and that good-will donations to institutions like the Charlotte Harbor Estuary Program are being phased out. Given that decline, it is hard to see where any new jobs are coming from.

Manatee County is being enticed with the prospect of jobs, and undoubtedly there will be jobs in Wingate East, but they will simply have moved from another mine. There is no, or very little net benefit in terms of jobs from the phosphate mines whose applications we are considering today.

What are the opportunity costs of phosphate mining? In other words, what jobs might have been shoved aside or foreclosed altogether to make room for this wholesale ruination of, so far, 8% of the County's land area. I don't have that data. Department of Ag's data sets do not allow me to make a direct comparison on a place-specific basis. But where there is – or was – agricultural land, there will be – or will have been – a lot of long-term, sustainable traditional jobs and products brought to market for which the profits remained in Manatee County, along with their multipliers.

For every paycheck, for every bushel of tomatoes or strawberries sold by a local farmer, there are multiplier effects in the community that currently, with near-zero net savings rates the new normal, average around 8 times as a given dollar is spent and re-spent in the community. So, for every dollar received and spent in Manatee County, there will be eight dollars of benefit in the community. This is standard economic reality, not magic thinking.

What is magic thinking, however, is the assumption that phosphate mining is good, in any way, for this county or its people.

Tourism is the engine of Manatee County's economy at this time. Mosaic already owns 8% of the County's land, and intends to mine it. It will acquire more, and will be back for more permits, each with its own rationale. Phosphate deposits run almost to I-75. With the staggering profits reaped from each acre, Mosaic can offer landowners sums that are very hard to resist. To ranchers and farmers it can seem like a long-deserved payday after generations of hard work. Where will Mosaic stop?

But how much tourism is there in heavily-mined counties? Polk County is 50% mined land. How much tourism is there in Polk County? Polk has even lost its groundwater due to excessive long-term pumping for the practice of "blending," diluting toxic discharges. How much tourism is in Hillsborough County, also extensively mined, with gypstacks looming over the landscape? Hardee? DeSoto?

In science and economics there is a factor known as the threshold effect – the point beyond which everything changes. There will be a threshold effect in Manatee County, when phosphate strip mining reaches a point that toggles the county from a sun-drenched tourist destination to a devastated wasteland of giant machines and impoverished soil.

Where does the money go?

Mosaic is a publicly-traded corporation. Hence it has shareholders all over the world. Despite the fact that phosphate mining is consistently listed among the bottom-six categories of businesses, it does have shareholders, and they expect either dividends or growth, or both.
That money leaves the state in order to reach those shareholders.

Mosaic must pay a significant percent of its revenues to overhead, to fancy corporate offices and executive salaries. That money also leaves the state.

To the extent that any of Mosaic's employees are residents of Manatee County, even temporarily, those employees' paychecks and multipliers may be felt in the county. But how many of them live here? One has no way of finding out.

Mosaic is not a huge, monolithic company. The five-year average dividend is 2.3%. Not the best investment one could look for, but it gets thrown into low-end diversified mutual funds and the like. It has annual revenues of just $11.8 billion from worldwide operations, and has been steadily declining over the last six years. Those billions move through the corporate coffers in Minnesota, as the few Mosaic employees in the chemical plants, mines and offices toil here in Florida. Their paychecks may be the only money Florida sees, aside from a few modest contributions and a compulsory thing called a severance tax on extracted natural resources, which gets doled out to counties by Tallahassee.

Public Benefit?

Phosphate mining is claimed to be one of the greatest economic engines in the State of Florida. The presence of a public benefit is presumed, embodied in categories of transaction like "Overriding Public Benefit" – some public benefit that is so magnificent, it overrides the destruction of the county's long-term security – its land.

So far, we have heard about roughly $2.5 million to be spent on headwaters restoration, and a similar amount to be spent by trusted intermediaries – the Manatee County Community Foundation and the Conservation Foundation of the Gulf Coast – on a project of their choosing. So far, there is no project in the pipeline, nor even any property for sale with which to create even this very small offsetting benefit in land.

Mosaic claims that over the life of the mine – perhaps 20-30 years – the company will spend some $18 million in Manatee County, and the County will receive a similar amount in severance taxes, paid to the state, apportioned, and disbursed from Tallahassee.

How do those contributions stack up against what Mosaic stands to gain? Based on figures obtained during lawsuits involving recent mine permits, Mosaic's gross revenues were $800,000 - $1,000,000 per acre at the time, when rock prices were around $77 per ton. Today rock is $103, recently down from $113. Therefore, while the real number is probably higher, for the sake of keeping the math simple, we can safely call the revenue per acre $1 million. If 3,600 acres of Wingate East are mined, that is a total revenue, over the life of the mine, approaching $4 billion.

According to Mosaic's annual reports, net profits hover around 18%. Therefore, the net from the total destruction of all future potential of the Wingate East tract is about $650 million

Forgive me for being cynical, but a $40,000,000 total payback to the County, of which the majority is involuntary and compulsory, spread out over 20-30 years, just doesn't stack up against $3.6 billion, or $650 million.

And forgive me again for just laughing outright at the idea of $5 million being an "overriding public benefit," when put up against the wholesale environmental apocalypse that is phosphate mining.

One drive through rural west-central Florida, and it is clear that Mosaic is turning our region into a banana republic: plundering our natural resources, leaving our residents jobless, destroying our land and the habitat that supports our precious species, exporting the wealth from the ground while shipping the profits elsewhere. There are post-mining towns in Florida that cannot even support a grocery store.

Cost-Benefit Analysis

In summary, please review the cost-benefit comparison on the attached table.

Conclusion

You work for the people. To help grasp the public's opinions on this matter, imagine putting this application up as a voter referendum. You know how your voters run. Republican or Democrat or NPA, they consistently vote over 70% pro-environment. These applications wouldn't stand a chance, even with Mosaic's multimillion-dollar head start in its propaganda. Your voters may be deprived of information, and may be subject to a barrage of

disinformation, but they are not stupid.

The County should not bargain with Mosaic on any level. Not for more money, not for fewer wetlands, not for wider buffers. When analyzed objectively and fairly, with an attempt at full capture of economic externalities, there is every reason to reject these applications outright, take the lawsuit and defend the county against this company's predations once and for all. You will win, based on virtually all case law, and because it is not an actionable taking to simply stand pat behind your current codes.

If you don't stand up for the land and for the integrity of this County, Mosaic will be back over and over, bolder and bolder, demanding more, until the mines approach I-75, driving species out, driving land values ever downward, stifling more-sustainable forms of development, ending the county's ability to feed itself, wiping out tourism, altering the county's demographics and creating dependency on even the token sums it offers.

There is no public benefit to phosphate mining. Phosphate mining is a net economic loss to the state, the county, the people and the natural environment. It is also a clear and present ongoing threat to human communities and health, whether in Manatee County or not.

Deny these applications in their entirety.

Glen Gibellina....Community Activist
The activist is not the man who says the river is dirty,
The activist is the man who cleans up the river.
Ross Perot

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From: Gina Coke
To: Peterson, Mark E CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] PHOSPHATE MINING
Date: Sunday, July 23, 2017 11:50:48 AM
Attachments: PhosLtr0717.docx

Mr Mark E. Peterson,

Please read the attached letter on this urgent matter. As a resident and citizen, I have concerns to address.

Respectfully,

Ms Gina Coke

Dear Mr. Peterson:

Thank you for this opportunity to comment on permit application SAJ-2009-03221.

1. Wetlands are protected in the Clean Water Act (CWA), which states that healthy intact aquatic ecosystems are in the public interest. Wetlands store 40% of Earth's carbon output, reduce storm surge, function as some of the most vibrant and diverse habitats on earth, and provide food and shelter for listed and many other species, filter out pollution, recharge aquifers, retain stormwater and help minimize flooding.

2. *The Manatee County permit to mine Wingate East was gained in the face of clear and evident reasons to deny*, with over 2,000 speakers and writers in opposition versus 17 in favor. At the very least, a full Environmental Impact Statement (EIS) should be required, because under the National Environmental Policy Act (NEPA), one of the criteria for requiring a full EIS instead of an Environmental Assessment (EA) is "the degree to which the effects on the human environment are likely to be highly controversial."

The Manatee County permit is under legal challenge.

Furthermore, the principal environmental staff member for Manatee County has been dismissed after a long and troubled employment history, for substance abuse. His work is being analyzed and reassessed by consultants, which may result in further challenges.

3. *Phosphate mining fails the CWA public interest test*. Per 33 C.F.R. § 325.1(d)(1), the Corps must deny a permit application if it is "contrary to the public interest." Fertilizer, the principal justification alleged to offset the apocalyptic destruction of miles of whole landscapes, is not in the public interest, as claimed (see #5, below, and numerous reports such as Montgomery; Scientific American, April 2017).

But if it is, then the Corps must open the door to inclusion of all the impacts associated with the manufacturing of fertilizer. The Corps must either remove the alleged public benefit of fertilizer production from its consideration, or factor the impacts of transportation, fertilizer production, human health impacts and waste disposition into its consideration. The applicant and the Corps simply cannot have it both ways.

4. *The applicant's eight-page Statement of Need is spurious, and so narrow as to preclude all alternatives*. This is completely unacceptable, as numerous courts have ruled (*Id.* at 669; *Citizens for Smart Growth v. Sec'y of Dep't of Transp.*, 669 F.3d 1203 (11th Cir. 2012); *Davis v. Latschar*, 202 F.3d 359, 367?68 D.C. Cir. 2000), and demonstrates an unlawful willingness by the Corps to accept the applicant's facts and narrative without performing the required "probing, independent review" (*Simmons v. United States Army Corps of Eng'rs*, 120 F.3d 664, 669 n. 1 (7th Cir. 1997); *Balt. Gas & Elec. Co. Natural Res. Def. Council Inc.*, 462 U.S. 87, 106?07 (1983)) By unlawfully allowing the existing Statement of Need to stand unquestioned, the Corps is assenting *a priori* to the applicant's assertion that their exact preferred alternative, and no other, is the only practicable alternative, which is, without question, *not* the case.

5. Alternatives must be re-examined without deferential consideration of Mosaic's business needs over the requirements of the CWA and the public interest. (ibid)

Alternatives to chemical fertilizers must also be acknowledged and considered in the Corps' approval calculus. Alternatives such as using less fertilizer, recycling fertilizer, and farming with more sustainable

methods such as regenerative agriculture, which the UN is studying on a global scale (Montgomery; Scientific American, April 2017), have been unlawfully ignored, as the Corps again accepts the applicant's information without question, and without independent review.

6. *The AEIS separation of mining from processing and waste disposition is arbitrary and capricious*. There would be no point to mining without turning the phosphate into a marketable product. NEPA says the severity of a project's impact includes the degree to which the proposed action affects public health or safety—issues that are exported from Manatee County to other nearby counties, all in the AEIS study area. Mosaic is vertically-integrated, by the Corps' own admission. It owns the very facilities the AEIS ignores! Why would it own the facilities if they are not integral to the process that is only beginning with mining? The AEIS was prepared by CH2M Hill, a longtime consultant on the Mosaic payroll. No one outside of the Corps and Mosaic's sphere of influence trusts the objectivity of the AEIS and its content.
This convenient separation, which disallows consideration of toxic waste disposal, also, of course, disallows consideration of public health impacts. There have been no comprehensive epidemiological studies performed among communities living in proximity to gypstacks, even though anecdotal reports of widespread illness abound.

7. *Mosaic must not be allowed to self-monitor or self-regulate*. Its representatives blatantly lied at least twice during hearings at Manatee County under oath on January 15, 2017, and it was caught cheating on toxic waste disposal by EPA, resulting in a $2 billion settlement, (United States v. Mosaic Co: https://www.epa.gov/sites/production/files/2016-03/documents/florida-cd.pdf) because 8 gypstacks are now thoroughly contaminated with a higher order of toxic waste than before. An independent third-party must be secured to perform monitoring, data collection and analysis of all subsequent mining operations.

8. *Reclamation and mitigation have improperly become the Corps' default alternatives for wetlands*. They have improperly displaced the primary wetlands protection mechanisms in the CWA: avoidance, followed by minimization. Reclamation and mitigation are by no means proven methodologies; system failure is more the norm than the exception. The public will not have access to the reclamation and mitigation plan prior to the Corps' decision. This itself is in violation of NEPA, since the Corps must consider public input to qualify its decisions as "informed."

Has the Corps physically inspected the totality of Mosaic's so-called reclaimed lands, both released and unreleased? Or has the Corps just been shown Mosaic's demonstration projects, which are themselves the exception, having benefitted from millions in asymmetric restoration expenditures?

9. The economics of phosphate are misrepresented in AEIS and SEA. Economics are part of the suite of metrics considered in a CWA Section 404 determination of public interest. Phosphate mining is not an economic benefit to the county, state or nation, and is in fact a net loss. It leaves behind a mountain of uncaptured costs for future generations to deal with. Mosaic stated under oath that there will be no new jobs created by mining Wingate East. Therefore, any claims of economic benefit from jobs is fallacious.

The table of economic benefits (Table 1-4) in the AEIS, modified for the Wingate East EA, lists New or Retained Jobs, Annual Tax Revenue, and for the EA, a new item called "Value Added." Value added—over $1 billion—appears to suggest that the entire net profit of the phosphate being mined somehow accrues to the public. There could be no other reason for listing it. It is not explained in the EA, which is the only document where it appears. Furthermore, there is no established market value for separated slurries or any of the other intermediate stages between mining and chemical processing, so the only marketable commodity other than raw phosphate rock is phosphoric acid, Mosaic's finished product. That value-added includes, therefore, the many uncaptured costs associated with ore separation and chemical processing, which Mosaic, Manatee County, the Corps and the AEIS dismiss as "irrelevant" (as articulated by Mosaic attorney McGuire, February 15) to the consideration of mining (see Manatee County Wingate East hearings, January 15, January 26, February 15, 2017, and #5 above). There has been no attempt to identify or quantify these "externalities" – uncaptured costs passed downstream by unscrupulous corporate actors.

Furthermore, the table of economic benefits does not factor in agricultural and tourism jobs lost, today and in the future, as a result of mining. It does not account for the stark decline in taxable value of mined land, amply demonstrated in other counties, which can be as much as 75%, nor does it calculate those losses out over a 100-200-year time horizon, the minimum amount of time before these lands have any chance of returning to productivity, if ever. It does not account for wear and tear on the region's roads, which must endure tens of thousands of heavily-laded truck trips as ore is shipped to New Wales, and then waste phosphogypsum is sent to a gypstack. It does not admit that *as a publicly traded company, Mosaic sends virtually all its revenues out of state, to corporate headquarters for eventual shareholder distribution.*

The only revenues that will stay in Florida from mining at Wingate East are the multipliers from perhaps 200 relocated employees (which will be a loss to other, adjacent counties, which hardly constitutes a benefit), sixty recycled subcontractors, and a severance tax, a modest per-ton royalty paid to Tallahassee and shared among many counties.

Neither the AEIS nor the EA capture or even acknowledge the costs associated with phosphogypsum waste storage in "gypstacks," and the discharge of almost 5 million pounds per year of toxic and carcinogenic chemicals via its NPDES outfalls (EPA Toxic Release Inventory, 2016), where the toxic materials are diluted—"blended," in Mosaic doublespeak—until they meet regulatory standards (mosaicco.com/FAQs), then discharged into the landscape. The same amount of toxic waste, just diluted.

When Mosaic mines the last of the phosphate ore and leaves the state, it will leave behind 24 huge flat-topped mountains of radioactive, hazardous and toxic waste, with an EPA consent decree and funds to remediate only 8 of them (DOJ/EPA, 2016). Future generations will inherit the rest, and the liability for tens of billions in remediation costs, to be borne by taxpayers.

The phosphate industry is unpredictable, subject to boom-and-bust cycles. For this, and other reasons, phosphate mining stocks are among the worst-rated on Wall Street. Mosaic has not mined all the lands for which it has received permits, nor has it come close to reclaiming all the lands it has finished mining. When seeking delays, extensions and variances, as it does repeatedly, Mosaic cites lack of operating cash as a principal reason. In that light, it would make sense to hold any further permits, at the very least, until Mosaic catches up with its obligations.

Phosphate mining, far from a public benefit, is a ruinous public liability, with the capacity to bankrupt the state one day. Economic grounds alone should be enough to stop phosphate mining in its tracks. At the very least, the Corps should require financial assurance for a comprehensive remediation of impaired groundwaters and the 16 phosphogypsum "stacks" not covered in the EPA consent decree, in collaboration with EPA per CERCLA and RCRA. As the last phosphate mining company standing, having acquired and merged with the last remaining companies, the corporate legacy of liability inherited by Mosaic is clear, no matter who owned those stacks to begin with.

10. *The Endangered Species Act prohibits "takings," which include harm, harassment, and habitat modification or degradation*. Mosaic, taking advantage of the indefensible contention in FL legislative intent that phosphate mining is a "temporary land use," assumes that after 30-50 years, the land will once again be suitable habitat. There is no objective, peer-reviewed science to support that contention, and in fact, all the evidence before our eyes appears to indicate that mined land acquires a thin cover of nuisance vegetation, and remains unusable and uninhabitable (Jerue v. Drummond Company, Inc.) for an unknown period of time, perhaps centuries. Where exactly will the animals go during that time? How many will die from the disturbance, and from the animals' stubborn but innate instincts to remain at home?

The Corps must deny the permit. It has absolute authority to do so.

I further urge that he Corps host a public hearing somewhere in or near the Bone Valley.

Sincerely,

From: Brooks Armstrong
To: Peterson, Mark E CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Comment on Mosaic Application SAJ-2009-03221
Date: Monday, July 24, 2017 7:36:45 PM
Attachments: Hardee County CFRPC LAND USE SUITABILITY INDEX.pdf
Regarding Wingate East permit application number SAJ-2009-03221.docx

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Mr Peterson,
Please see my comments attached below as a word document, as well as these other references for your review
Thank you,
Brooks Armstrong

Commission Meeting Video <Blockedhttp://www mymanatee org/home/government/board-of-commissioners/bocc-meetings-and-agendas/streaming-video/commision-meeting-video html?
v=mp4%3A2017%2F20170215_landuse mp4&title=02/15/17%20Special%20Land%20Use%20Meeting%20(Continuation%20from%20January%2026%20and%2030,%202017)>

<Blockedhttp://www mymanatee org/home/government/board-of-commissioners/bocc-meetings-and-agendas/streaming-video/commision-meeting-video html?
v=mp4%3A2017%2F20170215_landuse mp4&title=02/15/17%20Special%20Land%20Use%20Meeting%20(Continuation%20from%20January%2026%20and%2030,%202017)>

Commission Meeting Video

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LAND USE SUITABILITY INDEX FOR USE IN HARDEE COUNTY

Prepared by:

CENTRAL FLORIDA REGIONAL PLANNING COUNCIL

For:

HARDEE COUNTY
BOARD OF COUNTY COMMISSIONERS

Submitted:
June 6, 2002

Adopted:
November 14, 2002
(Resolution No. 03-05)

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For:

HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

Principal Investigators:

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Submitted:
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INTRODUCTION

The primary task of this study was to develop a land suitability index that is applicable to all potentially developable lands in Hardee County, Florida. Development of the index is part of the ongoing revision of the Future Land Use Element of Hardee County's Comprehensive Plan and the Hardee County Mining Ordinance (Ordinance No. 1999-02).

Among the proposed revisions to the Future Land Use Element, under Objective L7 (Protect the economic viability of future land development in the County), is Policy 7.1, which states:

> The County shall adopt a "Land Use Suitability Index" to assess the ability of reclaimed lands to support and sustain various types of future development. The Index shall ultimately be employed to determine the value and contribution of post-mining scenarios to the economy and future growth of Hardee County.

Proposed revisions to the Hardee County Mining Ordinance (Ordinance No. 1999-02) include certain "Economic Diversity Requirements," among which will be the repatriation of reclaimed lands, certain minimum "Land Use Suitability" requirements, re-mapping of mined/reclaimed soils, a "no-mine" overlay, and other requirements.

According to current estimates, phosphate mining companies own nearly 100,000 acres of lands within Hardee County,[1] an amount roughly equal to a quarter of the county area. With the exception of Cargill's South Fort Meade Mine, these lands are situated west of the Peace River. It is these lands that are the focus of the present study. It is hoped that this study builds upon the results of an earlier regional land use planning and reclamation study conducted by the Central Florida Regional Planning Council on the phosphate mining industry (Long and Orne, 1990). Like that study, the present one represents an initial effort to develop and evaluate current and projected land use suitability information for Hardee County. The present study is also, in part, a response to Long and Orne's plea for more a comprehensive and integrated approach to the future land use planning of reclaimed mined lands.

SCOPE OF WORK

The original scope of services called for the development of a land suitability index that could be applied to all mined-reclaimed phosphate lands in Hardee County (Figure 1). Early in the project, it was decided that the index would be county-wide in application in order to place the land suitability of reclaimed lands into a broader geographic context and to facilitate comparisons with the suitability of unmined lands. Aside from that modification, the project followed the work plan set forth in the scope of services.

The general approach taken in the development of the land suitability index was to make full use of existing soil mapping and attribute data from the USDA Natural Resources Conservation Service's (NRCS) Soil Survey Geographic Database (referred to as SSURGO). SSURGO is a digital version of NRCS soils data and was chosen for use in this study because the data is

county-wide and because many of the soil attributes directly relate to land use suitability. Although the published (hardcopy) soil survey of Hardee County (Robbins et al., 1984) was frequently consulted in this study, SSURGO served as the principal source for soil data for two reasons: (1) it contained updated attribute data not contained in the hardcopy survey, and (2) it was in digital format, which enabled the study team to use GIS and database management softwares in the development of the land suitability index and the creation of corresponding land suitability maps. The published soil survey, however, was routinely consulted for narrative material on the soils and their associated attributes.

The project was broken down into four tasks. During Task 1, the post-reclamation (i.e., "future") soil mapping units that were determined to be equivalent to the various reclaimed landforms were identified. During Task 2, the associated soil attributes from NRCS's Soil Survey Geographic (SSURGO) Database were linked to the post-reclamation soils. Task 3 was devoted to building the land suitability index. This index included two subindices, one for agricultural suitability and one for urban suitability, with each mapped soil mapping unit assigned a suitability rank for each subindex. Task 4 linked the resulting index and subindices to the digital county soils mapping file and generated a series of maps displaying the existing (pre-mining) agricultural, urban, and combined agricultural-urban (i.e., overall land) suitability rankings. As an example of how the index can be applied to post-reclamation landforms, a map series focusing on IMC Phosphates' proposed Ona Mine was also produced[2]. As an extension of Task 4, comparisons were made between the existing (pre-mining) and post-reclamation conditions with respect to shifts in land suitability index values, not only for the Ona Mine site, but also for the estimated 100,000 acres of land owned by phosphate mining companies in Hardee County. To facilitate county-wide comparisons, an estimate of post-reclamation conditions was computed based on extrapolations from the Ona Mine comparisons.

MATERIALS AND METHODS

Mapping of the Future Soils in the Post-Reclamation Landscape

Mapping of the soils in Hardee County was based on 1970 aerial photographs (Robbins et al., 1984). Because phosphate mining had not yet begun in the county by that date, no soils ("land areas") directly resulting from mining or mine reclamation activities were identified or mapped. For the purposes of this study, the soils as mapped in the soil survey were taken to represent "existing" conditions. Unlike Hardee County, phosphate mining had long been underway in adjoining Polk and Hillsborough counties by the time their respective soil surveys were performed. The Polk County soil survey was issued in 1990 (Ford et al., 1990) and the Hillsborough County soil survey was issued the previous year (Doolittle et al., 1989). Consequently, several soil types resulting from phosphate mining were described and mapped in these two counties.

