1. Administrative Details

Proposal Name: Sny Island Levee Drainage District - Acknowledgement of 100-year Level of Protection

by Agency: Sny Island Levee Drainage District

Locations: IL

Date Submitted: 09/23/2015

Confirmation Number: aa4db228-7dad-4116-ba7f-c3994ddbe519

Supporting Documents

File Name	Date Uploaded
20150923SubmittalFINAL.pdf	09/23/2015
20150923LetterofSupport.pdf	09/23/2015

2. Provide the name of the primary sponsor and all non-Federal interests that have contributed or are expected to contribute toward the non-Federal share of the proposed feasibility study or modification.

Sponsor	**Letter of Support**
Sny Island Levee Drainage District(Primary)	The Sny Levee Drainage District Board supports the plan for maintaining its improvements. The Sny landowners and residents in the protected communities also support, and would benefit greatly from this authorization. Other levee and drainage districts throughout the Upper Mississippi also support the Sny's position, as shown in the letter of support from the Upper Mississippi Illinois Missouri Rivers Association (UMIMRA)

3. State if this proposal is for a feasibility study, a modification to an authorized USACE feasibility study or a modification to an authorized USACE project. If it is a proposal for a modification, provide the authorized water resources development feasibility study or project name.

[x] Modification to an Authorized USACE Project : Mississippi River, Local Flood Protection at Sny Island Levee Drainage District, ILL - As Authorized in 1954 Rivers and Harbors Act (House Document 247/83/2)

4. Clearly articulate the specific project purpose(s) of the proposed study or modification. Demonstrate that the proposal is related to USACE mission and authorities and specifically address why additional or new authorization is needed.

The Sny Island Levee (Sny) was authorized under the Rivers and Harbors Act of 1954 (House Document 247/83/2). That authorization allowed the US Army Corps of Engineers (USACE) to improve the Sny mainstem levee to the 50-yr water surface elevation plus 2 feet of freeboard. While working with State and Federal Agencies over several decades, the Sny improved to its current elevation; 100-yr plus 3 feet of freeboard. Specific authorization from Congress is now being sought to recognize the current elevation of the Sny levee as allowable. The 1,200 residents and critical infrastructure protected by Sny levee system make the current elevation vital to the local communities and their economy. The Sny is vigilant in their efforts to provide reliable flood protection, and is merely seeking to retain the 100-yr accreditation that was attained with concurrence from the USACE, and recognized by FEMA. The series of modifications to the levee system were accomplished in accordance with requirements imposed at the time the improvements were made, identified through correspondence and in meetings with federal, state and local regulators. The process to evaluate alterations to existing projects, and the flood risk management framework now in place, differs greatly from the practices employed at the time the work now in question was performed. Although the Corps has under its present authority the ability to approve the Sny's 100-yr level of protection they instead seek to conduct a retroactive review under their new 408 permitting guidance (effective as of July 2014) that was issued nearly 5 years after the work was completed. To resolve this untenable situation we ask that Congress recognize the current elevation of the Sny levees, determined by the 2004 Upper Mississippi Flow Frequency Study 100-yr profile plus 3 feet of freeboard, as specifically authorized including for purposes of FEMA accreditation and the Corps Levee Rehabilitation and Inspection Program.

5. To the extent practicable, provide an estimate of the total cost, and the Federal and non-Federal share of those costs, of the proposed study and, separately, an estimate of the cost of construction or modification.

	Federal	**Non-Federal**	**Total**
Study	$0	$0	$0
Construction	$0	$0	$0

Explanation (if necessary)

Cost estimate is not applicable. As described above, the authorization is being sought for a project that is already in place, but for which the Corps is now seeking to retroactively apply new Section 408 permitting requirements.

6. To the extent practicable, describe the anticipated monetary and nonmonetary benefits of the proposal including benefits to the protection of human life and property; improvement to transportation; the national economy; the environment; or the national security interests of the United States.

The Sny is the largest levee and drainage district on the Mississippi north of St. Louis (180 mi^2). It protects the health, safety and wellbeing of 1,200 residents. The leveed area contains portions of the Villages of Hull, Kinderhook and Pleasant Hill and unincorporated areas of East Hannibal, Fall Creek and Pike Station. The Sny is conceivably the most populated levee district on the Mississippi River from Muscatine, IA to St Louis, MO. In addition to its residents, the Sny protects 86 miles of US, State, and County Highways; 19 miles of railroads; other critical infrastructure including a public high school and wastewater treatment facilities; and significant commercial, industrial and agricultural development.

The Sny protects 13.5 miles of Interstate 72, and the Mississippi River Bridges at Hannibal and Louisiana having an average daily traffic count of 13,500 and 3,400, respectively. This transportation infrastructure has been studied for its cost associated with detours, road damage and highway damage. The cost of a major flood on the transportation system of the Upper Mississippi was found to be $1.027 billion, of which a significant portion is located within the Sny.

Environmentally, the Sny directly or indirectly protects the wastewater treatment facilities of 4 municipalities. Flooding would increase the risk of damage or failure to these facilities. Additionally, the levee protects a network of oil and natural gas pipelines and flooding would increase the risk of damage or rupture. A release of raw sewage, chemicals, natural gas, or oil onto the nearby land or into waters of the US would be an environmental disaster. Since 1993, the Sny levees have prevented an average of $64.4 million per year in damages and since 1973 a total of $1.3 billion in damages have been prevented. Federal funds are not being requested for this project. The project request is to retain 100-yr level of protection that is already in place and was financed locally.

7. Does local support exist? If 'Yes', describe the local support for the proposal.

[x] Yes

Local Support Description

In addition to the support of the local sponsor, other levee and drainage districts in the area typically support one another's efforts to improve or maintain their levee systems. In fact, The Sny Island Levee Drainage District is a member of the Upper Mississippi Illinois Missouri Rivers Association (UMIMRA) which is a group of Upper Mississippi River stakeholders throughout the Tri-State: Illinois, Missouri, and Iowa Region. This group and its members strongly support the ability for Sny Island Levee Drainage District to maintain their system.

