



MEMORANDUM FOR RECORD

SUBJECT: Record of Decision and Statement of Findings for Department of the Army (DA) Permit Application SAJ-2009-03221

This document constitutes the Record of Decision, Clean Water Act Section 404(b)(1) Guidelines Evaluation, Public Interest Review, and Statement of Findings for DA Permit Application SAJ-2009-03221 pursuant to 40 C.F.R. §§ 1505.2 and 1506.4 and 33 C.F.R. Part 325, Appendix B, Paragraph 18. The Final Areawide Environmental Impact Statement (EIS), Addendum, and Supplemental Environmental Assessment (EA) are available on the Jacksonville District, Regulatory Division's website, on the Items of Interest page under Central Florida Phosphate Mining:
<http://www.saj.usace.army.mil/Missions/Regulatory/Items-of-Interest/>

1.0 Application:

1.1 Applicant: Mosaic Fertilizer, LLC
13830 Circa Crossing Drive
Lithia, FL 33547

1.2 Location and Affected Waterway:

Location: The project, known as "Wingate East Mine", is located partially in wetlands associated with the Wingate Creek Headwaters of the Myakka River Watershed.¹ Specifically, the project is located north of the intersection of State Road 64 and Duette Road in Sections 13, 22 through 27, and 34, Township 34 South, Range 22 East in eastern Manatee County, Florida.

1.2.1 Approximate Central Coordinates:

Latitude: 27.496°
Longitude: -82.084°

1.3 Existing conditions: The 3,635-acre Wingate East tract is comprised of 939.8 acres of jurisdictional wetlands, 53.5 acres of isolated wetlands, and 68,138 linear feet of jurisdictional tributaries (including ditches and streams). The tract also includes a total of 53.5 acres of non-jurisdictional wetlands, which are isolated, non-navigable, and do not support interstate commerce. Over 30 percent of the property has been converted from native vegetative cover into pastures, roads, livestock watering ponds, or utility corridors. Native upland cover (i.e., rangeland and forests) is present on approximately 42 percent of the site and wetland vegetative cover is present on approximately 26 percent of the site. The historic and current physical land use is primarily agricultural, with most of the property used for cattle grazing.

¹ As described in Section 4.2.4 of the Final EIS, 90% of the project site is within the Upper Myakka River subwatershed of the Myakka River Basin, with the remaining portion in the Horse Creek subwatershed of the Peace River Basin. However, all proposed impacts to wetlands and other surface waters of the United States are within the Upper Myakka River subwatershed.

- 1.3.1 Project History: The U.S. Army, Corps of Engineers, Jacksonville District Regulatory Division (Corps) received Mosaic's original application for the Wingate East project on June 29, 2011. Prior to receiving the Wingate East Mine application, the Corps prepared an August 3, 2010, Memorandum for the Record (MFR) concluding that an EIS was the appropriate National Environmental Policy Act (NEPA) documentation for evaluating permit applications for phosphate mining projects in the Central Florida Phosphate District. On January 28, 2011, the Corps prepared a second MFR, which also confirmed that an EIS was the appropriate NEPA documentation for proposed phosphate mining projects. The Corps concluded that preparing the Areawide EIS for similar proposed mines would be more effective and efficient than preparing multiple EISs.

The Notice of Intent (NOI) for the EIS was published in the Federal Register on February 18, 2011 (76 Fed. Reg. 9560). Sections 1.8.2 and 1.8.3 of the Final EIS describe the NOI and the subsequent scoping process.

The Notice of Availability for the Draft EIS was published in the Federal Register on June 1, 2012 (Fed. Reg. 77(106), 32635-32636). Sections 1.8.7, 1.8.8, and 1.8.9 of the Final EIS describe the Notice of Availability, the public involvement process, and the public comments received on the Draft EIS respectively. The Corps also published a separate public notice for the Wingate East project on June 1, 2012.

On May 3, 2013, the Corps, U.S. Environmental Protection Agency (EPA), and Florida Department of Environmental Protection (FDEP) published a Notice of Availability for the Final EIS. As described therein, the Final EIS provided the project-specific NEPA analysis for the Wingate East project and three other similar proposed mining projects. See, e.g., Final EIS page 1-34. The Wingate East project is thus included within the scope of action analyzed in the Final EIS. See Final EIS page 1-21 to 1-31. On July 12, 2013, the Corps, EPA, and FDEP published an Addendum to the Final EIS.

The Corps published a second public notice for Wingate East on June 22, 2017. The purpose of the second public notice was twofold: 1) to make a draft of the Section 404(b)(1) and public interest review analyses available to the public, as the Corps committed to do in the Final EIS, and 2) pursuant to 40 C.F.R. §§ 1501.3(b) and 1502.9(c)(2) to provide the public an opportunity to review a supplemental environmental assessment, which the Corps prepared to assist with the permit decision and further the purposes of NEPA.

The Final EIS, Addendum, and Supplemental EA are available on the Jacksonville District, Regulatory Division's website, on the Items of Interest page under Central Florida Phosphate Mining:

<http://www.saj.usace.army.mil/Missions/Regulatory/Items-of-Interest/>

- 1.4 Work Proposed: The Applicant requests a 20 year construction window to mine phosphate ore from approximately 3,137 acres within the 3,635-acre Wingate East property in Manatee County, Florida. The 3,137 acre impact area consists of 2,658 acres of mining, and an additional 479 acres of support infrastructure. The applicant proposes mining operations on the proposed Wingate East Mine for approximately 17 years. This project would provide phosphate ore to extend the life of the currently operating Wingate Creek Mine beneficiation plant. Upon completion of mining operations at Wingate East, the Applicant proposes to reclaim all land disturbed by mining operations and implement the approved compensatory mitigation plan (Attachment B of this decision document).

The Applicant proposes approximately 553.1 acres of impacts to Waters of the United States (WOUS), including 542.8 acres of wetland impacts, and 10.3 acres of impacts to other surface waters such as cattle ponds and upland-cut ditches. The June 1, 2012, public notice for this project described a total of 761 acres of wetland impacts; however, the Applicant has since minimized wetland impacts by 218.2 acres.

The Applicant also proposes to impact 10,023 linear feet of ditched and non-ditched intermittent or ephemeral streams, which is a 17,264 linear foot reduction in proposed impacts since the June 1, 2012, public notice.

Following cessation of the proposed mining at Wingate East, the Applicant would recommence mining of 577 acres at the Wingate Creek Mine (authorized under DA Permit SAJ-1990-00518). The 577 acres include the Wingate Creek Mine's Initial Clay Settling Area (ISA), sand/phosphate rock stockpiles, and infrastructure connections that will first be utilized to mine outlying areas like Wingate East (Attachment C, Figure 9 of this decision document).

- 1.4.1 Changes to the proposed work since the 2011 DA application and Final EIS²:
- i. Timeframe: The proposed timeframe for construction has decreased since the project was originally proposed. Active mining (phosphate rock production) at Wingate East is now proposed for approximately 17 years, with reclamation and wetland mitigation activities taking up to five years. In the Final EIS, this project was proposed as 27-28 years of active mining and up to eight years of reclamation and mitigation construction. The decreased timeframe is a result of multiple factors that include: 1) improved mining efficiency (see production rate); 2) reduced impacts to WOUS, and; 3) increased upland buffers around avoided wetlands and streams, thereby decreasing the mine area. The Applicant's mine plan now calls for the recovery of 28

² These changes were previously described in the June 22, 2017 Supplemental EA, which was made available for public review and comment.

million tons³ (MMT) of phosphate rock from 2,658 acres vs. 36 MMT of phosphate rock recovered from 3,070 acres, as proposed in the 2011 DA application and described in the Final EIS.

- ii. Production Rate: The Final EIS projected a production rate of 1.3 million tons per year (MMTPY) of phosphate rock. The proposed production rate has increased to 1.7 MMTPY. Improvements to the beneficiation plant since 2013 have improved the efficiency of the recovery process, which allows the machines to operate with less down time, and more area to be mined within a year. The 2011 application proposed mining 110 acres/year. The current plan is to mine 160 acres/year.
- iii. Impacts to WOUS: The Applicant now proposes approximately 553.1 acres of impacts to WOUS, including 542.8 acres of wetland impacts, and 10.3 acres of impacts to other surface waters such as cattle ponds and upland-cut ditches. The Final EIS and the June 1, 2012, public notice for this project described a total of 784 acres of impacts to WOUS (761 acres of wetland impacts and 23 acres of other surface water impacts). As a result of the Applicant's proposed avoidance of higher quality wetlands, impacts to WOUS have been reduced by 230.9 acres, which includes 218.2 acres of wetlands and 12.7 acres of surface waters.
- iv. The Applicant also proposes to impact 10,023 linear feet of ditched and non-ditched ephemeral streams, which is also a reduction in proposed impacts since the project was originally proposed. The Final EIS and the June 1, 2012, public notice for this project described a total of 27,287 linear feet of jurisdictional stream impacts.

A comparison of Attachment C, Figure 7 (Applicant's Preferred Alternative) and Attachment C, Figure 8 (Applicant's June, 2011 application) illustrates the wetlands and streams avoided since the June 1, 2012 public notice and Final EIS.

iv. Clay Settling Areas (CSAs): The number of new CSAs has been reduced from two to one. In the June, 2011 DA application, beneficiation of the 36 MMT of phosphate rock proposed to be extracted from the Wingate East Tract was expected to separate approximately 29 MMT of clays. The Applicant had proposed utilizing extra capacity of the existing FM-1 and FM-2 CSAs on the adjacent Southeast Tract to handle clays until two new CSAs on the Wingate East Tract (WE-1 and WE-2) could be built (about 7 years). The current plan calls for the recovery of 28 MMT of phosphate rock producing approximately 20 MMT of clays. As a result, less clay storage capacity is needed so only one new CSA (WE-1) will be constructed. Attachment C, Figure 8 depicts the WE-1 and WE-2 configuration proposed in the June, 2011 DA application. Attachment C, Figure 9 depicts the currently proposed WE-1 configuration along with FM-1 & FM-2 on the adjacent Four Corners Mine Southeast Tract. The existing FM-1

³ The term "tons" refers to "short tons", which equals 2,000 pounds.

& FM-2 CSAs on Southeast Tract will still be utilized while WE-1 is under construction.

- 1.4.2 Updated Analyses: In order to address the project changes described in Section 1.4.1 above, at the Corps' request, the applicant provided updated analyses of the direct, indirect, and cumulative effects of Wingate East on groundwater and economic resources, as described in Sections 6.0 of this document. The Corps independently evaluated these updated analyses as it conducted its review of the proposed work in accordance with NEPA, the 404(b)(1) Guidelines, and the public interest review factors.

The Corps determined that the project changes, such as the reductions in mining area and impacts to aquatic resources, would lead to either no changes or reductions in the direct, indirect, and cumulative effects of Wingate East for these resource categories, as evaluated in the Final EIS: surface water resources, water quality, ecological resources, environmental justice, radiation, cultural resources and historic properties, and surficial geology and soils. Therefore, the Corps based its review of the project's potential impacts for these resource categories on the administrative record for the project, including the Final EIS analyses, Addendum, and Supplemental EA.

- 1.5 Avoidance and minimization statement from applicant: The June 1, 2012, public notice states that "Mosaic Fertilizer, LLC (Mosaic) is proposing to avoid impacts to 273 total acres of land. The avoided area consists of approximately 111 acres of uplands and approximately 162 acres of Corps jurisdictional wetlands of which approximately 157 acres are mature diverse forested wetlands and approximately 5 acres of associated herbaceous marshes within the 25-year floodplain of the Myakka River and the West Fork of Horse Creek."

The applicant's revised statement includes additional avoidance and minimization measures. Section 5 of this decision document includes the Corps' determination about those measures.

- 1.6 Compensatory mitigation proposal from applicant: The June 1, 2012, public notice states:

"To offset impacts to 348 acres of herbaceous wetlands and 413 acres of forested wetlands, Mosaic is proposing to establish 404 acres of herbaceous wetlands and 545 acres of forested wetlands. Mosaic is also proposing to create 27,913 linear feet of streams to offset impacts to 27,287 linear feet of streams (24,266 linear feet of natural streams and 3,021 linear feet that have been mechanically disturbed). To accomplish this, Mosaic is proposing to utilize a watershed approach in re-establishing wetlands, type for type and for streams such that there is more aquatic resource connectivity than currently exists. If the proposed onsite compensatory mitigation for aquatic resources is not sufficient, then Mosaic intends to provide off-site mitigation to fully compensate for impacts to aquatic resources."

The applicant has revised the mitigation plan since that June 1, 2012, public notice. Section 8 of this decision document provides additional information about the compensatory mitigation. Attachment B of this decision document provides a copy of the final, approved compensatory mitigation plan (CMP).

1.7 National Environmental Policy Act (NEPA) purpose and need:

1.7.1 Basic and Overall Project Purpose and Need:

Basic: To extract phosphate ore.

Overall: To extract phosphate ore from the mineral reserves located in the Central Florida Phosphate District (CFPD) and to construct the associated infrastructure required to extract and process the phosphate ore at separation/ beneficiation facilities recognizing that the ore extracted must be within a practicable distance to a new or existing beneficiation plant.

Public Need: Section 1.2.1 of the Final EIS describes the public's general need.

Applicant's Need: Section 1.2.2 of the Final EIS describes the applicant's general need. In addition, the applicant provided the following statements (*italicized text*) about the specific need at an overall operational level and at a project specific level:

Overall Need: Overall Need: Applicant currently operates the Four Corners, South Fort Meade, South Pasture, and Wingate Creek Mines in the CFPD to meet its phosphate rock needs (AEIS page 2-6). The Final EIS estimates that the Applicant produces 17.1 million short tons of phosphate rock per year (MMTPY) at its four CFPD mines as follows: Four Corners- 6.1 MMTPY; Hookers Prairie - 1.9 MMTPY; South Fort Meade- 4.3 MMTPY; South Pasture- 3.5 MMTPY; and Wingate Creek-1.3 MMTPY (AEIS Table 1-3). The Final EIS acknowledges that these estimated production rates are calculated based on mining at 85% of capacity, and that actual production rates may fluctuate from year to year. As discussed below, process improvements and ore considerations, which have helped optimize the existing plant's production rates, have caused the Applicant to revise its project-specific need for the Wingate beneficiation plant as well as the expected timeframe for mining.

All of the Applicant's existing CFPD mines will complete extraction of currently permitted ore reserves between 2020 and 2025⁴. In order to continue to obtain an uninterrupted phosphate rock supply to meet projected demands, the Applicant plans to extend mining onto the Wingate East property from the Wingate Creek Mine, develop the Ona property to replace the Four Corners Mine, and develop the DeSoto Mine to replace the

⁴ The Corps issued a permit for the South Pasture Extension project on November 15, 2016, which is expected to extend the life of the South Pasture Mine and beneficiation plant through approximately 2035.

Hookers Prairie and South Fort Meade Mines. This mining development sequence is based upon business factors such as logistics, production needs, and projected rock supply. The Corps' Final EIS evaluated all four of the Applicant's proposed mines and mine extensions as well as the reasonably foreseeable Pioneer and West Pioneer Tract and Pine Level-Keys Tract projects.

Project Specific Need: The Wingate East Mine, which is located adjacent to the existing Wingate Creek Mine, will extend the life of the Wingate Creek Mine beneficiation plant, thereby maintaining uninterrupted a long- term supply of phosphate rock to meet the fertilizer demand of the Applicant's customers. This is a mine extension project; the Applicant is seeking to extend the life of the Wingate Plant through at least 2037 rather than construct a new beneficiation plant.

If Wingate East is not developed, the phosphate rock production currently provided by the Wingate beneficiation plant that supports a portion of Applicant's fertilizer production capacity would be at risk of termination within the next 10 years. The Corps recognizes that providing a supply of phosphate rock not only requires an ore reserve large enough to sustain production for an extended time horizon (FAEIS pg. B-15)(1-48) but also the associated infrastructure required to support extraction and ore separation/beneficiation. Other operators who have previously been unable to achieve phosphate rock supply self-sufficiency have failed. In addition, 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. Therefore, phosphate mining operations must develop mining plans that allow for long-term mining in an economical and efficient manner.

Applicant needs to maximize its ore recovery and related plant production from the high quality Wingate East reserves to recover its substantial investment in these reserves.

Because of the high quality of the Wingate East reserves, and improvements made to the recovery process at the plant, the Applicant expects to operate the Wingate beneficiation plant at a higher production rate than in previous years. Higher quality phosphate ore/matrix present at the Wingate East property means there are fewer impurities that need to be removed in the beneficiation process and ultimately, results in more recoverable phosphate ore from the same amount of extracted matrix. Additionally, the Applicant has undertaken a number of capital improvements at Wingate to improve overall operations, which in turn has increased or will increase the ability to operate at capacity. Finally, the Applicant is instituting additional capital improvements at Wingate that will increase the production capacity at the plant. The

capital improvement projects completed or planned at Wingate (discussed below) provide increased production capacity from 1.5 MMTPY to 1.7 MMTPY^{5 6}.

The Wingate improvements will allow Applicant to maintain overall production levels at CFPD to meet projected demand. Applicant upgraded the Wingate beneficiation plant to optimize the flow of ore through the plant at a cost of \$20.4 million. Ore separation efficiency is being improved through an ongoing \$13 million capital improvement project. The over 30-year-old dredges on Wingate were recently replaced at a cost of \$21.0 million. The capital cost to replace the Wingate beneficiation plant is estimated to be approximately \$100 to \$150 million. To recover these capital expenditures, Applicant plans to process approximately 1.7 MMTPY of ore reserves at the Wingate Plant over an approximately 20 year planning horizon. In other words, in light of the higher rock quality and these expenditures, Applicant plans to operate Wingate at its operational capacity, rather than at 85% of capacity.

As noted, the FAEIS originally estimated a lower production rate of 1.3 MMTPY over a much longer mining horizon and a larger mine footprint than the Applicant's Preferred Alternative. Tables 4-140 and 4-141 of the FAEIS estimated that, with a rock production of 1.3 MMTPY (operating at only 85% of the plant's capacity at that time), rock production would extend for a total timeframe of 31 years, with ore recovery of approximately 36 MMT from 3,070 acres. The estimates contained in these tables of the FAEIS were obtained from the Applicant's 2011 Application; Table 10 of the 2011 Application estimated 28 years of actual mine life, with a recovery of 36 MMT from 3,070 mined acres. The 2014 Revised Application, the Applicant's Preferred Alternative, reduced the mine footprint considerably, to 2,658 acres. Given delays in mine starts, reserve exhaustion at existing mines, and the above-mentioned plant improvements and rock quality, the Applicant now plans to operate Wingate Mine at its new operational capacity of 1.7 MMT, but over a significantly shorter timeframe, approximately 20 years (estimate 17 years of actual mine life), for a total recovery of 28 MMT.

Applicant's predecessor purchased Wingate Creek Mine in 2004. The purchase and subsequent merger into what is now Mosaic allowed Applicant to consolidate and integrate mining operations and infrastructure on Wingate Creek with Applicant's nearby Southeast Tract. One principal environmental benefit of the consolidation was the availability of previously mined land on the Southeast Tract large enough to site clay settling areas (CSAs) (the FM-1 and FM-2 CSAs) to manage clay separated from ore

⁵ Table 1-3 of the Final EIS projected an annual production rate of 1.3 MMTPY at Wingate Creek beneficiation plant, which represented 85% of the plant's capacity of that time of 1.5 MMTPY. Note that Table 1-3 reflect approximate reserve recovery estimates in short tons for Wingate East, while other portions of the Final EIS reflect reserve estimates in metric tons.