Mapping the future (post-reclamation) soils in Hardee County required that two steps be taken. First, those soil types corresponding to the various types of post-reclamation[3] landforms had to be identified. Second, the extent of these landforms within the areas proposed for mining in Hardee County, as shown on mine-specific post-reclamation soil maps or waste disposal plans, had to be mapped. A total of 14 soil types in Polk and Hillsborough counties that are associated with phosphate mining and/or reclamation were identified. In Polk County, these included

Hydraquents, clayey (Slickens); *Arents-Water complex*; *Neilhurst sand, 0-5% slopes*; *Haplaquents clay*; *Arents-Urban land complex, organic substratum*; *Neilhurst-Urban land complex, 1-5% slopes*; *Arents, 0-5% slopes*; and *Gypsum land*. In Hillsborough County these included: *Arents, nearly level*; *Gypsum land*; *Arents, very steep*; *Quartzipsamments, nearly level*; *Slickens*; and *Haplaquents, clayey*.

On March 22, 2002, the study team met with two NRCS resource soil scientists at NRCS' Bartow field office. Richard D. Ford (principal author of the Polk County soil survey) represented Polk County and Juan A. Vega represented Hardee County. The objective of the meeting was threefold: (1) review the above listing of phosphate mine-related soils, (2) obtain NRCS guidance in eliminating soil mapping units not considered representative of post-reclamation landforms (but rather of active mining or early reclamation landforms), and (3) identify which pairs of soil mapping units from Polk and Hillsborough counties were taxonomically equivalent, and equate these paired soil mapping units with their corresponding post-reclamation landforms.[4] As a result of that meeting, the original list of 14 soil mapping units was narrowed down to three paired mapping units considered to be the soil equivalents of three post-reclamation landforms: clay setting areas, sand-tailings, and overburden (Table 1). It was also recognized that NRCS would probably recognize sand-clay mix settling areas, which are currently being created by CF Industries, Inc. (CFI) at its Hardee Phosphate Complex, as one or additional post-reclamation soil mapping units. Currently, there appears to be no soil equivalent to sand-clay mixes in Florida.[5]

On May 1, 2002, the study team, accompanied by Messrs. Ford and Vega, joined CFI's John Kiefer on an inspection of several of CFI's sand-clay reclamation sites. Aside from an early field evaluation of initial stages of sand-clay reclamation (Garlanger, 1982), little published information is available on sand-clay mixes, particularly from a soils perspective. Based on that site visit, the study team concluded that, because of differential horizontal and vertical settling of the sand fraction, sand-clay mix comprise up to four different mine-related soil types ranging from clayey to sandy in texture[6]. However, for the purposes of this study, the study team felt that the sand-clay settling areas could be grouped with the clay settling areas and be assigned the same soil ratings and limitations ascribed to clayey haplaquents.[7]

Assignment of Associated NRCS Soils Attributes to the Future Soils

Once the future soils were equated with existing soil types, assignment of the associated NRCS soils attributes to the future soils was a simple spreadsheet exercise. Because the soil ratings and limitations of the paired Polk-Hillsborough soil types were virtually identical with respect to one another, a single database record for each of the three future soil types was created by copying over those SSURGO soil attributes needed for constructing the land suitability index. For example, for any clay settling area, the soil attributes shared by clayey Haplaquents were linked to it; for any sand tailing area, attributes for Neilhurst/Quartzipsamments soils were linked; and for any overburden or overburden-sand tailing areas, the Arents attributes were linked. At present, post-reclamation soils mapping is available only for the proposed Ona Mine (Figure 2), so the SSURGO soils attributes were linked to this file[8]. As new or revised post-reclamation soils or waste disposal plan maps become available for mines in Hardee County, this same linkage procedure can be quickly performed and the maps made ready for calculating land suitability index values.

Development of the Land Suitability Index

Land suitability is a central feature of the land evaluation process. Many different land evaluation systems have been devised to classify land for specific purposes. Among the more widely known systems are USDA's Land Capability Classification (Klingebiel and Montgomery, 1961) and Land Evaluation Site Assessment (U.S. Department of Agriculture, Soil Conservation Service, 1983), the various FAO land evaluation systems (Food and Agriculture Organization of the United Nations, 1985), the Fertility Capability Soil Classification System (Sánchez, Couto and Buol, 1982), U.S. Bureau of Reclamation's Land Suitability for Irrigation (U.S. Department of the Interior, Bureau of Reclamation. 1951). Land evaluation can be defined as "the process of assessment of land performance when [the land is] used for specified purposes" (Food and Agriculture Organization of the United Nations, 1985); or put another way, "all methods to explain or predict the use potential of land" (Van Diepen et al., 1991). Land evaluation can be a vital tool for land use planning and can be used by both land users or by land planners. Land evaluation offers a diverse set of analytical techniques to describe land uses, predict the physical and economic responses of land to these land uses, and optimize land use in the face of multiple objectives and constraints (Rossiter, 2002).

In developing an appropriate land suitability classification system for Hardee County, the availability of an information source that was widely recognized, mapable, and county-wide in geographic extent were of paramount concerns. The only dataset that satisfied these concerns was the USDA-NRCS Soil Survey Geographic (SSURGO) database. SSURGO consists of geo-referenced digital spatial data, metadata, and a tabular soil database documenting the properties for each soil type (USDA-NRCS, 2002). SSURGO includes the land capability classes and subclasses for each soil type in Hardee County, as well as soil potential ratings for a variety of urban-type land uses and land features.

Each soil in the county, with the exception of the *Water* and *Pits* soil mapping units, was assigned an agricultural suitability value of 1 to 5 and a corresponding urban suitability value of 1 to 5 (with "1" denoting the highest relative suitability and "5" the least relative suitability). To create an overall land suitability index value on a scale of 1 to 10, each soil's score on the two subindices was summed and reduced by one. A score of "10" was be reserved for *Water* and *Pits*. A land suitability score of "1" denotes the soil mapping units with the highest relative land suitability for urban and agricultural development, while a score of "10" denotes soil mapping units with the lowest relative land suitability.

Agricultural Suitability Subindex. The *agricultural suitability subindex* proposed for Hardee County is based entirely on NRCS's land capability classification system[9]. Originally formulated in 1938 (Norton, 1938), the land capability classification (LCC) is a system of grouping soils primarily on the basis of their capability to produce common cultivated crops and pasture plants without deteriorating over a long period of time. The basic aim of the LCC is to rank all soils from "best" to "worst" according to the degree of relatively permanent physical limitations to productive land use (e.g., agriculture, grazing, and forestry) (Rossiter, 2002). NRCS's National Resources Inventory[10] information and many field office technical guides have developed guidelines and procedures for assigning soils to one or another of these classes. The system has been adopted in many textbooks and has wide public acceptance, both nationally and internationally.[11] The 1985 Farm Bill incorporated the LCC system and several state

legislatures have incorporated the LCC in farm conservation laws (Klingebiel and Montgomery, 1961; USDA-NRCS, 2001: §622.02).[12]

The LCC is one of a number of NRCS-based interpretive groupings of soils made primarily for agricultural purposes. As with all interpretive groupings, the LCC begins with the individual soil mapping units, which are building stones of these groupings. The soil mapping unit (the unit that is mapped in soil surveys, including the Hardee County soil survey) provides the basis for all interpretive groupings of soils, including the LCC groupings. It provides the information needed for developing capability units, and well as forest site, crop suitability, range site, engineering, and other interpretive groupings (Klingebiel and Montgomery, 1961).

Although the original and still primary purpose of the LCC is for farm planning, NRCS has made other uses of the LCC ratings, including land use planning and inventorying conservation needs. After World War II, the land capability classification was also being used for tax assessment purposes (Helms, 1992). The current version of the LCC is detailed in Agricultural Handbook 210, Land-Capability Classification, issued in 1961 (Klingebiel and Montgomery, 1961).

The LCC is subdivided into capability class and capability subclass, and these are assigned to soil mapping units (map unit components) in the national soil information system and incorporated in the SSURGO database. The capability class is the broadest category in the LCC. It groups together those soils sharing the same relative degree of hazard or limitation. The only information concerning general agricultural limitations in soil use are obtained at the capability class level. For information on soil suitability with respect to woodland or range use, the range site and woodland-suitability groupings should be consulted (Klingebiel and Montgomery, 1961).

There are eight capability classes in the LCC system. These classes are differentiated on the basis of soil and climatic limitations in relation to the use, management, and soil productivity. Classes are based on both degree and number of limitations affecting kind of use, risks of soil damage if mismanaged, needs for soil management, and risks of crop failure. The risks of soil damage or limitations in use become progressively greater from class 1 to class 8. Soils in the first four classes are considered *arable soils* (soils suitable for long-term sustained use for cultivated crops) and are grouped according to their potentialities and limitations for sustained production of the common cultivated crops that do not require specialized site conditions. *Non-arable soils* are similarly grouped but in terms of production of permanent vegetation and according to their risks of soil damage if mismanaged. Some soils in classes 5 and 6 are also capable of producing specialized crops, such as certain fruits and ornamentals, and even field and vegetable crops under highly intensive management involving elaborate practices for soil and water conservation (Helms, 1992; Klingebiel and Montgomery, 1961).

The following class definitions are taken from the USDA-NRCS's National Soil Survey Handbook (§622.02):

- *Class 1* soils have slight limitations that restrict their use.
- *Class 2* soils have moderate limitations that reduce the choice of plants or require moderate conservation practices.
- *Class 3* soils have severe limitations that reduce the choice of plants or require special conservation practices, or both.

- *Class 4* soils have very severe limitations that restrict the choice of plants or require very careful management, or both.
- *Class 5* soils have little or no hazard of erosion but have other limitations, impractical to remove, that limit their use mainly to pasture, range, forestland, or wildlife food and cover.
- *Class 6* soils have severe limitations that make them generally unsuited to cultivation and that limit their use mainly to pasture, range, forestland, or wildlife food and cover.
- *Class 7* soils have very severe limitations that make them unsuited to cultivation and that restrict their use mainly to grazing, forestland, or wildlife.
- *Class 8* soils and miscellaneous areas have limitations that preclude their use for commercial plant production and limit their use to recreation, wildlife, or water supply or for esthetic purposes (USDA-NRCS, 2001).

Table 2 summarizes the limitations, land uses, corrective measures, and capability subclasses associated with these eight land capability classes. This table shows that as the limitations increase in severity, the possible land uses decrease in intensity, and greater corrective measures are needed.

The capability subclass is the second category in the land capability classification system. It identifies major management concerns associated with each soil type. Subclass codes *e*, *w*, *s*, and *c* are used for land capability subclasses. Subclass *e* is made up of soils for which the susceptibility to erosion is the dominant problem or hazard affecting their use. Subclass *w* is made up of soils for which excess water is the dominant hazard or limitation affecting their use. S*ubclass s* is made up of soils that have soil limitations within the rooting zone. Subclass *c* is made up of soils for which the climate (the temperature or lack of moisture) is the major hazard or limitation affecting their use (Klingebiel and Montgomery,1961; USDA-NRCS, 2001: §622.02). Some states utilize a *capability unit*, which provides specific information on the nature of the limitation identified at the subclass level.[13] For the present study, it was decided that the class level alone (not the subclass) provided sufficient basis for constructing an agricultural suitability subindex.

It should be noted that the LCC class and subclass codes assigned to a particular soil type were not meant to be permanent. Any number of changes in the land such as accelerated erosion, accumulation of salts, artificial drainage, or supplies of irrigation water would call for reclassification of the area. Likewise the introduction of new crops and farming methods would call for a reappraisal of a soil's rating (Helms, 1992; Klingebiel and Montgomery, 1961).

The soils of Hardee County, as currently mapped, are grouped into one of five capability classes. Although there is no Class 1, 2, or 8 soils, Classes 3 through 7 are present. Table 3 lists the acreage and proportionate extent of the soils grouped by LCC class. Nearly three-fourths of the County is underlain with arable soils (Classes 1 through 4), with Class 3 soils accounting for 17.6 percent and Class 4 55.1 percent. Among the nonarable soil group (Classes 5 through 8), Class 5 accounts for 12.6 percent, Class 6 3.2 percent, and Class 7 11.3 percent.

After the LCC class codes were compiled for each existing and future soil type (soil mapping unit), one final step was taken in order to construct the agricultural suitability subindex. LCC Class 3 soils were assigned an index value of 1 (the highest rank), Class 4 an index value of 2,

Class 5 an index value of 3, Class 6 and index value of 4, and Class 7 an index value of 5 (the lowest rank).

Urban Suitability Subindex. The *Urban Suitability Subindex* was constructed by averaging the soils-based limitation ratings for six attributes and partitioning these averages into "natural" classes.[14] Five of the selected attributes are representative of uses typical of urban settings. Four are associated with building site development (dwellings without basements, small commercial buildings, local roads and streets, and lawns and landscaping) and one is associated with sanitary facilities (septic tank absorption fields). The NRCS assigned one of three possible ratings for these limitations (slight, moderate, and severe). A sixth attribute, soil drainage class, was later added because most of the soils ratings limitations were due to wetness. Adding the drainage attribute helped further differentiate among the lower rated soils.

According to the Hardee County soil survey:

> The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and the limitations are minor and easily overcome; *moderate* if the soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction coasts, and possibly increased maintenance are required (Robbins et al. 1984: 41).

Dwellings without basements and *small commercial buildings* are structures built on shallow foundations on undisturbed soil. The load limit equals that of a single-family dwelling three stories or less in height. The limitation ratings are based on soil properties, site features, and observed performance of the soils as these relate to the potential movement of footings, ease of excavation and construction, and landscaping and grading involving cuts and fills less than five feet.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic year-round. They have a sub-grade of cut or fill soil material, a base of gravel, crushed rock, or stabilized soil material, and flexible or rigid surface. Cuts and fills are generally less than six feet. The limitation ratings are based on soil properties, site features, and observed performance of the soils as these affect the ease of excavating or grading and traffic supporting capacity.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. The limitation ratings are based on soil properties, site features, and observed performance of the soils as these affect plant growth and trafficability after vegetation is established.

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. The limitation ratings are based on soil properties, site features, and observed performance of the soils (specifically between 24 and 72 inches depth) as these affect absorption of the effluent or interfere with installation (Robbins et al. 1984: 42).

Soil Drainage Classes identify the natural drainage condition of the soil. It provides a guide to the limitations and potentials of the soil for field crops, forestry, range, wildlife, and recreational uses. The class roughly indicates the degree, frequency, and duration of wetness, which are factors in rating soils for various uses (USDA-NRCS 2001: 618-16). *Excessively drained* soils are the driest of the soils in Hardee County, followed, in order of increasing wetness, by *well drained*, *moderately well drained*, *somewhat poorly drained*, *poorly drained*, and *very poorly drained* soils. The latter soils are invariably hydric and are associated with historic wetlands (Robbins et al. 1984).

The following steps were followed in constructing the urban suitability subindex for the existing and future soils. For the four building site development and septic tank criteria, a rating of "slight" was assigned a score of 1, a "moderate" rating a score of 3, and a "severe" rating a score of 5. For the drainage classes, excessively and well drained soils were assigned a soil of 1, moderately well drained soils a score of 2, somewhat poorly drained soils a score of 3, poorly drained soils a score of 4, and very poorly drained soils a score of 5. Next, the six scores for each soil were summed and an average score computed. The average scores were then grouped into five classes using natural breaks using ArcView GIS software (version 3.2a). This method identifies breakpoints by looking for groupings and patterns inherent in the data. A complex statistical formula (Jenks optimization) that minimizes variation within each class was used (ESRI, 1996).

Land Suitability Index. As indicated previously, building the land suitability index was a simple matter of adding the agricultural and urban subindices together and reducing that value by one and assigned a score of 10 to *Water* and *Pits*. Again, a land suitability score of 1 denotes the soil mapping units with the highest relative land suitability for urban and agricultural development, while a score of 10 denotes soil mapping units with the lowest relative land suitability.

The land suitability index, as well as its component agricultural and urban subindices, was compiled as three separate stand-alone dBASE IV (.dbf) format database file using Excel 2000 spreadsheet software. Each record in these database files includes a unique soil map unit identification symbol (the MUID field in the SSURGO files) and its corresponding index or subindex score. These files are reproduced in Appendix A (the soil mapping unit name, or soil type name, was added in order to make the data more interpretable for the reader).

Map Preparation

A series of maps showing the existing agricultural, urban, and overall land suitability for all of Hardee County and for IMC Phosphates' proposed Ona Mine was created using ArcView GIS software (version 3.2a). A second series of maps focusing on the proposed Ona Mine and showing the post-reclamation agricultural, urban, and overall land suitability index results was also generated.

Comparing Existing Versus Future Land Suitability

Total acreage by agricultural, urban, and overall land suitability index scores was extracted from the completed index and subindex database files. The Ona Mine was evaluated in terms of within-class proportional shifts between existing and future conditions for the three indices (e.g.,

percent increase or decrease in the geographic extent of Class 1 agricultural suitability areas between existing and future conditions). Without the benefit of post-reclamation soils or reclamation plans from all the phosphate mining firms (save for the proposed Ona Mine) that have existing or planned mines in Hardee County, an estimate of these within-class shifts was computed. This estimate assumed that the proportion of post-reclamation landform and no-mine (preserved) areas and the same proportional shifts evident in the Ona Mine data would apply to the remaining mine properties. As additional post-reclamation soils become available, this estimate can be refined.

RESULTS

It is evident, after applying the agricultural, urban, and the overall land suitability index that Hardee County is endowed with an abundance of land suitable for agricultural uses, but a relative scarcity of lands naturally suited for urban uses. The results of applying the index to all of Hardee County, as well as to the proposed Ona Mine, are presented in Tables 4 through 11 and are graphically portrayed on Figures 3 through 11.

Existing Agricultural Suitability

Approximately three-quarters of the lands in Hardee County scored 2 or higher on the existing agricultural suitability subindex (Table 4; Figure 3). Class 2 lands are most prevalent, occupying 57.6 percent of the county, followed, in descending order of extent, by Class 1 (17.6%), Class 3 (12.6%), Class 5 (8.8%), and Class 4 (3.2%). Generally speaking, Class 1 lands occur in the better drained soils along portions of the major streams in the county (Peace River and Payne, Horse, Troublesome, and Charlie creeks). Class 2 lands are predominant throughout the flatwoods sections of the county. Class 3, 4, and 5 lands occupy stream floodplains, flatwoods sloughs, and wetlands.

Existing Urban Suitability

Most of the county (77%) rates as Class 4 urban lands (Table 5; Figure 4). An additional 11.5 percent rates as Class 5. Higher rated lands are significantly less frequent, with Class 1 accounting for less than one percent, Class 2 just over two percent, and Class 3 nearly nine percent. The generally poor rating of the county lands on the urban suitability subindex is largely a reflection of the prevalence of the low-lying topography and the poorly drained nature of the soils.

Existing Overall Land Suitability

Over half of the county (55.3%) falls in the Class 5 category using the land suitability index (Table 6; Figure 5), an additional 17.5 percent Class 6, 9.4 percent Class 4, 8.6 percent Class 9, and 6.5 percent Class 3. The remaining classes make up less than one percent. The more suitable lands (Classes 1 and 2) are concentrated in the uplands around Payne Creek and along portions of the Peace River, with smaller areas scattered throughout all sections of the county. As with the agricultural land ratings, flat topography and soil wetness were major factors accounting for the prevalence of lower ranked lands.

Comparison of Existing and Future Land Suitability

The draft post-reclamation soils map for the proposed Ona Mine provided an opportunity to illustrate the value of the land suitability index for evaluating effects of mining on land suitability as reflected by the index (Figure 2 above). Specifically, the index may be used to examine the geographic extent of shifts in land suitability between existing (pre-mining) and future (post-reclamation) conditions for a given unit of land. As proposed, it is estimated that, upon completion of reclamation, the Ona lands will consist of 7,072 acres of sand tailing fill, 6,896 acres of phosphatic colloidal clays, 5,012 acres of overburden, 4,903 acres of preservation area, and 338 acres of unmined-disturbed soils.

Ona Mine - Future Agricultural Suitability. Figures 6 and 7 show the existing and future agricultural suitability, respectively, of the proposed Ona Mine property. A comparison of the two figures reveals a significant downward shift in agricultural suitability. The shifts are also quite evident when examined in tabular form (Table 7). Class 1 agricultural lands will be reduced by nearly 1,300 acres, Class 2 lands by over 12,600 acres, and Class 3 lands by 850 acres. In place of these higher ranked agricultural lands will be dramatic increases in lower ranked agricultural lands, with Class 4 lands showing the most marked gains (over 10,000 acres), followed by Class 5 lands (nearly 4,400 acres).

Ona Mine - Future Urban Suitability. Figures 8 and 9 show the existing and future urban suitability, respectively, of the proposed Ona Mine property. Unlike the shifts for agricultural lands, pre-post mining shifts in urban land suitability are less dramatic and mainly involve offsetting increases/decreases in the mid to lower ranked lands. A significant increase in Class 3 urban lands occurs, largely at the expense of Class 4 lands (Table 8). Existing Class 1 and 2 urban lands are limited to nearly 440 acres, all of which shifts to Class 3 lands after mining. Class 5 lands are essentially unaffected.

Ona Mine - Future Overall Land Suitability. Figures 10 and 11 show the existing and future overall land suitability, respectively, of the proposed Ona Mine property. Overall, there is a downward shift in land classes, which is largely an artifact of the pronounced decline in agricultural suitability (Table 9). There are no Class 1 or 2 lands, and limited acreage of Class 3, 7, and 10 lands. The predominant class represented at Ona, Class 5, shows the largest decline in raw numbers and percentage, with over 12,000 acres being replaced by Class 6 and 9 lands. A significant but lesser magnitude decline in Class 4 lands is also evident.

Countywide - Future Agricultural Suitability. Extrapolating the results of the projected agricultural, urban and overall land suitability shifts for the Ona Mine to these lands, an approximate estimate of the effects on phosphate mining on suitability values can be obtained. Table 10 presents an extrapolated comparison of agricultural and urban suitability values between existing and future conditions. For the purposes of this comparison, it is assumed that the lands owned by mining companies have same proportion of soils as has the proposed Ona Mine. It is estimated that approximately 5,500 acres of Class 1 lands, 54,500 acres of Class 2 lands, and 3,700 acres of Class 3 lands will be replaced by 45,000 acres of Class 4 lands and 19,000 acres of Class 5 lands.

Countywide - Future Urban Suitability. Shifts in urban suitability primarily involve a reversal of acreage between Class 3 and 4 lands (Table 10). Approximately 600 acres of Class 1 lands

and 1,700 acres of Class 2 lands will be lost. Although Class 4 loses over 60,000 acres, the loss is offset by gains in Class 3 (44,300 acres) and Class 5 lands (19,500 acres). Class 1 and 2 lands will remain essentially unchanged.

Countywide - Future Overall Land Suitability. In terms of the overall, or combined, land suitability values, there is a downward shift in land classes, which, like the Ona results, is largely an artifact of the pronounced decline in agricultural suitability in combination with mid-value shifts in urban suitability which tend to negate each other (Table 11). Because there are no Class 1 or 2 lands at the Ona Mine, approximations for these classes could not be made. The predominant class represented for the mining lands is Class 5. It is also the land class most adversely affected in terms of reduced areal extent and percentage, with an esimated 47,300 acres being replaced by Class 6 and 9 lands. A significant but lesser magnitude decline in Class 4 lands is also evident. The remaining classes were either minimally affected (Class 3 and 4) or were of limited extent (Class 7 and 10).