8. Does the primary sponsor named in (2.) above have the financial ability to provide for the required cost share?

[x] Yes

Primary Sponsor Letter of Support

(As uploaded)

20150923LetterofSupport.pdf

Meagan Kaiser
Executive Director
Michael Klingner
Chairman, Illinois
Vicki Stoller
Vice Chairman, Iowa
Dianne Barnett
Treasurer, Illinois
David McMurray
Executive Committee, Iowa
John Winkelman
Executive Committee, Missouri
Jason Hutcheson
Director, Iowa

UMIMRA
UPPER MISSISSIPPI, ILLINOIS & MISSOURI RIVERS ASSOCIATION

P.O. Box 418, Bowling Green, MO 63334
573.489.9173

Joseph B. Gibbs, PE
Director, Missouri
Philip Held
Director, Missouri
Al Muhlenbruck
Director, Iowa
Brent Hoerr
Director, Missouri
Jim Koeller
Director, Illinois
Roger Sutter
Director, Missouri
Kevin Rund
Director, Illinois

December 1, 2014

U.S. Army Corps of Engineers
Attn: CECW-CE (Lisa Keifel)
441 G Street NW
Washington, DC 20314-1000

RE: Section 7001 of the Water Resources Reform and Development Act of 2014

Dear Ms. Keifel,

Established in 1954, UMIMRA is a grassroots stakeholder organization advocating for a stronger Upper Mississippi Valley through flood control. Reliable flood control leads to a more reliable navigation channel, economic development, and a better way of life for the communities along the river. UMIMRA works closely with local, state, and federal legislators, the U.S. Army Corps of Engineers, and other agencies to ensure our members concerns are heard.

UMIMRA sends this letter of support for the Sny Island Levee Drainage District application.
The District was established to protect 112,000 acres and aid in the reduction of waterborne illness. It has been estimated that the District has prevented approximately $1,305,645,900 in damages since 1973.

The population located behind this levee is approximately 819. The proposed project would not only protect this population, but also protect approximately 86.5 miles of U.S., State, and County Highways, 18.6 miles of railroads, significant industrial/commercial development, and residences. The proposed project would provide additional protection for human health and these roadways, railways, and businesses beyond the existing estimated annual damages prevented of approximately $32.6 million.

Thank you for your consideration,

Meagan Kaiser

Meagan Kaiser, Executive Director
Upper Mississippi, Illinois, & Missouri
Rivers Association

Additional Proposal Information

(This is as uploaded, a blank page will show if nothing was submitted)

20150923SubmittalFINAL.pdf

KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors

WRRDA 2014 - SECTION 7001 SUBMITTAL

Submitted to:
http://www.wrrda7001proposals.us/

September 23, 2015

Prepared for:

THE SNY ISLAND LEVEE DRAINAGE DISTRICT

490 N. Main
New Canton, IL 62356

Prepared by:

KLINGNER & ASSOCIATES, P.C.

616 North 24th Street
Quincy, IL 62301

Project No. 15-0930

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1.0 NON-FEDERAL INTEREST

Sny Island Levee Drainage District is the project sponsor and sole project contributor. Funding for on-going maintenance of the 100-year FEMA certification and eligibility in the USACE PL 84-99 Programs is through assessment of its stakeholders and a special assessment including thirty one (31) commercial and industrial facilities, Norfolk Southern Railroad, Kansas City-Southern Railroad, Rockies Express Pipeline, Panhandle Eastern Pipeline, Nicor and Magellan Pipeline, eight (8) non-for-profits businesses, electric utility lines, residential properties, recreational land, conservation districts, and agricultural properties. Letters of support are included in the Appendix A.

2.0 STUDY OR MODIFICATION TYPE

The proposed project is a modification to an existing authorized United States Army Corps of Engineers (USACE) water resources development project. The Sny Island Levee Drainage District (Sny) has worked with both the USACE and The Federal Emergency Management Agency (FEMA) to obtain a levee elevation of 100 year, plus 3 feet of freeboard (using the Upper Mississippi River System Flow Frequency Study (2004)). Specific authorization from Congress is now being sought to recognize the current elevation of the Sny levee as allowable so as to avoid an unnecessary increase in flood risk to the people, property and critical infrastructure that already have a 100-year level of flood protection.

The Sny Island Levee Drainage District was the first such district in the State of Illinois, officially organized in 1880. The USACE was first involved in the construction / repair of the Sny Levee as far back as 1883, when Federal funds amounting to between $25,000 and $50,000 were used to install brush and stone along the riverbank to protect the levee. From that date forward the Federal Government maintained a vested interest in the Sny. Funds were appropriated to miscellaneous Sny projects in The Rivers and Harbors Act of 1888, The Rivers and Harbors Act of 1892, The Rivers and Harbors Act of 1896, The Rivers and Harbors Act of 1913, The Rivers and Harbors Act of 1916, and The 1928 Flood Control Act. Larger flood control projects that improved the Sny's levees and interior drainage, district wide, were federally funded and authorized under the Flood Control Acts of 1936 and 1946[1]. The Sny Island Levee Drainage District's most recent authorization falls under the 1954 Rivers and Harbors Act (House Document 247, 83rd Congress, 2nd Session), with the

[1] All historical appropriations of Federal funds to the Sny Island Levee Drainage District are referenced in "*The Sny Story: the Sny Island Levee Drainage District and the Sny Basin*". Additional appropriations may have been made outside of the listed Congressional Acts.

primary purpose of flood damage reduction. The report approved by Congress in the 1954 Rivers and Harbors Act states,

"The design grade for the Sny Island Levee Drainage District as set up in the report would provide against floods of 50-year frequency with a freeboard of 2 feet, computed without taking into consideration the effect of reservoirs." It goes on to state that, *"The 50-year frequency flood would be 1.7 feet higher than the 1947 Flood."*

The levee is therefore Congressionally authorized to the 1947 Flood plus 3.7 feet (1.7 feet to get to the then approximated 50-year flood event plus 2 feet of freeboard). It should be noted that the 1947 flood was the flood of record at the time the 1954 Flood Control Act was passed. Since then, water elevations have surpassed the 1947 water surface elevation nearly a dozen times at the City of Hannibal (USGS Gage 05501600). The Hannibal Gage is located directly across the Mississippi River from Reach 1 of the Sny, River Mile 309.