⁶ The Final EIS projected greater total impacts on Wingate East than the current Preferred Alternative, but at a lower production rate and over a longer horizon (1.3 MMTPY for Wingate through 2046). Based on a production rate increase to 1.7 MMTPY and more avoidance of priority resources, the mining timeframe now runs through 2034.

extracted and beneficiated at Wingate Plant. Construction and use of the FM-1 and FM-2 CSAs on the Southeast Tract minimized the clay footprint on Wingate by using impact minimization techniques such as common wall dams, below grade storage, sequential use of mined land, and stage filling of CSAs. Use of these CSA footprint minimization practices had not been employed by the prior operator of Wingate.

Development of Wingate East on a timely basis would provide Applicant with a continuous supply of phosphate ore to allow for production of approximately 1.7 MMTPY from the Wingate beneficiation plant in order to meet CFPD production needs. The initial mining would extract ore beneath the proposed clay storage space to allow for CSA construction to be completed before the FM-1 and FM-2 CSAs are filled to capacity. Operations at Wingate East would continue for approximately 20 years. Upland reclamation and wetland mitigation outside the CSAs would follow the ore extraction sequence in phases and would be completed by about year 25.

The Wingate East parcel is adjacent to and, on average, less than 4 miles from the Wingate Creek Mine beneficiation plant, which allows continued use of the existing Wingate Plant, the FM-1 and FM-2 CSAs on the Southeast Tract, and other infrastructure while mining at Wingate East, thereby offering not only cost and logistics benefits but also environmental benefits (e.g., avoiding unnecessary or lengthy movements of large equipment across the landscape, minimizing the overall CSA footprint by utilizing existing storage capacity, and more efficiently using water). The Applicant's overall mining and operations plans will integrate all approved mining operations associated with the Wingate Creek Mine, including integrated disposal, storage, and use of generated clay and sand tailings for reclamation. The very close proximity of the Wingate East property to Wingate Creek Mine and beneficiation facilities allows for the planned optimization of mine activities and facilitates uninterrupted production at the Wingate Plant.

As stated in 33 C.F.R. 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." Therefore, the Corps independently reviewed and verified the information in the Applicant's statements of overall and project-specific need.

Section 1.2.1 of the Final EIS includes the information about yearly overall production rates and the plan of mine succession. The Corps determined that this information is valid and will use it in its alternatives analysis.

The Corps first reviewed the overall production information. The Applicant produces publicly available 10-K reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. These reports include production data for the Applicant's mines. A review of the 2016 10-K report showed overall production rates of 14 MMTPY in

2014, 14.5 MMTPY in 2015, and 14.2 MMTPY in 2016, and an overall annual operational capacity of 17.2 MMTPY for the Applicant's four currently operating mines (Four Corners, South Fort Meade, South Pasture, and Wingate Creek) in the CFPD. Section 1.2.1 of the Final EIS includes similar information about the overall production rates, along with information supporting the Applicant's plan of having new mines replace previous production. The Corps has determined that this information regarding overall need is valid, and will use it in the alternatives analysis for Wingate East.

To independently review and verify the Applicant's statement about the project-specific production needed for the Wingate East project, the Corps evaluated data from the publicly available 2016 10-K report, which shows that Wingate Creek had a production rate of 1.1 MMTPY in 2014, 1.2 MMTPY in 2015, 1.3 MMTPY in 2016, and an overall annual operation capacity of 1.5 MMTPY⁷. The process improvements and ore considerations described above are expected to increase future production rates to 1.7 MMTPY.

For the Corps' alternatives analysis, the total production amount projected for each alternative (not production capacity), is the most critical information for evaluating whether each alternative could meet the project-specific need. It is this total amount of 'needed' phosphate rock that determines what acreage the Applicant has proposed to mine, and by extension the amount of potential impacts to aquatic resources.

As described in the Applicant's project-specific need statement, and verified by the 2016 10-K report, Wingate East has an estimated total production of 28 MMT of reserves, based on the Applicant's current mine plan as described in Section 1.4, and as evaluated as the Applicant's Preferred Alternative in Sections 5.2.2 and 5.4.6 of this decision document. Regardless of whether the Applicant mines these reserves at a rate of 1.7 MMTPY over 17 years, or a less-productive rate for a longer period within the construction window, the project is expected to yield 28 MMT of phosphate.

Therefore, in its evaluation of the least environmentally damaging practicable alternative for this project, the Corps will consider the Applicant's need for an alternative, whether offsite or onsite, to yield a total of 28 MMT of phosphate ore. For the evaluation of required infrastructure, the Corps will consider the maximum production level of 1.7 MMTPY.

- 1.7.2 Water-dependency determination: Because the project's basic purpose, extracting phosphate ore, does not require siting within a water of the U.S., the proposed discharge is not water dependent.

⁷ The 10-K reports do not reflect the additional capacity gained by process improvements and ore considerations described above.

2.0 Authority: Section 404 of the Clean Water Act of 1972 (33 U.S.C. § 1344)

2.1 Jurisdictional Determination Information: The Corps issued an approved jurisdictional determination for the project on February 16, 2012.

3.0 Scope of Analysis

3.1 National Historic Preservation Act (NHPA) "Permit Area" – *The NHPA scope is defined as "permit area". The permit area for an undertaking is defined in 33 C.F.R. 325, Appendix C. The following three (3) tests must all be satisfied for an activity undertaken outside of waters of the United States to be included within the "permit area".*

3.1.1 Tests (*check all that apply*):

a. The activity outside of waters of the United States would not occur but for the authorization of the work or structures within waters of the United States.

b. The activity outside waters of the United States is integrally related to the proposed work or structures within waters of the United States (or, conversely, the proposed work or structures within waters of the United States must be essential to the completeness of the overall project or program).

c. The activity outside waters of the United States is directly associated (first order impact) with the proposed work or structures within waters of the United States.

3.1.2 Scope Determination: Activities outside waters of the United States are included because all of the above tests apply to this project.

3.1.3 NHPA Scope Summary and Description: The NHPA scope includes the entire Wingate East parcel, including upland areas and non-jurisdictional aquatic resources.

3.2 Endangered Species Act (ESA) "Action Area" – *The ESA scope is defined as "action area". The action area means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action; and, is defined in for an undertaking is defined in 50 C.F.R. § 402.02, Definitions.*

3.2.1 Determined Scope: The ESA scope includes the entire Wingate East parcel, including upland areas and non-jurisdictional aquatic resources, plus downstream aquatic resources potentially affected by the proposed activities.

4.0 Public Involvement (*Public Notice required by 33 C.F.R. § 325.3*):

4.1 a) EIS: Section 1.8 of the Final EIS describes the public involvement process for the EIS review, including the public meetings held ahead of the NEPA process, the EIS scoping, the project website, the interagency coordination including newsletter updates, the public meetings for the Draft EIS, and the Draft EIS comment review. Appendix A of the Final EIS and the Addendum to the Final EIS provide the comments received on the Draft EIS and the Corps' responses to those comments.

b) The Corps received the application for the Wingate East project on June 29, 2011, and considered it complete on May 31, 2012. The Corps published a public notice for the project on June 1, 2012, with an initial 30-day comment period, which the Corps later extended to 60 days. The Corps published a second public notice for the project on June 22, 2017, to provide additional opportunity for public review and comment on a supplemental environmental assessment, draft CWA Section 404(b)(1) Guidelines analysis and draft public interest review. Attachment A of this decision document provides the comments that the Corps received in response to the 2012 and 2017 public notices, as described in Section 4.3 below.

4.2 Public Meeting(s): Yes

Discussion/Explanation: Section 1.8 of the Final EIS summarizes the public participation process for the EIS, including the public scoping meetings and the public meetings held during the Draft EIS comment period.

4.3 Public Notice Comments: The Corps has reviewed and considered all public comments submitted on the proposed Wingate East project. Attachment A provides comments received and the Corps' responses, organized into two sections. Section 1 provides a table summarizing the 2012 public notice comments and the Corps' responses, and then attaches the public comments as received. Section 2 provides the table summarizing the 2017 public notice comments and the Corps' responses, and then attaches the public comments as received⁸.

The Corps consolidated comments with similar themes or messages into single entries on the tables. As part of its responses, the Corps provided references to sections of the Final EIS (including those sections modified by the Addendum) or this decision document as specifically as possible, where further responsive information can be found. In the case of identical, or nearly identical, comments on the 2017 public notice that were generated through the website of the Center for Biological Diversity, or generated by Food & Water Watch on behalf of some of its members, the Corps

⁸ Due to the volume of similar or identical comments submitted by Center for Biological Diversity on behalf of its members, they are not all included in Attachment A. Alternatively, an example of each type of comment is included in Attachment A. However, the Corps has reviewed and considered all comments and all comments will be included in the administrative record.

summarized similar comments for response. Where individual commenters added additional language to the comments that required individual responses, the Corps responded individually. Individual commenters who included a statement requesting a public hearing are listed in Section 2 of Attachment A, and received a separate response to the request.

- 4.4 Comments/Issues Forwarded to Applicant: The Corps sent the comments received on the 2012 public notice to the applicant on June 13, 2013, along with the Corps' own comments. The applicant responded on September 25, 2013. The Corps sent comments on the 2017 public notice to the applicant on July 26, 2017. The applicant responded on September 29, 2017. The Applicant's responses are included in administrative record.

The Corps reviewed all comments received after close of the 30 day comment period. However, the comments provided information and concerns that have been previously considered by the Corps. Therefore, those comments are not discussed further in this document but are included in the administrative record.

- 4.5 Corps Purview – The following comments are not discussed further in this document as they are outside the Corps purview: As shown in the comment response tables, the Corps did not provide further discussion on topics outside of the Corps' regulatory authority, or topics that the Corps considered to be outside the scope of analysis for this review, including but not limited to fertilizer manufacturing and mandatory reclamation of mined areas.

Section 1.3.1 of the Final EIS describes the scope of action for the EIS, and for the Corps' project-specific reviews of the four actions considered in the EIS, including Wingate East. As stated there, the Corps determined that the four actions are single and complete actions, and have independent utility from the fertilizer plants, including from the phosphogypsum stacks created from a byproduct of the manufacturing process. The fertilizer plants could conceptually continue operations using rock from other sources than the proposed mines. Therefore, the EIS, and the Corps' project-specific reviews of Wingate East and the other three actions, did not consider the direct and indirect effects of the plants or the phosphogypsum stacks. The cumulative impact analysis did include the plants and phosphogypsum stacks where appropriate, along with other past, present, and reasonably foreseeable future actions.⁹

FDEP and the USEPA both directly regulate the fertilizer plants and phosphogypsum stacks. FDEP maintains a Phosphogypsum Management Program that regulates the

⁹ For example, groundwater resources cumulative impact analysis was conducted on a regional level and captured the effects of non-mining activities, such as from the fertilizer processing facilities. For surface water resources, the cumulative impacts analysis considered the watersheds of the evaluated actions (Myakka River and Peace River watersheds) and receiving waters (Charlotte Harbor), including any past non-mining activities such as fertilizer processing.

design, construction, operation, and maintenance of phosphogypsum stack systems. USEPA regulates the plants and stacks under the Resource Conservation and Recovery Act of 1976 (RCRA). Under RCRA, USEPA defines and identifies hazardous waste; establishes standards for its transportation, treatment, storage, and disposal; and requires permits for persons engaged in hazardous waste activities.

- 4.6 Public Hearing Request – *(33 C.F.R. § 327) Requests for a public hearing shall be granted unless the district engineer determines that the issues raised within the request(s) for a public hearing are insubstantial or there is otherwise no valid interest to be served by the hearing. The district engineer will make such a determination in writing, and communicate his reasons therefor to all requesting parties.*

Public Hearing: Public hearings were requested, but denied.

Discussion/Explanation: As described in Sections 4.1 and 4.2 of this decision document and Section 1.8 of the Final EIS, the Corps held public meetings in accordance with NEPA requirements. In accordance with 33 C.F.R. § 327.4(b), the Corps determined that the issues raised by the requests for a public hearing were either insubstantial or there was otherwise no valid interest to be served by a hearing because the issues raised by the requestor were addressed in the EIS, Addendum, supplemental environmental assessment, or this ROD. The Corps received public hearing requests as follows:

<u>Date</u>	<u>Requested By</u>
June 6, 2012	Glenn Compton, ManaSota-88, Inc.
June 15, 2012	Beverly Griffiths, Sierra Club Florida Phosphate Committee
June 16, 2012	Dr. Helen Jelks King, Protect Our Watersheds, Inc.
June 18, 2012	Dennis Mader, People for Protecting Peace River
June 25, 2012	Sandra Ripberger, Manatee-Sarasota Sierra Group
July 14, 2017	Beverly Griffiths, Sierra Club Florida Phosphate Committee
July 17, 2017	Glenn Compton, ManaSota-88, Inc.
July 21, 2017	Glen Gibellina
July 21, 2017	Leslie Harris-Senac
July 24, 2017	Barbara Angelucci
July 24, 2017	Margaret Tams
July 24, 2017	Hugh Richardson
July 24, 2017	Jaclyn Lopez, Center for Biological Diversity
July 24, 2017	Andy Mele, Suncoast Waterkeeper
July 24, 2017	Linda T. Jones, Manatee-Sarasota Sierra Group
July 24, 2017	Charles Trowbridge

The Corps sent a letter to all of the above parties stating that their request for a public hearing had been denied, and providing the reasons for that denial.¹⁰

5.0 Alternatives Analysis – (40 C.F.R. § 230.10, HQ Regulatory SOP July 2009, RGL 93-2, RGL 84-09) *If the project is sited in a special aquatic site (such as a wetland), and if the project does not need to be in or near the special aquatic site to fulfill its basic purpose (i.e., the project is not "water-dependent"), it is presumed that there are practicable alternatives that do not involve special aquatic sites. To overcome this presumption, the applicant must clearly demonstrate to the Corps that practicable alternatives are not available. If the presumption is not overcome, the Corps must deny the permit application. If the project is not sited in a special aquatic site and/or is water-dependent, the applicant is not required to overcome the presumption that upland alternatives are available. However, the Corps must still address whether there are any upland alternatives (or alternatives with less impact), and if any are identified, the applicant must clearly demonstrate that they are not feasible. If such a demonstration cannot be made, the Corps must deny the permit application. The Corps performed an evaluation of alternatives, as described below:*

5.1 Offsite/Avoidance Alternatives Screening Process and Evaluation Criteria: Section 2.2.4.1 and Appendix B of the Final EIS describe the screening process for offsite, or avoidance, alternatives used for the Final EIS. The Corps' project-specific evaluation of avoidance alternatives under Clean Water Act Section 404(b)(1) began with the list of parcels identified in the Final EIS: South Pasture Extension, Pioneer Tract, Desoto, Pine Level/Keys Tract, Site A-2, Site W-2, Ona, and Wingate East. The Corps has since issued a permit for the South Pasture Extension project, which is no longer considered an alternative mine site for Wingate East.

40 C.F.R. § 230.10(b)(2) states "An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes." Section 3.1.5 of the Final EIS describes why the Corps considers ten miles to be the practicable pumping distance to move material to and from a phosphate beneficiation plant. Exceptions to this distance are highly dependent on having access to access corridors and facilities to process material at an intermediate stage, before final beneficiation, and are typically logistically not feasible. Therefore, the first step in the Corps' project-specific screening process considered whether an alternative (or any part of an alternative) lay within a ten-mile radius of the Applicant's Wingate Mine beneficiation plant. Three alternatives met this criterion - Ona (10,364 acres), Pioneer (5,794 acres) and Site W-2 (8,662 acres). The acreage figures are the area of each parcel located within a 10-mile radius of the Wingate Plant. Because the other three parcels identified in the Final EIS (Desoto, Pine Level/Keys Tract, and Site A-2) are outside of the ten-mile radius and there is no site-specific reasons to make an exception to this practicable pumping distance for these

¹⁰ Individual commenters who included a statement requesting a public hearing are listed in Section 2 of Attachment A, and received a separate response to the request.

parcels. Therefore, Desoto, Pine Level/Keys Tract, and Site A-2 are not practicable alternatives and the Corps eliminated them from further consideration.

The avoidance alternatives carried forward for further analysis included a No Action Alternative, Wingate East (the Applicant's Preferred Site Alternative), and the three offsite alternatives (Ona, Pioneer Tract, and Site W-2).

Figure 2-8 in Chapter 2 of the Final EIS shows the locations of all of the alternatives considered in the Final EIS, including the avoidance alternatives identified above and evaluated in this EA. Appendix C of the Final EIS has aerial photographs of the alternatives.

As stated in 40 C.F.R. § 230.1(a), "No discharge will be permitted if there is a practicable alternative which would have less adverse impact on the aquatic ecosystem provided the alternative does not have other significant adverse environmental consequences." Therefore, for the next step in the alternatives analysis the Corps independently reviewed and verified the criteria for considering both the practicability (based on 40 C.F.R. § 230.10(b)(2), as described above) and the environmental impacts of each of the offsite/avoidance alternatives.

5.1.1 Practicability Criteria: The Corps considered the following specific criteria:

- a) The logistics associated with construction of the pipelines needed to carry material between an alternative and the Wingate Creek beneficiation plant, including the total combined length of the pipelines and the availability of access corridors;
- b) the number of stream crossings needed for pipelines (stream crossings);
- c) the ability of an alternative to support other necessary mine infrastructure such as clay settling areas (considering factors such as available area);
- d) compliance with state (FDEP) or local (Manatee or Hardee County) permitting requirements,
- e) the ability of an alternative to produce 1.7 MMTPY for 17 years a total of 28 MMT, and meet the project-specific need as described in Section 1.7.1 of this document, and;
- f) the ability of an alternative to fulfill the mining development sequence described in the overall need statement in Section 1.7.1 of this document.

For practicability criterion a), the pipeline information is based on the distance between each offsite alternative and the beneficiation plant, and on the number of draglines needed to maintain a maximum of 1.7 MMTPY production. Overburden removal and ore extraction would be accomplished on Wingate East using a combination of dredges and potentially draglines. Dredges would be used west of Duette Road where this mining method has been proven at Wingate and the ore is deeper and thicker. Draglines will be used east of Duette Road where dragline mining was utilized successfully on the adjacent Southeast Tract and the ore is shallower and thinner. For purposes of the alternatives analysis, however, off-site alternative analysis assumed the use of

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draglines due to the technical limitations of dredge-based phosphate mining identified in Section 2.2.6.1 of the Final EIS. Each dragline requires one matrix pipeline to the beneficiation plant and one sand tailings line back to the current reclamation site.

Also, for the Applicant's Preferred Site Alternative and Ona, the Corps considered specific data and information from the Applicant's proposed mine plans. Because there are no mine plans for Site W-2 or Pioneer Tract, the Applicant provided estimates for the pipeline information.

The access corridor part of criterion a) relied on available information about property ownership or control.

The stream crossing information for criterion b) relies on the mine plans for the Applicant's Preferred Site Alternative and Ona, and on an estimated plan for Site W-2 and Pioneer.

For criterion c), the CSA data uses the acreage of an alternative and an estimated volume of phosphate and associated clay that an alternative would produce. The production data considers each site's total mineable reserves, to eliminate any discrepancies in the comparison of the two alternatives with mine plans (and their associated onsite avoidance and minimization of wetland impacts), and the two alternatives without a mine plan.

Criterion d) considers either finalized state or local permitting actions, or available information about state or local permitting requirements.

For criterion e), the estimated production values for Ona and Wingate East rely on those alternative's mine plans. For Site W-2 and Pioneer, the estimated production values assume 14% preservation. For all alternatives, the Corps used prospecting data provided by the Applicant.

For criterion f), the Corps considered the Applicant's overall mining sequence as described in Section 1.7.1 of this document.

- 5.1.2 Environmental Criteria: In addition to the determinations of practicability described above, the Corps evaluates the environmental impacts of project alternatives. As stated in 40 C.F.R. § 230.1(a), "No discharge will be permitted if there is a practicable alternative which would have less adverse impact on the aquatic ecosystem provided the alternative does not have other significant adverse environmental consequences."