DISCUSSION

Several studies have been published in the past two decades that address the agricultural potential of reclaimed phosphate mined lands. One of the more ambitious of these was the Mined Lands Agricultural Research and Demonstration Project (MLARD), a ten-year program of research that examined the agricultural potential of colloidal phosphatic clay. Summary results of this decade-long study were published by the Florida Institute of Phosphate Research (FIPR) in the mid-1990s (Shibles, 1994); Hanlon et al., 1996). An overview and retrospective of the MLARD project was recently presented by James Stricker, the Principal Investigator and Project Director of the MLARD project (Stricker, 2000). The MLARD program also published a number of detailed studies addressing various aspects of the project.[15] In addition to other findings, MLARD researchers also developed recommendations for modifying reclamation techniques to better prepare reclaimed lands for agricultural use (Hanlon et al., 1994). Prior to and concurrent with the MLARD project, Dr. Paul Mislevy and associates, based at the University of Florida's Range Cattle and Education Research Center in Ona, published a number of studies on the viability of producing certain forage crops on phosphatic clays (Mislevy and Blue, 1981a, 1981b, and 1981c; Mislevy et al., 1989, 1990a, 1990b, 1991a, and 1991b; Blue and Mislevy, n.d., and 1990).

Aside from the MLARD studies and Mislevy's research, there is little published research relating to the agricultural potential or productivity of reclaimed mine lands. Most such research was funded by FIPR, and is now somewhat dated. These investigations examined cash crop production on sand-clay mix (Bromwell and Carrier, 1989) and citrus plantings (Zellars-Williams, 1988). The Zellars-Williams investigated citrus plantings on overburden and sand tailings, and to a lesser extent, on sand-clay mix. The authors concluded that overburden was a viable substrate for citrus growth but that there was insufficient evidence to determine whether citrus could be grown economically on sand tailings. The authors also cited economics or profitability as constraints on the future of citriculture on sand tailings fill (Zellars-Williams, 1988). The Bromwell and Carrier study demonstrated that these soils can produce commercially important crops but that trafficability[16] problems increased as the ratio of clay to sand increased (Bromwell and Carrier, 1989). Notwithstanding the rather optimistic results of these studies, very little acreage of reclaimed land have been used for commercial agriculture (e.g., row or field

crops) or citriculture. The predominant agricultural use is improved pasture. According to SWFMWD's 1999-2000 land use/land cover mapping, of the estimated 48,775 acres of mined soils in Hillsborough and Polk counties, only 675 acres (just over 1%) are in citrus, 33 acres in row crops, and six acres in nurseries/vineyards (probably sod farms). Roughly 3,510 acres (7.2%) is classified cropland/pastureland (a catch-all category that SWFWMD GIS staff has suggested is largely pasture land), and 202 acres is classified as open rural land.

A thorough review of the findings of the MLARD project findings is beyond the scope of the present study. It is appropriate, however, to summarize some its key findings as they relate to present-future agricultural suitability assessment. MLARD successfully demonstrated that phosphatic clays are "fertile" soils that are capable of growing high quality commercial crops such as forage grasses, tropical cultivars, and biomass crops (although grain yields were marginal). However, numerous problems and limitations were also documented (Hanlon et al., 1996; Stricker 2000). One of the most difficult problems to overcome was the inability to work the phosphatic clays when wet. Phosphatic clays are documented to be extremely low in permeability, pose safety risks and trafficability problems, and require costly drainage improvements and maintenance. These soils are also often highly variable in surface topography (due to differential horizontal and vertical settling), texture, and substrate consistency. Water quality concerns arising from stormwater runoff were also cited. Because of the unworkable nature of phosphatic clays when wet, farming is effectively limited to the dry season, and even then, the occasional winter storms associated with the passage of cold fronts may hinder access to crop fields, and provides the potential for total crop failure, depending on drainage and surface conditions.

Specialized, non-conventional farming technologies are needed for site preparation, tillage, and harvesting on phosphatic clays (Shibles, 1994; Stricker, 2000). This may add significantly to agricultural production costs. Another problem cited by the MLARD research is an apparent lack of markets and market capacity for agricultural crops grown on phosphatic clays. In addition, short-term land leases, which are traditionally used by phosphate mining companies, have discouraged investments on the part of the lessees for drainage and other capital improvements (Stricker 2000; Hanlon et al., 1996). Invasive exotic plant species also pose serious management and maintenance problems, not only for reclaimed lands, but potentially for adjacent or nearby properties. A recent study found 11 species listed as exotic/nuisance plant species by the Florida Exotic Pest Plant Council on naturally reclaimed clay settling areas (Doherty, 1991; Erwin et al., 1997). Clearing of these and other plants that typically form a dense vegetative growth adds to the cost of converting clay settling areas to agricultural use. Finally, there is concern over the adverse public perceptions of growing and/or consuming crops grown on phosphatic clays due to elevated levels of radionuclides (Guidry 1990; Guidry et al., 1991; Stricker 2000).

Simply stated, agricultural production on phosphatic clays is a risky venture. In the words of the MLAR/D project manager, "rather than being performed at optimum times, disease and insect control or even final harvest may be limited to periods of dry weather. Such rain delays can often result in *crop/economic loss*, creating a *high risk* setting when crop production on phosphatic clay is approached in a conventional manner" (Shibles 1994: xxxi) [emphasis added]. This clearly implies that non-conventional approaches to farming will be required, which translates into increased production costs. In consideration of the MLARD findings, the LCC Class 7 rating assigned to phosphatic clays is appropriate given the factors upon which the

classification system is based: (1) inherent physical soil limitations that constrain land use; (2) the risks of soil damage; (3) the need for soil management; and (4) risks of crop failure. Moreover, the absence of commercial agricultural land uses reflects the limitations imposed by the surface disposal of phosphatic waste clays.

With respect to the agricultural use potential of overburden and sand tailings, their Class 6 rating is not very dissimilar to the LCC ratings for unmined soils traditionally used for citriculture. These latter soils are generally dry mineral sands of very low fertility (e.g., Candler, Astatula, or St. Lucie soil series). According to SWFWMD's 1999-2000 land use/land cover data, nearly all of the 675 acres of citrus groves on mined soils occur on overburden or sand tailings fill.[17]

The less dramatic declines obtained for the pre-mining versus post-reclamation urban suitability assessment are consistent with recent land use data from the region. Considering SWFMWD's 1999-2000 land use/land cover within Hillsborough and Polk counties' mined soil areas, there is some acreage in urban uses. Approximately 2,400 acres has been converted to residential development, 640 acres to commercial uses, 140 acres to institutional uses, 650 acres to industrial uses, and 1,270 acres to recreational uses. Much of this urban land conversion has taken place in the southern and eastern portions of Lakeland. Consistent with the adage, "location, location, location," where reclaimed overburden and sand tailing landforms are situated in the path of urban growth, and real estate values are elevated, such as along State Road 37, such lands may be viewed as developable. Under "bullish" market conditions, developers might be willing to pay the extra costs potentially associated with building on reclaimed lands. However, little if any urban development has taken place on waste clay disposal sites, which is understandable given the extreme physical shortcomings of clays as support for foundations as cited in AASHTO and Unified Soil Classification System ratings for clay soils (cf. Dunn et al., 1980; Wagner 1957).

CONCLUSIONS

The land suitability index developed as part of this study provides a basic method of assessing the capability of reclaimed lands to support sustainable future agricultural and urban development. It is based on the USDA's land capability classification system and represents a technically reasonable use of a well-known, widely accepted, readily available, county-wide land suitability database. As new information on a soil's physical properties, or new farming techniques, improved management systems, or other social or technological innovations are developed and implemented, the LCC ratings may well be reclassified.

The results of this study indicate that future land use patterns, in particular the ability to support various types of commercial agriculture and urban development, may be substantially altered as a result of large-scale phosphate mining in Hardee County.

ENDNOTES

[1] Based on the latest preliminary mapping information from Florida DEP-Bureau of Mine Reclamation, four different phosphate companies (Cargill, CF Industries, Farmland Hydro L.P., and IMC Phosphates, Inc.) collectively own approximately 99, 650 acres of land in Hardee County.

[2] The Ona Mine's property boundary and post-reclamation soils GIS files are draft products, subject to revision. They are intended only to illustrate how the land suitability index can be applied. Among the strengths of the index is its adaptability to changing property and soil boundaries. When an updated version of the Ona Mine files, or for that matter any of the phosphate mines, becomes available, the index can simply be linked to the electronic versions of these files and an updated index map can be immediately produced.

[3] This study sought to identify soils whose landforms represent an advanced or completed state of reclamation. Soils representing active mining or early stages in the reclamation process were deemed irrelevant, as these soils and their associated landforms would eventually be replaced by other soils and landforms representing advanced or completed reclamation.

[4] Eight soil types were eliminated from further consideration as future soils candidates. The eliminated soils were *Arents-Urban land complex*; *Arents, very steep*; *Arents-Water complex*; *Gypsum land*; *Hydraquents, clayey*; *Neilhurst-urban land complex*; and *Slickens*. Although no phosphogypsum stacks in Hardee County are planned for the foreseeable future, its associated soil type, *Gypsum land*, was included in the land suitability index as these represent a potential future post-reclamation landform type.

[5] Although one or more of the older settling areas at the PCS Phosphate Mine in Aurora, NC, were reported to contain a sand-clay mix, both the printed Beaufort County soil survey (issued in 1995) and the associated SSURGO data simply labeled the PCS settling areas as "Slime Ponds" and provided no attribute data. The printed survey did not even recognize Slime Ponds as a soil mapping unit.

[6] Sandier material tended to form deltaic fans around the discharge pipes. The sand-to-clay ratio also appeared to be higher near the discharge pipe. The farther from the discharge pipe, the lower the sand-to-clay ratio.

[7] It was surmised that NRCS would have assigned land use-related ratings and limitations to sand-clay settling areas very much like those currently assigned to clay settling areas (i.e., similar, if not identical, land capability class/subclass, and suitability for houses, small commercial buildings, local streets and highways, lawns and landscaping, and septic tank absorption fields).

[8] The post-reclamation soils mapping of the proposed Ona Mine was obtained from IMC Phosphates' as part of an ongoing Development of Regional Impact (DRI) review. The file is an ArcInfo coverage named "Post_soils" and is dated April 19, 2000. It is a draft version of post-reclamation soils and is subject to change as the DRI review proceeds.

[9] An attempt was made to incorporate crop yield data (tomato, grapefruit, orange, and bahiagrass) and rangeland productivity. The crop yield data was not complete, with several soil types having no data. The rangeland data was not included in the SSURGO dataset, but was included in the published soil survey. However, because of the deficiencies in the crop yield data, it was decided to abort a multi-criteria approach and instead use the Land Capability Classification ratings.

[10] The National Resources Inventory is (NRI) is a statistically based sample of land use and natural resource conditions and trends on U.S. nonfederal lands. It is the most comprehensive database of its kind ever attempted anywhere in the world. The NSI serves as the Federal Government's principal source of information on the status, condition, and trends of soil, water, and related resources in the United States. More information on the NRI can be found on the NRI website at http://www.nrcs.usda.gov/technical/NRI.

[11] Canada, Great Britain, the Pacific Rim countries, and others have modeled their respective adopted land capability classifications after the USDA system.

[12] In assigning soils to the various capability groupings a number of assumptions are made: (1) the system considers only *relatively-permanent* land characteristics (for this reason, physical LCs such as stoniness are given more weight than chemical LCs such as pH), (2) within a class there may be very different soils but with the same degree (in a subclass, also kind) of limitations; (3) it is not a productivity rating; (4) Class 4 land could be more productive than class 1 but also be more fragile; (5) no attempt was made to determine profitability; (6) a single, moderately-high level of management is assumed; (7) if major land improvements are made, the land should be reclassified; (8) the cost of the land improvement is not considered; (9) geographic factors such as distance to market, kinds of roads, size and shape of soil areas, location within a farm or field etc. are not included.

[13] Capability unit information was not presented in either the printed or SSURGO versions of the Hardee County soil survey.

[14] An attempt was made to incorporate AASHTO or Unified Soil Classification System (USCS) ratings as criteria. However, these systems tended to group the soils of Hardee County into only two classes, making AASHTO and USCS of limited value for building a suitability index.

[15] For a complete listing of these studies, the reader is encouraged to consult Shibles (1996) and Hanlon and associates (1994).

[16] Trafficability (as used in the MLARD studies) refers to the accessibility to traffic for field operations, especially after a rainfall for irrigation. The clay is slippery and sticky, causing tractors and other vehicles to lose traction or become mired (Hanlon et al., 1996: 36).

[17] A small (~1.7 acre) grove is currently on CF Industries land in northwestern Hardee County. Other citrus groves may be growing on mined soils in other sections of Hardee County, but because NRCS has not yet mapped mined lands in the County, such as areas were not identified in this study.

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TABLES

Table 1. Post-reclamation soil types in Polk and Hillsborough counties and their associated post-reclamation landforms.

Equivalent (Paired) Soil Types	Associated Post-Reclamation Landforms
Haplaquents clay (P) / Haplaquents, clayey (H)	Clay setting areas
Arents, 0-5% slopes (P) / Arents (H)	Overburden or overburden/sand tailings mix
Neilhurst sand, 0-5% slopes (P) / Quartzipsamments, nearly level (H)	Sand tailings
new soil to be identified	sand-clay setting areas

Source: soils surveys for Polk and Hillsborough counties (Ford et al. 1990; Doolittle et al. 1989).
(P) denotes Polk County soil type, (H) denotes Hillsborough County soil type.

Table 2. Land capability classes and their limitations, land uses, and corrective measures.

Capability Class	Limitations	Possible Land Use	Possible Corrective Measures	Possible Capability Subclasses
1	No limitations for cropland	Very intense cultivation of field crops	Fertilization to maintain productivity	None
2	Moderate limitations for cropland	Intense cultivation of field crops	Drainage, fertilization, conservation	e, w, s, c
3	Severe limitations for cropland	Moderate cultivation of field crops	Drainage, fertilization, conservation	e, w, s, c
4	Very severe limitations for cropland	Limited cultivation of field crops	Drainage, fertilization, conservation	e, w, s, c
5	Slight to moderate limitations for grassland	Intense grazing	Not feasible	w
6	Severe limitations for grassland	Moderate grazing	No	e, w, s
7	Very severe limitations for grassland	Limited grazing	No	e, w, s
8	Non-agricultural land (i.e., badlands, mine tailings)	Wildlife, recreation	No	None

Source: adapted from Agricultural Handbook 210 (Kingebiel and Montgomery, 1961) by the Illinois Deparment of Natural Resources - Office of Mines and Minerals (http://dnr.state.il.us/mines/lrd/capclass htm)

Table 3. Acreage and proportionate extent of soils by USDA Land Capability Class in Hardee County.

Land Capability Class	Total Acreage	Percent
1	0	0.0
2	0	0.0
3	71,978	17.6
4	235,463	57.6
5	51,367	12.6
6	12,922	3.2
7	35,845	8.8
8	0	0
	407,575	99.8

Note: *water* and *pits* are not assigned a capability class, hence their acreage (927 ac) is not included.
Source: SSURGO data for Hardee County.

Table 4. Acres and proportionate extent of lands by agricultural suitability in Hardee County.

Index	Acres	%
0	927	0.2
1	71,978	17.6
2	235,463	57.6
3	51,367	12.6
4	12,922	3.2
5	35,845	8.8
Totals	408,502	100.0

Note: "0" denotes unrated soil mapping units (i.e., water and pits)

Table 5. Acres and proportionate extent of lands by urban suitability in Hardee County.

Index	Acres	%
0	927	0.2
1	2,667	0.7
2	8,442	2.1
3	36,488	8.9
4	314,506	77.0
5	45,472	11.1
Totals	408,502	100.0

Note: "0" denotes unrated soil mapping units (i.e., water and pits)

Table 6. Acres and proportionate extent of lands by land suitability in Hardee County.

Index	Acres	%
1	168	0.0
2	8,275	2.0
3	26,725	6.5
4	38,458	9.4
5	226,003	55.3
6	71,608	17.5
7	1,343	0.3
8	0	0.0
9	34,995	8.6
10	927	0.2
Totals	408,502	100.0

Note: "10" denotes *water* and *pits* soil mapping units

Table 7. Comparison of agricultural suitability between existing (pre-mining) and future (post-reclamation) conditions at IMCP's proposed Ona Mine.

Index	Pre-mining (acres)	% of Property	Post-mining (acres)	% of Property	Difference (acres)	% Change
0	5.2	<0.1	0.0	<0.1	-5.2	<0.1
1	1,758.3	7.6	461.1	2.0	-1,297.2	-5.6
2	14,695.7	63.5	2,043.0	8.8	-12,652.7	-54.7
3	2,271.9	9.8	1,421.6	6.1	-850.3	-3.7
4	1,568.4	6.8	11,984.4	51.8	10,416.0	45.0
5	2,834.8	12.3	7,225.6	31.2	4,390.8	18.9

Note: "0" denotes unrated soil mapping units (i.e., water and pits)

Table 8. Comparison of urban suitability between existing (pre-mining) and future (post-reclamation) conditions at IMCP's proposed Ona Mine.

Index	Pre-mining (acres)	% of Property	Post-mining (acres)	% of Property	Difference (acres)	% Change
0	5.2	<0.1	0.0	<0.1	5.2	<0.1
1	37.5	0.2	0.0	0.0	-37.5	-0.2
2	419.6	1.8	21.1	0.1	-399.0	-1.7
3	1,068.0	4.6	11,935.8	51.6	10,868.0	47
4	17,790.3	76.9	3,637.0	15.7	-14,153.0	-61.2
5	3,813.7	16.5	7,541.9	32.6	3,728.0	16.1

Note: "0" denotes unrated soil mapping units (i.e., water and pits)

Table 9. Comparison of land suitability between existing (pre-mining) and future (post-reclamation) conditions at IMCP's proposed Ona Mine.

Index	Pre-mining (acres)	% of Property	Post-mining (acres)	% of Property	Difference (acres)	% Change
3	42.6	0.2	1.9	0.0	-40.7	-0.2
4	1,715.7	7.4	459.2	2.0	-1,256.5	-5.4
5	14,136.4	61.1	1,747.8	7.6	-12,351.1	-53.3
6	4,313.7	18.6	13,671.8	59.1	9,320.6	40.3
7	123.4	0.5	29.4	0.1	-94.0	-0.4
9	2,797.3	12.1	7,225.6	31.2	4,428.3	19.1
10	5.2	0.0	0	0.0	-5.2	-5.2

Note: "10" denotes *water* and *pits* soil mapping units

Table 10. Comparison of agricultural and urban suitability between existing (pre-mining) and estimated future (post-reclamation) conditions in the phosphate mining company lands in Hardee County.

Agricultural Suitability			Urban Suitability		
Index	Existing (acres)	Future (acres)	Index	Existing (acres)	Future (acres)
0	45	0	0	45	0
1	7,554	2,092	1	606	0
2	63,265	8,764	2	1,792	99
3	9,776	6,075	3	7,083	51,389
4	6,750	51,588	4	76,181	15,636
5	12,201	31,072	5	13,884	32,467
Totals	99,591	99,591	Totals	99,591	99,591

Note: "0" denotes unrated soil mapping units (i.e., water and pits)
Existing anf future acres are proportional approximations based on the existing future acres derived for the proposed Ona Mine.

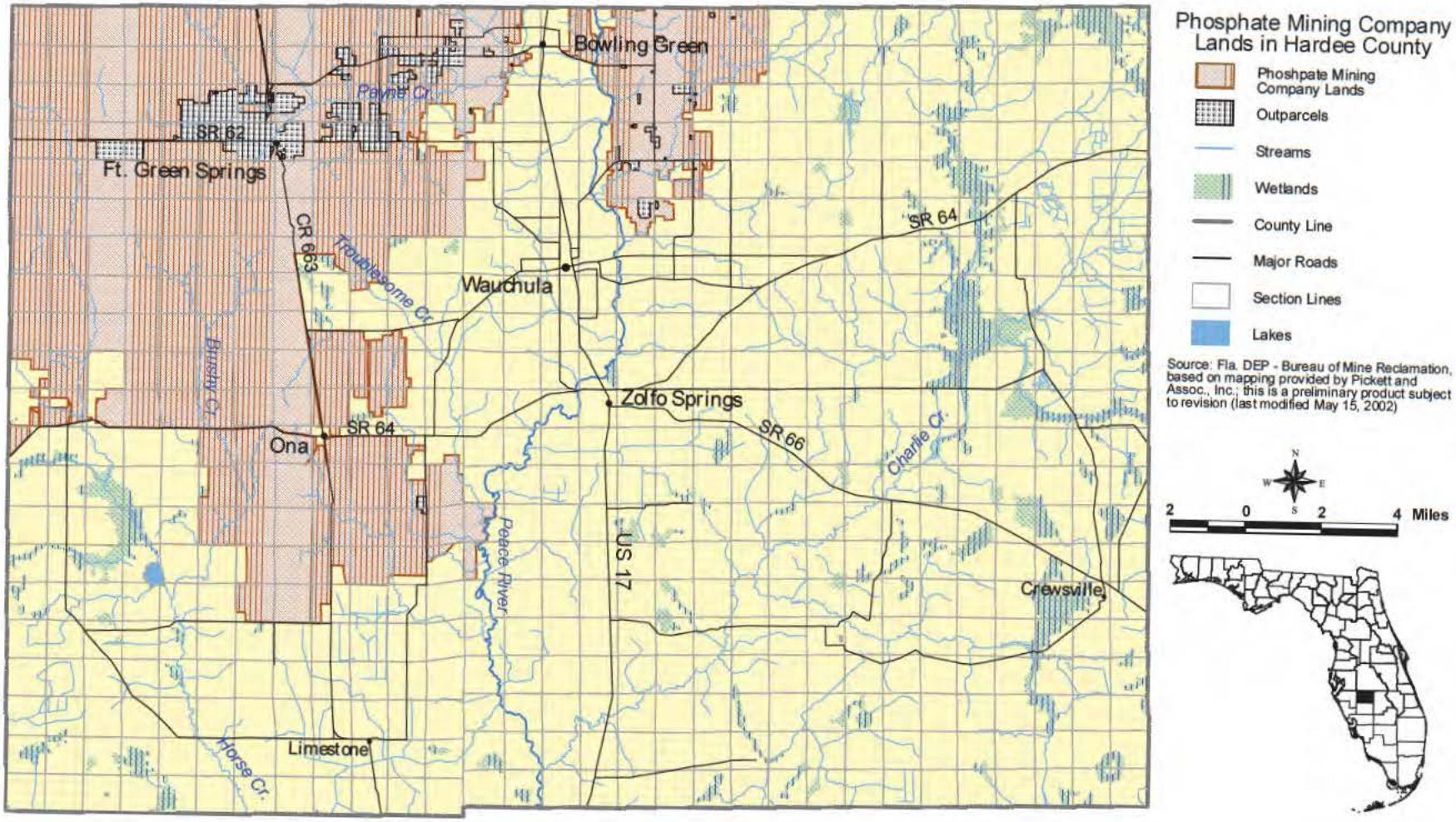
Table 11. Comparison of land suitability between existing (pre-mining) and estimated future (post-reclamation) conditions in the phosphate mining company lands in Hardee County.

	Land Suitability	
Index	Existing (acres)	Future (acres)
1	76	0
2	1,752	0
3	3,873	0
4	9,944	1,992
5	55,275	7,569
6	19,077	58,858
7	386	100
9	9,163	31,072
10	45	0
Totals	99,591	99,591

Note: "10" denotes water and pit soil mapping units
Existing anf future acres are proportional approximations based on the existing future acres derived for the proposed Ona Mine.

FIGURES

Figure 1. Map of Hardee County showing extent of current land holdings of the phosphate mining companies.



SAJ-2009-03221 2018-01-22 ROD_SOF Att A

Figure 2. Map of post-reclamation soils - proposed Ona Mine.