The proposed project has not been authorized by Section 216 of the Flood Control Act of 1970. This Section authorizes the USACE District Engineer, "To review the operation of current federal water resources projects and make recommendations to Congress." It is not a vehicle being used by the Corps to authorize a levee districts already existing level of protection.

3.0 PROPOSED PROJECT PURPOSE

As stated above, the Sny Island Levee Drainage District was originally authorized as part of the 1954 Rivers and Harbors Act (House Document 247/83/2). This authorization allowed for USACE construction of the Sny levee to the 50 Year flow frequency water surface elevation (at the time of the 1954 flood control act) plus 2 feet of freeboard. Due to the USACE construction standards at the time, the levee was actually built to the 1954, estimated 50 year water surface elevation, plus 3 feet to freeboard. USACE estimates that a foot of overbuild was added as an extra factor of safety and to account for any possible settlement. While not officially recognized as a 50 year levee, plus three feet of freeboard, it is this "As-Built" elevation that is recognized by the USACE-MVR at this time[2].

One significant reason for the Sny's original authorized elevation, was its proximity to Hannibal, Missouri. Upon analysis of the House Document authorizing the Sny Island Levee Drainage District, and the House Document authorizing the neighboring Hannibal Floodwall, it was clear that Congress had intended the Sny to be approximately 2 feet lower than Hannibal. House Document 564 / 87 Congress / 2nd Session states,

[2] As-Built drawings based on a post construction survey of the Sny Island Levee Drainage District do not exist. Estimated "As-Builts" have been drawn by the USACE-MVR and are available upon request. These "As-Builts" show that the Corps instructed its contractor to build the levee to the 50-year plus 3 feet of freeboard level of protection.

"With 100-year recurrence interval design floods for urban areas and three feet of freeboard, the levees and walls protecting urban areas downstream from Muscatine would generally be about two feet higher than the rural protection works in the vicinity."

By remaining lower than the Hannibal floodwall, the Sny provides additional security to Hannibal. It would potentially overtop and store floodwater during large events, thus relieving pressure on the City of Hannibal. If the Sny had not been in the vicinity of Hannibal, the Sny itself would have been eligible for 100-Year protection, plus 3 feet of freeboard. The recommendations of the Chief of Engineers (House Document 281 / 83rd Congress / 2nd Session) as approved by Congress in the 1954 Flood Control Act states,

"The levees and flood walls designed for protection of the urban areas, or rural areas in which urban protection is involved, will provide a 3-foot freeboard above the flow line of a flood having an estimated probability of occurrence of once in 100 years."

The Sny protects the large portions of the incorporated Villages of Hull, Kinderhook and Pleasant Hill along with the unincorporated areas of East Hannibal, Fall Creek, and Pike Station. All this in addition to critical infrastructure including a public high school, interstate, oil / gas pipelines, rail, electric transmission lines, etc. An estimated 8-percent of Pike County, Illinois lives in the Sny Bottoms, lowering the Sny levee puts that population at a significantly higher risk. While primarily rural, it clearly involves the protection of urban areas.

This two feet of elevation difference remained, until 1993 when Hannibal completed a floodwall improvement project, raising their level of protection to 500 year plus three feet of freeboard (according to the 1979 profiles). This was a raise of nearly three feet. In order to counteract the impact transferred to the Sny, the USACE wrote a letter stating the Sny may wish to raise a portion of their levee one foot (Sta. 433+00 to 903+00). This letter can be seen as Appendix C, attached[3]. While this levee raise counteracted a portion of the induced risk from Hannibal, the Sny did not at that time maintain the two foot elevation difference for the full length of the system, which the original authorization had intended. The flow frequency profiles had been lowered in 1979 to reflect the completion of the USACE's upstream flood storage reservoirs and with these new profiles and the allowed improvement, the Sny had 100-year protection, plus three feet of freeboard.

With the 100-year level of protection and three of freeboard using the 1979 profiles began the multi-year levee certification process (2000-2003). This certification was first recognized by FEMA in a 2003 Letter of Map Revision (LOMR) and accreditation was later reflected on effective flood maps published by FEMA. The Sny reached out to the Corps, and even retained their services to assist in the certification required for that accreditation. Attaining that accreditation was significant, even by FEMA standards - the LOMR encompassed three counties and at the time

[3] Also in 1996, the Sny, working with IDNR, was permitted to raise the upper closure levee up to six (6) feet or to the standard project flood. However, due to limited funds this levee was only raised to the 500 year level of protection plus 3 feet of freeboard.

was thought to be the largest ever completed in the U.S. Accreditation is shown to be supported by the USACE in an approval letter, shown in Appendix C, attached.

In 2004, new flow frequency profiles became official and replaced the 1979 profile. This time, in the northern portions of the District (Reaches 1 and 2), water surface profiles reverted to near the old 1954 level. The higher water surface elevation meant 100 year protection would be lost. To maintain accreditation and not lose the benefits of 100-year flood protection, the Sny, in collaboration with the Federal Emergency Management Agency (FEMA), regraded the 2008 flood fighting "push-up" to the 2004, 100-year flow frequency elevation plus 3 feet of freeboard elevation. Had improvements not been complete, 59,000 acres (Reachs I & II), portions of the Villages of Hull, Kinderhook, and Pleasant Hill, and US Interstate 72 would have lost accreditation and been labeled as floodplain. A floodplain designation would throw the Sny out of compliance with an Illinois Executive Order intended to protect critical infrastructure, see Appendix C. The property owners in this area had the reasonable expectation to maintain the flood protection they had with the old 1979 profiles.