For the environmental criteria used to evaluate the avoidance alternatives, the Corps used wetland acreage based on National Wetland Inventory data (NWI wetlands) and Southwest Florida Water Management District data (SWFWMD wetlands). The alternatives analysis also uses the SWFWMD wetland data to compare the area of

wetland coverage for each parcel as a percentage of the overall acreage. The Corps chose these criteria to ensure a consistent approach and because the data is publicly available.

5.2 Evaluation of the Avoidance Alternatives

5.2.1 No Action Alternative: Section 4.1.9 of the Final EIS describes the two No Action Alternatives - No Mining and Upland Only Mining. This section of this decision document will address the No Action- No Mining alternative. Section 5.4.1 of this decision document describes the Corps' evaluation of the No Action- Upland Only Mining alternative as a minimization alternative.

Under the “No Action - No Mining” alternative, existing permitted mining on the Wingate Creek Mine would continue to completion, however, the Applicant would not mine the Wingate East parcel at all. There is no construction of any mine infrastructure, including pipelines, crossings, or clay settling areas, within the Wingate East parcel. This alternative does not produce any phosphate rock at all.

Because this alternative does not produce any phosphate rock, it does not satisfy the overall project purpose described in Section 1.7.1 of this decision document, nor does it meet the project-specific need of 1.7 MMTPY for 17 years/28 MMT of total production described in Section 1.7.1. Therefore, the “No Action Alternative – No Mining” alternative is not a practicable alternative.

The Wingate East parcel contains 893 acres of NWI wetlands and 758 acres of SWFWMD wetlands. SWFWMD wetlands comprise 20.8% of the site. Because there is no new mining, there are no mining-related impacts to these wetlands.

The “No Action Alternative - No Mining” alternative is the least environmentally damaging alternative of all the avoidance alternatives, including the Applicant's Preferred Alternative.

5.2.2 Applicant's Preferred Alternative: This is the 3,635-acre Wingate East parcel described in Section 1.7.1 of this decision document. The entire 3,635 acres is within ten miles of the Wingate beneficiation plant. This alternative considers impacting 3,137 acres of the 3,635 acre site. This alternative requires approximately 11 miles of pipelines and no new stream crossings (2 miles from the plant to the project boundary, 9 miles within the project boundary). Available information indicates that the Applicant owns or controls all of the property needed to construct the necessary access corridors. The Applicant states that this alternative has sufficient space for the necessary CSA. Mining the Wingate East parcel utilizing the Applicant's Preferred Alternative would produce 28 MMT of phosphate. This is based on 2,658 acres of mining, and an estimated yield of

10,500 tons of phosphate rock per acre. This alternative has received approval from both FDEP and from Manatee County¹¹.

The Wingate East parcel contains 893 acres of NWI wetlands and 758 acres of SWFWMD wetlands. SWFWMD wetlands comprise 20.8% of the site.

This alternative meets the overall project purpose and the Applicant's need on both the overall and the project-specific levels. The Corps considers this alternative to be practicable.

- 5.2.3 Ona: This alternative considers mining 7,938 acres of the 10,364 acres of the overall Ona parcel that lie within ten miles of the Wingate beneficiation plant. This alternative requires approximately 28 miles of pipelines and two new stream crossings (6 miles from the plant to the project boundary, 22 miles within the project boundary). Available information indicates that the Applicant owns or controls all of the property needed to construct the necessary access corridors and that this alternative has sufficient space for the necessary CSAs. This alternative is adjacent to the Wingate East Preferred Alternative. Based on 7,938 acres of mining, and an estimated yield of 9,925 tons of phosphate rock per acre, Ona would produce 78 MMT of phosphate. This alternative has received approval from FDEP. As described in the overall need statement, the Applicant plans to replace the Four Corners Mine with the Ona Mine. The Ona alternative contains 1,719 acres of NWI wetlands and 2,268 acres of SWFWMD wetlands. SWFWMD wetlands comprise 21.9% of the site within the 10-mile radius.

The Ona alternative meets the overall project purpose and the project-specific need. However, as explained in Section 1.7.1 of this decision document, the Applicant's overall mine plan has the phosphate production from the Ona reserves replacing the production from the Four Corners Mine after that mine's reserves run out. Therefore, this alternative does not meet the Applicant's overall need. Also, this alternative would require 17 more miles of pipeline and 2 more crossings than the Applicant's Preferred Alternative. Although the percentage of wetlands on the Ona alternative and Wingate East site are comparable, the additional pipeline construction and crossings make this alternative more environmentally damaging than the Applicant's Preferred Alternative.

- 5.2.4 Site W-2: Consideration of this alternative assumes mining 7,449 of the 8,662 acres of Site W-2 that are within ten miles of the Wingate beneficiation plant. There is no current application to mine this parcel, and no mine plan. Therefore, as stated in Section 5.1.1 of this decision document, the analysis of this alternative relies on an estimated mine plan with an assumed 14% preservation. This alternative requires approximately 18 miles of pipelines and 5 stream crossings (7 miles from the plant to the project boundary, 11 miles within the project boundary). The Corps has assumed that this

¹¹ Refers to the Master Mine Plan and zoning approvals. Other County permits/approvals are pending.

alternative has sufficient space for the necessary CSAs. Site-specific geologic information is not available for this site. Available drilling data indicate yields below 6,000 tons of phosphate rock per acre would be likely. Mining 7,449 acres would therefore yield a total of 44.7 MMT. It is unknown if either FDEP or Manatee County would approve mining on this site. The Corps will conservatively assume that the Applicant could obtain the necessary approvals. Site W-2 would not disrupt the Applicant's planned overall mining sequence.

The Applicant does not own or control all of the land necessary to construct the access corridors between this site and the Wingate Creek beneficiation plant. The Applicant would need to acquire more than seven miles of access corridor, and construct pipelines and dragline crossings within that corridor, including stream crossings over the Taylor and Ogelby Creek tributaries to the Myakka River and un-named headwater tributary streams. Manatee County Property Appraiser ownership records indicate that the Applicant would need to complete numerous real estate transactions to secure an access corridor route, regardless of the corridor's location.

In addition to securing an access corridor, the Applicant would need to complete prospecting, acquire the W-2 property, develop mining studies, and get State and County approvals, complete site design, and complete construction of a CSA. This would need to be accomplished before mining the ore would be needed to replace the existing Wingate production.

The Site W-2 alternative contains 2,188 acres of NWI wetlands and 2,229 acres of SWFWMD wetlands. SWFWMD wetlands comprise 25.7% of the site within the 10-mile radius.

This alternative may have mineable phosphate ore, is within a practicable pumping distance of the Wingate Creek beneficiation plant, and may be permissible at the local and state level. However, the Applicant would need to acquire sufficient control over the properties between the beneficiation plant and this site to construct the access corridors, and would need to complete the required studies, mine plans, get the required permits, and construct a CSA in time to replace current production. Based on these logistical constraints, the Applicant believes the W-2 alternative is not a practicable alternative.

Because Site W-2 is predicted to produce 44.7 MMT of phosphate, and would not disrupt the Applicant's mining development sequence, and because it is located within a 10-mile practicable pumping distance of the beneficiation plant, the Corps has determined that the W-2 alternative does meet the Applicant's overall and project-specific need.

Considering the potential wetland impact acreage, as well as the need for a new access corridor across several areas with aquatic resources including five stream crossings, the

Site W-2 alternative is more environmentally damaging than the Applicant's Preferred Alternative.

- 5.2.5 Pioneer: Consideration of this alternative assumes mining 4,983 of the 5,794 acres of the Pioneer site that are within 10 miles of the Wingate beneficiation plant. There is no current application to mine this parcel, and no mine plan. Therefore, as stated in Section 5.1.1 of this decision document, the analysis of this alternative relies on an estimated mine plan with an assumed 14% preservation. This alternative requires approximately 30 miles of pipelines and 7 additional stream crossings (14 miles from the plant to the project boundary, 16 miles within the project boundary). Mining 4,983 acres at an assumed yield of 8,000 tons of phosphate rock per acre, mining this alternative would produce approximately 40 MMT of phosphate. It is unknown if either FDEP or Hardee County would approve mining on this site. The Corps will conservatively assume that the Applicant could obtain the necessary approvals. This alternative would not disrupt the Applicant's planned overall mining sequence.

The Applicant provided the following statement about potential access corridors between this alternative and the Wingate Creek beneficiation plant:

Given the distance between the Wingate beneficiation plant and the Pioneer/West Pioneer site, the access corridor route needs to be as straight as possible to approach the practicability limit. Review of Manatee and Hardee County Property Appraiser ownership records documents over 15 separate real estate transactions would need to be successfully consummated to acquire a direct access route. Pipeline lengths of over 11 miles would be required, which would reduce operating factors to approximately 57 percent. At a minimum pumping distance of 10.8 miles from the Wingate beneficiation plant, the Pioneer/West Pioneer site marginally exceeds USACE's practicable pumping distance criterion (FAEIS page 3-11). At a more probable distance of 13 to 15 miles, this alternative clearly would not meet the pumping distance practicability criterion. Therefore, this site is also not practicable.

As stated in Section 5.1 of this document, there are exceptions to the ten-mile distance. Although the Applicant states that they would need to complete "15 separate real estate transactions", other submittals indicate that the Applicant owns or controls sufficient property within the boundaries of the Pioneer, Ona, Wingate East and Wingate Creek parcels. Therefore, the Corps has determined that the Applicant could construct a pipeline between this alternative and the Wingate Creek beneficiation plant.

The Pioneer alternative contains 1,708 acres of NWI wetlands and 1,994 acres of SWFWMD wetlands. SWFWMD wetlands comprise 34.4% of the site within the 10-mile radius.

This alternative does have mineable phosphate ore. An access corridor from Pioneer across the Ona site to the Wingate plant would result in a circuitous route over 14 miles

long, however it is the Corps' determination that the Applicant could construct such a pipeline. Therefore, the Corps has determined that the Pioneer alternative would meet the overall project purpose. Based on the estimate that the Pioneer alternative could produce 40 MMT of phosphate and does not disrupt the Applicant's mining development sequence, this alternative also meets the Applicant's overall and project-specific need.

According to SWFWMD data, wetlands account for approximately 34.4% percent of the vegetative cover on Pioneer within 10-miles of the Wingate beneficiation plant. Considering the additional potential wetland impact acreage, as well as the need for an access corridor over 14 miles long with 7 more crossings than the Applicant's Preferred Alternative, the Pioneer alternative is more environmentally damaging than the Applicant's Preferred Alternative.

5.3 Onsite/Minimization Alternatives and Evaluation Criteria: The Corps evaluated seven minimization alternatives for Wingate East:

- a) The No Action – Uplands Only alternative;
- b) Upland Mining with Crossings of WOUS;
- c) Priority Avoidance;
- d) Initial Landscape Systems Avoidance;
- e) Avoidance of Key Landscape Systems;
- f) The Applicant's Preferred Alternative, and;
- g) The Original Mine Plan - Maximum Recovery/Minimal Avoidance.

Each of these onsite alternatives represents a different mine plan for the project. Attachment C to this decision document provides maps of each of these plans.

As with its evaluation of the avoidance alternatives, the Corps independently reviewed and verified both the practicability and the environmental impacts of the minimization alternatives in accordance with 40 C.F.R. § 230.1(a) and 40 C.F.R. § 230.10(b)(2).

5.3.1 Practicability Criteria: The Corps considered the following specific criteria:

- a) The estimated total length of pipelines needed to carry material to the Wingate beneficiation plant and the estimated total length of the ditch and berm system around areas not to be mined;
- b) the number of crossings needed for pipelines and draglines;
- c) the ability of an alternative to support other necessary mine infrastructure such as clay settling areas (considering factors such as available area);
- d) compliance with state (FDEP) or local (Manatee County) permitting requirements, and;
- e) the ability of an alternative to meet the overall project purpose, and to produce a total of 28 MMT and meet the independently reviewed and verified project-specific need as described in Section 1.7.1 of this decision document.

- 5.3.2 The environmental criteria included each alternative's expected level of impact to WOUS (based on the February 16, 2012, approved jurisdictional determination) and agreement with the mitigation framework described in Section 5.4 of the Final EIS. As stated in Section 5.4.1 of the Final EIS, the mitigation framework applies after consideration of the applicable presumptions for proposed discharges of fill into special aquatic sites under the Section 404(b)(1) Guidelines, and does not modify any law or regulation or the jurisdictional authority of USACE or any other agency.

As further described in Section 5.4.3 of the Final EIS, there are four steps in the mitigation framework:

a) Step 1 is the identification of priority-based avoidance areas (see Final EIS Section 5.4.3.1). Such resources include perennial and intermittent streams, forested wetlands, and high quality herbaceous wetlands (defined as having an overall UMAM score of 0.7 or higher).

Section 5.4.3.1 of the Final EIS also describes how the Corps can apply other factors in Step 1 of the mitigation framework, such as giving greater priority to areas where multiple criteria apply, higher-quality forested wetlands and streams, and other environmental criteria such as wetland's or stream's location, surrounding land use, prior disturbance, connectivity, hydrology, plant species composition, and usage by wildlife or listed species.

The final part of Step 1 describes how the Corps can consider other criteria to support its evaluations, such as Critical Lands and Waters Identification Project (CLIP) priority, the Integrated Habitat Network, and 100-year floodplains.

b) Step 2 of the mitigation framework, as described in Section 5.4.3.2 of the Final EIS, is to determine the extent of onsite avoidance that is practicable under the Section 404(b)(1) Guidelines. Section 5.4 of this decision document provides the Corps' evaluation of the seven alternatives for mine plans for the Wingate East.

c) Step 3 of the mitigation framework, as described in Section 5.4.3.3 of the Final EIS, evaluates opportunities to minimize impacts through best management practices and mine plan design. Section 5.6 of this decision document describes how the Corps considered Step 3 in its evaluation. Sections 6 ("Evaluation of the CWA Section 404(b)(1) Guidelines") and 7 ("Public Interest Review") of this decision document also describe many of these minimization measures.

d) Step 4 of the mitigation framework (reference Final EIS Section 5.4.3.4) is addressed by Section 8 of this decision document, "Compensatory Mitigation", and Attachment B, the approved compensatory mitigation plan.

5.4 Evaluation of the Minimization Alternatives

- 5.4.1 No Action – Uplands-Only: This alternative involves mining only non-Corps jurisdictional areas, including uplands and aquatic resources not considered to be WOUS, with no impacts to any WOUS, including from dragline/dredge and infrastructure crossings. Attachment C to this decision document includes a map of this alternative (Figure 2).

Under this plan, the Applicant could recover 34% of the total commercially mineable phosphate reserves, or 12.2 MMT, from 1,160 acres of mined area. The total length of perimeter ditch and berm systems around avoided jurisdictional areas would be approximately 10.3 miles. Approximately 23 miles of pipelines would be needed to transport ore matrix to the Wingate plant and stormwater to the CSA, and to return process water and tailing sand back to the mine areas. The Applicant would not need to construct any wetland or stream crossings with this plan, and a reduced sized (468.3-acre) CSA, mostly located on areas already approved for mining, could handle this alternative's output. Figure 1 shows the location of this reduced CSA.

Without approval to cross WOUS, the only areas mineable using dredges would be uplands that abut the Wingate Extension dredge pool. The Applicant would have to use draglines to mine the remainder of Wingate East, however the current Manatee County permit requires the use of dredges west of Duette Road.

This mine plan avoids 100% of the onsite WOUS overall, and 100% of the wetlands and 100% of the streams prioritized by the mitigation framework. Because there are no impacts to resources prioritized by the mitigation framework, this alternative agrees with Steps 1 and 2 of the mitigation framework.

This alternative meets the overall project purpose, however it does not meet either the overall or the project-specific need, and it would conflict with the current County permit.

With no wetland or stream impacts, and agreement with Steps 1 and 2 of the mitigation framework, this is the least environmentally damaging alternative compared to the other onsite alternatives, including the Applicant's Preferred Alternative. However, with the ability to produce a total of 12.2 MMT of phosphate, this is not a practicable alternative.

- 5.4.2 Upland Mining with Crossings of WOUS: In this plan, the Applicant would only mine upland/non-Corps-jurisdictional areas, however the Applicant would impact wetlands and streams for dragline or dredge and infrastructure crossings. Figure 3 illustrates an upland area located in Section 34 in the southern portion of Wingate East, measuring about 42 acres, that could be added to the 1,160 acres of upland mineable areas described in "No Action – Uplands-Only" alternative" (Figure 2).

This plan allows the Applicant to recover 35% of the total commercially mineable phosphate reserves, or 12.5 MMT, with approximately 1200 acres of mining. This mine

plan requires two temporary dredge crossings of WOUS, 23 miles of pipeline would be needed, and a total of 10.4 miles of perimeter ditch and berm system would need to be constructed. A reduced sized (468.3-acre) CSA, mostly located on areas already approved for mining, could handle this alternative's output. Figure 1 shows the location of this reduced CSA.

Approval of crossings of WOUS at the approximate locations shown on Figure 3 would provide access to two mine blocks by the existing dredges mining at the adjacent Wingate Extension, which would eliminate the need to mine these blocks using draglines. The infrastructure corridor supporting the "No Action – Uplands-Only" alternative would be relied upon to connect the added mine area to the Wingate plant. The Corps will conservatively assume that the Applicant could obtain the necessary state and local approvals for this mine plan.

This mine plan impacts 2.1 acres of the onsite WOUS overall (avoiding approximately 99.8%), 1.8 acres of mitigation framework priority wetlands (avoiding approximately 99.8%) and no streams prioritized by the mitigation framework (100% avoidance).

This alternative meets the overall project purpose, however it does not meet either the overall or the project-specific need. The Corps assumes that this alternative is available, because there are no conflicts with other agencies' requirements.

Because there are impacts to only 0.2% of the resources prioritized by the mitigation framework, this alternative agrees with Steps 1 and 2 of the mitigation framework. With less impact to WOUS overall and to framework wetlands and streams, and agreement with the mitigation framework, this alternative is less environmentally damaging than the Applicant's Preferred Alternative. However, with the ability to produce a total of 12.5 MMT of phosphate, this is not a practicable alternative.

Attachment C to this decision document includes a map of the "Upland Mining with Crossings of WOUS" alternative (Figure 3).

5.4.3 Priority Avoidance: For this alternative, the Applicant would avoid mitigation framework priority wetlands and streams.

Under this plan, the Applicant could recover 59% of the total commercially mineable phosphate reserves, or 21.3 MMT, from 1,556 acres of mined area. The total length of perimeter berm systems around the avoided areas would be approximately 8.4 miles, and 10.3 miles of pipelines would be needed. The Applicant would not need to construct any WOUS crossings with this plan, and a reduced sized (468.3-acre) CSA could handle this alternative's output. Attachment C, Figure 1 shows the location of this reduced CSA. Dredge mining could be accomplished west of Duette Road because the Wingate Extension dredge pool abuts all mineable areas there. The Corps will

conservatively assume that the Applicant could obtain the necessary state and local approvals.

This mine plan impacts 327.6 acres of onsite WOUS overall (avoiding approximately 65%). No impacts will occur to mitigation framework priority wetlands (avoiding 100%) or streams (100% avoidance).

The "Priority Avoidance" alternative meets the overall project purpose, however it does not meet either the overall or the project-specific need. The Corps assumes that this alternative is available, because there are no conflicts with other agencies' requirements.

Because this alternative would avoid 100% of the resources prioritized by the mitigation framework, this alternative agrees with Steps 1 and 2 of the mitigation framework. With less impact to WOUS overall, no impacts to framework wetlands and streams, and agreement with the mitigation framework, this alternative is less environmentally damaging than the Applicant's Preferred Alternative. However, with the ability to produce a total of 21.3 MMT of phosphate, this is not a practicable alternative.