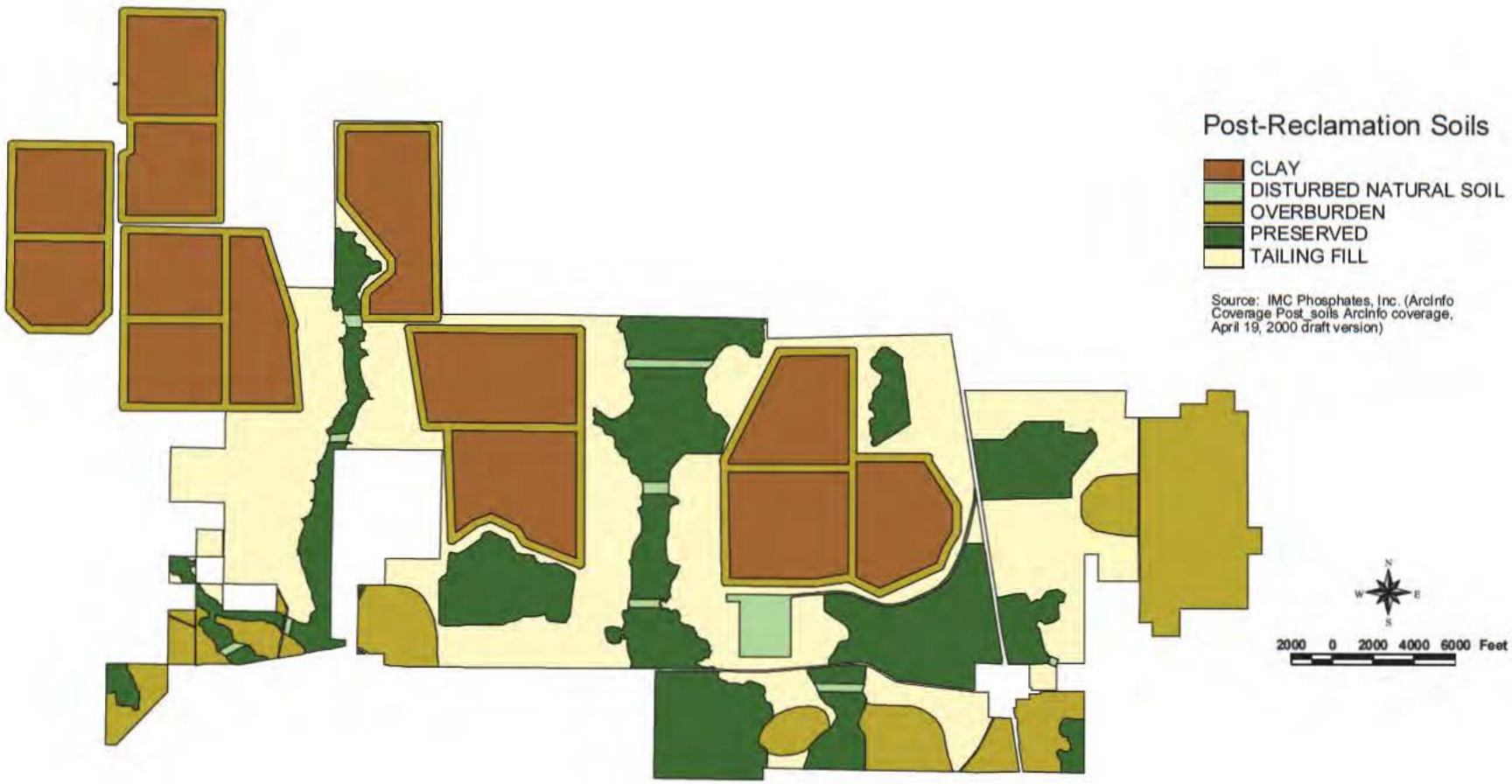
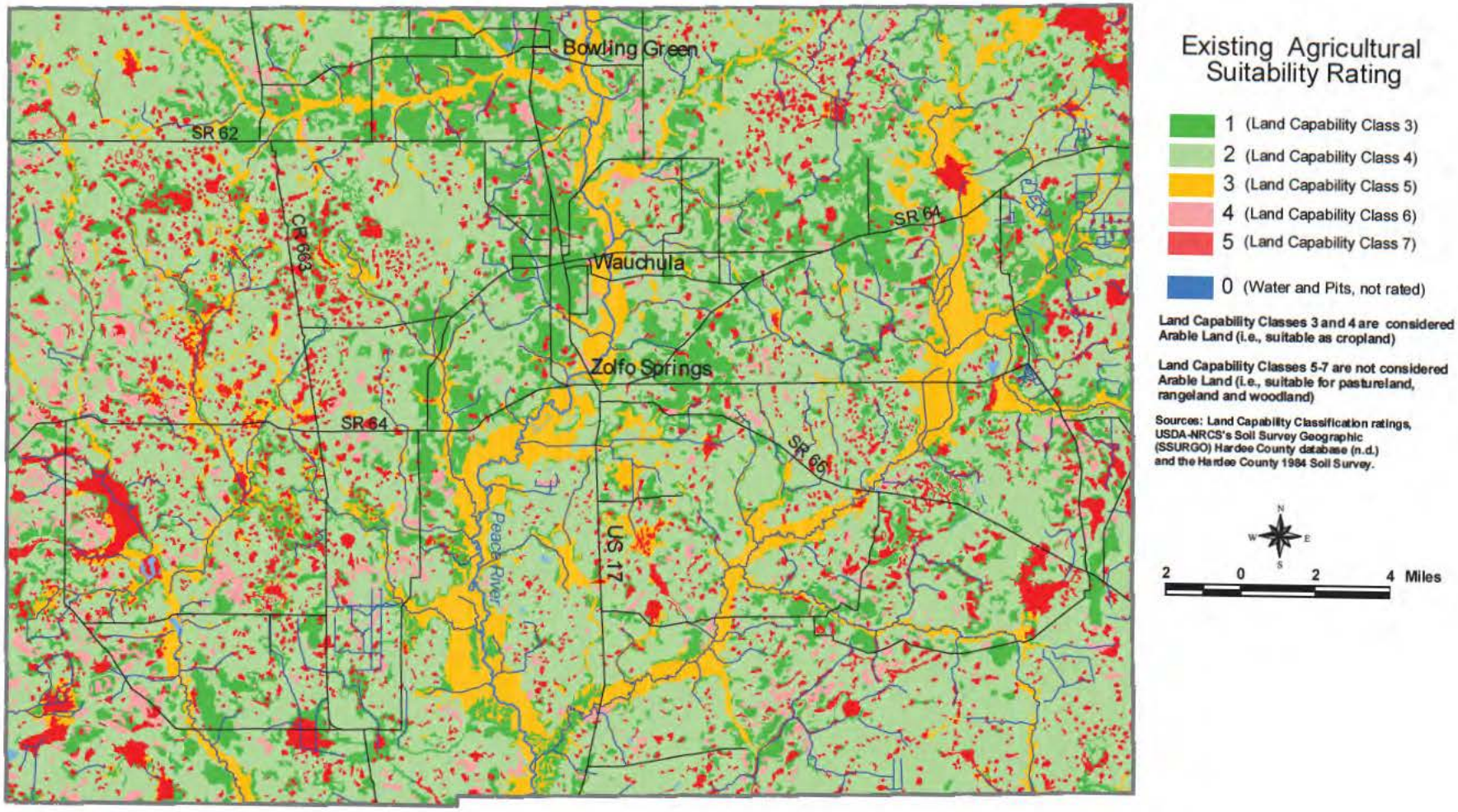
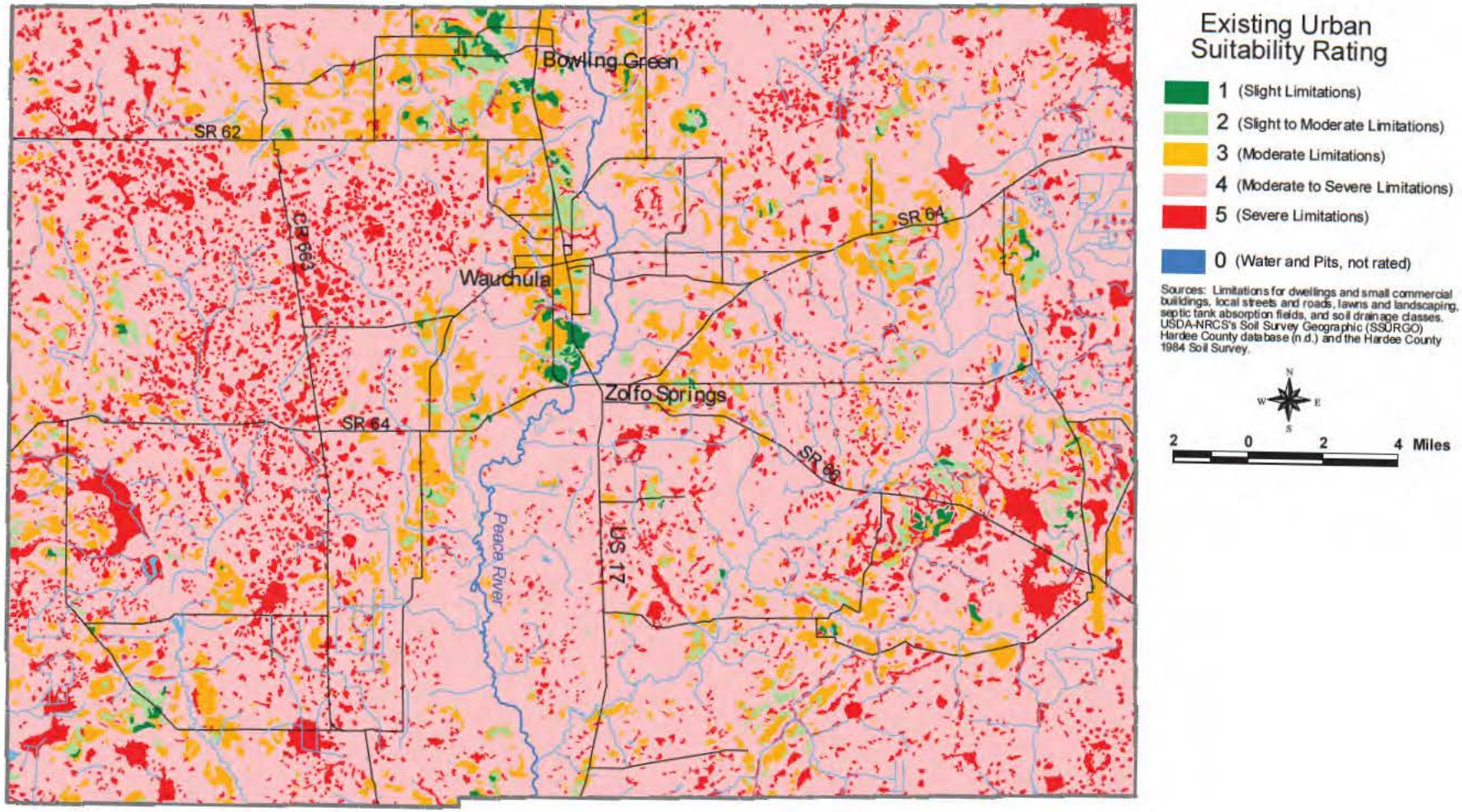


Figure 3. Map of existing agricultural suitability - Hardee County.



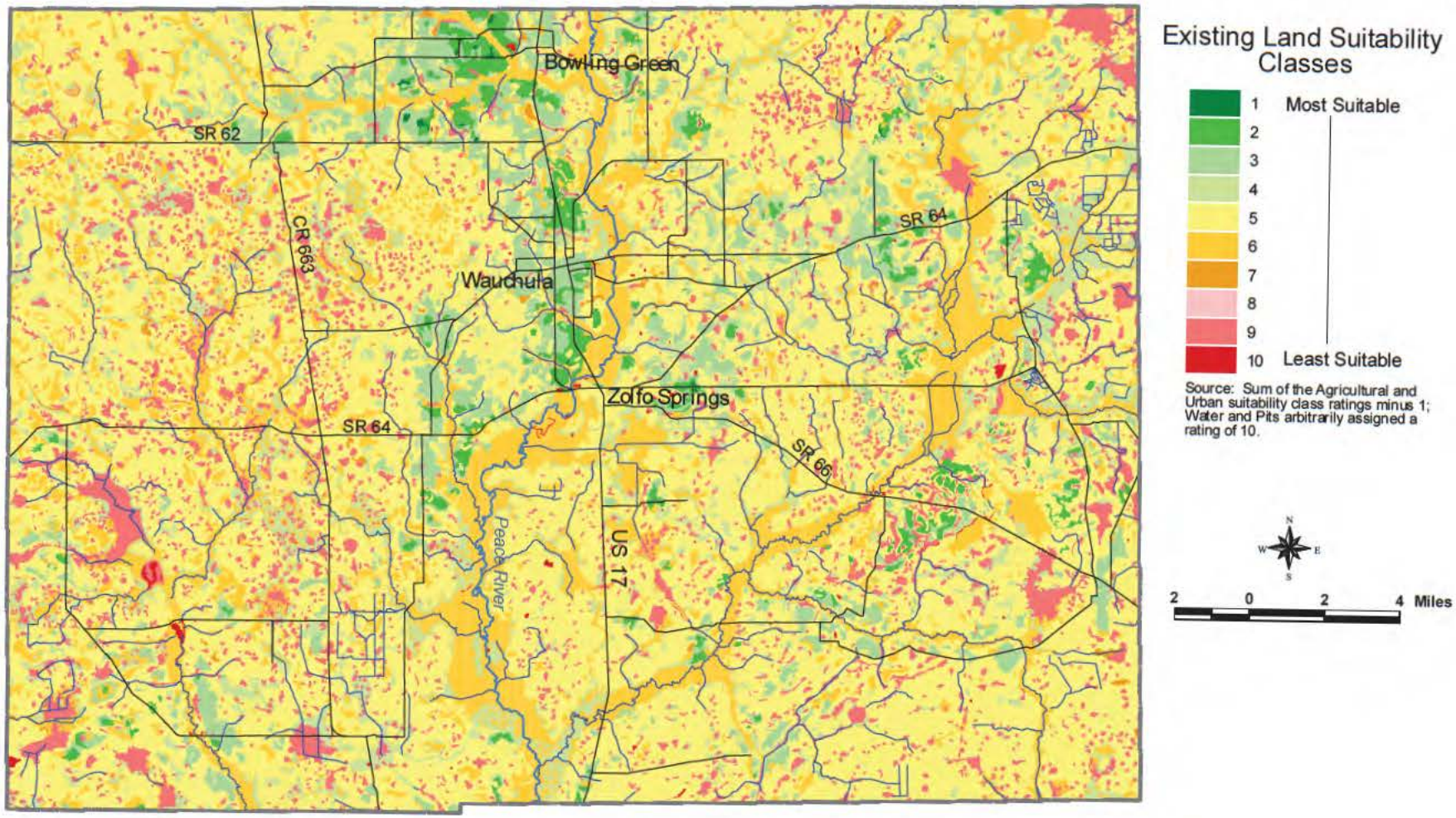
SAJ-2009-03221 2018-01-22 ROD-SOF Att A

Figure 4. Map of existing urban suitability - Hardee County.



SAJ-2009-03221 2018-01-22 ROD-SOF Att A

Figure 5. Map of existing land suitability - Hardee County.



SAJ-2009-03221 2018-01-22 ROD-SOF Att A

Figure 6. Map of existing agricultural suitability - proposed Ona Mine.

Figure 7. Map of future agricultural suitability - proposed Ona Mine.

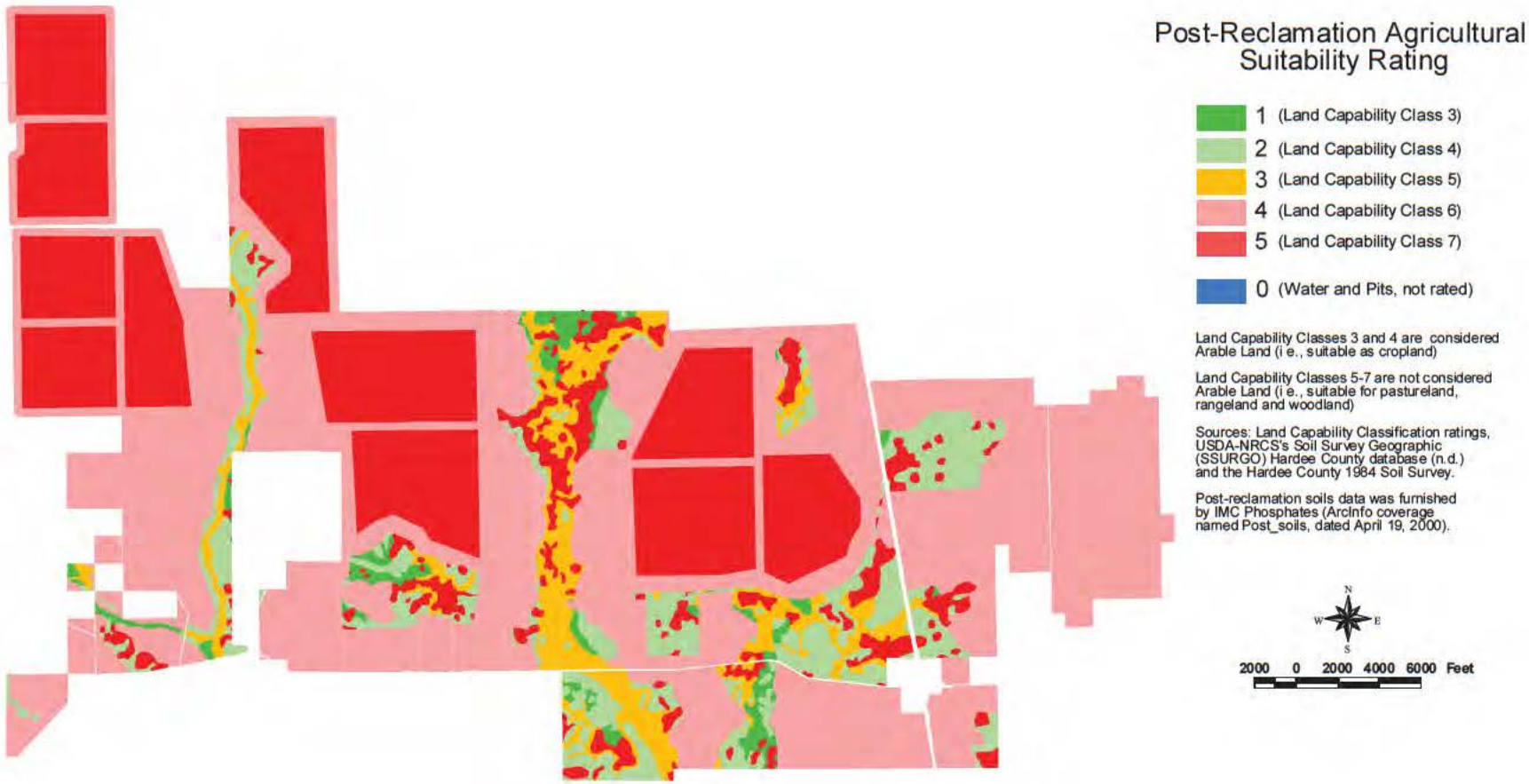


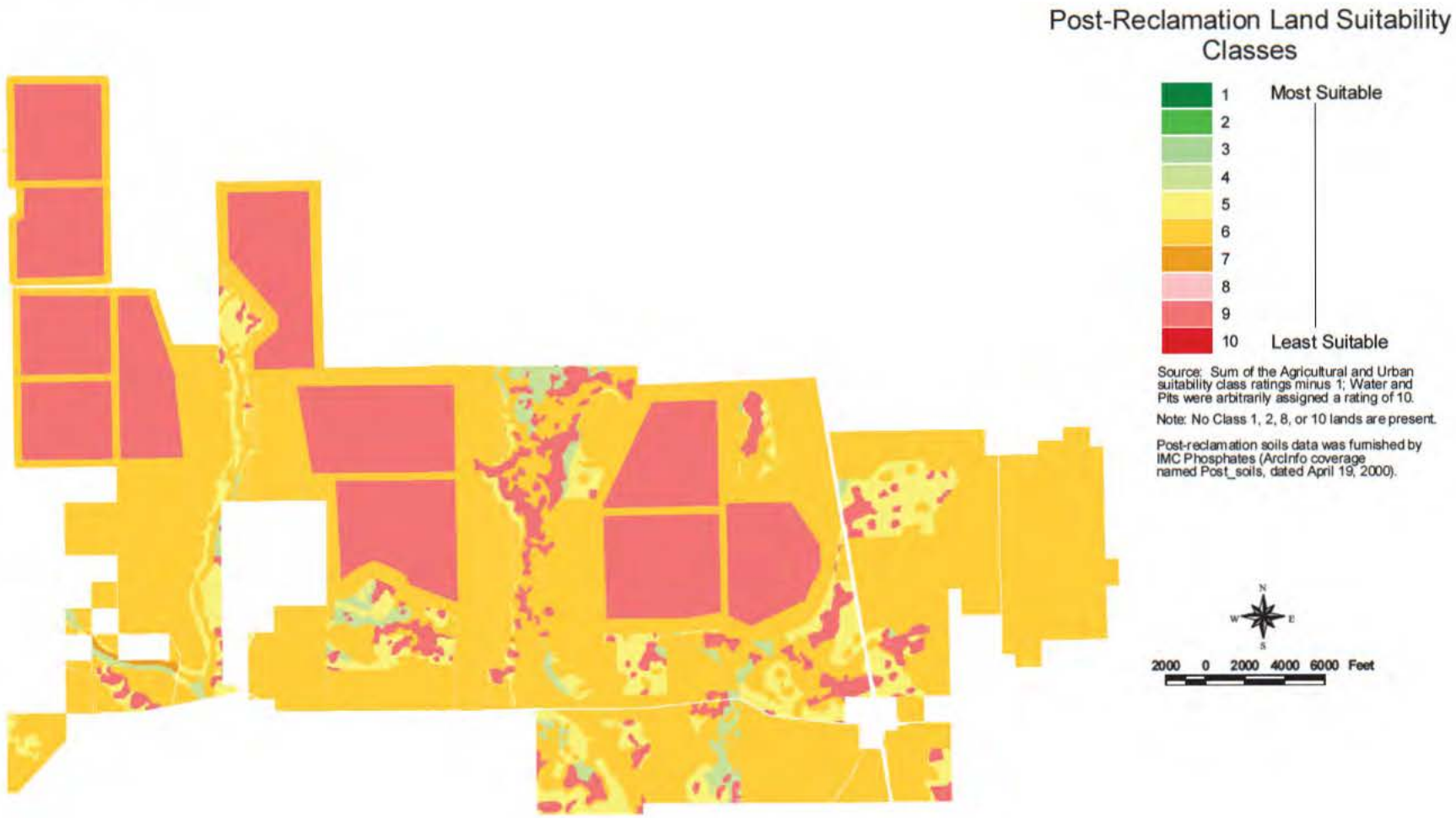
Figure 8. Map of existing urban suitability - proposed Ona Mine.

Figure 9. Map of future urban suitability - proposed Ona Mine.

Figure 10. Map of existing land suitability - proposed Ona Mine.

SAJ-2009-03221 2018-01-22 ROD-SOF Att A

Figure 11. Map of future land suitability - proposed Ona Mine.