The post 2004 series of modifications to the levee system were accomplished in accordance with requirements imposed at the time the improvements were made, those having been identified through correspondence and in meetings with federal, state and local regulators. The process to evaluate alterations to existing projects and the flood risk management framework now in place differs greatly from the widely accepted practices employed at the time the work now in question was actually performed. Although the Corps has under its present authority the ability to approve the Sny's 100-year level of protection they instead seek to conduct a retroactive review under their new 408 permitting guidance (Engineering Circular - effective July 2014 through July 2016) that was issued more than five years after the work was completed - the anticipated outcome is an increase in flood risk.

Soon after, in 2006 FRM guidance began to come from the USACE. The FRM programs was developed for two primary purposes, the first being, "To work across the agency to focus the policies, programs, and expertise of the Corps towards reducing overall flood risk, including reducing the risk of loss of life, reducing long-term economic damages to the public and private sector, and improving the natural environment.[4]" The new emphasis on reducing the overall flood risk, particularly risk to human life, supports the Sny's ability to maintain its current elevation. The Sny should be able maintain the elevation difference originally authorized between the Sny and the City of Hannibal, to counteract the risk transferred from the raising of the Hannibal Floodwall, and to ensure the risk to human life and the local economy is not degraded.

The Corps recently informed the Sny of a determination of "inactive" for purposes of the Corps Rehabilitation and Inspection Program (RIP), meaning Federal funds cannot be made available

[4] http://www.iwr.usace.army.mil/Missions/FloodRiskManagement/FloodRiskManagementProgram/AbouttheProgram.aspx

to repair the levee if it is damaged by flooding. Mississippi River flooding can be devastating to the levees protecting communities and it is important that those levee systems are soon repaired after being damaged. Not being eligible for federal funds to assist with those repairs may pose a significant problem and lead to increased future flood risk. However, lowering the levees from their current elevation, especially to the height initially authorized by Congress in 1954, will now result in greater flood risk as well as loss of accreditation on the FEMA flood maps.

To resolve this untenable situation we ask that Congress recognize the current actual elevation of the Sny levees, determined by the 2004 Upper Mississippi Flow Frequency Study 100-year profile plus 3 feet of freeboard, as specifically authorized, including for purposes of FEMA accreditation and the Corps Levee Rehabilitation and Inspection Program.

4.0 COST ESTIMATE

The authorization of the current Sny Island Levee Drainage District levee elevation would be of no cost to the Federal government. No Federal funds were sought due to relatively low NED. However, regionally the benefit is strong with a calculated Regional Economic Development (RED) benefit to cost ratio of 5:1. For this reason, all funding was provided locally through assessments of its stakeholders following the procedures of the Illinois Drainage Code. The project was complete as part of a levee regrade post the Flood of 2008. Construction of this project was done in general accordance with the levee improvement practices being used at that time.

By authorizing this proposal, Congress is providing the Sny Island Levee Drainage District the ability to maintain their current 100-year level of protection, as recognized by FEMA.

5.0 BENEFITS OF THE PROPOSED PROJECT

The population located behind the Sny's levees is approximately 1,237 (The nearby Hannibal urban levee systems is authorized higher, protect fewer residents (93), and provides a smaller average annual benefit). The proposed project would not only protect the Sny Island Levee Drainage District population, but also protect approximately 86.5 miles of U.S., State, and County Highways, 18.6 miles of railroads, significant industrial/commercial development, and two wastewater treatment

facilities[5]. These facilities treat the wastewater of residential, commercial, and industrial users in Hull (pop. 461) and Pleasant Hill (pop. 1,047). The Sny also indirectly protects the wastewater treatment facilities of New Canton and Kinderhook. For example, FEMA incurred significant costs to upgrade the Kinderhook facility to handle the displaced population from the Sny in 1993. The USACE estimates that the existing protection has prevented annual damages of approximately 64.4 million since 1993, (compared to the Hannibal Floodwall estimated at 1.8 million)[6].

The Sny is a portion of the Upper Mississippi River Basin levee system, which provides direct or indirect protection to major roadways and railway bridges that cross the Mississippi or Illinois Rivers. A study entitled "Detour and Transportation infrastructure Costs Due to a Major Flood Event on the Upper Mississippi and Illinois Rivers," by the Center of Transportation Research at the University of Tennessee found that the total cost of detour, road damage, and highway damage due to a major flood event was $1.027 billion. The Sny provides a portion of that transportation benefit. This was never more evident than the Great Flood of 1993 where bridges across the Mississippi were out or inaccessible for over 270 miles, from Davenport, Iowa to St. Louis, Missouri, bringing the Midwestern economy to a halt.

Furthermore, the Sny flood fights during significant events by pushing up their sand levee and sandbagging where necessary. When the flooding subsides, the Federal Emergency Management Agency (FEMA) funding is applied for to cover flood fighting expenses. If the flood fighting was unsuccessful and the levee overtopped, then the District would apply for funding from the USACE under PL84-99. This cycle of flood fighting and repair work has occurred several times since original authorization, to significant federal and local expense. PL84-99 expenses in the last 15 years alone have reached nearly 8 million dollars. Table 1 below shows the PL84-99 costs since 2001 in the year they were incurred. This does not include the flooding cost incurred by the Sny during its levee failure in the Great Flood of 1993. In 1993, the Upper Mississippi River total damage estimates reached 15 to 20 billion dollars.