Attachment C to this decision document includes a map of the "Priority Avoidance" alternative (Figure 4).

- 5.4.4 Initial Landscape Systems Avoidance plan: Under this alternative, two landscape-scale areas would be avoided: one centered along the West Fork Horse Creek riparian corridor and the other encompassing highly functional upland and wetland habitat adjacent to the onsite segment of the Myakka River and associated tributaries.

Under this plan, the Applicant could recover 78% of the total commercially mineable phosphate reserves, or 28 MMT, from 3,216 acres of mined area. The total length of perimeter berm systems around avoided jurisdictional areas would be approximately 4 miles. The reduced sized CSA (468.3-acre) shown on Figure 1 would not be sufficient under this Alternative. Two larger CSAs (WE-1 & WE-2) shown on Figure 5 would be constructed to handle the clay output from this Alternative. The state rejected this mine plan during its review of the proposed project.

This mine plan impacts 626 acres of the onsite WOUS overall (avoiding approximately 33%), 272 acres of mitigation framework priority wetlands (avoiding approximately 54%) and 2,389 linear feet of priority streams (72% avoidance).

This alternative meets the overall project purpose and the overall and project-specific need. Based on the state's rejection of this mine plan, the Corps does not consider this alternative to be available.

This alternative has the ability to produce a total of 28 MMT of phosphate. However, this alternative does not agree with Steps 1 and 2 of the mitigation framework. Because this alternative would impact more WOUS overall and more mitigation framework wetlands and streams, this alternative is more environmentally damaging than the Applicant's Preferred Alternative.

Attachment C to this decision document includes a map of this alternative (Figure 5).

- 5.4.5 Avoidance of Key Landscape Systems: This alternative was developed during the discussions and field reviews among the Applicant and USACE, EPA, and FDEP staff conducted during 2013. This alternative avoids three landscape-scale areas.

Under this plan, the Applicant could recover 78% of the total commercially mineable phosphate reserves, or 28 MMT, from 3,148 acres of mined area. This plan involves no crossings of WOUS. The total length of perimeter berm systems around avoided jurisdictional areas would be approximately 5.3 miles, and approximately 4 miles of pipelines would be needed. The reduced sized CSA (468.3-acre) shown in Figure 1 would not be sufficient under this Alternative. Two larger CSAs (WE-1 & WE-2) shown on Figure 6 would be constructed to handle the clay output from this alternative. The state rejected this mine plan during its review of the proposed project.

This mine plan impacts 563 acres on the onsite WOUS overall (avoiding approximately 40%), 235 acres of mitigation framework priority wetlands (avoiding approximately 59%) and 2,389 linear feet of priority streams (72% avoidance).

This alternative meets the overall project purpose and the overall and project-specific need. Based on the state's rejection of this mine plan, the Corps does not consider this alternative to be available.

This alternative does not agree with Steps 1 and 2 of the mitigation framework. Because this alternative would impact more WOUS overall and more mitigation framework wetlands and streams, this alternative is more environmentally damaging than the Applicant's Preferred Alternative.

Attachment C to this decision document includes a map of this alternative (Figure 6).

- 5.4.6 Applicant's Preferred Alternative: This alternative is the project as described in Section 1.4 of this decision document and avoids three landscape-scale areas.

This alternative allows the Applicant to recover 78% of the total commercially mineable phosphate reserves, or approximately 28 MMT, with 2,658 acres of mining. This plan involves no crossings of WOUS, 11 miles of pipelines, and 6.3 miles for the ditch and berm system around avoided areas. The reduced sized CSA (468.3-acre) shown Figure 1 would not be sufficient under this Alternative. One larger, 596-acre CSA (WE-1)

shown on Figure 7 would need to be constructed to handle the clay output from this Alternative. The state has approved this mine plan.

This plan impacts 553 acres of the onsite WOUS overall (avoiding approximately 41%), 226 acres of mitigation framework priority wetlands (avoiding approximately 61% in total, including 61% of forested wetlands and 38% of high quality herbaceous wetlands). 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).

The Applicant's Preferred Alternative meets the overall project purpose and the overall and project-specific need, and is practicable. Both FDEP and Manatee County have approved this mine plan, so the Corps considers it to be available.

Due to the contiguous avoided area, which contains natural streams, floodplains, high-quality forested and herbaceous wetlands, and upland buffers, this mine plan agrees with Steps 1 and 2 of the mitigation framework.

Attachment C to this decision document includes a map of this alternative (Figure 7).

- 5.4.7 Original Mine Plan - Maximum Recovery/Minimal Avoidance: In their June 2011 application submittal, the Applicant presented a mine plan that would have recovered 36 MMT of phosphate rock product by extracting ore from 3,362 acres. This plan involves no crossings of WOUS, 4 miles of pipelines, and 2.6 miles for the ditch and berm system around avoided areas. The reduced sized CSA (468.3-acre) shown in Figure 1 would not be sufficient under this Alternative. Two larger CSAs, totaling 1,248 acres (WE-1 & WE-2) shown in Figure 8 would need to be constructed to handle the clay output from this alternative. The state rejected this mine plan during its review of the proposed project.

Environmentally, this mine plan impacts 778 acres of the onsite WOUS overall (17% avoidance), 425 acres of mitigation framework priority wetlands (avoiding approximately 27%) and 5,196 linear feet of streams prioritized by the mitigation framework (40% avoidance).

This plan meets the overall project purpose and the overall and project-specific need. Based on the state's rejection of this mine plan, the Corps does not consider this alternative to be available.

This mine plan does not agree with Steps 1 and 2 of the mitigation framework, and has more overall impacts to WOUS, impacts to framework wetlands, and impacts to framework streams, than the Applicant's Preferred Alternative. This alternative is more environmentally damaging than the Applicant's Preferred Alternative.

Attachment C to this decision document includes a map of this alternative (Figure 8).

5.5 Least Environmentally Damaging Practicable Alternative (LEDPA): In consideration of the information noted above, the Corps has determined that the Applicant's preferred Alternative, as described in Sections 5.2.2 and 5.4.6 above, is the LEDPA that would achieve the overall project purpose. This determination considers cost, existing technology, and logistics, in addition to the consideration of impacts to the environment.

5.6 Additional Minimization Measures - As stated in Section 5.4.3.3 of the Final EIS, "Impact minimization considerations may address both physical and temporal impacts as well as direct, indirect, and cumulative impacts. Potential minimization measures include, but are not limited to, reducing the widths of infrastructure corridors; using existing CSAs and constructing contiguous CSAs so that they have a common wall; minimizing CSA footprints through design and operation methods; using existing stream crossings created for agricultural operations; sequentially reusing disturbed areas; using upland buffers; using recharge ditch systems; and maintaining habitat interconnectivity and existing wildlife corridors."

The measures described below are part of the mine plan for the Applicant's Preferred Alternative for Wingate East, as described in Sections 5.2.2 and 5.4.6 of this decision document.

5.6.1 Wetland Corridors. There are no wetland crossing corridors required for the Applicant's Preferred Alternative.

5.6.2 CSAs: Implementation of the Applicant's Preferred Alternative allows the Applicant to minimize CSA impacts through several means including utilization of existing CSA capacity within the Applicant's Southeast Tract, stage filling, proper design of the overall mine backfill plan to advantageously site the CSA in an area with greater overall mining depths, thereby maximizing unit storage capacity in terms of disposal capacity per acre of land, and proper consideration of site hydrology effects in developing the mine backfill plan such that changes in runoff or recharge are not disproportionately assigned to any one subwatershed associated with the project.

5.6.3 Buffers: The proposed non-uniform buffers would preserve total upland and native upland habitat adjacent to the avoided wetlands within the range resulting from application of 100 foot and 300 foot uniform buffers, while preserving less non-native habitat areas than either. The width of this buffer is greatest where the native habitat is most prevalent and the wetlands are of a higher quality. All intermittent streams to be avoided would be buffered by over 100 feet from the closest stream bank, thereby meeting the water quality buffer criterion. In addition, all of the avoided corridors measure at least 200 feet wide and nearly all measure over 600 feet wide. Because the minimum overall width of each corridor exceeds 600 feet, the ecological objectives of

the Final EIS have been met. A mine's ditch and berm system also buffers the adjacent area from the mining activity, providing approximately 300 feet of separation from the excavation.

- 5.6.4 Recharge ditches: For areas proposed to be mined with a dragline, the ditch and berm systems protect the adjacent WOUS and the surficial aquifer by maintaining water table elevations at sufficient levels to hydrate nearby wetlands or streams while the adjacent mine cuts are temporarily dewatered. The recharge ditch delivers water to the nearby wetland via the surficial aquifer. This delivery mechanism mimics an important natural pathway and provides high quality water. The ditch and berm system also constitutes an effective and recognized BMP to protect downstream waters from water quality impacts and is a requirement of FDEP's Environmental Resource permit (ERP) for the project.
- 5.6.5 Maintaining connectivity: The Applicant has identified several key landscape features consisting of higher quality wetlands, streams, and upland corridors in large continuous blocks for preservation and enhancement. Preserving these areas will maintain connectivity both onsite and offsite.

6.0 Evaluation of the 404(b)(1) Guidelines:

(40 C.F.R. § 230) For each of the below listed evaluation criterion, this section describes the potential impact, any minimization measures that would be used to reduce the level of impact, and the resultant impact level. For the purpose of this evaluation, the fill associated with this project is the activity described in Sections 1.4 and 1.4.1 of this decision document.

- 6.1 Factual determinations (40 C.F.R. § 230.11, Subpart B).
 - 6.1.1 Physical Substrate (40 C.F.R. § 230.11(a)): As described in Section 4.10 of the Final EIS, phosphate 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. In addition, the best management practices described throughout the Final EIS, including the perimeter ditch and berm system that separates the active mine from adjacent wetlands and surface waters, should protect those aquatic resources from indirect effects to substrate. Changes to the Wingate East project identified in Section 1.4.1 of this decision document do not alter the surficial geology and soils determinations made in the Final EIS. Attachment B of this decision document provides the Applicant's approved mitigation plan.
 - 6.1.2 Water circulation, fluctuation, and salinity (40 C.F.R. § 230.11(b)): Section 4.2.4 of the Final EIS describes the predicted effects of the Wingate East project on surface water flows within the Upper Myakka River and Horse Creek of the Peace River watershed.

The Final EIS states that the project will have no measurable effect on Horse Creek and an insubstantial effect on the Upper Myakka River. The Final EIS also states that there is in effect no reduction to the stream flow resulting from the mining of Wingate East either on the Upper Myakka River subwatershed, the Myakka River watershed, or Charlotte Harbor, and no significant impact on the Horse Creek subwatershed. The Corps has determined that the changes to the project since the Final EIS will reduce the mine's life, mined area, and impacts to aquatic resources and will result in reductions in potential impacts to surface water hydrology. Therefore, there will be a reduction in the degree and significance of potential impacts identified in the Final EIS. As such, the Corps concludes that the changes to the Wingate East project identified in Section 1.4.1 of this decision document do not alter the surface water flow determinations made in the Final EIS.

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. 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). Changes to the Wingate East project identified in Section 1.4.1 of this decision document do not alter surface water quality determinations made in the Final EIS.

- 6.1.3 Suspended particulate/turbidity (40 C.F.R. § 230.11(c)): 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. 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). Changes to the Wingate East project identified in Section 1.4.1 of this decision document do not alter surface water quality determinations made in the Final EIS.
- 6.1.4 Contaminant Availability (40 C.F.R. § 230.11(d)): 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. 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). Changes to the Wingate East project identified in Section 1.4.1 of this decision document do not alter the surface water quality determinations made in the Final EIS.
- 6.1.5 Aquatic Ecosystem Effects (40 C.F.R. § 230.11(e)): Section 4.5.1.4 of the Final EIS describes the predicted effects of Wingate East on aquatic biological communities. As stated in that section, the Applicant must provide compensation for lost function, which reduces the predicted level of impact to moderate, at the greatest. Similarly, Section 4.5.2.4 described the predicted effects on wetlands, and states that with mitigation, Wingate East would have no impact to a minor impact on wetlands. Changes to the Wingate East project identified in Section 1.4.1 of this decision document do not alter the aquatic biological communities determination made in the Final EIS.

Chapter 5 of the Final EIS further describes mitigation, including the Corps' requirements, the sequence of avoidance, minimization, and compensation, and the mitigation framework developed for the evaluation of the four main phosphate mining projects. Section 8 of this document further describes the specific proposed compensatory mitigation for the Wingate East project.

- 6.1.6 Proposed Disposal Site (40 C.F.R. § 230.11(f)): The best management practices described throughout the Final EIS, including the perimeter ditch and berm system that separates the active mine from adjacent wetlands and surface waters, will confine the discharged materials within the mine boundaries. Changes to the Wingate East project identified in Section 1.4.1 of this decision document do not alter the determination made in the Final EIS.
- 6.1.7 Cumulative Effects (40 C.F.R. § 230.11(g)): Section 4.12 of the Final EIS describes the predicted cumulative effects of the four proposed phosphate mines, including Wingate East, plus two reasonably foreseeable future mines, plus other past, present, and reasonably foreseeable future actions, both mining-related and non-mining related, on five resource categories: surface water resources, groundwater resources, surface water quality, ecological resources (including aquatic resources and upland habitat), and economic resources.

Section 1.4.1 of this decision document describes the project changes since the publication of the Final EIS. As described in Section 1.4.2, the Corps considered updated analyses of Wingate East's potential effects on groundwater resources and economic resources. For the other resource categories, the Corps determined that the existing administrative record, including the Final EIS analyses and Addendum, provided a sufficient basis for its review. For further discussion of the Corps' consideration of the updated analyses of the project's potential impacts on groundwater resources and economic resources, see Section 7 of this decision document.

In addition, since the Final EIS, the Applicant made changes to other proposed phosphate mine projects, including reductions in overall mined area and aquatic resource impacts (South Pasture Extension (which has since been permitted) and Ona), and additions of infill parcels to existing mines (South Fort Meade – Hardee County). However, because these changes either reduce the potential for cumulative effects in resource categories such as ecological resources, or fall outside the geographic scope of the cumulative effects analyses for Wingate East in resource categories such as surface water resources (where Wingate East is predominantly in the Myakka River watershed and these other projects are predominantly in the Peace River watershed), they do not alter the cumulative effects determinations made in the Final EIS for Wingate East.

- 6.1.8 Secondary Effects (40 C.F.R. § 230.11(h)): As stated in Section 4.1 of the Final EIS, 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. Changes to the Wingate East project identified in Section 1.4.1 of this decision document do not alter the secondary effects determinations made in the Final EIS.
- 6.2 Potential Impacts on Physical and Chemical Characteristics of the Aquatic Ecosystem (40 C.F.R. Part 230, Subpart C): Chapter 4 of the Final EIS describes the Wingate East's potential impacts on substrate, suspended particulates/turbidity, water, current patterns and water circulation, normal water fluctuations, and salinity gradients. Changes to the Wingate East project identified in Section 1.4.1 of this decision document do not alter the potential impacts on substrate, suspended particulates/turbidity, water, current patterns and water circulation, normal water fluctuations, and salinity gradients determinations made in the Final EIS.
- 6.3 Potential Impacts on Biological Characteristics of the Aquatic Ecosystem (40 C.F.R. Part 230, Subpart D): 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. As described in Section 10.1 of this decision document, on May 18, 2012, the Service issued an amended¹² Incidental Take Permit (ITP) and approved Habitat Conservation Plan (HCP) for the threatened Florida scrub-jay and the threatened Eastern indigo snake. On May 24, 2012, the Service determined (based on the approved HCP) that proposed project is not likely to adversely affect (NLAA) wood stork or caracara, and there are no effects to any other listed species, pursuant to Section 7 of the Endangered Species Act.

Changes to the Wingate East project identified in Section 1.4.1 do not alter the potential impacts on threatened or endangered species, fish, crustaceans, mollusks, and other aquatic organisms, and other wildlife determinations made in the Final EIS. As stated in Section 10.1, the Corps contacted the Service by email on September 26, 2017, and stated its conclusion that the proposed changes to the Wingate East application do not alter the potential impacts the project will have on threatened or endangered species determinations made in the Final EIS, or in the ITP/NLAA/No Effect determinations made by the Service in 2012. By email dated October 4, 2017, the Service responded that it agrees with the Corps' conclusions.

As also described in Section 10.1 of this decision document, as a result of a November 6, 2013 discussion of the project with the National Marines Fisheries Service Protected Resource Division (NMFS-PRD), the Corps determined that the proposed mines would have no effect on the smalltooth sawfish. On December 16, 2015, the NMFS Habitat Conservation Division (NMFS-HCD) stated that they anticipated any adverse effects

¹² This is an amendment to ITP/HCP #TE236128-0, issued September 27, 2010, which covered Florida scrub-jay. The May 18, 2012 amended ITP/HCP #TE236128-1, adds Eastern indigo snake to species covered under the ITP/HCP.

associated with the proposed project that might occur on marine and anadromous fishery resources would be minimal and, therefore, they did not object to issuance of a permit.

- 6.4 Potential Impacts on Special Aquatic Sites (40 C.F.R. Part 230, Subpart E): Chapter 4 of the Final EIS describes the Wingate East project's potential impacts on sanctuaries and refuges, wetlands, mud flats, vegetated shallows, and riffle and pool complexes. Chapter 5 of the Final EIS further describes mitigation, including the Corps' requirements, the sequence of avoidance, minimization, and compensation, and the mitigation framework developed for the evaluation of the four main phosphate mining projects. Section 8 of this document further describes the specific proposed compensatory mitigation for the Wingate East project. There are no coral reefs potentially impacted by the proposed Wingate East project. Changes to the Wingate East project identified in Section 1.4.1 of this decision document do not alter the potential impacts on sanctuaries and refuges, wetlands, mud flats, vegetated shallows, and riffle and pool complexes determinations made in the Final EIS.
- 6.5 Potential Impacts on Human Use Characteristics (40 C.F.R. Part 230, Subpart F): Chapter 4 of the Final EIS describes the Wingate East project's potential impacts on municipal and private water supplies, recreational and commercial fisheries, water-related recreation, and aesthetics. Changes to the Wingate East project (including the reduction in impacts to WOUS) identified in Section 1.4.1 of this decision document do not alter the potential impacts on municipal and private water supplies, recreational and commercial fisheries, water-related recreation, and aesthetics determinations made in the Final EIS.
- 6.6 Contaminant Evaluation and Testing (40 C.F.R. Part 230, Subpart G): Section 4.4 and Appendix D of the Final EIS describe the surface water quality monitoring, including aquatic biological monitoring, associated with existing phosphate mines, and reasonably expected to be required for proposed mines, including Wingate East. Changes to the Wingate East project identified in Section 1.4.1 of this decision document do not alter the secondary effects determinations made in the Final EIS.
- 6.7 Actions to minimize adverse effects (40 C.F.R. Part 230, Subpart H): Section 5.4 of this decision document describes actions to be undertaken in response to 40 C.F.R. § 203.10(d) to minimize the adverse effects of discharges of dredged or fill material.
- 6.8 Restrictions on Discharges (Subpart B, section 230.10) (*an answer marked with an asterisk indicates noncompliance with the Guidelines*):

No	Based on the discussion in section 5, are there available, practicable alternatives having less adverse impact on the aquatic ecosystem and without other significant adverse environmental consequences that do not involve discharges into "waters of the US" or at other locations within these waters?
Yes	Based on the discussion in section 5, if the project is in a special aquatic site and is not water-dependent, has the applicant clearly demonstrated that there are no practicable alternative sites that do not involve SAS? Will the discharge:
No	Violate state water quality standards?
No	Violate toxic effluent standards (under Section 307 of the Act)?
No	Jeopardize endangered or threatened species or their critical habitat?
No	Violate standards set by the Department of Commerce to protect marine sanctuaries?
No	Will the discharge contribute to significant degradation of "waters of the US" through adverse impacts to:
No	Human health or welfare, through pollution of municipal water supplies, fish, shellfish, wildlife and special aquatic sites?
No	Life stages of aquatic life and other wildlife?
No	Diversity, productivity, and stability of the aquatic ecosystem, such as the loss of fish or wildlife habitat, or loss of the capacity of wetland to assimilate nutrients, purify water or reduce wave energy?
No	Recreational, aesthetic, and economic values?
Yes	Will all appropriate and practicable steps (40 C.F.R. 23.70-77) be taken to minimize the potential adverse impacts of the discharge on the aquatic ecosystem?