SAJ-2009-03221 2018-01-22 ROD-SOF Att A

APPENDIX A

Soil mapping units and raw data used in compiling the agricultural, urban, and overall land suitability ratings

Appendix A. The Agricultural. Urban, and Overall Land Suitability Ratings Relational Database

		AGRICULTURE			URBAN								OVERALL
MUID[1]	Soil Type	LCSS[2]	LCSC[3]	Agri. Rating[4]	Dwellings without basements	Small commercial buildings	Local roads and streets	Lawns and landscaping	Septic tank absorption fields	Drainage criteria[5]	Avg of 6 criteria	Natural Break Classes[6]	Land Suitability[7]
49001	ADAMSVILLE FINE SAND	3w	III	1	3	3	3	5	5	3	3.7	3	3
49002	ZOLFO SAND	3w	III	1	3	3	3	5	5	3	3.7	3	3
49003	FT. GREEN FINE SAND; 2 TO 5 PERCENT SLOPES	3w	III	1	5	5	5	5	5	3	4.7	4	4
49004	APOPKA FINE SAND; 0 TO 5 PERCENT SLOPES	3s	III	1	1	1	1	5	1	1	1.7	1	1
49005	TAVARES FINE SAND	3s	III	1	1	1	1	5	3	2	2.2	2	2
49006	CANDLER FINE SAND; 0 TO 5 PERCENT SLOPES	4s	IV	2	1	1	1	5	1	1	1.7	1	2
49007	BASINGER FINE SAND	4w	IV	2	5	5	5	5	5	4	4.8	4	5
49008	BRADENTON LOAMY FINE SAND; FREQUENTLY FLOODED	5w	V	3	5	5	5	5	5	4	4.8	4	6
49009	POPASH MUCKY FINE SAND	7w	VII	5	5	5	5	5	5	5	5.0	5	9
49010	POMONA FINE SAND	4w	IV	2	5	5	5	5	5	4	4.8	4	5
49011	FELDA FINE SAND	3w	III	1	5	5	5	5	5	4	4.8	4	4
49012	FELDA FINE SAND; FREQUENTLY FLOODED	5w	V	3	5	5	5	5	5	4	4.8	4	6
49013	FLORIDANA MUCKY FINE SAND; DEPRESSIONAL	7w	IV	2	5	5	5	5	5	5	5.0	5	6
49015	IMMOKALEE FINE SAND	4w	IV	2	5	5	5	5	5	4	4.8	4	5
49016	MYAKKA FINE SAND	4w	IV	2	5	5	5	5	5	3	4.7	4	5
49017	SMYRNA SAND	4w	IV	2	5	5	5	5	5	3	4.7	4	5
49018	CASSIA FINE SAND	6s	VI	4	3	3	3	3	5	3	3.3	3	6
49019	ONA FINE SAND	3w	III	1	5	5	5	5	5	4	4.8	4	4
49020	SAMSULA MUCK	7w	VII	5	5	5	5	5	5	5	5.0	5	9
49021	PLACID FINE SAND; DEPRESSIONAL	7w	VII	5	5	5	5	5	5	5	5.0	5	9
49022	POMELLO FINE SAND	6s	VI	4	3	3	3	5	5	2	3.5	3	6
49023	SPARR FINE SAND	3w	III	1	3	3	3	3	5	3	3.3	3	3
49024	JONATHAN SAND	6s	VI	4	1	1	1	5	5	2	2.5	2	5
49025	WABASSO FINE SAND	3w	III	1	5	5	5	5	5	3	4.7	4	4
49026	ELECTRA SAND	6s	VI	4	3	3	3	5	5	3	3.7	3	6
49027	BRADENTON-FELDA-CHOBEE ASSOCIATION; FREQUENTLY FLOODED	5w	V	3	5	5	5	5	5	4	4.8	4	6
49028	HOLOPAW FINE SAND	4w	IV	2	0	5	5	5	5	4	4.8	4	5
49029	PITS	not assigned	not assigned	0	5	0	0	0	0	0	0.0	0	10
49030	HONTOON MUCK	7w	VII	5	5	5	5	5	5	5	5.0	5	9
49031	POMPANO FINE SAND; FREQUENTLY FLOODED	6w	VI	4	5	5	5	5	5	4	4.8	4	7
49032	FELDA FINE SAND; DEPRESSIONAL	7w	VII	5	5	5	5	5	5	5	5.0	5	9
49033	MANATEE MUCKY FINE SAND; DEPRESSIONAL	7w	VII	5	5	5	5	5	5	5	5.0	5	9
49034	WAUCHULA FINE SAND	3w	III	1	5	5	5	5	5	4	4.8	4	4
49035	FARMTON FINE SAND	4w	IV	2	5	5	5	5	5	4	4.8	4	5
49036	KALIGA MUCK	7w	VII	5	5	5	5	5	5	5	5.0	5	9
49037	BASINGER FINE SAND DEPRESSIONAL	7w	VII	5	5	5	5	5	5	5	5.0	5	9
49038	ST. LUCIE FINE SAND	7s	VII	5	1	1	1	5	1	1	1.7	1	5
49039	BRADENTON LOAMY FINE SAND	3w	III	1	5	5	5	5	5	4	4.8	4	4
49099	Water	not assigned	not assigned	0	0	0	0	0	0	0	0.0	0	10
49991[8]	Haplaquents clay	7w	VII	5	5	5	5	5	5	5	5.0	5	9
49992[8]	Arents, nearly level and Arents, 0 5% slopes	6s	VI	4	3	3	3	5	5	1	3.3	3	6
49993[8]	Quartzipsamments, nearly level and Neilhurst sand, 0-5% slopes	6s	VI	4	2	2	2	5	5	4	3.3	3	6

[1] Mapunit Identification Symbol

[2] USDA Land Classification System Subclass

[3] USDA Land Capability System Class

[4] Agricultural Rating:
1 = LCC of 3
2 = LCC of 4
3 = LCC of 5
4 = LCC of 6
5 = LCC of 7

[5] Rating System for Drainage:
1 = Excessively drained and well drained
2 = Moderately well drained
3 = Somewhat poorly drained
4 = Poorly drained
5 = Very poorly drained

[6] Jenk's optimization (a statistical formula) was used within ArcView to partition the average values into classes separated by relatively large differences in the values

[7] Land Suitability Rating equals the sum of the agricultural rating plus the urban rating minus 1 with water and pits arbitrarily assigned a value of 10.

[8] These are provisional mapunit identification symbols assigned specifically for this study.

July 24, 2017
Mark E. Peterson
West Branch Mining Team
Jacksonville District Corps of Engineers
10117 Princess Palm Ave., Suite 120
Tampa, FL 33610

Re: Public Comments on Mosaic Fertilizer, LLC Permit Application SAJ-2009-03221, Wingate East Mine

Dear Mr. Peterson,

As a citizen living in the Central Florida Phosphate District, specifically in Hardee County, I am and have long been, very concerned about Phosphate mining in the region I consider my community. I respectfully request that the US Army Corps of Engineers deny this permit application for the reason that it is not in the public interest to allow what can only be the net destruction of valuable native wetlands. I include comments below, as well as an attachment, for your review.

1.The applicant's Project Specific Need for the Wingate East mine includes maintaining an uninterrupted supply of phosphate rock to meet the fertilizer demands of its customers. Specifically, Mosaic states that it needs to mine 28 MMT of phosphate from the Wingate East Mine.
Several mining alternatives were considered along with the applicant's requested project. This was done apparently in attempts to find an alternative that would be less damaging to the Waters of the United States. But as we are taken through each alternative consideration, it seems that in each case we default back to the applicant's "preferred alternative". Either more damage resulted to the environment or the stated business needs of Mosaic could not be met.
This process seems backward to me. Shouldn't it be up to the applicant to find an alternative that can and will comply with the laws protecting the WOUS?
Why is the Army Corps of Engineers to delve into the business considerations of Mosaic? Is it not the job of the Corps to protect the WOUS for its citizens? Why would the profit considerations or even the solvency of the applicant be an issue that must be considered while performing the protection duties above?

2. The public need for this project is not the need for fertilizer. In fact, I would argue that the public need is to not have phosphate strip mining in Manatee County, or any other county for that matter. Shouldn't the public have input on their own needs for the permitting of this specific project?
At the county level, hearing was held in Jan. and Feb. of 2017 prior to decision on approval of Wingate East mine. Approximately 2,000 written and 80 spoken comments were presented to the commissioners on this topic. Only 17 were in favor of approval. Overwhelmingly citizens of the region gave their reasons why this mine project was unwanted. Many of these comments were of a well researched and scientific nature. Others were simple common sense. Despite the fact that commissioners were still relatively ignorant of the entire subject of phosphate mining at the end of the three day hearing (see the video transcripts available on the Manatee Commission agenda website, link also on email) they voted 5 to 2 to approve. Their approval was admitted to be due to fears of retaliatory litigation by the applicant for property rights losses. This, even though it was explained by a competent attorney that the applicant should have had no certain expectation of a rezoning from agricultural to extraction when they purchased the property.
Since major impacts to wetlands and river systems are proposed in this application, and due to the highly controversial nature of both the application and this company itself, I think there should be an in person discussion between the public and the Army Corps of Engineers on this issue.

3. My own experience as a property owner and native plant nursery owner in the CFPD leads me to a few additional comments. Land use by both humans and wildlife is degraded after phosphate mining and reclamation. Mosaic has neither the knowledge (science) nor the money to restore or even mitigate all of the lands they damage by strip mining.
Regarding agriculture and urban development, I refer to a study done for use by the Hardee County commission in 2002. It was titled "Land use Suitabilty Index for Use in Hardee County" and is also attached. The conclusions of that study were that after phosphate mining and reclamation, lands were degraded for categories of urban development and for agriculture. My own experience of travel through western Polk County over many years on my job is that there is very little if any of agriculture to be seen on any of the mined out lands.

As a former native nurseryman, I know how difficult it is to establish and colonize many native plant species, even in their native habitats. Specific location seems to be important, even beyond proper hydrology and elevation. So soils are key. Combine all the things that mining does and you have impossible conditions to reestablish native plant communities as a whole. And of course the animal populations are dependent on these. Mining leaves rearranged soils, changed elevations, altered hydrology, destroys microbial conditions, etc., even after reclamation. And for most reclamation, only the most rudimentary of repair is required, while there are a limitless number of factors in habitat composition. Microhabitats, such as ephemeral wetlands are not replaced after mining. Again, species of plants and animals are very dependent on microhabitats for survival. These microhabitats are in turn very sensitive to alterations in the larger landscape around them. We simply do not have enough knowledge, nor arguably, will we ever have enough to fully understand our wild systems.

4. To conclude my statements I want to refer to this Environmental Assessment, page 8. Quoting from C.F.R. Part 325, Appendix B "while generally focusing on the Applicant's statement, the USACE will in all cases exercise independent judgement in defining the purpose and need from both the Applicant's and public's perspective." It would seem that the most clear understanding of the public's perspective would be gained by a face to face meeting. I would respectfully request that a hearing with the Army Corps and the concerned public be held for SAJ-2009-03221.

Respectfully,

Brooks Armstrong
7301 Redge Rainey Rd.
Ona, FL 33865

From: Garrett Ramy
To: Peterson, Mark E CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Fwd: Comments on Permit Application SAJ-2009-03221
Date: Monday, July 24, 2017 1:38:00 AM
Attachments: Contaminated Land Lawsuit-1.pdf
Document.pdf

---------- Forwarded message ----------
From: "Garrett Ramy" <garrett ramy@gmail.com <mailto:garrett ramy@gmail.com> >
Date: Jul 24, 2017 1:32 AM
Subject: Comments on Permit Application SAJ-2009-03221
To: "Garrett Ramy" <garrett ramy@gmail.com <mailto:garrett ramy@gmail.com> >
Cc:

Mr. Peterson,

Thank you for this opportunity to hear from the Citizens of Manatee County.
I would like to bring to your attention the fact that the the applicant Mosaic SAJ-2009-03221 is lacking support and approval from the community and especially bordering residences as myself.

I Garrett Ramy, currently have a pending lawsuit against Manatee county and Mosaic Windgate LLC.

1) There was a failure on behalf of the Applicant Mosaic to prove benifit to the county.

2) There were several violations within the hearings.

3) Violations from the Homesteading Act regarding land usage and seizure of land.

4) Impacted land vaules to worthless land.

5) No provisions or compensation has been made for bordering residences.

At this time both Manatee county and Mosaic are tied up in these unresolved issues.

In this email I have included an attachment of my testimony before the Manatee county commissioners on this issue. None of my questions or concerns were addressed, so I'm seeking clarification on this situation and my questions from the Army Corp of Engineers. We have no representation so I am personally reaching out to you Mr. Peterson for help.

I also have additional concerns in reference to reclaimation claims.
To this date 5,145 acres have been reclaimed of approximately 300,000 acres mined. This ratio is extremely unproportionate. There is currently a pending lawsuit in Polk county regarding a housing development on reclaimed land from previously phosphate mined land with high levels of Radiation. exposure.

Phosphate Mining in Florida must be reevaluated as a whole. More land is being occupied and yet there is no proof that land reclamation is successful.
We have no security south of any mining operation in Florida, especially in the event of a catastrophic hurricane or natural disaster.

Please review what I have provided as a citizen and be our advocacy.

- 8 On Your Side

- Investigations

Target 8: Thousands of Polk Co. homes sit on contaminated land, lawsuit claims

By **Steve Andrews** Published: March 14, 2017, 6:52 pm Updated: April 11, 2017, 12:12 pm

POLK COUNTY, Fla. (WFLA) – A lawsuit filed in federal court claims developers in Polk County failed to notify thousands of new homeowners that they are living on contaminated land.

The lawsuit was filed on behalf of people who own property or live in the Oakbridge and Grasslands subdivisions in Lakeland. Joseph Jerue is the lone plaintiff in the complaint, which is seeking class action status.

Jerue is represented by the Lanier Law Firm out of Houston. The law firm is also working with firms Girardi Keese, Nidel & Nace, German Rubenstein and Lilly O'Toole & Brown.

Advertisement

The complaint claims that the developer of the property, the Drummond Company, knew about high radiation levels as early as 1978.

Grasslands is a premier golf community with upscale housing. Right next door is Lakeside Village, a major retail center.

The area used to be known as the Poseidon mine. It was purchased by the Drummond company in 1978. In 1982, Drummond ceased mining operations and began to reclaim the area and develop 1,400 acres.

The lawsuit claims, "No one, including Drummond…notified the plaintiff or class members of the significantly elevated cancer risks posed by the presence of radon gas…gamma radiation…or concerns raised by the federal EPA."

It also asserts "In 1975 the EPA administrator informed the Governor of Florida that the EPA had found elevated levels of radiation in buildings constructed on land reclaimed from phosphate mining areas and recommended that construction of new buildings on phosphate mining lands be discouraged."

According to the complaint, politicians and the phosphate mining industry worked to keep the lid on the EPA's findings.

The document, filed last week in Tampa, states more than 40,000 homes sit on reclaimed phosphate mining land in Polk County.

Exposure to levels of radiation similar to that identified in the Oakbridge development translates to residents receiving over one chest x-ray per week.

The lawsuit seeks compensation for loss of property value, for clean-up and to initiate medical monitoring for residents.

WHAT OTHERS ARE CLICKING ON

- Valrico mother describes terrifying days when estranged husband kidnapped her
- You Paid For It: Nude 'Bare Dare' run in Pasco County
- Target 8: Thousands of Polk County homes sit on contaminated land, lawsuit claims
- Eaglet E9 falls from tree, flies for first time
- Child welfare agency: Florida girl who live streamed suicide suffered abuse
- TRAGEDY: Boyfriend discovered scene of girlfriend's deadly crash minutes after it happened

>>>>>> BACK TO TOP STORIES

TARGET 8: Lawyers want Oakbridge, Grasslands radiation lawsuit dropped

April 8, 2017

Lawyers for the Drummond Company want a federal judge to dismiss a lawsuit that claims people living in Oakbridge and Grasslands development…

Lakeland man sues friend in dispute over $1M lottery ticket

June 15, 2017

A Lakeland man is suing a friend who he says cheated him out of money from a $1 million lottery ticket.

Bobbi Kristina Brown's ex-boyfriend Nick Gordon arrested in Florida for domestic violence, kidnapping

June 10, 2017

Nick Gordon, the ex-boyfriend of Bobbi Kristina Brown is once again in trouble with the law after he reportedly assaulted his new girlfriend…

Target 8: Hundreds of Hillsborough retirees and their homes hang in the balance

July 9, 2017

After years of waiting, answers could come Tuesday.

WFLA.com

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I'm having a difficult time understanding why we are here today. A year ago in October 2015 I purchased my property. Prior to purchasing, I contacted the environmental/ Planning county departments regarding my Mosaic neighbor, at that time it was the conclusion that it was highly unlikely that mosaic would ever be granted mining status due to the location of the Myakka head and the high population of the gopher tortoises. What has changed so suddenly? I have 29 years left on my mortgage.

The staff was extremely excited with great approval recommendations especially when mosaic graciously offered 2.5 million dollars for them to play with later, Yet the staff failed to observe and recognize the bordering property owners, by totally dismissing them.

My property is bordered with signs that read protected property - integrated wildlife habitat land management- land managed for the environment in cooperation with landowners. State of FL DEP

I stand here before this commission not as a taxpayer or environmentalist but as an American Patriot citizen and a homesteader. As a homesteader granting this permit would be a direct violation of the homesteading act regarding seizure of land. I moved 45 minutes from civilization to get away from all the noise and nonsense, to create an organic farm in a balanced eco system to which I will not be able to maintain my organic status with a phosphate mine next door. By the way, organic farming does not require the use of mosaic's products.

My representative of District 1 Priscilla Trace owning a successful nursery can probably identify with the strict organic requirements.

This delay in this hearing has been hostile for me because my farm development opperations have been postponed pending this verdict.

Once this mining begins mosaic will burn off the land, why should my family and livestock be subjected to week upon weeks of vegetation smoke? Why should I have to tolerate night site lights and 24/7 heavy earth moving equipment running, vibrating my home & windows? Why should I have to have my wells and ponds run dry.

Why should I deal with any of this?

Why should I be subjected to getting sand blasted with the huge dirt barriers that are designed to protect us outside from the contamination that is within the permit area? After all, for every ton of Phosphate mined there is 4.8 tons of "slightly radioactive" water left behind. What is slightly radioactive anyways? Is it like being slightly pregnant?

Why should I have to contend with the overflow of predatory, invasive animals and insects? They have to go somewhere-

Why should my property vaule be decreased to a worthless piece of land while being charged nearly 3,000 a year just to live 1 hour from these chambers while receiving no county services?

As a matter of fact my property taxes were increased 30% this year, 800.00 more- I want you to remember that mosaic's gifts, donations and goodwill are just that and cannot influence this decision today. Commissioners represent their citizens we owe mosaic nothing.

So my financial contribution to the county of Manatee should buy me a voice on the one issue I'll ever ask from this commission....deny this permit!

We have to make adult decisions and see what is a stake here. Alot of opposition information that has been presented before this commission today.

The responsible judgment call would be to suspend this vote until the current permit expires at a minimum, because Mosaic has failed to prove benifit to the county as required.

Ona and Hardee county permits are in application also and I am in jeopardy of the Ona permit encroachment on the opposite side of my property

The future of Manatee and Sarasota counties are at stake here with just one more major mosaic incident or hurricane. We've recently witnessed the incompetence of the FL DEP and mosaic's failed "neighborly" notification of incident and mosaic had 2 leaks at 2 facilities since the Mulberry incident.... This irresponsibly displayed was to the point a new law was introduced to FL for the violator and DEP to be accountable for notifying the public in a timely manner. Sorry, this just doesn't give us a warm fuzzy feeling.

The 2.5 million should go to the residents in the impact area of the Myakka head/ Duette/ winding creek area for relocation, if this is proposal is considered. What are we to be left with?

This is not if something happens, it's when it happens.

There is no security in this master mining plan. From what we see in mosaic's overall strategy is master manipulation.

As a reminder

Mosaic's mineral rights don't trump mine!

We might as well rename Myakka and Duette because it will be known as an area formerly known as Myakka.

It is my prayer that this did not fall upon deaf ears

From: Garrett Ramy
To: Peterson, Mark E CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Re: Fwd: Comments on Permit Application SAJ-2009-03221
Date: Monday, July 24, 2017 5:21:47 AM
Attachments: Document (1).pdf

On Jul 24, 2017 1:36 AM, "Garrett Ramy" <garrett ramy@gmail.com <mailto:garrett ramy@gmail.com> > wrote:

---------- Forwarded message ----------
From: "Garrett Ramy" <garrett.ramy@gmail.com <mailto:garrett.ramy@gmail.com> >
Date: Jul 24, 2017 1:32 AM
Subject: Comments on Permit Application SAJ-2009-03221
To: "Garrett Ramy" <garrett.ramy@gmail.com <mailto:garrett ramy@gmail.com> >
Cc:

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Please review what I have provided as a citizen and be our advocacy.

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Herald-Tribune

BREAKING
9:06 PM
Beloved Snooty, oldest known manatee in…

Mosaic joins Manatee County's defense in lawsuit over mine approval

HIDE CAPTION

A dragline retrieves clay, sand and phosphate ore at a Mosaic phosphate mine in Polk County. PHOTO / HERALD-TRIBUNE ARCHIVE

By Dale White
Staff Writer

Posted Mar 31, 2017 at 4:00 PMUpdated Mar 31, 2017 at 4:00 PM

Circuit Judge Brian Iten granted Mosaic's unopposed motion to join the county as a defendant in a lawsuit filed by Myakka residents Deborah and Richard Mafera and Garrett Ramy.

MANATEE COUNTY — Mosaic Fertilizer will assist Manatee County in defending a recent decision to allow an expansion of the company's phosphate mining activity in the Myakka-Duette area.

This week, Circuit Judge Brian Iten granted Mosaic's unopposed motion to join the county as a defendant in a lawsuit filed by Myakka residents Deborah and Richard Mafera and Garrett Ramy.

On Feb. 15, in a series of 5-2 votes, the County Commission approved a rezoning and a master mining plan so Mosaic can extend its mining operations to its nearly 3,596-acre Wingate East property flanking Duette Road.

Commissioners Betsy Benac, Vanessa Baugh, Stephen Jonsson, Priscilla Whisenant Trace and Carol Whitmore voted in the majority. Commissioners Robin DiSabatino and Charles Smith dissented.

Related content

Manatee County votes 5-2 to approve Mosaic phosphate mine
February 16, 2017

Mosaic disputes 'smoking gun' claim
February 10, 2017

Public asks Manatee commissioners to reject Mosaic mine
January 30, 2017

During the public hearing, which lasted three days, Assistant County Attorney Bill Clague advised commissioners that "a total denial outright — that could be a tough case for us to defend."

In 2008, a previous commission denied Mosaic's application to expand its Four Corners Mine in Duette to a 2,048-acre site called the Altman Tract. Mosaic filed a $617.8 million lawsuit against the county. In January 2009, a commission with newly elected members — fearing the county would lose in court — reversed that denial.

In the current lawsuit filed by Cape Coral attorney Ralf Brookes, the petitioners claim the current commission "failed to provide procedural due process and failed to comply with the essential requirements of law."

The Maferas and Ramy are neighbors on Taylor Road who say their properties are adjacent to the approved mine. The Maferas also note that they reside downsteam from the Mosaic site on the headwaters of the Myakka River and express concerns about the mine's impact on the river.

All three residents spoke during the public comment phase of the public hearing. Their lawsuit provides Iten with 760 pages of transcripts from the proceedings.

The plaintiffs claim they "were not given sufficient time in which to present their testimony and evidence." They state they were each allowed three to five minutes at the podium but, under the county's rules of procedure, they should have been granted 20 minutes.

They also argue that, by rezoning Mosaic's land from agriculture to extraction, the commission did not accomplish "a legitimate public purpose."

"Zoning ordinances are enacted to protect citizens from losing their economic investment or the comfort and enjoyment of their homes by the encroachment of commercial development by an unreasonable or arbitrary act of their government," the lawsuit states.

County attorneys have yet to file a response. Because the litigation is pending, they have advised commissioners not to comment on the case.

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South Florida Museum-goers who never got to see Snooty saddened by his death

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From:	Henry Kuhlman
To:	Peterson, Mark E CIV USARMY CESAJ (US)
Subject:	[Non-DoD Source] Permit Application SAJ-2009- 03221 -- Manatee County Florida East Wingate Mine -- Public Comments by Henry Kuhlman
Date:	Sunday, July 23, 2017 8:15:13 PM
Attachments:	East Wingate Mine Letter to Corps SAJ-2009- 03221- Jul 23, 2017.pdf

Mr Peterson,

Please find attached my comments for the Mosaic mining permit --- East Wingate mine [SAJ-2009- 03221]

Thank You,

Henry Kuhlman,
5186 Ollie Roberts Rd,
Bowling Green, FL 33834

Mark E. Peterson
West Branch Mining Team
Jacksonville District Corps of Engineers
10117 Princess Palm Ave., Suite 120
Tampa, FL 33610
Mark.e.peterson@usace.army.mil

Dear Mr. Peterson:
Thank you for this opportunity to comment on permit application SAJ-2009- 03221.