Table 1. PL84-99 Costs Since 2001

Flood Year	Total PL84-99 Cost ($)
2001	960,905
2002	1,054,632
2008	4,489,400
2013	1,603,400

While the cost of flooding has been significant it is important to note that the Sny also provides a significant economic benefit to its surrounding region. The USACE has estimated that the Sny has prevented approximately $1,305,645,900 in damages since 1973[7]. The levee protects critical

[5] Miles of highway and railroads were determined via geospatial analysis. Data sources were provided by the Illinois Geospatial Clearinghouse.
[6] Estimates for the Sny's yearly damages prevented were compiled by Dennis Johnson, of the USACE.
[7] Estimates for the Sny's yearly damages prevented were compiled by Dennis Johnson, of the USACE. Damages were determined in the year in which they occurred. Base damages prevented values are derived using the best available USACE stage-damage

aspects of the local economy, and if lumped together with other Districts further benefits will be seen throughout the region. With very little to no further Federal investment, the proposed project can ensure a lasting level of protection for the region and continue to protect this critical area.

6.0 LOCAL SUPPORT

The Sny Levee Drainage District Board has completed the work described herein to attain, with the help of the Corps, FEMA 100-year accreditation, which the Sny now seeks to maintain. The Sny landowners and residents in the protected communities also support and would benefit greatly from this authorization. Other levee and drainage districts in the area typically support one another's efforts to improve or maintain their levee systems. The Sny Island Levee Drainage District is a member of the Upper Mississippi Illinois Missouri Rivers Association (UMIMRA) which is a group of Upper Mississippi River stakeholders throughout the Tri-State: Illinois, Missouri, and Iowa Region. This group and its members strongly support the ability for Sny Island Levee Drainage District to maintain their system.

7.0 FINANCIAL ABILITY

The Sny has the financial ability and financial stability to meet the Federal requirements for cost share according to ER 1105-2-100, The Flood Control Act of 1936, and WRDA 1986. The district assesses their protected stakeholders using the provisions outlined in the Illinois Drainage Code.

8.0 LETTERS OF SUPPORT

Letters of support are included in Appendix A.

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curves. Base values are indexed to respective price levels using Engineering News-Records (ENR) construction and labor indices for property, USDA production indices for crops, and ENR labor indices for emergency costs.

APPENDIX A
LETTERS OF SUPPORT

Meagan Kaiser
Executive Director
Michael Klingner
Chairman, Illinois
Vicki Stoller
Vice Chairman, Iowa
Dianne Barnett
Treasurer, Illinois
David McMurray
Executive Committee, Iowa
John Winkelman
Executive Committee, Missouri
Jason Hutcheson
Director, Iowa

UMIMRA
UPPER MISSISSIPPI, ILLINOIS & MISSOURI RIVERS ASSOCIATION

P.O. Box 418, Bowling Green, MO 63334
573.489.9173

Joseph B. Gibbs, PE
Director, Missouri
Philip Held
Director, Missouri
Al Muhlenbruck
Director, Iowa
Brent Hoerr
Director, Missouri
Jim Koeller
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Roger Sutter
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Kevin Rund
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December 1, 2014

U.S. Army Corps of Engineers
Attn: CECW-CE (Lisa Keifel)
441 G Street NW
Washington, DC 20314-1000

RE: Section 7001 of the Water Resources Reform and Development Act of 2014

Dear Ms. Keifel,

Established in 1954, UMIMRA is a grassroots stakeholder organization advocating for a stronger Upper Mississippi Valley through flood control. Reliable flood control leads to a more reliable navigation channel, economic development, and a better way of life for the communities along the river. UMIMRA works closely with local, state, and federal legislators, the U.S. Army Corps of Engineers, and other agencies to ensure our members concerns are heard.

UMIMRA sends this letter of support for the Sny Island Levee Drainage District application.
The District was established to protect 112,000 acres and aid in the reduction of waterborne illness. It has been estimated that the District has prevented approximately $1,305,645,900 in damages since 1973.

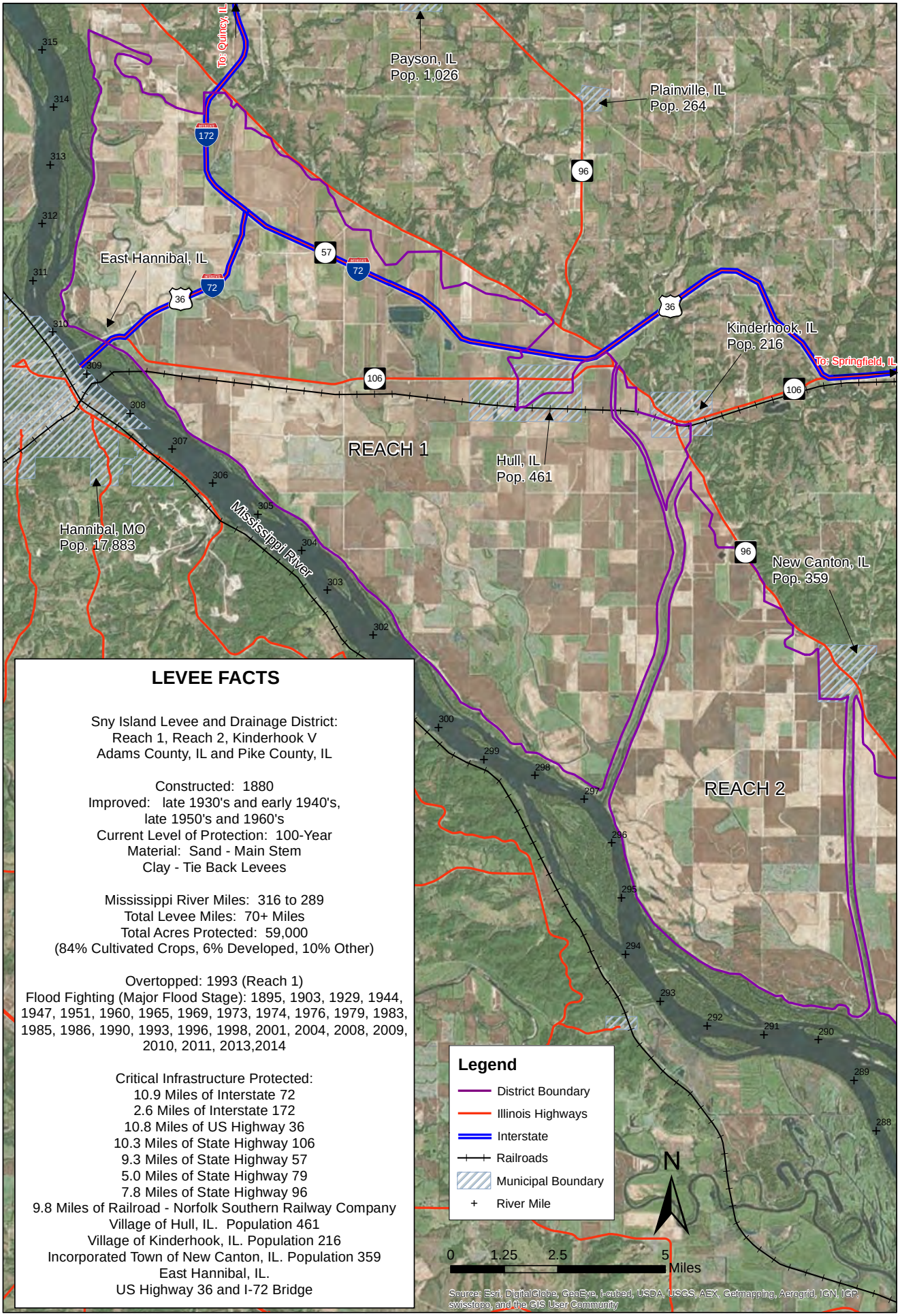
The population located behind this levee is approximately 819. The proposed project would not only protect this population, but also protect approximately 86.5 miles of U.S., State, and County Highways, 18.6 miles of railroads, significant industrial/commercial development, and residences. The proposed project would provide additional protection for human health and these roadways, railways, and businesses beyond the existing estimated annual damages prevented of approximately $32.6 million.