6.9 Compliance with the 404(b)(1) Guidelines: Reference Section 12.4 of this decision document.

7.0 General Public Interest Review – (33 C.F.R. § 320.4 and RGL 84-09) *All public interest factors have been reviewed and summarized below. Both cumulative and secondary impacts on the public interest have been considered.*

Public Interest Factors Considered:

a) Wetlands (33 C.F.R. § 320.4(b); Corps' Wetland Policy): Section 4.5.2 of the Final EIS describes how the Corps considered direct and secondary impacts to wetlands in the Final EIS. Section 4.5.2.4 of the Final EIS describes the specific evaluation of wetland impacts associated with the Wingate East project conducted for the Final EIS. Section 4.12.5 of the Final EIS describes the cumulative effects on ecological resources, including wetlands. The Corps has determined that the reduced wetlands impacts identified in Section 1.4.1 of this decision document (reductions in mine life, mined area, and impacts to aquatic resources) will result in reductions in potential impacts to ecological resources and surface water hydrology, and therefore there will be a reduction in the degree and significance of potential impacts identified in the Final EIS. Section 1.4 of this decision document describes the currently proposed project, including the level of impacts to Corps-jurisdictional wetlands and surface waters (including streams). Section 8 of this EA describes the compensatory mitigation plan proposed to offset the project's wetland and surface water impacts.

b) Fish and wildlife (33 C.F.R. § 320.4(c)): Section 4.5.1 of the Final EIS describes how the Corps considered direct and secondary impacts to aquatic biological communities in the Final EIS. Section 4.5.1.4 of the Final EIS describes the specific evaluation of aquatic biological community impacts associated with the Wingate East project conducted for the Final EIS. Section 4.5.3 of the Final EIS describes how the Corps considered direct and secondary impacts to wildlife habitat in the Final EIS. Section 4.5.3.4 of the Final EIS describes the specific evaluation of wildlife habitat impacts associated with the Wingate East project conducted for the Final EIS. Section 4.12.5 of the Final EIS describes the cumulative effects on ecological resources. The Corps considered changes to the project identified in Section 1.4.1 of this decision document, and their effect on the determinations made in the Final EIS.

As described in Section 6.3 of this decision document, the USFWS issued an HCP and ITP for the Florida scrub-jay on September 28, 2010, a revised ITP to address the eastern indigo snake on May 18, 2012, and provided a statement to the Corps addressing other federally-listed species on June 14, 2012.

As also described in Section 6.3 of this 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 mines would have no effect on the smalltooth sawfish. On December 16, 2015, the NMFS-HCD stated that they anticipated any adverse effects associated

with the proposed project that might occur on marine and anadromous fishery resources would be minimal and, therefore, they did not object to issuance of a permit.

c) Water quality (33 C.F.R. § 320.4(d)): Section 4.4 of the Final EIS describes how the Corps considered direct and secondary impacts to water quality in the Final EIS. Section 4.4.2 of the Final EIS describes the specific evaluation of water quality impacts associated with all of the action alternatives conducted for the Final EIS. Section 4.4.5 of the Final EIS describes the specific evaluation of water quality impacts associated with the Wingate East project conducted for the Final EIS. Section 4.12.4 of the Final EIS describes the cumulative effects on surface water quality. The Corps considered changes to the project identified in Section 1.4.1 of this decision document, and their effect on water quality determinations made in the Final EIS. The FDEP issued a water quality certification on November 16, 2015, as part of their ERP. If the Corps issues a permit for this project, it will include a general condition requiring compliance with the conditions specified in the certification as special conditions to that permit.

d) Historic, cultural, scenic, and recreational values (33 C.F.R. § 320.4(e)): Section 4.9 of the Final EIS describes how the Corps considered direct and secondary impacts to cultural resources and historic properties in the Final EIS. Section 4.9.4 of the Final EIS describes the specific evaluation of cultural resource and historic property impacts associated with the Wingate East project conducted for the Final EIS. Section 4.1.8.5 of the Final EIS describes how the Corps considered aesthetic impacts associated with phosphate mining, and Section 4.1.8.7 describes how the Corps considered effects on recreation. The Corps considered changes to the project identified in Section 1.4.1 of this decision document, and their effect on historic, cultural, scenic, and recreational values determinations made in the Final EIS. Section 10.3 of this decision document describes how the project complies with the National Historic Preservation Act of 1966.

e) Effects on limits of the territorial sea (33 C.F.R. § 320.4(f)): The Wingate East project will not affect coastal waters, either by erosion or accretion.

f) Consideration of property ownership (33 C.F.R. § 320.4(g)): The Applicant owns the property that is the subject of this permit application. The project will not affect navigation or riparian rights to navigable waters.

g) Activities affecting coastal zones (33 C.F.R. § 320.4(h)): The Wingate East project will not affect coastal zones.

h) Activities in marine sanctuaries (33 C.F.R. § 320.4(i)): The Wingate East project is not within a marine sanctuary.

i) Other Federal, state, or local requirements (33 C.F.R. § 320.4(j)): Section 10.0 of this decision document describes the project's compliance with other federal, state, and local requirements.

j) Safety of impoundment structures (33 C.F.R. § 320.4(k)): The construction and operation of the clay settling areas will comply with federal, state and local requirements. Specifically, the FDEP's NPDES permit requires compliance with Rule 62-672, F.A.C., and "Minimum Requirements for Earthen Dams Used in Phosphate Mining and Beneficiation Operations and for Dikes Used in Phosphogypsum Stack System Impoundments." Also, the Manatee County Development Order and Master Mine Plan will require additional inspection, reporting, and emergency management elements that apply to the dams proposed for the Wingate East.

k) Floodplain management (33 C.F.R. § 320.4(1)): Section 4.1.8.4 of the Final EIS describes how the Corps considered floodplain impacts associated with phosphate mining. As stated in that section, FDEP regulations state that no net encroachment into the floodplain, up to that encompassed by the 100-year event, can be allowed unless equivalent compensating storage is provided between the seasonal high water level and the 100-year flood level. FDEP issued an ERP for the project on November 16, 2015. Additionally, the Corps' evaluation of wetland impacts described in Section 7.0a of this decision document includes consideration of floodplains

l) Water supply and conservation (33 C.F.R. § 320.4(m)): Section 4.2.4 of the Final EIS describes the predicted effects of the Wingate East project on surface water flows within the Upper Myakka River subwatershed and within the Horse Creek subwatershed of the Peace River watershed. The Final EIS states that the project will have no measurable effect on Horse Creek and an insubstantial effect on the Upper Myakka River subwatershed. Changes to the Wingate East project identified in Section 1.4.1 of this decision document do not alter the water supply and conservation determination made in the Final EIS.

Section 4.12.2.5 of the Final EIS describes the cumulative effects of phosphate mining on water supply withdrawals in the lower Peace and Myakka Rivers, and Section 4.12.2.6 describes the magnitude and significance. As stated in those two sections, the cumulative effect of mining on water supply withdrawals has at most a minor level of effect. Changes to the Wingate East project identified in Section 1.4.1 of this decision document do not alter the cumulative effects of phosphate mining on water supply determinations made in the Final EIS.

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. Changes to the Wingate East project identified in Section 1.4.1 of this decision document do not alter the surface water quality determinations made in the Final EIS. 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 4.3.4 of the Final EIS describes the predicted effects of Wingate East on groundwater resources. As stated there, Wingate East will have a minor degree of effect on any aquifers.

Changes to the Wingate East project identified in Section 1.4.1 of this decision document do not alter the groundwater resources determinations made in the Final EIS. The Corps considered whether the proposed increase in production (as compared to the rate considered in the Final EIS) would lead to an increased rate of groundwater usage, albeit for a shorter timeframe. As stated in Section 4.3 of the Final EIS, the Corps used the permitted drought year annual average allocation rate in its groundwater modeling, to simulate a 'maximum rate' for groundwater usage. For the Wingate Creek project, including the Wingate East extension, this rate is 5.8 million gallons per day (mgd). As described in Section 4.3.4 of the Final EIS, at this pumping rate, the Corps determined that the Wingate East project would have a minor impact on the surficial aquifer system, the intermediate aquifer system zones 1 and 2, and a minor impact on the upper Floridan aquifer system, with none of these impacts being significant.

In response to a request for information on groundwater usage, the Applicant stated that the estimated groundwater usage is 3.15 mgd for the increased production rate, which is below the permitted drought year average pumping rate of 5.8 mgd as used in the Final EIS groundwater modeling. The Applicant further stated that it does not propose to request a modification of its Integrated Water Use Permit (IWUP) to increase the allocation for Wingate East. Therefore, based on the lack of changes to the conditions considered in the Final EIS groundwater hydrology analysis for the Wingate East project, the Corps has determined that the increased production rate does not change the determinations for the degree of effect or significance in the Final EIS for groundwater hydrology for Wingate East.

Section 4.12.3.12 of the Final EIS describes the cumulative effect of phosphate mining on groundwater resources, and Section 4.12.3.13 describes mitigation, monitoring, and adaptive management measures to protect groundwater resources. As stated in those two sections, the cumulative effect of phosphate mining on groundwater resources would at most be minor. Changes to the Wingate East project identified in Section 1.4.1 of this decision document do not alter the cumulative effect on effect groundwater resources determinations made in the Final EIS.

m) Energy conservation and development (33 C.F.R. § 320.4(n)): The Corps does not consider the proposed action, a phosphate mine, to be an energy project. In addition, the project will not significantly increase demands on energy production over and above the current levels at the Wingate Mine.

n) Navigation (33 C.F.R. § 320.4(o)): The proposed project will not have any effects on navigation.

o) Environmental benefits (33 C.F.R. § 320.4(p)): The proposed project will cause the short-term disruption of the existing altered ecosystem; however, successful implementation of the proposed reclamation plan and compensatory mitigation plan will result in long term benefits through the reclamation of native habitat and mitigation of aquatic resources. The approved compensatory mitigation plan provides for the reestablishment, management, and preservation of wetland habitats.

p) Economics (33 C.F.R. § 320.4(q)): Section 4.6.4 of the Final EIS describes the predicted effects of the Wingate East project on the economy of Manatee County. The Corps considered whether the project changes identified in Section 1.4.1 of this decision would lead to a change in the output, value added, jobs, and employee compensation in Manatee County from what the Final EIS analysis predicted, as shown in Table 4-100 (Table 16 of Appendix H). For example, as defined in Appendix H of the Final EIS, output is “Total sales or value of goods and services produced. For the phosphate industry this would represent the value of the phosphate rock ready for shipment from the beneficiation plant.” Because the reduction in mining area leads to a decrease in overall production, the Corps considered how this affected the “output”, and considered whether that change affected the Corps’ economic effects determinations in the Final EIS.

The updated analysis considered the 17 years of mining and up to five years of reclamation activities and total production of 28 million tons as described above for the Wingate East alternative. To allow for direct comparison, the updated analysis maintains the original production rate of 1.3 million tons per year.

The project changes resulted in the following updates to Table 4-100:

Net Impacts with Wingate East Alternative as
Compared to No Action Alternative on Manatee County

	No Action ¹³	With Mine	Difference
Average Annual Employment	233	565 407	332 174
Present Value Labor Income	\$809,100,000	\$1,675,800,000 \$1,336,700,000	\$866,700,000 \$527,600,000
Present Value – Value Added	\$1,605,600,000	\$3,322,800,000 \$2,650,300,000	\$1,717,200,000 \$1,044,700,000
Present Value Output	\$2,741,500,000	\$5,674,700,000 \$4,526,300,000	\$2,933,200,000 \$1,784,800,000

¹³ There are no changes to the No Action Alternative.

The updated values for Wingate East in Table 4-100 were then used to recalculate the cumulative effects in the eight county region (see Section 3.6.3 of AEIS Appendix H). The results are displayed below in updated Table 4-139. The table also includes updated values for the proposed Ona Mine in Hardee County.

The changes resulted in the following updates to Table 4-139:

Areawide Net Impacts of the With Mining Alternative as
Compared to No Action Alternative Central Florida Phosphate District, Florida

	No Action	With Mine	Difference
Average Annual Employment	2,053	8,393 7,853	6,340 5,800
Present Value Labor Income	\$6,706,459,906	\$21,564,800,000 \$20,313,228,816	\$14,840,300,000 \$13,606,768,910
Present Value – Value Added		\$42,292,000,000 \$39,784,056,741	\$29,111,100,000 \$26,603,151,740
Present Value Output	\$22,704,488,192	\$72,835,500,000 \$68,594,624,261	\$50,131,000,000 \$45,890,136,069

The Corps has determined that the changes to the proposed Wingate East project result in reductions to the increases in the economic impacts described. However, these reductions do not change the determinations for the degree of effect or significance in the Final EIS, specifically the predicted effects of Wingate East on the economy of Manatee County. The Corps further determined that the changes to the proposed project will result in reductions to the increases in the economic impacts in the eight county Central Florida Phosphate District. However, these reductions do not alter the cumulative effects determinations for economic resources made in the Final EIS.

Changes to the Wingate East project identified in Section 1.4.1 of this decision document do not alter the economic resources determinations made in the Final EIS.

q) Mitigation (33 C.F.R. § 320.4(r)): Chapter 5 of the Final EIS further describes mitigation, including the Corps' requirements, the sequence of avoidance, minimization, and compensation, and the mitigation framework developed for the evaluation of the four phosphate mine applications analyzed in the Final EIS. Section 8 of this document further describes the specific proposed compensatory mitigation for the Wingate East project.

r) Conservation: Decades of agricultural conversions have resulted in a degraded condition for many of the onsite wetlands. As described in Section 5 of this decision document, and in accordance with the mitigation framework described in Section 5.4 of the Final EIS, the Applicant has preferentially avoided forested wetlands, higher quality herbaceous wetlands, and stream systems in its mine plan. As described in Section 8 of this decision document, the Applicant also proposes to preserve and manage these avoided areas as part of the compensatory mitigation plan.

s) Shore erosion and accretion: The proposed action will not affect shore erosion or accretion.

t) Safety: Industry OSHA requirements will be in place during all construction activities. Section 4.8 of the Final EIS addresses the potential effects of radiation associated with phosphate mining. Changes to the Wingate East project identified in in Section 1.4.1 of this decision document do not alter the determinations made in Section 4.8 of the Final EIS.

u) Food and fiber production: The recovered phosphate ore will likely be processed into fertilizer and animal feed supplements. This is a direct benefit to food and fiber production.

7.1 The relative extent of the public and private need for the proposed structure or work:

Section 1.2.1 of the Final EIS describes the public's need. Section 1.2.2 of the Final EIS and Section 1.7.1 of this decision document describe the applicant's general need.

7.2 Are there unresolved conflicts as to resource use? No

If so, are there reasonable and practicable alternative locations and/or methods to accomplish the objectives of the proposed action? N/A

7.3 The extent and permanence of the beneficial and/or detrimental effects, which the proposed work is likely to have on the public and private use to which the area is suited:

As described in Sections 4.6 and 4.12.6 of the Final EIS, the phosphate industry is a major constituent of the regional economy, contributes to the tax base, and provides local jobs. On the private side the company benefits by being allowed to continue its mining activities which continues to generate income for their stockholders.

8.0 **Mitigation** – 33 C.F.R. § 320.4 (r); 33 C.F.R. Part 332; 40 C.F.R. §§ 230.70-77; 40 C.F.R. §§ 230.90-99 and 40 C.F.R. § 1504.12(f):

8.1 Mitigative Actions (33 C.F.R. § 320.4(r) and 40 C.F.R. Part 230, Subpart F): Chapter 4 of the Final EIS describes actions proposed by the applicant to avoid, minimize, and offset adverse impacts to the human and natural environment associated with

phosphate mining in addition to the avoidance, minimization, and compensation of impacts to aquatic resources. For example, Section 4.1.8.1 describes the best management practice of watering down roads within the mine to reduce fugitive dust and protect air quality. Section 4.1.8.5 describes how the berms around the mine function as a visual barrier to protect aesthetics in addition to being part of the overall water management system. Chapter 5 of the Final EIS provides information about compensatory mitigation for impacts to aquatic resources and mitigation alternatives for phosphate mining within the Central Florida Phosphate District, with consideration of the mitigation proposed at that time for the four phosphate mine applications analyzed in the Final EIS (South Pasture Extension, Ona, Wingate East, and Desoto).

Sections 5.1 and 5.2 of this decision document describe the measures to avoid impacts to aquatic resources proposed by the applicant and considered by the Corps.

Sections 5.3 and 5.4 of this decision document describe the minimization measures to avoid impacts to aquatic resources proposed by the applicant and considered by the Corps.

8.2 Compensatory Mitigation for Unavoidable Impacts to Aquatic Resources (33 C.F.R. § 332)

8.2.1 Is Compensatory Mitigation required?

No

Yes

8.2.2 Are the impacts to the jurisdictional aquatic resources in the service area of an approved mitigation bank? Yes

As of November 16, 2017, there is one federally-approved mitigation bank with a service area that covers the proposed project – Myakka River.

8.2.3 Does the mitigation bank have the appropriate number and resource type or credits available? No

As of November 16, 2017, the Myakka River Mitigation Bank has 61.87 freshwater forested credits and 59.17 freshwater herbaceous credits available. This is not sufficient to compensate for all of the project's wetland impacts, and has no credits available to compensate for the project's stream impacts. The Applicant could partially offset wetland impacts by purchasing mitigation bank credits. However, Section 8.2.7 of this decision document, and the approved compensatory mitigation plan (Attachment B), explain why the use of permittee-responsible mitigation to offset all of the impacts is

environmentally preferable, and in compliance with the 2008 Compensatory Mitigation Rule.