Manatee County Commissioners approved the permit to mine Wingate East in the face of overwhelming evidence for denial. Over 2,000 speakers and writers presented their opposition while only 17 spoke in favor.

Quite simply, there is no viable economic or environmental reason a county could choose to permanently destroy their productive agriculture land and wetlands. The reason most given by Manatee County Commissioners for voting YES, was that they were afraid of being sued by Mosaic, if they didn't approve the permit. This is hardly in the best interest of the future generations who will suffer the lost jobs and benefits from housing, tourism, agricultural production stretching out 100-200 years. Not to mention the costs in tax revenue from the decreased appraised value of mined out land. Mined out land in Hardee County next door is valued from 50 to 85% less than productive native land.

I drive by the Mosaic Four Corners Mine that borders State Road 62 in Manatee County. On one side of the highway are beautiful huge fields of bright red tomatoes and other crops being harvested by hundreds of employees (season after season). On the other side of the highway are the dead grey pits where Mosaic's dragline are digging up what used to be living farmland. This land will be less than half the value of the land across the highway and have no jobs and no productive uses for a hundred years.

Not even housing is an option for Mosaic on their mined out land. A 1,400 acre housing area in Polk County developed on reclaimed land is under a huge federal lawsuit. The land beneath thousands of homes is contaminated with radon gamma radiation (https://goo.gl/5AqdrT).

The product Mosaic makes from strip mining, phosphoric acid fertilizer, is far from certain to be the best option for sustainable agriculture (https://goo.gl/iO3LCa).

The byproducts of producing their fertilizer should in itself prevent mining. Mosaic will have 24 deadly gypsum stacks of radioactive, hazardous and toxic waste. The EPA has a consent decree and funds for remediation for only 8 of these permanent liabilities that Mosaic will walk away from (DOJ/EPA, 2016). The taxpayers will be stuck with billions and billions for hundreds of years trying to avoid one catastrophe after another (think Hurricane state). Mosaic has a long and sorry history denigrating the waters above and below the surface in Florida (https://goo.gl/1DUv5t and https://goo.gl/ry8nPQ).

Mr. Peterson, the Corps must deny this permit. The long term best interest of the people of Florida comes first. Thank You,

Henry Kuhlman, Bowling Green (in the heart of Bone Valley), FL

From: Henry Kuhlman
To: Peterson, Mark E CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Refer to Permit SAJ-2009-03221 -- Public Comments -- Mosaic Permit -- East Wingate Mine
Date: Monday, July 24, 2017 8:58:05 PM
Attachments: CORPs Comments (pictures) - SAJ-2009-03221.pdf

Mr. Peterson,
Please accept the pictures in the attachment as my input for your review on the Permit requested by Mosaic Corp -- SAJ-2009-03221. They were taken by myself of their mines next door in Hardee County.
Henry Kuhlman.

Mark E. Peterson
West Branch Mining Team
Jacksonville District Corps of Engineers
10117 Princess Palm Ave., Suite 120
Tampa, FL 33610
Mark.e.peterson@usace.army.mil

Dear Mr. Peterson:

Thank you for this opportunity to comment on permit application SAJ-2009-03221.

Please look at the pictures I have taken of mining in Hardee County next door to Manatee where Mosaic is the last phosphate strip mining company in Florida. It is incredible they have gotten away with this for so long.

1. South Pasture mine looking west. It extends five miles and joins the West Pasture mine. They cut Hardee County in half with no way for wild life to migrate north/south. The new 7,000 acre South Pasture Extension mine has been approved and being mined to the south.

Comments submitted by Henry Kuhlman, Bowling Green, Florida

2. Reclaimed land from Mosaic's North Pasture mine is useless and covers thousands of acres. It is appraised by the County as low as $1,100 per acre compared to $7,000 per acre for productive agricultural land like it was before mining.

3. All Mosaic mined land facing east from the Hardee/Manatee County line. The green land in the background will be mined next as part of the South Pasture Extension Mine. How can this be allowed to continue?

From: Linda T Jones
To: Peterson, Mark E CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Wingate East Mine -Comments on Permit Application SAJ-2009-03221
Date: Monday, July 24, 2017 11:29:18 PM
Attachments: Wingate East Mine - Public Notice.pdf

Dear Mr. Peterson,

Attached are comments and attachments

To: Mark E. Peterson

West Branch Mining Team, Jacksonville District Corps of Engineers, 10107 Princess Palm Avenue, Tampa, Florida 22610

Re: Public Comments on Mosaic Fertilizer, LLC Permit Application SAJ-2009-03221, Wingate East Mine, Manatee County

From: (Dr.) Linda T. Jones

Dear Mr. Peterson:

I respectfully submit the following comments to the U.S. Army Corps of Engineers for the above-referenced permit for the Wingate East Mine on behalf of the Manatee Conservation Committee, Manatee-Sarasota Group of the Sierra Club.

Chair of the committee, Sandra Ripberger, is out of the country and requested I submit comments.

l. NEPA/Figures in EA. This project and all proposed strip mines are, by their nature, contrary to the purpose and goals of the National Educational Policy Act..."to declare a national policy which will encourage productive harmony between man and his environment, to promote efforts which will prevent or eliminate damage to the environment...to enrich understanding of the ecological systems and natural resources...and serve as trustee of the environment for succeeding generations. Establishing a project need and purpose that has as its only objective strip mining phosphate does not take into consideration the impacts on the environment in which the mining will take place and is inconsistent with the purpose of NEPA. Further, the off-site alternatives are limited to the other sites the applicant proposes to mine in the future so they are not alternatives at all.

Of the 9 figures that are attached to the EA, Alternative 1A (Figure 2-Upland Only Mining) would prevent damage to the water resources and wetlands. It also, as pointed out, agrees with step 1 and 2 of the mitigation framework. The priority wetland scheme in the AEIS Chapter 5 is ignored and not being implemented. As for conflicting with the "current county permit" (p.18), the permit though approved in concept is still incomplete because the three setback changes Mosaic wanted were not approved by the Manatee BOCC and the CSA is being re-configured. Figures 5, 6, and 8 of the EA depict two CSAs and should be discounted. The County wrote a letter copied to the Corps indicating issues with a second CSA. Mosaic's preferred alternative (Figure 7) impacts too many wetlands and streams.

2. Wingate East Mine Is Strongly Opposed by Citizens/Not in the Public Interest. During three days of public hearings (January 26 and 30, February 15, 2017), over 2000 comments were made against approving this mine, while only 6 spoke for it, according to one count (Manatee BOCC records). Diverse comments were made, many focusing on environmental destruction and protection of the wetlands, streams and habitat. Also, residents living close to the proposed mine want the permit denied.

3. The level/percentage of avoidance of jurisdictional wetlands and streams is far too low. (about 17.6% impact). For comparison, 27% of Altman tract 4 wetlands (552 out of 2048) were avoided plus an enhancement included a 552-acre conservation easement. Sections 34, 27, and 26 contain many streams and connected high quality wetlands which could be avoided. The staff has expressed concerns about the ability to reclaim high quality wetlands, stating that forested wetlands may take 20-30 years to mature. Bay swamps found in these sections (20.4 acres:26-9C, 27-9A, 27-10B, 34-4B, and 34-16B) as well as gum swamps (6 acres) are locally quite rare. Wetland expert Brian Winchester indicated in his report for the AEIS that there is no evidence that bay swamps can be reclaimed. Consequently, they should be avoided.

In addition, there are numerous stream segments in these sections. County staff also does not support mining in the 25-year floodplain of stream 100 because it provides water quality treatment, moderation of groundwater flow, nutrient processing, organic carbon export and flood storage. They state that moderate to high quality forested wetlands are hydrologically connected to stream 100 via natural stream segments l04a and l04b and altered stream segments 105b, l06, and l03b. Stream 107a is a first order stream channel where upstream waters have been diverted from this flow way. The USACE stream maps (2-2-A-ii-a) also show stream l06d extending into section 26 and northeast to the large area of wetlands in 26. The connections among the wetlands and streams in 26, 27, and 34 should be maintained.

A recent 2015 EPA synthesis of research based on 1200 studies, "Connectivity of Streams and Wetlands to Downstream Waters," indicates that scientific evidence unequivocally demonstrates that small or temporary streams and wetlands, regardless of their size or frequency of flow, are connected to downstream waters and strongly affect their function and water quality. Further, floodplains and isolated wetlands, even when lacking surface connections, also provide biological functions that affect the integrity of downstream waters. The report strongly supports the conclusion that the incremental contributions of all these streams and wetlands, whether they are intermittent or not, are cumulative across watersheds (notably the Myakka in this landscape). In mining, there are also temporal impacts--the streams are wiped out for many years.

In addition to avoiding valuable wetland and stream systems, xeric oak on the east side of the tract is another critically endangered habitat which supports many listed species such as the scrub jay and gopher tortoises whose incredible burrows support 200 or more other species. The AEIS recommended mining companies avoid and preserve these rare scrub habitats but fell short of

saying how they can be adequately mitigated. They are also very slow growing and would take many years to replace. Why aren't they considered for avoidance?

4. The Manatee County staff report (Case Summary-p. 9) states: "Although Florida law treats mining as a temporary land use, Staff is of the opinion that mining of high quality wetlands and other sensitive native habitats, such as forested wetlands and scrub, results in the total destruction of all vegetation and long-lasting disturbance of soil. Mosaic has indicated that forested wetlands reclamation areas are typically planted 5 to 6 years after mining has commenced and that these areas are typically released after an additional 10 to 15 years. Release of reclamation areas does not indicate that the area will develop into a habitat with equivalent functions. Forested areas may not reach full maturity and replace lost functions for another 10-15 years. High quality, forested wetland functions can be lost for 20 to 30 years as a result of mining. Due to the duration in which functions and values are lost to the system, plant and animal species composition may not recover." Added note in margin: "Therefore, although mining is considered a 'temporary use' under Florida law, it can result in significant long-term impacts to the environment."

While some mitigating factors were listed (p. 2,4), the Case Summary on Wingate East completed by the Manatee county staff, indicated a number of negative aspects of the application (p.2). Briefly:

a. Construction of 595-acre clay settling area within 500 feet of Lake Manatee Watershed boundary (now changed to 588 acres)

b. Winding Creek rural subdivision directly west of proposed mine

c. Required modification to Southeast Tract Mine Master Plan for extension of mine life an additional 19 years, which includes the use clay settling areas FM-1 and FM-2

d. Mine and disturb 272.4 acres of upland habitat and 5.75 acres of isolated wetland habitat and 5.75 acres of isolated wet habitats in the Peace River WOD

e. Impact 19,916 linear feet of natural streams channels, ditched stream channels and sloughs (see note in f)

f. Mine and/or disturb 686 acres of jurisdictional waters: 37 acres of surface water features and 649 acres of wetlands (based on State determinations and including 661 extension acres; not the same as the USACE jurisdictional acres)

g. Listed wildlife species observed on or near Wingate East Mine: 17 are named

h. Request to mine wetlands encumbered by Texaco Wetland Contract which is based on demonstration of same quality of wetlands reclaimed on Altman 4 tract

i. Proposing to impact 25 year floodplain of stream 100 (26 acres) and functionally integrated wetlands

j. Requires a modification to the Wingate Creek Mine Master Mining Plan for the extension of mine life for an additional 17 years, which includes trucking and processing of phosphate ore at the beneficiation plant

Staff also expressed concerns about the overriding public benefit proposal #2--a phosphate mining application does not meet this test based solely on the "strategic importance" of the mineral resource (phosphate), indicating therefore that the avoidance and minimization of "viable wetland systems" must be thoroughly addressed.

5. Similarly, Mosaic's business plan in the EA for mining as much phosphate ore as possible is not in the public interest when it involves impacting such a high percentage of the WOUS which could be avoided. Figure 4 of the EA shows the application of the mitigation framework and protects the forested wetlands which take so long to reach the functions and values associated with a fully developed canopy. The statement on p.33 of the EA, i.e., that the proposed project will cause the "short-term disruption" of the existing altered ecosystem, simply does not take into account the length of time required for forested wetlands to mature and doubts about Mosaic's ability to successfully reclaim high quality wetlands.

6. Mosaic already has enough acreage to mine in Manatee County (and other counties). In addition, only a small percentage of the acreage mined has been reclaimed or released. The attached annual chart provides the number of acres that have been mined and disturbed and the number of acres reclaimed and released. Of 16,532 acres mined since 1978, only 857 have been released and 6452 reclaimed. Projected mining for 2016/17 is 689 acres across 4 mines and projected reclamation for 2016/17 is only 320 acres across 4 mines. Note that the acreage to be reclaimed is minimal and less than half as much as the acres being mined. In the reclamation plan for Wingate East, the only section receiving new faster reclamation methods (muck and topsoil) is in the Peace River Watershed overlay--probably to focus attention away from mining which shouldn't be allowed in the watershed in the first place. The other types of habitats indicate overburden or overburden mixed with sand tailings when "practical" or "available"--an opt-out.

What is not understood or discussed in the EA or AEIS are the thousands of acres of mine equipment, paraphernalia and CSAs which have not or are not being reclaimed. (shown on chart)

7. "No action" would prevent additional damage to the water resources and land from strip mining that devastates the landscape and has "significant long-term impacts" according to Manatee county staff.

Alternatives such as no or upland only mining (Figure 2) and importation should be considered. The AEIS statements on pages 2-20 and 2-21 regarding importation are misleading. Mosaic did

use rock imported from Morocco when the South Fort Meade Mine was shut down, but continues to import rock. According to the USGS minerals yearbook for 2015, the United States is "the leading importer of phosphate rock in the world." Further, "about 98% of imported phosphate rock was consumed by Mosaic and PCS Nitrogen at their phosphoric acid plants in Louisiana." Mosaic imports from its mine in Peru and from Morocco, and owns an interest in a mine in Saudi Arabia that is being developed. The latest USGS report (attached) indicates many countries with significant reserves, more than "300 billion tons." The report states: "There are no imminent shortages of phosphate rock." Morocco alone, a friendly country, has 50 times the phosphate Florida has and is expanding its mining and production. The USGS Phosphate Rock World Review section indicates major projects being developed and new mines in various stages of development in many countries. Therefore, as many other countries develop new mines and/or expand existing mines, it cannot be assumed that Mosaic's business will continue as usual. Phosphate mining is risky, markets can change rapidly; the business could go bad as it has in the past in Florida with similar devastating consequences.

Mosaic also has not presented any need other than its own business plan and profits. Exporting its product to other countries is at the expense of massive groundwater withdrawals and destruction of valuable wetlands and water resources in Florida. This is not a sufficient justification and is not in the public interest.

8. The Reality of Phosphate Strip Mining Shown in Aerial photographs/Google Maps. Close-up aerials and videos of current and past mines depict the landscapes which have been strip mined. The AEIS consists of words, mostly from the mining industry's point of view and the consultants the contractor chose to convey minimal significance. The truth is on the ground and clearly visible from the air and Google maps.

There appears to be little reclamation, mostly just scarred, often whitish landscapes, infestations of cogan grass and other invasive weeds, and slime ponds that are there for many years because so much earth was dug up and taken away and clays left in CSAs. There isn't enough soil or even sand to reclaim the land. Instead, deep pits (aka lakes) are created instead to fill the holes. A recent article in the Ledger, "What's Next for Bone Valley," inadvertently pointed out yet another long-term burden of phosphate mining in the southern part of Polk county--an astronomical 250,000 acres of old mining land that is not being used, much of it in long-term ownership by Mosaic.

9. Reclamation Delays/Variances. Mosaic doesn't keep the promises they make about reclamation. Their mine reclamation plans and timelines may have little meaning. They have been granted, according to a study by Norma Demers, 100 variances, for example for 10-year delays by DEP. Lack of enough sand is often cited as a reason. They should not be granted any permits for mining based on plans that have not been implemented according to schedule. The AEIS assumes that 8 years after mining completion the land is available for farming. This assumption is unsupported. The DEP state report includes 5-year blocks of time (20 years). The

2014 DEP report indicates that the percentage of mandatory acres of Mosaic mines reclaimed and released since 1975 is only 39%. Some say the areas will never be the same again, and others say it will take hundreds of years, if ever, for strip-mined areas to recover.

10. Clay Setting Areas. The waste clay disposal areas on approximately 40% of land are not temporary and constitute a significant impact which is ignored. The CSAs interfere with groundwater flow, ruin the land, are not readily reclaimed, and have little to no use after mining. No CSAs in Manatee County have even been reclaimed.

11. Losses of water resources are significant impacts and contrary to the public interest.

Ecosystems are completely destroyed down to a depth of 40-60 feet by strip mining, including the surficial aquifer that cannot be reclaimed. The Peace River Manasota Water Authority expressed concerns about mining in the AEIS and in the South Pasture Extension comments.

The water level is lowered by mining without even considering groundwater pumping. As mining occurs, groundwater moves into the mined area, permanently lowering the water in the surrounding areas.

The mining excavations and pits also result in a greater loss of water through evaporation.

We are in a water use caution area, yet millions of gallons of groundwater are used in the mining process that Mosaic obtains for free through a mega permit that allows for more water withdrawal than most municipalities use. Groundwater is being pumped from hundreds of wells. An unnecessary and destructive business is being subsidized; the water is a public resource.

The Hydrologic Conditions Report (June 7, 2017) by Peace River Manasota Water Authority indicated that rainfall in the Peace River Basin for the past 12 months is nearly 20 inches below normal. Region-wide rainfall conditions reported by SWFWMD for the 12-month period ending April 2017 indicate dry to very dry conditions in most of the Peace River Basin and along the coast of west-central Florida..

Manatee County is under water restrictions; is Mosaic?

SWFWMD also cannot predict droughts: Southwest Florida Still in a Drought (Water Usage Report Card-2008-2009; Deepening Drought is On the Way--Forecast raises specter of strained supply and rising fire risks (Herald Tribune, March 16, 2012), Little Rain, Low Rivers--with Dry Spell Seen Ahead, Fears of a Drought Return (Herald Tribune, March 7, 2013)

12. Lack of Research Supporting Success of Reclamation/Mitigation. Valuable wetland functions are lost for many years during mining. Some types of wetlands are difficult to re-create or cannot be re-created according to experts who have testified. There was no field research in the AEIS in Chapter 5 to determine the success of reclamation or mitigation. For example, what is the actual time it takes for different wetland and habitat types and what is the

actual fertility and performance of the "reclaimed" wetlands and land? Scientific evidence that reclamation or mitigation works and to what extent is lacking, yet the mine plan will includes written plans as though it does.

13. Economic Analysis Undervalues Ecosystem Services and Agriculture. The AEIS overestimates the value of mining, compared to the value of ecosystem services for forests and wetlands (AEIS treats them as though they have no value but research does indicate their value to society) and income to agriculture. Professor Weisskoff (see report submitted previously for AEIS) states that the income/revenue attributed to agriculture is grossly understated and that the methodology used by AEIS invalidates the agricultural contributions of all counties. The reason this is brought up is that it affects the outcome of the entire AEIS program, i.e., if the No action alternative is multiplied by the US Ag census factor, then the No action alternative actually gives a higher value than the With Mine alternative. The undervaluation of agriculture lands materially impacts the AEIS economic calculation, giving a higher value to the No action alternative. This failing is due to the company the applicant used to provide the AEIS economic analysis. Further, the product sold by the mining companies benefits the company and its shareholders, not the local economies, citizens or the local environment.

14. Chemical Fertilizer Runoff Contributes to Blue-Green Algae. Chemical fertilizer is one of the contributors to the nutrient load and runoff of phosphorus and nitrogen from land that is causing the poisoning of the water and blue-green algae in South Florida.

I respectfully request you deny this application. Loss of wetlands, natural resources and agricultural land to strip mining is the worst possible land use and is unsustainable.

Thank you for your consideration.

Sincerely,

(Dr.) Linda T. Jones

Attachments

Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence (Final Report)

Overview

History

Downloads

Notice

EPA announces the availability of the final report "*Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence*" in a January 15, 2015 Federal Register Notice. The purpose of this report is to summarize the current understanding about the connectivity and mechanisms by which streams and wetlands affect the physical, chemical, and biological integrity of downstream waters.

Federal Register Notices

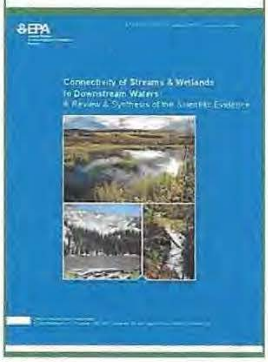
- FR Notice: Jan 15, 2015

Contact

Laurie Alexander

phone: 703-347-8630

email: alexander.laurie@epa.gov



Abstract

The U.S. Environmental Protection Agency's (USEPA) Office of Research and Development has finalized the report *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence*. The report reviews more than 1,200 peer-reviewed publications and summarizes current scientific understanding about the connectivity and mechanisms by which streams and wetlands, singly or in aggregate, affect the physical, chemical, and biological integrity of downstream waters. The focus of the report is on surface and shallow subsurface connections by which small or temporary streams, nontidal wetlands, and open waters affect larger waters such as rivers, lakes, reservoirs, and estuaries.

This report represents the state-of-the-science on the connectivity and isolation of waters in the United States. It makes five major conclusions, summarized below, that are drawn from a broad range of peer reviewed scientific literature.

- The scientific literature unequivocally demonstrates that streams, regardless of their size or frequency of flow, are connected to downstream waters and strongly influence their

function.

- The scientific literature clearly shows that wetlands and open waters in riparian areas (transitional areas between terrestrial and aquatic ecosystems) and floodplains are physically, chemically, and biologically integrated with rivers via functions that improve downstream water quality. These systems act as effective buffers to protect downstream waters from pollution and are essential components of river food webs.

- There is ample evidence that many wetlands and open waters located outside of riparian areas and floodplains, even when lacking surface water connections, provide physical, chemical, and biological functions that could affect the integrity of downstream waters. Some potential benefits of these wetlands are due to their isolation rather than their connectivity. Evaluations of the connectivity and effects of individual wetlands or groups of wetlands are possible through case-by-case analysis.

- Variations in the degree of connectivity are determined by the physical, chemical and biological environment, and by human activities. These variations support a range of stream and wetland functions that affect the integrity and sustainability of downstream waters.

- The literature strongly supports the conclusion that the incremental contributions of individual streams and wetlands are cumulative across entire watersheds, and their effects on downstream waters should be evaluated within the context of other streams and wetlands in that watershed.

This report was developed to inform rulemaking by the U.S. EPA and the U.S. Army Corps of Engineers on the definition of "waters of the United States" under the Clean Water Act (CWA). Because this report is a technical review of peer-reviewed scientific literature, it neither considers nor sets forth legal standards for CWA jurisdiction, nor does it establish EPA policy.

The report summarizes current scientific understanding about the connectivity of streams and wetlands to downstream waters. EPA has conducted a thorough review of the literature – more than 1,200 peer-reviewed and published documents – on the scientific evidence regarding the effects that streams, nontidal wetlands, and open -waters have on larger downstream waters such as rivers, lakes, estuaries, and oceans. The focus of the report is on surface and shallow subsurface connections by which small or temporary streams, nontidal wetlands, and open waters affect larger waters such as rivers, lakes, reservoirs, and estuaries. EPA, along with other federal agencies and states, can use this scientific report to inform policy and regulatory decisions, including the Clean Water Rule being developed by EPA and the U.S. Army Corps of Engineers.

Citation

U.S. EPA. Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence (Final Report). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-14/475F, 2015.