Thank you for your consideration,

Meagan Kaiser

Meagan Kaiser, Executive Director
Upper Mississippi, Illinois, & Missouri
Rivers Association

APPENDIX B
MAPS



LEVEE FACTS

Sny Island Levee and Drainage District:
Reach 1, Reach 2, Kinderhook V
Adams County, IL and Pike County, IL

Constructed: 1880
Improved: late 1930's and early 1940's,
late 1950's and 1960's
Current Level of Protection: 100-Year
Material: Sand - Main Stem
Clay - Tie Back Levees

Mississippi River Miles: 316 to 289
Total Levee Miles: 70+ Miles
Total Acres Protected: 59,000
(84% Cultivated Crops, 6% Developed, 10% Other)

Overtopped: 1993 (Reach 1)
Flood Fighting (Major Flood Stage): 1895, 1903, 1929, 1944, 1947, 1951, 1960, 1965, 1969, 1973, 1974, 1976, 1979, 1983, 1985, 1986, 1990, 1993, 1996, 1998, 2001, 2004, 2008, 2009, 2010, 2011, 2013,2014

Critical Infrastructure Protected:
10.9 Miles of Interstate 72
2.6 Miles of Interstate 172
10.8 Miles of US Highway 36
10.3 Miles of State Highway 106
9.3 Miles of State Highway 57
5.0 Miles of State Highway 79
7.8 Miles of State Highway 96
9.8 Miles of Railroad - Norfolk Southern Railway Company
Village of Hull, IL. Population 461
Village of Kinderhook, IL. Population 216
Incorporated Town of New Canton, IL. Population 359
East Hannibal, IL.
US Highway 36 and I-72 Bridge

SHEET 1

GENERAL LOCATION

SHEET TITLE

DRAWING DATE 11/17/2014

PROJECT NO.

SNY ISLAND LEVEE DRAINAGE DISTRICT

P.O. BOX 169, 490 N. MAIN
NEW CANTON, IL 62356

SCALE: 1 INCH = 1 MILE

DESIGNED WEK | DRAWN WEK
FIELD | FIELD BOOK
CHECKED | CHECK DATE

FILE NAME XXX

NO.	APPR.	REVISION DESCRIPTION	DATE

FULL SCALE DRAWING SIZE: 22" x 34"