8.2.4 Are the impacts to the jurisdictional aquatic resources in the service area of an approved in-lieu fee program? No

8.2.5 Does the in-lieu fee program have the appropriate number and resource type or credits available? N/A

8.2.6 Identify the selected compensatory mitigation options(s):

mitigation bank credits

in-lieu fee program credits

permittee-responsible mitigation under a watershed

permittee-responsible mitigation, on-site

permittee-responsible mitigation, off-site

8.2.7 As the selected compensatory mitigation option deviates from the order of the options presented in §332.3(b)(2)-(6) and/or incorporates permittee-responsible mitigation, explain why the selected compensatory mitigation option is environmentally preferable. Address the criteria provided in §332.3(a)(1) and §332.4(c)(2)-(14):

a) §332.3(a)(1) states that the fundamental objective of compensatory mitigation is to offset environmental losses resulting from unavoidable impacts to waters of the United States authorized by DA permits, with consideration of environmental preferability based on likelihood of ecological success and sustainability, the location of the compensation site relative to the impact site, the significance within the watershed, and costs. §332.3(a)(1) further states that mitigation banks or in-lieu fee programs may, in many cases, be environmentally preferable because they consolidate resources, provide financial planning and scientific expertise, reduce temporal loss, and reduce risk. However, the Corps has determined that the applicant's compensatory mitigation plan (Attachment B), as independently reviewed and verified by the Corps, is the environmentally preferable option, as outlined below.

i) Likelihood of ecological success and sustainability: As described in the approved plan, the applicant has conducted extensive monitoring and data collection of the existing conditions, and modeled the pre- and post-mining hydrology and topography in support of the planning of the locations and types of onsite and offsite wetland and surface water mitigation areas. Sections 5.2 and 5.3 of the Final EIS provide additional information on the methodologies used by the applicant, such as transplanting donor muck, and using laser and GPS-guided earthmoving equipment, in reestablishing mitigation areas. In addition, as also described in the mitigation

plan, the applicant proposes perpetual preservation and management of the mitigation areas, ensuring the long-term success and sustainability.

ii) Location of the compensation site relative to the impact site: All proposed impacts to wetlands and other waters of the United States are within the headwaters of the Myakka River, within the Upper Myakka River subwatershed. There is one federally-approved mitigation bank with a service area that covers the proposed project – Myakka River. The Myakka River Mitigation Bank is located within the Myakka River Basin. However, the bank is located in the southern portion of the Myakka River watershed, about 20 miles downstream of the impact site. The applicant proposes to preserve, enhance, and after mining and reclaiming discrete units within the project boundaries, establish wetland and stream mitigation areas onsite, and establish three offsite wetland mitigation areas on three adjacent parcels. The two adjacent offsite wetland mitigation areas to the east and south will include the restoration of 1.5 miles of the upper Myakka River and its riparian corridor by filling in ditched sections of the Myakka River and creating a more naturally-meandering stream channel flanked by bottomland swamp. The proposed permittee-responsible mitigation is not only much closer to the impacts than the mitigation bank, it is also within the same subwatershed.

iii) Significance within the watershed: The Upper Myakka River subwatershed in the vicinity of the project historically consisted of a matrix of fire-adapted pine flatwoods communities, herbaceous wetlands, and low-lying bottomland swamps that drained into the streams that form the headwaters of the Myakka River. The Myakka River and its riparian corridor provide important regional habitat linkages from the River's headwaters in the Upper Myakka River subwatershed, downstream to Charlotte Harbor. The only available mitigation bank is not within the Upper Myakka River subwatershed and therefore does not provide compensation within the subwatershed where the impacts occur.

iv) The Charlotte Harbor National Estuary Program (CHNEP) Comprehensive Conservation and Management Plan (CCMP), a watershed plan pursuant to 33 C.F.R. § 332.3(c), identifies four Priority Problems for the Myakka River watershed:

- 1) Water Quality degradation: Pollution from agricultural and urban runoff, point-source discharges, septic systems and wastewater treatment systems, atmospheric deposition, groundwater, and other sources;
- 2) Hydrologic alterations: Adverse changes to amounts, locations, and timing of freshwater flows, the hydrologic function of floodplain systems and natural river flows;
- 3) Fish and wildlife habitat loss: Degradation and elimination of headwater streams and other habitats, conversion of natural shorelines caused by

development, cumulative impacts of docks and boats, invasion of exotic species and cumulative and future impacts; and

- 4) Stewardship gaps: Limitations in people's knowledge of choices and management decisions that will lead to sustainability within their community. These gaps include overarching issues such as public outreach, advocacy, and data management.

The CCMP further identifies fifteen short-term Objectives and 76 Priority Actions to address the Priority Problems. The permittee-responsible mitigation addresses several of these Priority Actions by improving and protecting water quality to offset other anthropogenic impacts (CHNEP Priority Action WQ-E), establishing and maintaining a more natural seasonal variation in freshwater flows by eliminating ditches and reducing peak runoff rates (CHNEP Priority Action HA-E), restoring and protecting freshwater wetlands on at least an acre-for-acre basis (CHNEP Priority Action FW-C), restoring and protecting aquatic and terrestrial native habitat (CHNEP Priority Action FW-F), and increasing the acreage of land protected under conservation easements (CHNEP Priority Action FW-H).

In a letter from the Charlotte Harbor National Estuary Program (CHNEP) dated September 9, 2016, the Director noted improvements of the current phosphate mining permit proposals over past practices:

- 1) Habitat areas are now protected under a Conservation Easement (CEs) rather than deed restrictions.
- 2) CEs are enforceable where deed restrictions are not.
- 3) CSAs are no longer under consideration for compensatory wetland mitigation.
- 4) Reclamation results have improved substantially for both wetlands and uplands within the mining footprint, based on my own site investigations. Groundwater monitoring using piezometers demonstrates the accuracy of groundwater modeling. Where the models appeared incorrect, previously unknown geologic structures were found and the models corrected. Temporal losses of wetland and natural resource functions are now addressed with off-site mitigation.
- 5) Off-site mitigation options presented in the current mining proposals were designed to improve hydrology and habitat diversity.

- 6) Unmined areas, areas reclaimed for habitat purposes, and off-site mitigation combine to support the long term hydrologic and habitat diversity structure at the landscape level in the Peace and Myakka River watersheds.
- 7) On-site and off-site mitigation have been designed to support implementation of the CHNEP's Comprehensive Conservation and Management Plan.

In terms of size, the permittee-responsible mitigation for Wingate East totals over 1079.7 acres, including preservation of 264 acres of wetlands (251 acres forested and 14 acres herbaceous), 11,474 linear feet of streams with adjacent upland buffers, and enhancement and preservation of 27 acres of wetlands (7 acres forested and 20 acres herbaceous) prior to mining, and the establishment of 657 acres of wetlands (207 acres forested and 450 acres herbaceous) and 10,338 linear feet of streams after mining, with preservation of the enhanced and established areas after they achieve the required performance criteria. By contrast, Myakka River Mitigation Bank totals 121 Credits.

v. Section 5.7.1 of the Final EIS describes the FDEP mandatory reclamation requirements, which include acre-for-acre, type-for-type wetland and stream restoration on-site. Section 5.8 of the Final EIS describes the FDEP environmental resource permit program, which includes compensatory mitigation requirements similar to the Corps' requirements. Requiring the purchase of mitigation bank credits as Corps mitigation when the FDEP would require the applicant to reclaim and mitigate wetlands onsite would be a more expensive option than the proposed option.

As described above and in Attachment B, the applicant's mitigation plan consolidates resources by preserving and enhancing key landscape systems and then locating reestablished wetlands and streams in close proximity to those areas, provides financial planning in the form of financial assurance for implementation and long-term management of the mitigation areas, provides scientific expertise in the form of the extensive pre-construction planning and modeling and the post-construction mitigation methodologies and expertise, and addresses temporal loss and risk by applying applicable factors to the functional analysis for the mitigation. Therefore, again the Corps has determined that the applicant's compensatory mitigation plan (Attachment B) is the environmentally preferable option.

b) In accordance with 33 C.F.R. § 332.4(c), the Applicant has provided a compensatory mitigation plan which includes the following 12 components:

i. Objectives: As summarized in Text Table CMP-1 of the compensatory mitigation plan (Attachment B to this decision document), the required compensatory mitigation includes:

Onsite (Wingate East)

- 1) Preservation (Phase A-1) of 291.5 acres of onsite wetlands (258.05 acres forested and 33.40 acres herbaceous) along with associated upland buffers, providing 45.90 units of wetland function (41.42 units forested, 4.47 units herbaceous), as specified in Table 4-8-B-vii and Map 4-8-C-a of the Compensatory Mitigation Plan (Attachment B).
- 2) Preservation (Phase A-1) of 11,474 linear feet (2.17 miles) of onsite streams, providing 1,748 units of stream function as specified in Table 4-8-B-xv and Map 4-8-C-a compensatory mitigation plan. Each stream segment shall have a minimum 120-foot wide (60 feet on either side of the channel) preserved riparian buffer.
- 3) Enhancement and Preservation (Phase A-2) of 27 acres of onsite wetlands (7.35 acres forested and 19.70 acres herbaceous) along with associated upland buffers, providing 4.16 units of wetland function (0.91 units forested, 3.25 units herbaceous), as specified in Table 4-8-B-ix and Map 4-8-C-a of the Compensatory Mitigation Plan (Attachment B).
- 4) Establishment and Preservation (Phase A-3) of 607.9 acres of onsite wetlands (206.14 acres forested, 401.75 acres herbaceous) along with associated upland buffers, providing 136.68 units of wetland function (40.15 units forested, 96.52 units herbaceous), as specified in Table 4-8-B-v and Map 4-8-C-a of the Compensatory Mitigation Plan (Attachment B).
- 5) Establishment and preservation (Phase A-3) of 10,338 linear feet (1.96 miles) of on-site stream mitigation, providing 2,342 units of stream function as specified in Table 4-8-B-xiv, Map 4-8-C-a, and Appendix B-i of the compensatory mitigation plan (Attachment B). Each stream segment shall have a minimum 120-foot wide (60 feet on either side of the channel) preserved riparian buffer.

Offsite (Wingate Extension)

- 6) Establishment and preservation (Phase A-3) of 45.32 acres of offsite herbaceous wetlands along with associated upland buffers, on the adjacent Wingate Extension parcel, providing 19.02 units of wetland function as specified in Table 4-8-B-v(H) and Map 4-8-C-a of the Compensatory Mitigation Plan (Attachment B).

Offsite (Myakka River Headwaters)

- 7) Preservation (Phase B) of 87.79 acres of offsite wetlands in the Myakka River Headwaters Restoration Area (87.51 acres forested and 0.28 acres

herbaceous) along with associated upland buffers, providing 14.48 units of wetland function (14.42 units forested, 0.06 units herbaceous), as specified in Table 4-8-A-xvi, and Figures 6 through 6G of Appendix 4-3-B, of the compensatory mitigation plan (Attachment B).

8) Preservation (Phase B) of 2,350 linear feet (0.45 miles) of offsite natural streams and riparian buffers in the adjacent Myakka River Headwaters Restoration Area (East Parcel) providing, 374.13 units of stream function, as specified in Table 4-8-B-xv-a and Figures 6 through 6G of Appendix 4-3-B of the compensatory mitigation plan.

9) Enhancement and Preservation (Phase B) of 43.71 acres of offsite wetlands in the Myakka River Headwaters Restoration Area (41.03 acres forested and 2.68 acres herbaceous) along with associated upland buffers, providing 6.57 units of wetland function (6.15 units forested, 0.42 units herbaceous), as specified in Table 4-8-A-xvi, and Figures 6 through 6G of Appendix 4-3-B of the compensatory mitigation plan (Attachment B).

10) Enhancement and Preservation (Phase B) of 2,385 linear feet (0.45 miles) of offsite natural streams and riparian buffers in the adjacent Myakka River Headwaters Restoration Area (West Parcel), providing 907.87 units of stream function, as specified in Table 4-8-B-xv-a and Figures 6 through 6G of Appendix 4-3-B of the compensatory mitigation plan.

11) Establishment and Preservation (Phase B) of 3.56 acres of offsite wetlands (0.9 acres forested, 2.66 acres herbaceous) along with associated upland buffers, in the Myakka River Headwaters Restoration Area, providing 1.76 units of wetland function (0.43 units forested, 1.33 units herbaceous), as specified in Table 4-8-A-xvi, and Figures 6 through 6G of Appendix 4-3-B, of the compensatory mitigation plan (Attachment B).

In addition, the applicant will provide the specific wetland types by Florida Land Use and Cover Classification System (FLUCCS) and acreages for individual wetland establishment areas as shown in Table 8 of the compensatory mitigation plan, unless the Corps approves adaptive management measures as described in the Mitigation Adaptive Management/Alternatives Special Condition of the DA permit (as shown in Attachment D to this decision document).

After achievement of performance standards, the applicant will preserve all enhanced wetlands and established wetlands and streams with a conservation easement, as described in Section 8.2.7(b)(iii) of this decision document, the compensatory mitigation plan (Attachment B to this decision document), and the DA permit special conditions (Attachment D to this decision document).

The upland buffers associated with the preserved and established wetland mitigation areas described above did not provide direct compensation for the loss of aquatic resource functions. However the Corps did consider the upland buffers' effect on and support of the wetland mitigation areas in its review and approval of the functional analysis of the wetland compensatory mitigation.

Section 8.2.7(a) of this decision document describes how the anticipated functions of the mitigation project will address watershed needs, as does the Objectives section of the compensatory mitigation plan (Attachment B to this decision document).

ii. Site Selection: The Corps has independently reviewed and verified the Applicant's site selection criteria, including both the onsite and offsite mitigation areas, as described in the Site Selection section of the compensatory mitigation plan (Attachment B to this decision document). The Corps concurs with the Applicant's discussion of why purchasing mitigation bank credits is not an environmentally preferable mitigation alternative.

Section 8.2.7(a) of this decision document describes how the Corps determined that the Applicant's compensatory mitigation plan (Attachment B) is the environmentally preferable option.

Section 8.2.7(a)(iii) describes how the proposed mitigation meets watershed needs within the Myakka River watershed.

Figure 7 of Attachment C to this decision document shows the Applicant's Preferred Alternative for minimization, including the areas that the Applicant has avoided on-site. The Applicant proposes to preserve all of these areas before mining. The proposed enhancement areas are also within the avoided/no-mine areas. Section 5.4 of this decision document explains how the Corps considered other onsite alternatives.

As explained in the Site Selection section of the compensatory mitigation plan, the Applicant based the locations of the reestablished onsite and offsite wetlands and the onsite streams on extensive monitoring, data collection, analyses and modeling. The attachments to the compensatory mitigation plan provide additional information on that monitoring, data collection, analyses, and modeling. The Corps has independently reviewed and verified that information as part of its overall review and approval process for the compensatory mitigation plan and for this project.

iii. Site Protection Instrument: The Applicant will provide long-term protection of the mitigation areas by granting conservation easements to the FDEP over the mitigation areas. The DA permit will require the Applicant to record legally sufficient conservation easements that are consistent with the goals of the compensatory mitigation plan and long-term management plan and provide third party rights of notice and enforcement to

the Corps. The Applicant will be required to submit the draft conservation easements, scale drawings of the areas to be included within the conservation easements, legal descriptions, and surveys for review and approval by the Corps pursuant to 33 C.F.R. § 332.7(a). Furthermore, the Applicant will be required to provide title evidence demonstrating sufficient legal interest to ensure long-term protection of the mitigation areas and a title insurance policy in an amount equal to the current market value of the unencumbered property. Any existing encumbrances that are not consistent with the goals of the compensatory mitigation plan or long-term management plan will be required to be subordinated to the conservation easement. Finally, the Applicant will be required to provide a certified copy of the recorded conservation easement to the Corps.

iv. Baseline Information: As described in the June 1, 2012 and June 22, 2017 public notices for the Wingate East project, the 3,634-acre Wingate East tract is comprised of 939.8 acres of jurisdictional wetlands and other waters, 53.5 acres of non-jurisdictional wetlands¹⁴, and 23,399 linear feet of jurisdictional tributaries (including ditches and streams). The 939.8 acres of jurisdictional area consists of 570.4 acres of forested wetlands, 345.7 acres of herbaceous wetlands, and 23.6 acres of ditched wetlands, upland cut ditches, and cattle ponds. Over 30 percent of the property has been converted from native vegetative cover into pastures, roads, livestock watering ponds, or utility corridors. Native upland cover (i.e., rangeland and forests) is present on approximately 43 percent of the site and wetland vegetative cover is present on approximately 27 percent of the site. The historic and current physical land use is primarily agricultural, with most of the property used for cattle grazing.

The Applicant has collected ecological baseline data for the site since 2006 including wetland delineations, wetland quality assessments using UMAM, detailed vegetation and land use mapping, and wildlife and listed species surveys. A hydrologic assessment was also completed. A hydrologic assessment was also completed as a part of the MIKE SHE / MIKE-11 integrated groundwater / surface water modeling analysis. Data collected for this analysis included stream and drainage area characteristics, topography, precipitation rates, measurements of evapotranspiration, and hydrogeology.

As described in the Site Selection section of the compensatory mitigation plan, the Applicant included the Wingate Extension offsite mitigation area to provide additional herbaceous wetland UMAM credits over and above what could be provided on site. Although offsite, it is part of the extensive modeling of pre and post-mining hydrology and topography associated with the overall compensatory mitigation plan. Likewise, applicant included the Myakka River Headwaters Restoration offsite mitigation area to provide additional forested wetland UMAM credits over and above what could be provided on site. Like Wingate Extension, Myakka River Headwaters Restoration offsite

¹⁴Hydrologically isolated wetlands that do not support interstate commerce are not jurisdictional.

mitigation area was included in the pre and post hydraulic modeling for the Wingate East project.

The Corps considered this baseline information both in its evaluation of the proposed impacts associated with the Wingate East project and its evaluation of the compensatory mitigation.

v. Determination of Credits: The Corps has independently reviewed and verified the Applicant's functional assessment of proposed wetland and stream impacts and compensatory mitigation. Based on functional analyses using the Uniform Mitigation Assessment Method (UMAM), the proposed unavoidable wetland impacts cause the loss of 83.57 units of forested wetland function, and 121.43 units of herbaceous wetland function. The mitigation provides 103.48 units of functional gain for forested wetlands and 125.06 units of functional gain for herbaceous wetlands. Based on functional analyses using the FDEP stream habitat assessment methodology, the proposed unavoidable stream impacts cause the loss of 4,911 units of stream function, and the proposed mitigation provides 5,372 units of functional gain for streams.

Table CMP-10 in the compensatory mitigation plan (Attachment B to this decision document) provides additional details on the acreage and functional loss or gain by wetland type (forested or herbaceous). Appendix 2-4-A-i of the compensatory mitigation plan provides the UMAM data sheets for wetland impact and mitigation sites.

Table CMP-7 of the compensatory mitigation plan provides additional details on length and functional loss or gain by streams. Appendix 2-2-B-i and Appendix 4-3-B of the compensatory mitigation plan provides details of the stream functional analysis for impacts and mitigation.

The Determination of Credits/Sufficiency section of the compensatory mitigation plan provides additional information about the wetland and stream functional analyses, including explanations of how those analyses consider risk and temporal lag. Also in the Determination of Credits/Sufficiency section, under the heading "Preservation Adjustment Factor", is an explanation of the preservation mitigation. As stated in that subsection:

Section 332.3(h) of the CMR dictates that preservation may be used to provide compensatory mitigation for activities authorized by DA permits when the five specific criteria listed below are met.

- (i) The resources to be preserved provide important physical, chemical, or biological functions for the watershed
- (ii) The resources to be preserved contribute significantly to the ecological sustainability of the watershed. In determining the contribution of those

resources to the ecological sustainability of the watershed, the district engineer must use appropriate quantitative assessment tools, where available

- (iii) Preservation is determined by the district engineer to be appropriate and practicable
- (iv) The resources are under threat of destruction or adverse modifications
- (v) The preserved site will be permanently protected through an appropriate real estate or other legal instrument (e.g., easement, title transfer to state resource agency or land trust)

The compensatory mitigation plan provides information about the resources and their contributions related to items (i), (ii), (iii), and (v). For item (iv), the Corps considered the potential for the aquatic resources proposed for preservation to be degraded by changes in land use within and adjacent to the resources to more intensive and damaging uses.

UMAM allows for a comparison between the 'without preservation' condition of a proposed preservation area and its condition 'with preservation'. As described in Table 4-8-B-vii of the compensatory mitigation plan and in the UMAM data sheets (Appendix 2-4-A-i of the compensatory mitigation), 'without preservation' the preserved wetlands' would score lower than their current condition. The Corps determined that 'with preservation', however, there would be no improvement above the current condition in the wetlands' condition in the categories of water environment or community structure because preservation would only prevent degradation from occurring, not improve conditions. The Corps did allow for increases above the current condition for location and landscape support due to the inclusion of upland buffers, the inclusion of two of the main streams and their floodplains in the preservation areas, and the expected connectivity between the preservation areas and offsite mitigation areas. The Corps did not approve direct wetland mitigation credit for the preservation of upland areas.