Annual Phosphate Mining Summary
Manatee County

	Jameson Tract	Northeast Tract[1]	Southeast Tract	Altman Parcel #4	TOTAL
Acres Zoned EX	4,933	6,970	2,611	2,048	16,562
Permitted Undisturbed	350	452	461	529	
Acres Mined & Disturbed	4,359	5,720	2,150	1,290	13,519
Acres Reclaimed (less released[2])	1,618	2,656	968	313	5,555
Acres Released	410	79	0	0	489
In Active Use (i.e., Plant, CSAs, corridors, etc.)	2,331	2,301	1,157	397	6,186
Projected Mining 2016/17	52	309	0	233	594
Projected Reclamation 2016/17	0	50	25	75	150
General Surety Bond	$300,225		$10,000	$759,500	$1,069,725
Reclamation Bond	$26,319,479		$4,010,794	$7,096,412	$37,426,685

Footnotes: 1 - Bunker Hill Park and Fire Station (79 acres) released and removed from the project acreage.
2 - Acres Reclaimed are reduced by Acres Released.

	Wingate Creek	Wingate Extension	TOTAL	Combined Mosaic Totals
Acres Zoned EX[2]	3,029	646	3,675	**20,237**
Acres Mined & Disturbed	2,579	434	3,013	**16,532**
Total Acres Reclaimed	897	0	897	**6,452**
Acres Released[1]	368	0	368	**857**
In Active Use (i.e., Plant, CSAs, corridors, etc.)	1,088	215	1,303	**7,489**
Projected Mining 2016/17	0	95	95	**689**
Projected Reclamation 2016/17	170	0	170	**320**
General Surety Bond	$33,500	$293,000	$326,500	**$1,396,225**
Reclamation Bond	$8,813,120	$2,775,894	$11,589,014	**$49,015,699**

Footnotes: 1 - Acres released includes 80-ac Manfull Tract which was removed from Wingate Creek mine boundary in 2004.
2- This acreges does not include the Wingate Utility Corridor, which is included in the Southeast Tract acreage.

12/20/2016

PHOSPHATE ROCK

World phosphate rock production capacity was expected to increase by 2% per year through 2020, based on lower estimated production from China. The largest areas of growth were planned for Africa and the Middle East. In Morocco, work continued on the expansion of phosphate rock mines and processing facilities, which was expected to double phosphate rock production capacity by 2020. A new 5.3-million-ton-per-year phosphate mining and processing complex remained on schedule to open in 2017 in Saudi Arabia. The major U.S. phosphate rock producer is part of a joint venture in the project.

Other significant phosphate rock projects were expected to begin by 2020 in Algeria, Brazil, Egypt, Jordan, Kazakhstan, Peru, Russia, and Senegal.

Continued population growth will require a growing supply of phosphate rock to produce fertilizers for crops, animal feed supplements, and industrial applications (in order of importance). World consumption of P_2O_5 contained in all uses was expected to increase incrementally to 48.9 million tons in 2020 from 44.5 million tons in 2016.

World Mine Production and Reserves: Reserves for China were updated with information from official sources. Reserves for Saudi Arabia were updated with information from company reports. The phosphate rock mines in Iraq and Syria were reported to be closed in late 2015 because of ongoing conflicts in that region. Iraq only reported a small quantity of production in 2015; therefore, it was placed in the "Other countries" category.

	Mine production		Reserves[4]
	2015	2016[e]	
United States	27,400	27,800	1,100,000
Algeria	1,400	1,500	2,200,000
Australia	2,500	2,500	1,100,000
Brazil	6,100	6,500	320,000
China[5]	120,000	138,000	3,100,000
Egypt	5,500	5,500	1,200,000
India	1,500	1,500	65,000
Israel	3,540	3,500	130,000
Jordan	8,340	8,300	1,200,000
Kazakhstan	1,840	1,800	260,000
Mexico	1,680	1,700	30,000
Morocco and Western Sahara	29,000	30,000	50,000,000
Peru	3,880	4,000	820,000
Russia	11,600	11,600	1,300,000
Saudi Arabia	4,000	4,000	680,000
Senegal	1,240	1,250	50,000
South Africa	1,980	1,700	1,500,000
Syria	750	—	1,800,000
Togo	1,100	900	30,000
Tunisia	2,800	3,500	100,000
Vietnam	2,500	2,800	30,000
Other countries	2,470	2,410	810,000
World total (rounded)	241,000	261,000	68,000,000

World Resources: Some world reserves were reported only in terms of ore and grade. Phosphate rock resources occur principally as sedimentary marine phosphorites. The largest sedimentary deposits are found in northern Africa, China, the Middle East, and the United States. Significant igneous occurrences are found in Brazil, Canada, Finland, Russia, and South Africa. Large phosphate resources have been identified on the continental shelves and on seamounts in the Atlantic Ocean and the Pacific Ocean. World resources of phosphate rock are more than 300 billion tons. There are no imminent shortages of phosphate rock.

Substitutes: There are no substitutes for phosphorus in agriculture.

[e]Estimated. — Zero.
[1]Defined as phosphate rock sold or used + imports.
[2]Marketable phosphate rock, weighted value, all grades.
[3]Defined as imports – exports + adjustments for industry stock changes.
[4]See Appendix C for resource and reserve definitions and information concerning data sources.
[5]Production data for large mines only, as reported by National Bureau of Statistics of China.

From: Nancy Armstrong
To: Peterson, Mark E CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Wingate East Comment
Date: Monday, July 24, 2017 6:15:04 PM
Attachments: Comments for Wingate East.txt

Sent from Outlook <Blockedhttp://aka.ms/weboutlook>

Regarding SAJ-2009-03221
July 24, 2017

Dear Mr. Peterson,

I am respectfully addressing the Army Corps of Engineers to deny the permit for Wingate East SAJ-2009-03221. I am a resident of the mining district.

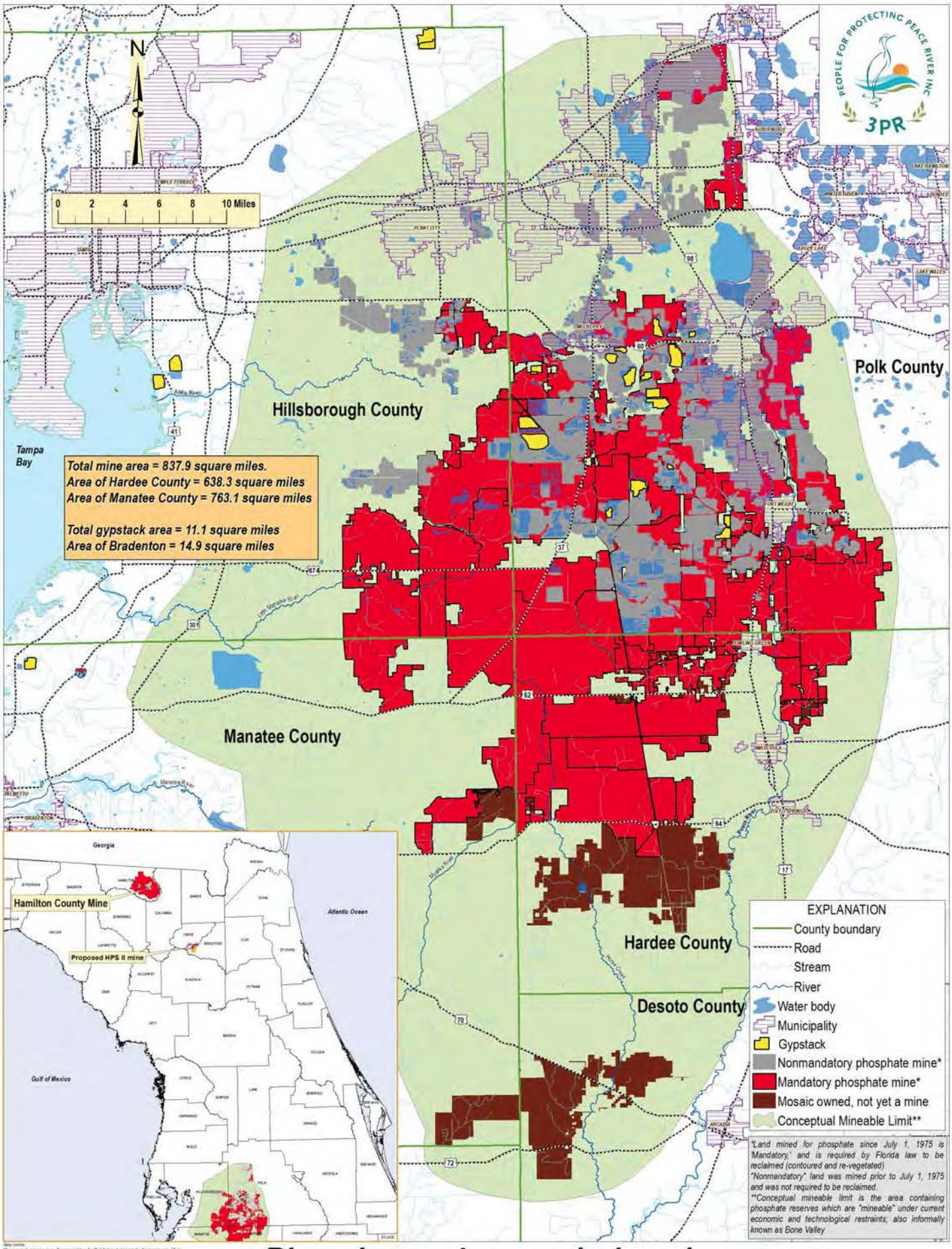
The Corps is under a significant obligation to protect the waters of the US. Wetlands have the highest priority and the mandate is to avoid or minimize impacts to these wetlands.
Reclamation and mitigation should not improperly replace the primary wetland protection mechanisms in the Clean Water Act: avoidance followed by minimization. The public has
not been allowed access to the reclamation and mitigation plan prior to the Corps approval. The Corps must consider public input to qualify it's decisions to fulfill NEPA. A public
hearing in the Wingate/Ona/Desoto mine area is necessary.
The Manatee County Commission approved Wingate East despite the public outcry to deny. Over 2000 people submitted presentations, emails and phone calls to deny this from
happening. A mere 17 for approval. The Manatee County Staff report of September 2016 states "that mining of high quality wetlands and other sensitive native habitats, such as
forested wetlands and scrub, results in the total destruction of all vegetation and long-lasting disturbance of soil." In that staff report, the mining industry purports that 15 to 25 years
after mining theymay have some reclaimed wetlands released. They do justify this by saying that they cannot claim that the area has replaced all lost functions but that there is a
"reasonable expectation"that the area will develop into a habitat of equivalent function. This is acceptable? There is no guarantee because they cannot replace what was there before.
It is forever changed. There are terms and phrases that come up frequently in the mining documents: reasonable assurances, if available, if practicable, reasonable expection. This is all
fuzzy, non-commital,very subjective language. Destroying high grade wetlands is not as Mosaic puts it "a reasonable use of the land." They acknowledge their destruction by offering up
mitigation but this mitigation has not been proven to function nor should it be allowed instead of avoidance.
It seems that the applicants statement of need stands unquestioned and that their preferred alternative is the only practicable alternative. The requirements of the CWA and the public
interest should not be subordinated to Mosaic's business needs. The applicant's project specific need is too narrow- it virtually eliminates consideration of other alternatives.
Fertilizer is alleged to be the overall public need. I believe this is not for the public's benefit but for the industry's benefit. If the fertilizer "public benefit" is given credence all permitting
must consider the whole fertilizer process from the mining of the rock through the processing of the rock. This includes all the hazardous waste left behind. Currently this is not
considered at all. Mosaic states that the phosphate rock mined in Manatee county will be processed in Hillsborough and/or Polk county processing plants. There is an ever increasing
awareness that regenerative agriculture will be what feeds the world - not a temporary amendment to the soil that adds to pollution. The massive sinkhole disaster in September
2016 still looms large and reminds us that the 24 gypstacks in central Florida have this potential which will affect all of Florida's water.
The idea that phosphate mining is a temporary use of the land is totally absurd.

The temporary use idea was initiated by the outdated grandfathered-in industry.
Phosphate mining affects the whole Bone Valley area and affects every Floridian. Wingate East (Manatee), South Pasture Extension (Hardee), Ona (Hardee), Pine Level (Desoto)
are up for permitting all at once. In the attached map you can see the whole scope of mining. This map is a compilation from the FDEP website.

The safety of our waters are at risk. The people of Florida depend on our agencies to protect our waters. Please look at the big picture.

I ask the ACOE to deny permitting Wingate East and to have a public hearing in the mining area. Thank you.

Nancy Armstrong
7301 Redge Rainey Road
Ona, FL 33865



Phosphate mines and phosphogypsum stacks (gypstacks) of Florida

From: Sarah Hollenhorst
To: Peterson, Mark E CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] SAJ-2009-03221 :3 Big Myths about Modern Agriculture - Scientific American
Date: Monday, July 24, 2017 12:53:33 PM
Attachments: 3-big-myths-about-modern-agriculture1.pdf
ATT00001.txt

In addition to statement by
Sarah Hollenhorst
Arcadia, FL 34266

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3 Big Myths about Modern Agriculture

Myths get in the way of our ability to restore degraded soils that can feed the world using fewer chemicals

By David R. Montgomery, The Conversation on April 5, 2017

Planting a diverse blend of crops and cover crops, and not tilling, helps promote soil health. *Credit: Catherine Ulitsky USDA Flickr (CC BY 4.0)*

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The following essay is reprinted with permission from The Conversation, an online publication covering the latest research.

One of the biggest modern myths about agriculture is that organic farming is inherently sustainable. It can be, but it isn't necessarily. After all, soil erosion from chemical-free tilled fields undermined the Roman Empire and other ancient societies around the world. Other agricultural myths hinder recognizing the potential to restore degraded soils to feed the world using fewer agrochemicals.

When I embarked on a six-month trip to visit farms around the world to research my forthcoming book, "Growing a Revolution: Bringing Our Soil Back to Life," the innovative farmers I met showed me that regenerative farming practices can restore the world's agricultural soils. In both the developed and developing worlds, these farmers rapidly rebuilt the fertility of their degraded soil, which then allowed them to maintain high yields using far less fertilizer and fewer pesticides.

Their experiences, and the results that I saw on their farms in North and South Dakota, Ohio, Pennsylvania, Ghana and Costa Rica, offer compelling evidence that the key to sustaining highly productive agriculture lies in rebuilding healthy, fertile soil. This journey also led me to question three pillars of conventional wisdom about today's industrialized agrochemical agriculture: that it feeds the world, is a more efficient way to produce food and will be necessary to feed the future.

MYTH 1: LARGE-SCALE AGRICULTURE FEEDS THE WORLD TODAY

According to a recent U.N. Food and Agriculture Organization (FAO) report, family farms produce over three-quarters of the world's food. The FAO also estimates that almost three-quarters of all farms worldwide are smaller than one hectare – about 2.5 acres, or the size of a typical city block.

Only about 1 percent of Americans are farmers today. Yet most of the world's farmers work the land to feed themselves and their families. So while conventional industrialized

agriculture feeds the developed world, most of the world's farmers work small family farms. A 2016 Environmental Working Group report found that almost 90 percent of U.S. agricultural exports went to developed countries with few hungry people.

Of course the world needs commercial agriculture, unless we all want to live on and work our own farms. But are large industrial farms really the best, let alone the only, way forward? This question leads us to a second myth.

MYTH 2: LARGE FARMS ARE MORE EFFICIENT

Many high-volume industrial processes exhibit efficiencies at large scale that decrease inputs per unit of production. The more widgets you make, the more efficiently you can make each one. But agriculture is different. A 1989 National Research Council study concluded that "well-managed alternative farming systems nearly always use less synthetic chemical pesticides, fertilizers, and antibiotics per unit of production than conventional farms."

And while mechanization can provide cost and labor efficiencies on large farms, bigger farms do not necessarily produce more food. According to a 1992 agricultural census report, small, diversified farms produce more than twice as much food per acre than large farms do.

Even the World Bank endorses small farms as the way to increase agricultural output in developing nations where food security remains a pressing issue. While large farms excel at producing a lot of a particular crop – like corn or wheat – small diversified farms produce more food and more kinds of food per hectare overall.

MYTH 3: CONVENTIONAL FARMING IS NECESSARY TO FEED THE WORLD

We've all heard proponents of conventional agriculture claim that organic farming is a recipe for global starvation because it produces lower yields. The most extensive yield comparison to date, a 2015 meta-analysis of 115 studies, found that organic production averaged almost 20 percent less than conventionally grown crops, a finding similar to those of prior studies.

But the study went a step further, comparing crop yields on conventional farms to those on organic farms where cover crops were planted and crops were rotated to build soil health.

SAJ-2009-03221 2018-01-22 ROD-SOF Att A
These techniques shrank the yield gap to below 10 percent.

The authors concluded that the actual gap may be much smaller, as they found "evidence of bias in the meta-dataset toward studies reporting higher conventional yields." In other words, the basis for claims that organic agriculture can't feed the world depend as much on specific farming methods as on the type of farm.

Cover crops planted on wheat fields in The Dalles, Oregon. Credit: Garrett Duyck NRCS *Flickr* (CC BY-ND 4.0)

Consider too that about a quarter of all food produced worldwide is never eaten. Each year the United States alone throws out 133 billion pounds of food, more than enough to feed the nearly 50 million Americans who regularly face hunger. So even taken at face value, the oft-cited yield gap between conventional and organic farming is smaller than the amount of food we routinely throw away.

BUILDING HEALTHY SOIL

Conventional farming practices that degrade soil health undermine humanity's ability to continue feeding everyone over the long run. Regenerative practices like those used on the

farms and ranches I visited show that we can readily improve soil fertility on both large farms in the U.S. and on small subsistence farms in the tropics.

I no longer see debates about the future of agriculture as simply conventional versus organic. In my view, we've oversimplified the complexity of the land and underutilized the ingenuity of farmers. I now see adopting farming practices that build soil health as the key to a stable and resilient agriculture. And the farmers I visited had cracked this code, adapting no-till methods, cover cropping and complex rotations to their particular soil, environmental and socioeconomic conditions.

Whether they were organic or still used some fertilizers and pesticides, the farms I visited that adopted this transformational suite of practices all reported harvests that consistently matched or exceeded those from neighboring conventional farms after a short transition period. Another message was as simple as it was clear: Farmers who restored their soil used fewer inputs to produce higher yields, which translated into higher profits.

No matter how one looks at it, we can be certain that agriculture will soon face another revolution. For agriculture today runs on abundant, cheap oil for fuel and to make fertilizer – and our supply of cheap oil will not last forever. There are already enough people on the planet that we have less than a year's supply of food for the global population on hand at any one time. This simple fact has critical implications for society.

So how do we speed the adoption of a more resilient agriculture? Creating demonstration farms would help, as would carrying out system-scale research to evaluate what works best to adapt specific practices to general principles in different settings.

We also need to reframe our agricultural policies and subsidies. It makes no sense to continue incentivizing conventional practices that degrade soil fertility. We must begin supporting and rewarding farmers who adopt regenerative practices.

Once we see through myths of modern agriculture, practices that build soil health become the lens through which to assess strategies for feeding us all over the long haul. Why am I so confident that regenerative farming practices can prove both productive and economical? The farmers I met showed me they already are.

This article was originally published on The Conversation. Read the original article.

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ABOUT THE AUTHOR(S)

David R. Montgomery

David R. Montgomery is a professor of Earth and Space Sciences at the University of Washington.

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Sent from my iPhone

From:	Sarah Hollenhorst
To:	Peterson, Mark E CIV USARMY CESAJ (US)
Subject:	[Non-DoD Source] SAJ-2009-03221Evaluation of Constructed Wetlands on Phosphate Mined Lands in Florida. Volume II: Hydrology, Soils, Water Quality, & Aquatic Fauna - Florida Industrial and Phosphate Research Institute
Date:	Monday, July 24, 2017 12:58:02 PM
Attachments:	evaluation-of-constructed-wetlands-on-phosphate-mined-lands-in-florida-volume-ii-hydrology-soils-water-quality-aquatic-fauna.pdf ATT00001.txt

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As addition to statement by Sarah Hollenhorst
Arcadia,FL 34266

« Back

Evaluation of Constructed Wetlands on Phosphate Mined Lands in Florida. Volume II: Hydrology, Soils, Water Quality, & Aquatic Fauna

03-103-139-v2Final (http://fipr.state.fl.us/wp-content/uploads/2014/12/03-103-139-v2Final.pdf)

During the process of mining phosphate matrix the landscapes of the Florida phosphate mining districts are greatly altered in terms of both the surface environment and the subsurface hydrogeology. Upon the completion of mining, it is desirable to restore the surface environment into a viable, functional, and productive condition. One of the most significant factors controlling the viability of the surface environment is the hydrologic character. There is a unique interrelationship between the type of environment and the hydrology, which dictates the distribution and function of all types of wetland and upland ecosystems.

It is a specific goal of all reclamation efforts to restore wetland areas so as to meet the national goal of no net loss of wetland habitat. In order to successfully restore or to create wetlands it is necessary to thoroughly understand the hydrology of the watersheds in which the wetlands reside and the hydrology of specific wetland types. Without some baseline information on the watershed hydrology, it is not possible to develop a viable restoration plan for the mined watershed. One very important fact is that the water balance of the restored watershed will not necessarily function in a completely similar manner to the pre-mined watershed. This water balance is fundamental in the control of both surface-water and groundwater flows. The creation of wetland environments can only be successful if the hydrology at the location of the new wetland matches the required hydrologic regime of the specific wetland type desired.

Changes in the hydrogeologic framework of the shallow aquifer system tend to cause permanent changes to the water balance in each part of the created watershed. For example, about 40% of the created watersheds (average) have clay as a shallow substrate compared to a much smaller percentage in the natural landscape. The clay occurs either within former settling ponds or as mixed overburden. Therefore, the created wetlands must be located in proper relation to the new hydrologic regime. Restoration efforts attempting to locate wetlands at their former geographic positions alone are more likely to have a high percentage of failures. Because of changes to the watersheds, it may be necessary to locate wetland environments lower in the new watersheds and it will be necessary to increase the size of the land area surrounding isolated wetlands in order to compensate for the increased amount of clay in the new environment.

Prior to mining, the Florida phosphate districts contained about 11 different types of wetlands of which about 6 of these wetland types have been successfully created. This does not mean that wetland restoration efforts have failed, because over a period of time the created wetlands will evolve into the types most suited for their new hydrologic regime and position in the watershed.

All wetland types evolve with time and sufficient time must be allowed before the restoration efforts can be evaluated. Wetland creation efforts can be greatly improved by clearly assessing the hydrology of the restored watershed in terms of the geomorphology and water balance at different locations in the basin and in terms of the regulations applied to mine reclamation. It is necessary to establish a cooperative effort between the mining companies and the regulatory agencies to enhance the reclamation efforts by incorporating the hydrologic regime into both the mining plan and the proposed wetland locations after mining. Minor adjustments in the mining plan can increase the potential success rates of reclamation without adding significant costs. Cooperation of the regulatory agencies in providing flexibility in the location and evaluation of created wetlands with specific consideration of the new watershed hydrology would greatly increase the success rate for created wetlands.

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Sent from my iPhone

From: Barbara Angelucci
To: Peterson, Mark E CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Permit Application SAJ-2009-03221 - Wingate East
Date: Sunday, July 23, 2017 7:12:14 PM

Mark E. Peterson

West Branch Mining Team

Jacksonville District Corps of Engineers

10117 Princess Palm Ave., Suite 120

Tampa, FL 33610

Dear Mr. Peterson:

Subject: Comments on Permit Application SAJ-2009-03221 Wingate East

I am submitted comments on SAJ -2009-03221, Supplemental Environmental Assessment, Draft Clean Water Act Section 404(b)(1) Guidelines Analysis, and Draft Public Interest Review for Department of the Army (DA) Permit Application SAJ-2009-03221 (SP-MEP) requesting that you deny the permit for Wingate East Mine and hold a Public Hearing in the location of the Wingate East, Ona and DeSoto Mines.