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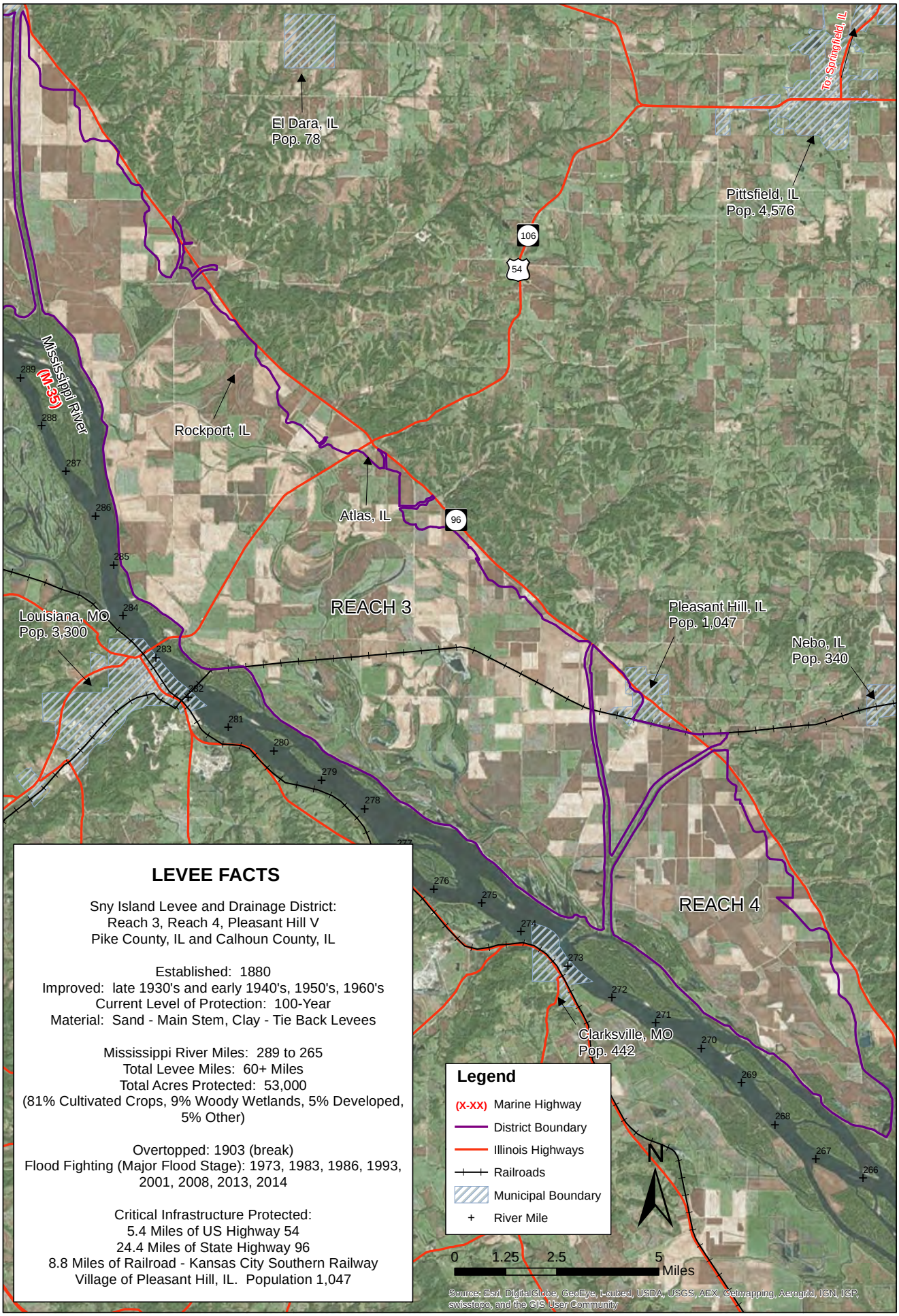
KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors
616 North 24th Street, Quincy, IL Ph 217.223.3670 - Fax 217.223.3603
6510 Paris Gravel Road, Hannibal, MO Ph 573.221.0020 - Fax 573.221.0012
610 N. 4th Street, Suite 100, Burlington, IA Ph 319.752.3603 - Fax 319.752.3605
49 North Prairie Street, Galesburg, IL Ph 309.342.4042 - Fax 309.341.3781
Internet Address: www.klingner.com



LEVEE FACTS

Sny Island Levee and Drainage District:
Reach 3, Reach 4, Pleasant Hill V
Pike County, IL and Calhoun County, IL

Established: 1880
Improved: late 1930's and early 1940's, 1950's, 1960's
Current Level of Protection: 100-Year
Material: Sand - Main Stem, Clay - Tie Back Levees

Mississippi River Miles: 289 to 265
Total Levee Miles: 60+ Miles
Total Acres Protected: 53,000
(81% Cultivated Crops, 9% Woody Wetlands, 5% Developed, 5% Other)

Overtopped: 1903 (break)
Flood Fighting (Major Flood Stage): 1973, 1983, 1986, 1993, 2001, 2008, 2013, 2014

Critical Infrastructure Protected:
5.4 Miles of US Highway 54
24.4 Miles of State Highway 96
8.8 Miles of Railroad - Kansas City Southern Railway
Village of Pleasant Hill, IL. Population 1,047

SHEET 1

GENERAL LOCATION

SHEET TITLE

DRAWING DATE 11/17/2014

PROJECT NO.

PROJECT MANAGER

SNY ISLAND LEVEE DRAINAGE DISTRICT

P.O. BOX 169, 490 N. MAIN
NEW CANTON, IL 62356

SCALE: 1 INCH = 1 MILE

DESIGNED WEK | DRAWN WEK
FIELD | FIELD BOOK
CHECKED | CHECK DATE

FULL SCALE DRAWING SIZE: 22" x 34"

FILE NAME XXX

NO.	APPR.	REVISION DESCRIPTION	DATE

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KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors
616 North 24th Street, Quincy, IL — Ph 217.223.3670 - Fax 217.223.3603
6510 Paris Grand Road, Hannibal, MO — Ph 573.221.0020 - Fax 573.221.0012
610 N. 4th Street, Suite 100, Burlington, IA — Ph 319.752.3603 - Fax 319.752.3605
49 North Prairie Street, Galesburg, IL — Ph 309.342.4042 - Fax 309.341.3781
Internet Address: www.klingner.com

APPENDIX C
SUPPORTING DOCUMENTS

DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS
CLOCK TOWER BUILDING — P.O. BOX 2004
ROCK ISLAND, ILLINOIS 61204-2004

September 6, 1996

REPLY TO
ATTENTION OF:

Emergency Management
Division

ASSOCIATES
RECEIVED
DATE 9/10/96

Mr. Michael D. Klingner, P.E.
Klingner & Associates, P.C.
613 Broadway
Quincy, Illinois 62301

Dear Mr. Klingner:

This letter is provided in reply to two of your letters dated June 5, and June 24 concerning the Sny Island Levee Drainage District. Your letters raised concern in two areas, the first was the upper end area repaired by the Corps after the 1993 flood damage. The second issue was that of a levee freeboard difference in the reach across from Hannibal, Missouri.

As you are aware, the Rock Island District arranged to obtain drill borings at sites suggested in your June 24 letter. The borings were completed in mid July and the laboratory analysis report of the work was recently completed. A copy of the report is enclosed for your information. The report finds that the materials used to construct this reach of the levee are within all normal design parameters assumed for the 1993 repair work. Additionally, the landside slope and berm enhancement work accomplished by the Sny District in 1995 and this year, elevates the levee safety factor considerably.

Based on this analysis, I believe the levee section is properly designed, constructed and is performing as expected. No further action is required or recommended.