Additional information about UMAM is available from the FDEP's website: <http://www.dep.state.fl.us/Water/wetlands/mitigation/umam/index.htm>. Additional information about the Corps' implementation and use of UMAM is available here, in the "Uniform Mitigation Assessment Methodology (UMAM) – FDEP" section: <http://www.saj.usace.army.mil/Missions/Regulatory/Source-Book/>. Additional information about the stream habitat assessment methodology is available here: <http://dep.state.fl.us/water/bioassess/training.htm#Stream>.

vi. Mitigation Work Plan: Section 1.6 of Attachment B provides details of the wetland mitigation work plan, as independently reviewed and verified by the Corps. The following is a summary of the wetland work plan.

Onsite wetland enhancement is based on the objective of returning portions of the Preservation Areas to native habitat more similar to pre-development conditions. This enhancement will improve the functional value of the Preservation Areas through the enhancement of uplands and wetlands.

Wetland establishment will begin when tailings backfill has been placed. Work would consist of analysis of the subsurface lithology and hydrology, placement or development of suitable soils at proper elevations, and vegetation establishment. Planting would occur in three phases. Phase A planting would occur as soon as the grading and muck/topsoil addition has been completed; species planted would consist of those tolerant of a relatively wide range of hydroperiods depths and durations. Phase B planting would not occur until two years of hydrological monitoring confirms that the wetland design is properly functioning in terms of hydroperiod depths and durations; Phase B species would consist of those requiring more precise or specific hydroperiods (e.g., marsh fringes or wet prairies). Phase C planting applies only to forested wetlands; species consist of shade adapted shrub and groundcover strata that would be planted only after canopy closure begins, which typically occurs several years after initial planting.

The stream reestablishment incorporates in-stream channel design, as well as a comprehensive overview of all lotic site conditions, which include headwater wetlands and in-line wetlands and the surrounding habitat zones of flanking wetlands and terrestrial communities within and along the riparian valley. To accomplish these goals, forested corridors and native upland riparian zones will typically replace those that were historically cleared for agriculture on the Wingate East. The reclaimed valleys will form an unditched drainage network with a flow regime that is not artificially flashy like the existing ditched systems. The stream restoration plan pays significant attention to landscape scale associations important to overall stream function by matching drainage area to valley geomorphology, width of the meander belt, and functional process zone (FPZ) types and sequences. The design covers a full hierarchy of scales, restoring a series of habitat patches and zones progressing from in-stream meso-habitats, such as individual logs and pools a few feet long, to the geomorphic and hydraulic linkages of entire lentic, paralotic, and lotic waterbodies and their associated ecotones encompassing many acres. These landscape linkages are based largely on the historic conditions of the property, prior to land clearing and ditching, which will provide a better overall lotic system versus that existing immediately prior to mining. The successful implementation of the stream restoration plan will result in the restoration of historic native, pre-agricultural conditions, wherever practical.

vii. Maintenance Plan: The applicant will conduct mitigation maintenance in conjunction with monitoring to ensure the mitigation sites progress towards success as defined by the permit performance standards and in accordance with the mitigation work plan.

For enhanced and established wetlands, and upland buffers, after the initial enhancement activities, the permittee will semi-annually inspect and conduct maintenance activities, including but not limited to exotic and nuisance species control to less than five percent cover, for the first two years, and then annually (unless instructed otherwise by the Corps).

viii. Performance Standards: The Performance Standards section of the compensatory mitigation plan (Attachment B to this decision document) provides the details of the performance standards for wetlands and streams. The performance standards include requirements for hydrology and plant species composition and coverage as appropriate by wetland type, coverage by exotic and nuisance species, macroinvertebrate richness and diversity in streams, and hydrology and other physical characteristics as appropriate by stream type. The performance standards also include time limits for achievement of the standards. Those time limits correspond with the temporal factors considered in the functional analyses for the wetland and stream mitigation. The performance standards in the compensatory mitigation plan for preserved wetlands, and for preserved and established streams, also have requirements based on the functional analyses.

The Mitigation Performance Standards special conditions in the DA permit (as shown in Attachment D to this decision document) for enhanced and established wetland mitigation areas also require that those areas achieve the UMAM scores described in the compensatory mitigation plan.

ix. Monitoring Requirements: The DA permit special conditions (Attachment D to this decision document) include requirements for monitoring, including descriptions of the parameters monitored, a schedule for monitoring and reporting, and the format for reporting.

x. Long-Term Management Plan: After the Corps' determination that a mitigation area has achieved the necessary performance standards, the Applicant will maintain that mitigation areas in perpetuity in accordance with mitigation objectives and an approved Long-term Management Plan. The long-term management plan includes a description of long-term management needs and the annual cost estimates for these active long-term management needs, an identified funding mechanism for the long-term management, a requirement for an Ecological Baseline Report, provisions for management of proposed secondary uses of the mitigation areas such as cattle grazing, hunting, and passive recreation, and annual reporting to document the ecological conditions within the post-release mitigation areas, the status of secondary activities conducted within the mitigation areas, and maintenance activities expenses. A

surety bond and standby trust, as independently reviewed, verified and approved by the Corps, provides the long term funding mechanism for the long term management needs of the mitigation areas.

Section 10 of the Long-Term Management Plan provides the bases for the cost estimates for the annual maintenance of the mitigation areas, including costs for maintaining fences, signage, and existing trail and road crossings of streams and wetlands, prescribed burning, herbiciding as necessary, and inspections and reports. The applicant states that the annual cost of maintenance overall is \$65 per acre; the Corps has reviewed and accepted the Applicant's cost estimates for long-term maintenance.

Based on that per acre cost, the annual cost of managing the 435 acres of immediate preservation described in Sections 8.2.7(b)(i)(b) and 8.2.7(b)(i)(e), including associated upland buffers, is \$45,695. As described in the Long-Term Management Funding special condition of the DA permit (as shown in Attachment D to this decision document), the funding mechanism will provide for an initial principal of \$1,413,750 to cover the annual cost of managing these 435 acres. The Corps independently verified this amount using a method for calculating a principal amount of a long-term funding mechanism described in the document Wetland and Stream Mitigation: A Handbook for Land Trusts, written by The Environmental Law Institute and Land Trust Alliance in September 2012 (included by reference, available at: https://www.epa.gov/sites/production/files/2015-08/documents/wetlands_and_stream_mitigation_-_a_handbook_for_land_trusts_0.pdf).

The method first requires a capitalization rate, which is the expected rate of return, minus an inflation rate, and minus administrative costs, such as for fund management. The applicant proposed a capitalization rate of 2%, based on a 6% rate of return, minus an assumed 3% inflation rate, minus 1% for costs. The method then applies a formula that divides the annual maintenance costs by the capitalization rate; $\$45,695/0.02 = \$1,413,750$.

xi. Adaptive Management Plan: To ensure the mitigation meets the required performance standards, Mosaic acknowledges that an adaptive management approach will be an integral part of the compensatory mitigation plan implementation. As described in the Monitoring Requirements section of the compensatory mitigation plan and as required by the DA permit, Mosaic will implement a comprehensive and extensive monitoring program designed to gather sufficient data to evaluate the progress of wetland and stream mitigation areas towards achievement of performance standards. Mosaic will also implement corresponding mitigation compliance reporting in accordance with the requirements of the DA permit.

If monitoring or compliance inspections identify performance deficiencies such as inappropriate hydrology or exotic/nuisance vegetation, or if the USACE otherwise

determines that the mitigation is not progressing towards achievement of performance standards, Mosaic will promptly assess the mitigation to determine the cause(s) of the problem(s), and develop and implement a site-specific adaptive management/corrective action plan that addresses specific construction, maintenance, and/or enhancement measures to achieve the design objectives. Examples of corrective actions may include but would not be limited to adjusting wetland hydrology, supplemental plantings, or changing the exotic and nuisance species control frequency or methods. Mosaic shall submit any such adaptive management plan to the USACE for approval prior to implementation, and include a description of the implementation and results in the annual monitoring reporting.

As also required by the DA permit, Mosaic will monitor and provide annual reports on the construction compliance, including the acreage and location of mitigation areas implemented during the reporting period and cumulatively. If the site has areas that are determined to be different from the originally permitted mitigation area boundaries or community types, Mosaic shall request a permit modification to delineate the correct boundaries and/or community types and requisite functional assessment adjustments.

xii. Financial Assurances:

A. The Corps requires sufficient financial assurances to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with applicable performance standards. 33 C.F.R. § 332.3(n)(1). The Corps may consider an alternate mechanism that ensures with a high level of confidence that the compensatory mitigation will be provided and maintained. Financial assurances required for compensatory mitigation projects under state law may be an appropriate alternative when the same compensatory mitigation project will be used to satisfy the requirements of the Corps Regulatory Program, as well as the state regulatory program.

The Applicant proposes to provide the same financial assurance mechanism to meet the requirements of 33 C.F.R. § 332.3(n) as that required by the State permit, which is a surety bond equal to 110 percent (%) of the estimated mitigation costs for waters and wetlands affected in the first three years of operation, including monitoring and maintenance. The Applicant proposes to update the financial responsibility yearly to cover, on a rolling basis, the cost of mitigation activities proposed to be undertaken over the next three year period, with a 10% contingency factor for any adaptive management that might be required. The Applicant will update the mechanism with revised costs until release.

On 28 November 2017, this District received a Compensatory Mitigation Plan (CMP) to offset the loss of wetland and stream functions associated with construction of the proposed 3,635-acre Wingate East phosphate mine. The CMP consists of 206.14 acres of onsite forested wetland establishment, 401.75 acres of onsite herbaceous wetland establishment, 250.70 acres of onsite forested wetland preservation, 13.70 acres of

onsite herbaceous wetlands preservation, 7.35 acres of onsite forested wetland enhancement, and 19.70 acres of onsite herbaceous wetlands enhancement. Off-site mitigation consists of 45.32 acres of herbaceous wetland establishment within the adjacent Wingate Extension parcel, 0.90 acres of forested wetland establishment at the adjacent Myakka River Headwaters Restoration site (MRHR), 2.66 acres of herbaceous wetland establishment at MRHR, 41.03 acres of forested wetland enhancement at MRHR, 2.68 acres of herbaceous wetland enhancement at MRHR, 87.51 acres of forested wetland preservation at MRHR, and 0.28 acres of herbaceous wetland preservation at MRHR.

In addition to wetlands mitigation, the CMP includes the onsite establishment of 10,338 linear feet of ephemeral streams, the preservation of 11,474 linear feet of onsite streams (10,813 LF Intermittent and 661 LF Ephemeral), and the preservation of 4,735 linear feet of streams associated with the MRHR. Established and preserved streams will have a 60-foot wide vegetated riparian buffer on each side of the meander belt which includes uplands as well as wetlands.

The CMP includes a copy of the detailed financial assurance mechanism previously approved by the State of Florida, Department of Environmental Protection, for Environmental Resource Permit No. 0095520-025. Also included are draft financial assurance instruments (surety bond, and standby trust), and the initial compensatory mitigation cost estimates for wetlands impacts incurred during the first three years of mining operations. The Applicant believes that the State approved financial assurances, along with the draft financial assurance instruments are sufficient to ensure satisfactory completion of the compensatory mitigation for the Wingate East project as required by the DA permit.

On November 16, 2015, the State of Florida, Department of Environmental Protection issued Environmental Resource Permit No. 0095520-025 under part IV of chapter 373, F.S. for the construction of the proposed 3,635-acre Wingate East phosphate mine. The State permit included the approval of a financial assurance mechanism developed to satisfy the regulatory requirements of the State for the State approved compensatory mitigation plan. Specifically, the State permit requires an initial financial responsibility demonstration equal to 110 percent of the estimated mitigation costs for wetlands and other surface waters affected in the first three years of operation under the permit. For each year thereafter, the financial responsibility demonstration shall be updated, including to provide an amount equal to the 110 percent of the estimated mitigation costs for the next year of operations under the permit for which financial responsibility has not already been demonstrated.

As stated previously, financial assurances required for compensatory mitigation projects under state law may be a satisfactory alternate mechanism provided it ensures, with a high level of confidence, that the Corps required compensatory mitigation will be provided and maintained. In June, 2011, the Institute for Water Resources (IWR)

provided a reference resource to aid in the key design and implementation issues and considerations relating to the use of financial assurances for mitigation project success. Titled "Implementing Financial Assurance for Mitigation Project Success," the document, updated in March, 2016, has been referenced to determine if the State financial assurance plan is sufficient to ensure with a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with applicable performance standards. The Corps has therefore considered the following:

Size, Type & Location: The State permit and this DA permit both require on-site and adjacent off-site permittee-responsible mitigation based on a watershed approach. The size and type of mitigation required by each plan is listed in the Table 1 below. The overall acreage of Corps required forested wetland establishment is 207 acres whereas the State requirement is 282 acres. The overall acreage of Corps required herbaceous wetland establishment is 450 acres whereas the State requirement is 487 acres. The overall acreage of Corps required forested wetland enhancement is 48 acres whereas the State requirement is 54 acres. The overall acreage of Corps required herbaceous wetland enhancement is 20 acres, equal to the State requirement is 20 acres. The overall acreage of Corps required forested wetland preservation is 338 acres whereas the State requirement is 445 acres. The overall acreage of Corps required herbaceous wetland preservation is 14 acres whereas the State requirement is 36 acres. The overall length of Corps required stream creation is 10,338 linear feet whereas the State requirement is 22,222 linear feet. The overall length of Corps required stream enhancement is 2,385 linear feet, equal to the State requirement is 2,385 linear feet. The overall length of Corps required stream preservation is 13,824 linear feet whereas the State requirement is 15,726 linear feet.

Table 1

Mitigation Type	Corps CMP	State CMP
Forested Establishment (Onsite)	206.14 Ac.	281.58 Ac.
Herbaceous Establishment (Onsite)	401.75	436.08
Forested Enhancement (Onsite)	7.35	12.79
Herbaceous Enhancement (Onsite)	19.71	19.71
Forested Preservation (Onsite)	250.70	366.60
Herbaceous Preservation (Onsite)	13.70	35.38
Total Onsite	899.34	1152.14
Herbaceous Establishment (Wingate Extension)	45.32 Ac.	45.32 Ac.
Forested Establishment (MRHR)	0.90 Ac.	0.90 Ac.
Herbaceous Establishment (MRHR)	2.66	5.40
Forested Enhancement (MRHR)	41.03	41.00
Forested Preservation (MRHR)	87.51	88.00
Herbaceous Preservation (MRHR)	0.28	0.30
MRHR Total	135.06	149.00

Stream Establishment (Onsite)	10,338 LF	21,530 LF
Stream Preservation (Onsite)	11,474	13,376
Total Onsite	21,812	34,906

Stream Enhancement (MRHR)	2,385	2,385
Stream Preservation (MRHR)	2,350	2,350
Total MRHR	4,735	4,735

Implementation of the CMP: The State and Corps have approved the same mitigation construction timetable, as listed below in Table 2.

Wetland Preservation: Both the Corps and State CMPs include the preservation of onsite, undisturbed wetlands and associated upland buffer areas. The current 137 acre excess in State required preservation is a result of preservation in the Horse Creek subwatershed.¹⁵ Both plans require the permittee to record these preserved areas in conservation easements prior to initiating the authorized work.

Stream Preservation: Both the Corps and State CMPs include the preservation of onsite natural streams. Both plans require the permittee to record these preserved areas in conservation easements prior to initiating the authorized work. The State plan includes an additional 1902 linear feet of stream preservation within in the Horse Creek subwatershed.

Wetland Enhancement: Both the Corps and State CMPs include the enhancement of on-site wetlands along with associated upland buffers. The State plan includes an additional 5 acres of wetland enhancement within the Horse Creek subwatershed. Both plans require the enhancement and protection of these areas in recorded conservation easements prior to initiating the authorized work.

Wetland Establishment: Onsite herbaceous and forested wetland establishment shall occur sequentially across the 3,635 acre site following completion of mining operations in each mining block (segment of mining). According to the timetable in Table 2, Phase A plantings must commence no later than 24 months after completion of mining operations, final grading, and muck placement. Phase B plantings will commence following two years of hydrological monitoring, and Phase C plantings will commence as conditions allow. Table 2 is part of the Corps approved CMP. Table 2 is included in Specific Condition 19 of the State permit. The State plan includes an additional 109.77 acres of wetland establishment for impacts to non-Corps jurisdictional wetlands.

Stream Establishment/Creation: On-site stream establishment will occur on a rolling basis across the site, as restoration follows behind mining. Attachment A, Part 2 of the Corps approved CMP details the stream design characteristics and timetables. The

¹⁵ The Corps does not have any jurisdictional wetland impacts within the Horse Creek subwatershed and therefore does not require mitigation in the Horse Creek subwatershed.

Corps approved stream restoration plan matches the State approved plan (See Appendix 2-2-B-i of the State permit) except the State plan includes an additional 11,192 linear feet of stream restoration.

Table 2

Activity Relative Time Frame	Relative Time Frame
Commencement of Severance/Site preparation	No more than six (6) months prior to mining operations (unless approved by the USACE for the purposes of directly transferring topsoil/muck to a contoured mitigation site), except as otherwise authorized herein.
Final grading, including muck placement	No later than 18 months after completion of mining operations, including backfilling with sand tailings.
Phase A planting (species that tolerate a wider range of water levels)	No later than six (6) months after final grading or 1 year after muck placement
Hydrological Assessment	For two (2) years after contouring in accordance with Specific Conditions and the Monitoring Conditions of this permit.
Phase B planting (species that tolerate a more narrow range of water levels)	Up to 12 months after the completion of the hydrological assessment
Phase C planting (shade-adapted ground cover and shrub species, additional trees and shrubs to meet the objectives of the Compensatory Mitigation Plan	At least two (2) years prior to release in forested wetlands

Monitoring requirements: Below is a comparison of Corps' and the State's mitigation monitoring requirements. The Corps' and the State's requirements are similar.

Corps: For established wetland mitigation areas, the Corps requires semi-annual monitoring of mitigation areas for the first two years following construction, and then annual monitoring thereafter. Semi-annual monitoring shall be combined into one annual monitoring report. Monitoring parameters include percent cover by desirable species by stratum, percent cover by exotic or nuisance species, dominant species, Water depth relative to zonation, soil monitoring relative to muck depth, color, texture, litter accumulation and moisture, the health and viability of the trees by measuring DBH and height. Annual monitoring reports shall be submitted until the Corps determines that the mitigation area(s) have achieved their performance standards. For streams, the Corps requires semi-annual monitoring of each stream establishment area for the first three years and then perform annual monitoring thereafter for a minimum of seven years. Monitoring parameters include drainage area, average bankfull cross-sectional area, average bankfull width, bankfull thalweg depth, hydraulic depth, width/depth ratio, pool depth, Rosgen class, sinuosity, stream length, bed slope, flood-prone width, functional process zone type, and habitat assessment score (HAS). Annual monitoring reports shall continue to be submitted until the Corps determines that the stream mitigation area have achieved their performance standards for five consecutive years.

State: Semi-annual vegetative monitoring for each mitigation area, and the submittal of the reports beginning one year after planting. Subsequent vegetation statistical reports shall be submitted in years two, three, five, and biennially thereafter until release.

Vegetative monitoring will include a species list and % cover, FLUCCS level III map, % bare ground and open water, nuisance spp. cover, upland spp. cover, tree density, shrub density, tree height, tree dbh, and fruit and seedlings. All monitoring data shall be submitted no later than March 1st of the following year. In addition to annual vegetative monitoring reporting, hydrology and water quality monitoring reports must be submitted annually. For stream mitigation, annual monitoring shall occur in years one through five, then every other year until release. Stream monitoring will include bank and channel stability, map of channel, sinuosity, stream length. Stream slope, bankfull indicators present, bankfull area, depth, width, maximum depth, width depth ratio, entrenchment ratio, radius of curvature large woody debris abundance, and vegetation cover in stream channel.