Mr. Heinz J. Mueller, Chief of the NEPA Program Office in the Office of Policy and Management submitted very strong comments to the USACE regarding mining ..."which may result in significant impacts to Aquatic Resources of National Importance, (ARNIs)." Since the date of that letter of 7/30/2012 nothing has changed except further pressures on our aquifers and waters of national importance with continued mining.

Letters from the Region 4 EPA as well as the scientific Technical Comments of

the USGS Florida Water Science Center all express concern about our rivers,

streams, wetlands, and habitat which is impacted by all aspects of mining.

Section 4.4.5 of the Final EIS describes the predicted effects of Wingate East on surface water quality.

As stated there, Wingate East will have a minor to moderate degree of effect. How do you know that?

Even the EPA and USGS Florida Water Science Center disagree with your statement.

In an EPA Statement posted on August 6, 2014 on "EPA: Protecting Water; A Precious, Limited Resource

by Gina McCarthy Head of the EPA stated "The new mines could significantly impact wetlands."

The USACE is doing just that as there is little to no evidence of protection of wetlands or water.

Then there is the distinct problem of the Mitigation and Reclamation Plan which is not

available to the Public. How do we know there will be "No net loss of Wetlands"

and how will they compensate for removed wetlands. The USACE must make the Avoidance and Mitigation Plan

available for public and other Regulatory review before any decision is made on this permit.

Mosaic relies on 'self reporting' and 'ghost writing' regulatory reports – which

ring with their need for more and more mining. However, in accordance with

Mosaic's filing of SEC Form 10K 2016, Page 8 they ….."have a 35% economic interest

in a joint venture which owns the Miski Mayo phosphate rock mine in the Bayovar region of Peru.

Our investment in the Miski Mayo Mine and related commercial offtake supply agreement to purchase

a share of the phosphate rock from the Miski Mayo Mine allows us to supplement our internally

produced rock to meet our overall fertilizer production needs.

The Miski Mayo Mine's annual production capacity is 3.9 million tonnes."…..

…."An additional Joint Venture is "MWSPC (Ma'aden Wa'ad Al Shamal Phosphate Company) which is developing a mine

and two chemical complexes that are presently expected to produce phosphate fertilizers and other downstream

phosphates products in the Kingdom of Saudi Arabia."

"Our investment in the Miski Mayo Mine and related commercial offtake supply agreement to purchase a share of the phosphate rock allows us to supplement our overall phosphate rock needs. In addition, we expect that MWSPC will enable us to not only further diversify our sources of phosphates but also improve our access to key agricultural countries in Asia and the Middle East".

Mosaic – SEC 10K 2016 Page 8.

According to the Wikipedia, approximately one third of Mosaic's Florida phosphate is shipped within North America with the remainder exported globally. The bulk of our natural resource is needlessly exiting our State, leaving our lands devastated and our wetlands, rivers, and streams replaced with piles of toxic and radioactive materials all because the FAEIS did not consider importation of phosphate rock which Mosaic is actually doing.

This disproves your or Mosaic's Statement of Need in the Supplemental Assessments and in the FAEIS. It is apparent the company can do with imported rock as it has imported rock before, which the USACE refuses to recognize putting more stress on our aquifer to the tune of up to 70 million gallons of free water a day. Mosaic is permitted to pump the aquifer while citizens are on water restrictions. Something is not right with this picture, as with each mine permit more water is withdrawn, rivers, watersheds, streams, wetlands are under duress and are negatively impacted

In Manatee County, the Wingate East Mine will impact the Myakka Watershed and Mosaic's mining of a strawberry field

as part of the Four Corners Mine, will also draw down and reduce flow in the Manatee River by 1.96 million gallons per day

during mining which….. "shall continue until such time that Mosaic has completed reclamation of all mining activities constituting

a part of the Four Corner Mine in the Watershed of Lake Manatee". We are talking decades!

The Manatee River feeds into Lake Manatee our drinking water supply which we also sell to Sarasota County.

Mosaic has said that they would augment the water quantity from their wells for these draw downs.

However, Mosaic is diminishing our present water supply and replacing it with water from our future water supply.

That means they get to draw even more water out of our aquifer to replace the reductions they incurred.

(August 11, 2015 Manatee County Board of Commissioners meeting, item #33. Z-14-04 –

Mosaic Fertilizer, LLC/Four Corners Mine – G & D Farms Addition –DTS20100222).

No mention was made of the aquatic life in the river that would be affected by these draw downs.

While this is not part of the USACE's jurisdiction, it is just another example of gambling with our greatest

resource……..WATER.

On the topic of water and Mosaic's use thereof, on February 23, 2012 a Petition for Hearing on the Approval of Mosaic's

Individual Water Use Permit #20011400.025, aka "Integrated Water Use Permit (IWUP)" dated February 29, 2012

was submitted by T. Mims Corp. in Lakeland. His professional engineer, Mike Cotter, reviewed the water permit

which was the basis for requesting an Administrative Hearing. State of Florida, Division of Administrative Hearings,

Nichols Ranch, LLC; Mims Properties Investments, LLC; Mims Properties, LLC and Mims Hammocks, LLC,

Petitioners VS Mosaic Fertilizer, LLC and Southwest Florida Water Management District.

A web link is below if you wish to use it

Respondents. Blockedhttp://www.protectpeaceriver.org/wp-contents/uploads/2012/04/mosaic_hearing_pdf.pdf <Blockedhttp://www.protectpeaceriver.org/wp-contents/uploads/2012/04/mosaic_hearing_pdf.pdf>

On Page 9 of Cotter's report under "Statement of Disputed Issues of Material Fact" there was mention regarding

the New Wales gypsum stack. The very same stack that recently developed a sinkhole which plundered unknown

amounts of toxic chemicals into the aquifer. This was unavoidable and predictable, considering the following

circumstances surrounding the issue. Some of the documents presented in the "Petition for an Administrative Hearing

on Mosaic's mega water permit, identified FDEP mining water use permit #405417 for the New Wales Facility issued in 1989.

It was discovered that this facility did not have any record of inspection since 1996 and no evidence

of there being one submitted prior to the sinkhole fiasco. SEVEN (7) YEARS with no inspections

which are usually done on an annual basis.

I know the USACOE does not include gyp stacks in its review, but it should as they have a direct impact on our water,

especially with self reporting by Mosaic and their neglect to inspect facilities. There are 24 gyp stacks in Florida and

Mosaic has said that the Wingate East disposable products, spoils, will go to the New Wales 'stack' or another 'stack'

north/outside of Manatee County which is more susceptible to sinkholes.

The effects of phosphate mining have been well documented over the years. The extensive pollution, the enormous water usage,

groundwater contamination, radioactive discharges and the failure to restore the land to its former use or even reclaim it are also well documented.

Mosaic owns hundreds of acres in Central Florida and expects to mine all of them. Surely, the USACE will own the Environmental Risk

from the cumulative impacts, it refused to examine. The USACE must deny this permit as our watersheds, rivers, streams,

wildlife and wetlands must be protected.

As Ansel Adams has said, "It is horrifying that we have to fight our own Government to save the environment".

Barbara A. Angelucci, Resident

Manatee County

941 351-1359

From: Hugh Richardson
To: Peterson, Mark E CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Permit SAJ-2009-03221 - Public Comments on Mosaic - Wingate East Mine Permit
Date: Monday, July 24, 2017 5:18:53 PM

Mr. Mark E. Peterson
Jacksonville District Corps of Engineers
Mark.e.peterson@usace.army.mil <mailto:Mark.e.peterson@usace.army mil>

Dear Mr. Peterson:

I am writing as a personal appeal to you and the Army Corps of Engineers to refrain from issuing permit SAJ-2009-03221 for the Mosaic Wingate East Mine. At the very least, we need a Public Hearing to voice the myriad of objections to the continuing devastation Florida's wetlands and agricultural land.

I am a native Floridian. My wife and I moved to Hardee County in 2013 to be close to family. We built a home in Ona, Florida to be next to family members who have lived and worked in Hardee County for 30 years. I knew about phosphate mining when we moved here. Its easy to see the results of the destruction of wetlands and pastureland in any aerial view of Polk, Hardee, and Manatee counties through Google Earth. But it was exciting to move to the area and look forward to retirement years in the real Florida, not along the overbuilt coast. Our 10 acres is in Ona, off SR 64, and, if Mosaic has its way, directly across from what might become a horrible example of humankind's complete lack of respect for the only inhabited planet that anyone knows of.

We moved here from Oregon - a state known for environmental concerns such as clearcutting of forests. As bad as the result of a clearcut is though, it does not hold a candle to the incredible destruction of phosphate mining and the irreversible loss of wetland and animal habitat it leaves in its wake. This coupled with the fact that, while trees can be replanted, phosphate can not be recreated. I did not realize when we moved here in 2013 just how awful this is. It was when I began to understand the sheer magnitude of the problem and to research the history of mining and the future destruction of Florida's counties that I felt compelled to come forward with my concerns.

We need a Public Hearing:
* to remind decision-makes of the vital role wetlands play in the fragile environment that is Florida.
* to show that, although Mosaic wants you to believe otherwise, it does Not have the support of citizens of Florida to extract the remaining non-replenishable resource that is phosphate with no regard to future needs and the devastation left behind.
* to show that Mosaic's Statement of Purpose is so narrowly worded that it tries to make you believe everything Mosaic desires is inevitable and must be provided to it on a silver platter. This is not right. If wetlands are going to be destroyed, it has to be proven that it is for the public good or for some overriding public purpose. Where is the proof of a public good coming out of this self-serving destruction?
* to find the support for claims that restored wetlands are better than they were. There seems to be nothing that demonstrates this contention. What happens to the aquifers that are destroyed? What plants and animals can live on the poor excuse for land that is put back after the draglines have finished destroying what took countless years to create? What about the loss of habitat now for plants and animals while Mosaic delays any remediation by continuing to expand mining so as to never shut down a site and have to actually clean up their mess.
* to discuss the probable impact of depleting this nation of its primary phosphate reserves causing us to depend on other, possible not very friendly, nations to sell us fertilizer. Can you imagine getting into the same predicament for fertilizer for US crops as we have with oil for cars and industry? Just because relations with a country are okay now does not mean that will be the case in future years when the worlds population has increased even more and everyone is demanding fertilizer to support their own agricultural needs. Mosaic can import raw material to process. It does not have to use up all of America's resource now just to satisfy a quarterly earnings report and make shareholders happy. We need to pull back the reins of this phosphate-hungry horse and put some perspective into the discussion.

There is so much more to say here but I know you will be receiving many comment letters and emails from concerned citizens and groups. Please consider our remarks, both backed by science and and from the heart, as you

move through this process. Consider that future generations will have to live with the results of the decisions made today.

Thank you for your time,

Yours truly,

Hugh Richardson

Hugh Richardson
Ona, Florida

From: Leslie Harris-Senac, Filmmaker / Owner of Visions Unlimited Video Productions, Inc.
To: Peterson, Mark E CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] permit application SAJ-2009- 03221
Date: Friday, July 21, 2017 4:53:46 PM

Dear Mr. Peterson,
Please stop phosphate mining in beautiful Manatee County.
Economics are part of the suite of metrics considered in a CWA Section 404 determination of public interest.
Phosphate mining is not an economic benefit to the county, state or nation, and is in fact a net loss.

The Corps must deny the permit. It has absolute authority to do so.
Please host a public hearing in or near the Bone Valley.
Do the right thing here. Consider grandchildren and their futures.

Sincerely,

Leslie Harris-Senac
Owner /Filmmaker

VISIONS UNLIMITED
Video Productions, Inc.

5109 S. Tamiami Trail
Sarasota, FL 34231

From: Margaret Tams
To: Peterson, Mark E CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Please reverse Wingate East mine permit
Date: Saturday, July 22, 2017 4:33:56 PM

Dear Mr. Peterson:

Thank you for this opportunity to comment on permit application SAJ-2009-03221.

The Clean Water Act states that healthy intact aquatic ecosystems are in the public interest. There are many reasons for this, among them:
Wetlands:
store 40% of Earth's carbon output,
reduce storm surge,
function as some of the most vibrant and diverse habitats on earth,
provide food and shelter for listed and many other species,
filter out pollution,
recharge aquifers,
retain stormwater
help minimize flooding.

The Manatee County permit to mine Wingate East was granted in spite of many clear reasons to deny. A full Environmental Impact Statement should be required; under the National Environmental Policy Act, one of the criteria for requiring a full EIS instead of an Environmental Assessment (EA) is "the degree to which the effects on the human environment are likely to be highly controversial." With over 2,000 citizens opposing this permit and only 17 speaking for it, I believe that the criteria for a full impact statement has been met.

Phosphate mining fails the public interest test. The Corps must deny a permit application if it is "contrary to the public interest." Fertilizer, the main justification alleged to offset the destruction of miles of landscapes, is not in the public interest, as claimed. But if it were deemed to be in the public interest, the Corps must include all the impacts associated with the manufacturing of fertilizer. The Corps must either remove the alleged public benefit of fertilizer production from its consideration, or factor the impacts of transportation, fertilizer production, human health impacts and waste disposal into its consideration.

The applicant's Statement of Need is so narrow as to preclude all alternatives. This is unacceptable, as numerous courts have ruled. By allowing the existing Statement of Need to stand unquestioned, the Corps is assenting a priori to the applicant's assertion that their exact preferred alternative, and no other, is the only practicable alternative, which is not the case.

Alternatives must be re-examined without consideration of Mosaic's business needs over the requirements of the CWA and the public interest.

Alternatives to chemical fertilizers must be acknowledged and considered in the Corps' decision. Alternatives such as farming with more sustainable methods such as regenerative agriculture, which the UN is studying on a global scale (Montgomery; Scientific American, April 2017), must not be ignored. There have been no comprehensive epidemiological studies performed among communities living in proximity to gypstacks, even though anecdotal reports of widespread illness abound.

Mosaic must not be allowed to self-monitor or self-regulate. It was caught cheating on toxic waste disposal by EPA, resulting in a $2 billion settlement, (United States v. Mosaic Co: Blockedhttps://www.epa.gov/sites/production/files/2016-03/documents/florida-cd.pdf) because 8 gypstacks are now thoroughly contaminated with a higher order of toxic waste than before. An independent third-party must be secured to perform monitoring, data collection and analysis of all subsequent mining operations.

Reclamation and mitigation have become the Corps' default alternatives for wetlands. They have displaced the primary wetlands protection mechanisms in the CWA: avoidance, followed by minimization. Reclamation and mitigation are by no means proven methodologies; system failure is more the norm than the exception. The public will not have access to the reclamation and mitigation plan prior to the Corps' decision. This itself is in violation of NEPA, since the Corps must consider public input to qualify its decisions as "informed."
Has the Corps physically inspected all of Mosaic's "reclaimed" lands? Or has the Corps only been shown Mosaic's demonstration projects, which are themselves the exception, having benefitted from millions in asymmetric restoration expenditures?

Phosphate mining is not an economic benefit to the county, state or nation, and is in fact a net loss. It leaves behind a mountain of costs for future generations to deal with. Mosaic stated under oath that there will be no new jobs created by mining Wingate East. Therefore, any claims of economic benefit from jobs is fallacious.

The table of economic benefits does not factor in agricultural and tourism jobs lost, today and in the future, as a result of mining. It does not account for the stark decline in taxable value of mined land, amply demonstrated in other counties, which can be as much as 75%, nor does it calculate those losses out over a 100-200-year time horizon, the minimum amount of time before these lands have any chance of returning to productivity. The only revenues that will stay in Florida from mining at Wingate East are the multipliers from perhaps 200 relocated employees (which will be a loss to other, adjacent counties, which hardly constitutes a benefit), sixty recycled subcontractors, and a severance tax, a modest per-ton royalty paid to Tallahassee and shared among many counties.

When Mosaic mines the last of the phosphate ore and leaves the state, it will leave behind 24 huge flat-topped mountains of radioactive, hazardous and toxic waste, with an EPA consent decree and funds to remediate only 8 of them (DOJ/EPA, 2016). Future generations will inherit the rest, and the liability for tens of billions in remediation costs, to be borne by taxpayers. The phosphate industry is unpredictable, subject to boom-and-bust cycles. For this, and other reasons, phosphate mining stocks are among the worst-rated on Wall Street. Mosaic has not mined all the lands for which it has received permits, nor has it come close to reclaiming all the lands it has finished mining.

The Endangered Species Act prohibits "takings," which include harm, harassment, and habitat modification or degradation. Mosaic contends that phosphate mining is a "temporary land use," and assumes that after 30-50 years, the land will once again be suitable habitat. There is no objective, peer-reviewed science to support that contention, and in fact, all the evidence appears to indicate that mined land acquires a thin cover of nuisance vegetation, and remains unusable and uninhabitable for an unknown period of time, perhaps centuries. Where will the animals go during that time? How many will die from the disturbance?

The Corps must deny the permit. It has absolute authority to do so.
I further urge that the Corps host a public hearing somewhere in or near the Bone Valley.
Sincerely,
Peg Tams

RECEIVED
JUL 17 2017
Tampa Regulatory Office

ManaSota-88, Inc.

A 501.c3 Public Health and Environmental Organization

District Engineer
West Branch Meeting Team
10117 Princess Palm Avenue
Suite 120
Tampa, Florida 33610

Re: DA permit application SAJ-2009-03221; Mosaic – Wingate East Mine

ManaSota-88, Inc. submits the following comments and request for a public meeting concerning the draft CWA Section 404(b)(1) Guidelines analysis and public interest review for DA Permit Application SAJ-2009-03221.

Additionally, ManaSota-88, Inc. strongly recommends the Army Corps of Engineers (ACOE) deny DA permit application SAJ-2009-03221 and find the project ***Environmentally Unsatisfactory.***

During the permit decision process, the Corps must evaluate the project in relation to the public interest. The public benefits and detriments of all factors relevant to each case are to be carefully evaluated and balanced. Relevant factors may include conservation, economics, esthetics, wetlands, cultural values, fish and wildlife values, water supply, water quality, and any other factors judged important.

ManaSota-88, Inc. (hereinafter, "ManaSota-88"), is a public interest conservation and environmental protection organization which is a Florida not-for-profit corporation and a citizen of the State of Florida whose address is: ManaSota-88, P.O. Box 1728, Nokomis, Florida 34274. The corporate purposes of ManaSota-88 include the protection and preservation of water quality and wildlife habitat in Manatee and Sarasota Counties. ManaSota-88 is a citizen of the State of Florida pursuant to section 403.412(5), Florida Statutes.

ManaSota-88 and its members will be substantially and adversely affected by the conditions and activity which will result if this permit is issued, including by water pollution and degradation of the water quality of surface and ground waters. ManaSota-88 owns real property located in Manatee County, Florida.

GENERAL COMMENTS

Post - reclamation lands must not be permitted to exceed pre-mining, unenhanced natural background soil radium and gamma levels.

Best Possible Technologies can reclaim mined land to pre-mining soil radium and gamma levels. Since the future land uses of the reclaimed lands are not known, all potential radiation exposures should be avoided.

Since it is both economically and technically feasible, DA permit application SAJ-2009-03221 should require radiation levels after mining not exceed those that existed before mining.

Clay Settling Areas are one of the significant environmental and public health threats associated with the Wingate East Mine. Radioactive wastes from these ponds threaten surface and groundwater; the hazard of slime spills is a constant menace to essential public water supplies and natural systems. Elevated levels of fluorides, chromium, cadmium, arsenic and other toxins are commonly found in clay settling areas.

The possibility of a slime pond dam break cannot be ruled out. When a pond ruptures their earthen impoundment's, the highly acidic, highly radioactive slime effluents completely annihilate all aquatic life in the receiving waters.

The highly acidic slime ponds also emit fluoride and radon gases, which are harmful to humans, plants and animal tissues.

Even if all mining proposed for the Myakka River and Peace River watersheds goes according to plan with no unexpected problems or deliberate violations of ACOE permits, because of run-off from mining tracts, permitted and unregulated discharges to surface and groundwater, water quality will still be degraded.

Water quality protection won't be accomplished by permitting thousands of tons of toxic and radioactive sandy slimes to be deposited in mine cuts which cut through to the surficial aquifer and beyond or permitting sandy slimes to be dumped in surface impoundment's.

DISPUTED ISSUES OF LAW AND FACTS

ManaSota-88 alleges the following disputed issues of law and material fact for determination in the DA permit application SAJ-2009-03221; Mosaic – Wingate East Mine.

(a) Whether Mosaic Fertilizer, LLC (hereinafter "Applicant") has provided reasonable assurances that the applicable state and federal water quality standards will not be violated as a result of the discharge from Wingate outfalls;

(b) Whether Applicant has provided reasonable assurances that the Daily Maximum Discharge Limits of Total Suspended Solids, Fixed Suspended Solids, Total Phosphorus, Total Nitrogen, Total Radium 226 + Radium 228, Alpha, Gross Particle Activity and whole effluent acute toxicity limits will be in compliance with Clean Water Act Section 404 and Class III water quality standards;

(c) Whether Applicant has provided reasonable assurances of compliance with Clean Water Act Section 404 and Class III water quality standards for the direct, secondary and cumulative impacts of the proposed discharges. These include, but are not limited to, the water quality standards for: nutrients, turbidity transparency, biological integrity, nuisance conditions, heavy metals and other contaminants, and dissolved oxygen, and including the anti-degradation and public interest provisions;

(d) Whether Applicant has provided reasonable assurances that the proposed activity is not contrary to the public interest as set forth in Clean Water Act Section 404 and the rules promulgated thereunder;

(e) Whether Applicant has provided reasonable assurances that the cumulative impacts of the proposed project, including applicable past, present and foreseeable cumulative impacts, will not cause violations of any state or federal standard;

(f) Whether Applicant has provided reasonable assurances that no significant unpermittable adverse cumulative impacts on water quality, and conservation and protection of fish and wildlife resulting from the extraction of phosphate ore will occur;

(g) Whether Applicant has provided reasonable assurances there will be no unpermittable foreseeable adverse secondary impacts from the proposed extraction of phosphate ore;

(h) Whether Applicant has provided reasonable assurances the mitigation proposed will be viable after construction activities;

(i) Whether Applicant has provided reasonable assurances that the applicable state and federal water quality standards will not be violated as a result of the proposed extraction of phosphate ore;

(j) Whether Applicant has provided reasonable assurances that the proposed extraction of phosphate ore is in compliance with EPA approved water quality standards with regard to Section 404 of the Clean Water Act;

(k) Whether Applicant has provided reasonable assurances that the proposed activity is not contrary to the public interest as set forth in Section 404(b) of the Clean Water Act;

(l) Whether Applicant has provided reasonable assurances that the cumulative impacts of the proposed project, including applicable past, present and foreseeable cumulative impacts, will not cause violations of any state or federal standard;

(m) Whether Applicant has provided reasonable assurances that permanent impacts associated with the disturbance of jurisdictional wetlands and non-jurisdictional wetlands does not violate any state or federal standard;

(n) Whether Applicant has provided reasonable assurances that the proposed extraction of phosphate ore is in compliance with Section 7 of the Endangered Species Act.

APPLICABLE LAWS AND STATUTES

Federal Laws and Statutes:

-Section 404 of the Clean Water Act (33 U.S.C. 1344),
-Section 404(b) of the Clean Water Act,
-Coastal Zone Management Act and the National Environmental Policy Act.,
-Section 7 of the Endangered Species Act.

Florida Laws and Statutes:

-Section 62-302 F.S. - Surface Water Quality Standards,
-Section 62-302.530 F.S. - Table: Criteria for Surface Water Quality Classifications,
-Sections 62-4.242, 62-4.243, 62-4.244, and 62-4.246 F.S.- antidegradation permitting requirements.

WHEREFORE,

ManaSota-88, Inc., formally requests that ACOE hold a public hearing concerning DA permit application SAJ-2009-03221; Mosaic – Wingate East Mine.

Sincerely,

Glenn Compton

Chairman, ManaSota-88, Inc.