Performance standards: Below is a comparison of Corps mitigation performance and the State permit mitigation release criteria. The Corps and the State have similar performance standards.

Preserved Wetlands	Corps	State
Baseline hydrology maintained	Yes	Yes
UMAM Community Structure scores maintained	Yes	No
Invasive exotic plant species (maximum)	5%	10%
Performance standards met prior to mining	Yes	Yes
Conservation easement recorded prior to mining	Yes	Yes

Enhanced Wetlands	Corps	State
Corps/State Jurisdictional	Yes	Yes
Percent cover by appropriate wetland species (minimum)	80%	N/A
UMAM assessment scores achieved	Yes	No
Appropriate soil hydrology	Yes	Yes
Years to achieve the performance standards	3	N/A

Established Wetlands (Herbaceous)	Corps	State
Corps/State Jurisdictional	Yes	Yes
Percent cover by appropriate wetland species (minimum)	80%	80%
UMAM assessment scores achieved	Yes	No
Invasive exotic plant species (maximum)	5%	10%
Percent cover by single species (maximum)	30%	50%
Relative percent cover by single groundcover species (maximum)	30%	80%
Years to achieve the performance standards (maximum)	5	7

Established Wetlands (Forested)	Corps	State
Corps/State Jurisdictional	Yes	Yes
Percent cover by appropriate wetland species (minimum)	No	80%
UMAM assessment scores achieved	Yes	No
Invasive exotic plant species (maximum)	5%	10%
Percent cover by single species (maximum)	No	No
Appropriate soil hydrology	Yes	Yes
Number live trees per acre that are at least 12' tall (minimum)	400*	400*
Number of shrubs per acre (minimum)	100	100
Years to achieve the performance standards (maximum)	15	12
Riparian buffer width with native vegetation (minimum)	60'	95', 60', and 25'
Years to achieve performance standards within each established stream segment (maximum)	10	12

*Does not apply to hydric pine flatwoods, hydric pine savanna, or slash pine swamp forest.

Preserved Stream Segments	Corps	State
Required FDEP visual habitat assessment scores (HAS) maintained in perpetuity	Yes	No
Riparian buffers 60 foot wide with native wetland or upland vegetation	Yes	No

Established Stream Segments	Corps	State
Rosgen Type stream segments with the specific characteristics as described in work plan.	C5 or E5	C or E
Macroinvertebrate species richness and diversity within the range of or which exceeds the reference stream segments	Yes	Yes
FDEP visual habitat assessment score (HAS) of 105 with a minimum buffer width of 60 feet on each side and stable stream banks.	Yes	Yes
Riparian buffer width with native vegetation (minimum)	60'	95', 60', and 25'
Years to achieve performance standards within each established stream segment (maximum)	10	12

Notification to the Corps of Termination, Revocation, Modification, Amendment, Partial Release, or Disbursement: The draft surety bond provided by the Applicant (CMP Attachment H) stipulates that the Surety provide notice to the Corps at least 120 days in advance of any termination or revocation of the bond, and provide notice to the Corps at least 30 days in advance of modifications, amendments, partial releases, or disbursements. By providing advance noticing language directly in the State Financial Assurance legal instrument, an additional measure of confidence has been provided

that the financial assurance required by the State for the construction of the compensatory mitigation project is sufficient for the purposes of achieving compliance with compensatory mitigation requirements of the DA permit, and is in compliance with 33 CFR 332.3(n)(1)-(6).

Cost: Rationale behind the cost estimate for providing replacement mitigation which considers costs for land acquisition, planning and engineering, legal fees, mobilization, construction, and monitoring. [See Institute for Water Resources (IWR) "Implementing Financial Assurance for Mitigation Project Success, June 2011" Updated March 2016]

Cost of Land Acquisition: The approved permittee-responsible, on-site and offsite mitigation has been subjected to comprehensive hydrologic modeling, geologic and soils testing, and ecological analyses by the Applicant. It was designed to fit the post-mining landscape which itself was designed to replicate or improve water resource features (i.e. wetlands), that were present prior to mining. In the event that the permittee abandoned the mitigation prior to release, remediation would be desirable and likely to be successful. If necessary, access to the mitigation sites by an independent, third-party contractor for remediation work and monitoring and maintenance is facilitated by the location of the property. The property directly abuts a public roads, as opposed to being surrounded by private properties whose owners may limit or deny access to the mitigation sites. For these reasons stated above, the Corps has determined that there is no need to include component costs for land purchase when setting assurance amounts.

Cost of Planning And Engineering: As is the case with land acquisition, the approved permittee-responsible mitigation plan is the result of comprehensive hydrologic modeling, geologic and soils testing, and ecological analyses by the Applicant. Likewise, the mitigation sites are designed to fit the post-mining landscape which itself is designed to replicate or improve water resource features (i.e. wetlands), that were present prior to mining. The risk of failure of the mitigation based on design deficiencies beyond that which could be corrected through on-site remediation, by a third party contractor, is unlikely.

Legal Fees: The financial assurance instruments, (surety bond, and the standby trust agreement), will be funded and in place prior to commencement of the authorized activities. The procedure for triggering the release of those funds from the surety bond into the standby trust, and administering those funds for the mitigation work until performance standards are achieved have already been established. Legal fees associated with implementing the financial assurance should therefore be minimal.

Cost of Mobilization, Construction, and Monitoring: On 30 August 2017, the Corps received a copy of the initial wetland mitigation financial assurance demonstration provided to the State. The estimated mitigation liability for the first three years of operations under the SPE ERP is \$1,900,523. Cost estimates for mobilization,

construction, maintenance and monitoring of the mitigation sites are based on the Applicant's history of competitive bidding associated with similar wetlands mitigation projects. Cost estimates are updated annually to account for inflation based on the Construction Cost Index (CPI) as published in the Engineering News-Record. In addition to estimating costs based on other projects, the Applicant has provided copies of signed contracts for earthwork, surveying, planting, maintenance, monitoring, and project management for wetland mitigation of a similar size.

4. Determination: The Corps has independently reviewed and verified the mitigation construction cost estimate as approved by the State. Based on the submitted documentation, the Corps has determined that the State-approved mitigation financial assurances provides sufficient financial resources to complete or replace the permittee's obligations to implement the required mitigation project and to meet specified performance standards in DA permit number SAJ-2009-03221, in the event that the permittee proves unable or unwilling to meet those obligations. Additional financial assurances are not necessary at this time. The DA permit includes a special condition requiring the financial assurances to be in place prior to commencement of the authorized activities.

- 9.0 Cumulative and Secondary Impacts** – *(40 C.F.R. § 230.11(g) and 40 C.F.R. § 1508.7, RGL 84-9) Cumulative impacts result from the incremental environmental impact of an action when added to all other past, present, and reasonably foreseeable future actions. They can result from individually minor but collectively significant actions taking place over a period of time. A cumulative effects assessment should consider both direct and indirect, or secondary, impacts. Indirect impacts result from actions that occur later in time or are farther removed in distance from the original action, but still reasonably foreseeable.*

Section 4.12 of the Final EIS provides the Corps' cumulative impacts analysis of the effects of the four similar phosphate mines analyzed in the Final EIS, including Wingate East, in combination with the effects of other past, present, and reasonably foreseeable actions, both mining-related and non-mining-related.

10.0 Other Laws, Policies, and Effects:

- 10.1 Endangered Species Act (ESA): On May 18, 2012, the Service issued an amended ITP/HCP for the threatened Florida scrub-jay and the threatened Eastern indigo snake. On May 24, 2012, the Service determined that proposed project is not likely to adversely affect (NLAA) wood stork or caracara, and there are no effects to any other listed species, pursuant to Section 7 of the Endangered Species Act. The above documents were issued directly to the Applicant with the Service providing copies to the Corps via email on June 14, 2012.

On May 3, 2013, the Corps, EPA, and FDEP published the Final Areawide Environmental Impact Statement on Phosphate Mining in the Central Florida Phosphate District (Final EIS). Chapter 4 of The Final EIS describes Wingate East's potential impacts on threatened or endangered species, fish, crustaceans, mollusks, and other aquatic organisms, and other wildlife. Subsequent to completion of the Final EIS, the applicant made a number of changes to the proposed work. Changes to the proposed work since the 2011 DA permit application and Final EIS were identified in Section 2.d of the Supplemental EA published by the Corps on June 22, 2017.

By email to the Service dated September 26, 2017, the Corps provided a copy of the Supplemental EA and included the following statement: "The Corps has reviewed the proposed changes to the Wingate East application and believes that they do not alter the potential impacts the project will have on threatened or endangered species determinations made in the Final EIS, or in the ITP/NLAA/No Effect determinations made by the Service in 2012. The Corps understands that the requirements of Section 7 of the Endangered Species Act are fulfilled for the Wingate East DA permit application and that no further action is required." By email dated October 4, 2017, the Service responded that it agrees with the Corps' conclusions and thanked the Corps for contacting the Service to review the changes.

On December 7, 2017, the Service published I notice in the Federal Register (82 FR 57784) of a request by Mosaic Fertilizer, LLC, for an amendment to ITP/HCP #TE236128-1. The requested amendment is to expand the existing 4,345-ac ITP/HCP permit area by 900 acres into western Hardee County. The amendment expands the area in which Eastern indigo snakes may be incidentally taken under the ITP/HCP. The Corps has determined that the Applicant's proposal, including the proposed mitigation and minimization measures, does not alter the potential direct or cumulative impacts the project will have on threatened or endangered species determinations made in the Final EIS, or in Section 6.3 of this decision document.

The Jacksonville District, Regulatory Division Mining Team drafted a memorandum for the record (MFR) to document and support a "no effect" determination for the manatee for the proposed Wingate East project. A copy of the MFR was emailed to the Service on December 8, 2017 along with the statement that the Corps understands that the requirements of Section 7 of the Endangered Species Act are fulfilled for the Wingate East application and that no further action is required. By email dated December 8, 2017, the Service acknowledged receipt of the memorandum supporting a "no effect" determination for the manatee on the proposed Wingate East project, and stated that the Service will keep it for its records.

On November 6, 2013, the Corps and NMFS-PRD held a meeting to discuss the effects of phosphate mining, including this project, on the smalltooth sawfish and the sawfish critical habitat unit in Charlotte Harbor. In regards to surface water quality effects, as described in Sections 4.4.6 and 4.12.4 of the Final EIS, and Sections 6 and 7 of this

decision document, individually and cumulatively the expected level of potential impact is low enough that there will be no effect downstream on the sawfish or its critical habitat. In regards to surface water quantity effects, as described in Sections 4.2.5 and 4.12.2 of the Final EIS, and Sections 6 and 7 of this decision document, individually and cumulatively the expected level of potential impact is low enough that there will also be no effect downstream on the sawfish or its critical habitat. Therefore, the Corps determined that the proposed project would have no effect on the smalltooth sawfish.

10.1.1 Compliance with ESA: Yes

10.2 Magnuson-Stevens Act – Essential Fish Habitat (EFH): Essential Fish Habitat (EFH): On December 16, 2015, the NMFS Habitat Conservation Division (NMFS-HCD) stated that they anticipated any adverse effects associated with the proposed project that might occur on marine and anadromous fishery resources would be minimal and, therefore, they did not object to issuance of a permit.

10.2.1 Compliance with Magnuson-Stevens Act: Yes

10.3 National Historic Preservation Act – Section 106: Section 6.3 of the Final EIS describes how the actions considered in that document, including this proposed action, will comply with the National Historic Preservation Act of 1966. The SHPO, by letter dated June 14, 2012, stated their review of the Florida Master Site File indicates that no historical properties are recorded within the project area. Furthermore, because of the location and/or nature of the project, the SHPO determined that it is unlikely that historic properties will be affected. In addition, the Seminole Tribe of Florida's Tribal Historic Preservation Officer (STOF-THPO), by letter dated July 3, 2012, stated that they had no objection to proposal at this time. However, they 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. The DA permit for this project includes a special condition requiring protection of previously unidentified archaeological/cultural materials and notification of appropriate authorities including the SHPO and THPO.

10.3.1 Compliance with National Historic Preservation Act: Yes

10.4 Corps Wetland Policy: Based on the public interest review (Section 7 of this document), the beneficial effects of the project outweigh the detrimental impacts of the project.

10.5 Water Quality Certification under Section 401 of the Clean Water Act: An individual water quality certification The FDEP issued a water quality certification on November 16, 2015, as part of their ERP.

- 10.6 Coastal Zone Management Consistency under Section 307c of the Coastal Zone Management Act (CZMA): The FDEP issued a coastal zone management consistency determination on November 16, 2015, as part of their ERP.
- 10.7 Effects on Federal Projects (33 C.F.R. § 320.4(g)(4)): This project is not located in the vicinity of an authorized federal project.
- 10.8 Effects on the limits of the territorial seas (33 C.F.R. § 320.4(f)): This proposed project does not include any structure or work affecting coastal waters.
- 10.9 Safety of impoundment structures (33 C.F.R. § 320.4(k)): The construction and operation of the clay settling areas will comply with federal, state and local requirements.
Specifically, the FDEP's NPDES permit will require compliance with Rule 62-672, F.A.C., "Minimum Requirements for Earthen Dams Used in Phosphate Mining and Beneficiation Operations and for Dikes Used in Phosphogypsum Stack System Impoundments."
- 10.10 Activities in Marine Sanctuaries (33 C.F.R. § 320.4(i)): This proposed project is not located in a marine sanctuary as established by the Secretary of Commerce under authority of Section 302 of the Marine Protection, Research and Sanctuaries Act of 1972.
- 10.11 Other Authorizations:
- a. Fish and Wildlife Act of 1956, Migratory Marine Game-Fish Act, Fish and Wildlife Coordination Act, and other acts protecting fish and wildlife resources: Chapter 4 of the Final EIS describes Wingate East's potential impacts on threatened or endangered species, fish, crustaceans, mollusks, and other aquatic organisms, and other wildlife.
 - b. Marine Mammal Protection Act of 1972: The proposed project does not affect any marine mammals.
 - c. Section 7(a) of the Wild and Scenic Rivers Act: Section 6.10 of the Final EIS describes how the actions considered in that document, including this proposed action, will comply with Section 7(a) of the Wild and Scenic Rivers Act.

In addition, Section 4.2.4 of the Final EIS describes the predicted effects of the Wingate East project on surface water flows within Horse Creek and the Upper Myakka River. The Final EIS states that there is in effect no reduction to the stream flow resulting from the mining of Wingate East either on the Upper Myakka River subwatershed, the Myakka River watershed, or Charlotte Harbor, and no significant impact on the Horse Creek subwatershed. Therefore, the effect of this Alternative on streamflow within the subwatershed and watersheds is minor and is not significant.

Section 4.12.2 of the Final EIS describes the predicted cumulative effects on the Peace River and Myakka River. Section 4.12.2.1 of the Final EIS describes the predicted cumulative effects on the on the Horse Creek Subwatershed, Section 4.12.2.3 describes the predicted cumulative effects on the on Upper Myakka River Subwatershed, and Section 4.12.2.6 describes the magnitude and significance of those cumulative effects. As stated in the Final EIS, the cumulative effects are minor to no effect, and not significant.

d. Section 402 of the Clean Water Act: The State of Florida issued NPDES permit No. FL0032522-007-IWIS/NR on November 21, 2012. This permit authorized an increase in the footprint of the existing 3,033-acre Wingate Creek Mine property boundary to approximately 16,055 acres. The expanded permit footprint includes the existing 660-acre Wingate Extension property, the proposed 3,635-acre Wingate East property, and approximately 8,677 acres transferred from the Fort Green Mine Complex. The transferred areas include CSAs FM-1 and FM-2 (both to be utilized by the proposed Wingate East Mine), Fort Green Mine Complex Outfall D-004 (renamed WC-004), pipeline corridors, and other parcels of preserved land or land in various stages of reclamation.

Three surface water discharges (outfalls) are authorized. Outfall WC-001 discharges excess mine recirculation water and stormwater into Wingate Creek, a tributary of the Myakka River. Outfall WC-002 discharges excess mine recirculation water and stormwater into Johnson Creek which flows into Wingate Creek, a tributary of the Myakka River. Outfall WC-004 (transferred from the Fort Green Mine) discharges excess mine recirculation water and stormwater into Horse Creek, a tributary of the Peace River. Discharges from these three outfalls are monitored to ensure that the water quality standards are not violated at the points of discharge. Also authorized are ground water discharges from waste clay settling areas and sand tailing disposal areas that impound wastewaters and discharge to ground waters. Groundwater is monitored to ensure compliance with water quality standards.

e. Migratory Bird Treaty Act: Section 6.12 of the Final EIS describes how the actions considered in that document, including this proposed action, will comply with the Migratory Bird Treaty Act.

10.11 Significant issues of Overriding National Importance (33 C.F.R. § 320.4(j)(2)): NA

10.12 Discussion (if necessary): NA

11.0 Final Project Description and Special Conditions:

11.1 Final Project Description: The final project description is as described in Section 1.4 of this decision document.

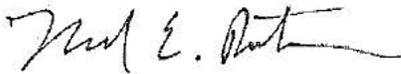
- 11.2 Special Conditions: Attachment D to this decision document provides the special conditions included in the DA permit for Wingate East.
- 12.0 Findings and Determinations:
- 12.1 Section 176(c) of the Clean Air Act General Conformity Rule Review: The proposed permit action has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activities proposed under this permit would not exceed de minimis levels of direct or indirect emissions of a criteria pollutant or its precursors and are exempted by 40 C.F.R. Part 93.153. Any later indirect emissions are generally not within the Corps' continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons, a conformity determination is not required for this permit action.
- 12.2 Relevant Presidential Executive Orders:
- 12.2.1 EO 13175, Consultation with Indian Tribes, Alaska Natives, and Native Hawaiians: This action has no substantial effect on one or more Indian tribes, Alaska or Hawaiian natives.
- 12.2.2 EO 11988, Floodplain Management: Alternatives to location within the floodplain, minimization and compensatory mitigation of the effects were considered above.
- 12.2.3 EO 12898, Environmental Justice: 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.
- 12.2.4 EO 13112, Invasive Species: Through the performance standards for the mitigation as described in the compensatory mitigation plan (Attachment B to this decision document and the special conditions of the DA permit (Attachment D to this decision document), the permittee will be required to control the introduction and spread of exotic species.
- 12.2.5 EO 13212 and EO 13302, Energy Supply and Availability: The project was not one that will increase the production, transmission, or conservation of energy, or strengthen pipeline safety.
- 12.2.6 EO 13547, Stewardship of the Ocean, Our Coasts, and the Great Lakes: The project would not adversely affect America's stewardship of the ocean, coasts, or Great Lakes.
- 12.3 Compliance with NEPA: All practicable means to avoid or minimize environmental harm from the alternative selected have been adopted.

CESAJ-RD-W

SUBJECT: Department of the Army Record of Decision and Statement of Findings for Permit Application SAJ-2009-03221

- 12.4 Compliance with the Section 404(b)(1) Guidelines: Having completed the evaluation in Section 6, the undersigned have determined that the proposed discharge complies with the Guidelines.
- 12.4.1 As described in Section 5.5 of this decision document, the proposed action is the LEDPA.
- 12.5 Public Interest Determination: We find that issuance of a Department of the Army Permit is not contrary to the public interest.

Prepared By:



Mark E. Peterson
Project Manager, Mining Team

Date: 17-Jan-2018

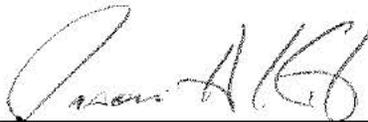
Reviewed By:



DONALD W. KINARD
Chief, Regulatory Division

Date: 1/19/18

Approved By:



JASON A. KIRK, P.E.
Colonel, U.S. Army
Jacksonville District Commander

Date: 22 JAN 2018