As for the issue of levee freeboard in the reach from station 433+00 to 903+00; the authorizing project document set forth a project freeboard for the mainstem Sny Island Drainage Levee District levees of 2 feet above the Mississippi River design flood profile. This freeboard was raised to three feet in certain critical locations in accordance with criteria and considerations contained in Engineering Bulletin 54-14 and first endorsement thereon, dated 25 October 1962. Application of this criteria resulted in design levee freeboard variation from 2 to 3 feet interspersed throughout all four cells of the Sny Island Levee Drainage District. The reach in question did not meet the criteria for a 3 foot freeboard.

The Sny Island Levee Drainage District may wish to increase the overall levee freeboard in the reach from station 433+00 to 903+00 to 3 feet. Any Corps of Engineers involvement from a design and construction standpoint would require specific congressional authorization or a Support For Others (SFO) agreement.

Sincerely,

Charles S. Cox
Colonel, U.S. Army
District Engineer

Enclosure

Copy Furnished:

Mr. Mike Reed, Executive Director
Sny Island Levee Drainage District
Hull, Illinois 62343

DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS
CLOCK TOWER BUILDING - P.O. BOX 2004
ROCK ISLAND, ILLINOIS 61204-2004

REPLY TO
ATTENTION OF:

April 12, 2002

KLINGNER &
ASSOCIATES P.C.
RECEIVED
DATE 4/15/02

Planning, Programs, and
Project Management Division

Mr. Mike Reed
Levee Commissioner
Sny Island Levee and Drainage District
P.O. Box 169
New Canton, Illinois 62356

Dear Mr. Reed:

This letter is to relate the findings of the technical review by the Rock Island District of the U.S. Army Corps of Engineers (Corps) of the data and analysis furnished by Klingner and Associates regarding the Sny Island Levee and Drainage District. The data and analysis was provided to determine if the Sny Island Levee and Drainage District qualifies for levee certification for National Flood Insurance Program (NFIP) purposes.

As part of the study, Klingner and Associates did an evaluation of interior flooding. Their report was evaluated by the Corps' Rock Island District and was found acceptable. The Levee District meets certification requirements as per the data, analysis, and inundation mapping supplied by Klingner and Associates. According to the data furnished, main-stem and tributary levees provide 3 feet of freeboard above the water-surface level of the base flood elevation (BFE) of the Mississippi River (*Upper Mississippi River Water Surface Profiles, River Mile 0.0 to River Mile 847.5*, published by the Technical Flood Plain Management Task Force in November 1979). It should be noted that updated Upper Mississippi River System Flow Frequency profiles will be published in March of 2003. It is anticipated that the March 2003 BFE will vary from that used in this certification evaluation.

The Corps' Rock Island District Geotechnical Branch evaluated the levee data according to the Corps' geotechnical guidelines. They did an on-site inspection, studied plotted cross-section surveys, reviewed seepage analysis computations, and evaluated the historic performance of the levee. They concluded that the levee passes the Corps' structural standards for NFIP certification for all Reaches 1, 2, 3, and 4, with the requirement that slope maintenance to be performed in Reach 2 by your organization (additional sand fill) from Station 1170+00 to Station 1332+00 be accomplished this spring/summer.

Based on the above studies and considerations, the Corps' Rock Island District has determined that the Sny Island Levee and Drainage District provides protection for a flood which has a 1-percent chance of occurrence in any given year, using the presently established BFE of the Mississippi River. The Rock Island District therefore has no objection to the certification of the levee system by Klingner and Associates under Federal Emergency Management Agency guidelines (44 CFR 65.10). The flooding source for this certification evaluation is the main stem Mississippi River. Please note that this statement does not constitute a warranty of performance, but rather the Corps' current position of the levee system's design adequacy, based on review of the information provided by Klingner and Associates.

Sincerely,

Gary L. Loss PE

Gary L. Loss, P.E.
Chief, Planning, Programs, and
Project Management Division

Copies Furnished:

Mr. Don Vonnahme
Illinois Department of Natural Resources
3215 Executive Park Drive
Springfield, Illinois 62703

Mr. Mike Klingner
Klingner & Associates, P.C.
616 North 24th Street
Quincy, Illinois 62301

STATE OF ILLINOIS

EXECUTIVE DEPARTMENT

SPRINGFIELD, ILLINOIS

2006-05

CONSTRUCTION ACTIVITIES IN SPECIAL FLOOD HAZARD AREAS

WHEREAS, the State of Illinois has programs for the construction of buildings, facilities, roads, and other development projects and annually acquires and disposes of lands in floodplains; and

WHEREAS, federal financial assistance for the acquisition or construction of insurable structures in all Special Flood Hazard Areas requires State participation in the National Flood Insurance Program; and

WHEREAS, the Federal Emergency Management Agency has promulgated and adopted regulations governing eligibility of State governments to participate in the National Flood Insurance Program (44 C.F.R. 59-79), as presently enacted or hereafter amended, which requires that State development activities comply with specified minimum floodplain regulation criteria; and

WHEREAS, the Presidential Interagency Floodplain Management Review Committee has published recommendations to strengthen Executive Orders and State floodplain management activities;

NOW THEREFORE, by virtue of the authority vested in me as Governor of the State of Illinois, it is hereby ordered as follows:

1. For purpose of this Order:

A. “Critical Facility" means any facility which is critical to the health and welfare of the population and, if flooded, would create an added dimension to the disaster. Damage to these critical facilities can impact the delivery of vital services, can cause greater damage to other sectors of the community, or can put special populations at risk. The determination of Critical Facility will be made by each agency.

Examples of critical facilities where flood protection should be required include:
Emergency Services Facilities (such as fire and police stations)
Schools
Hospitals
Retirement homes and senior care facilities
Major roads and bridges
Critical utility sites (telephone switching stations or electrical transformers)
Hazardous material storage facilities (chemicals, petrochemicals, hazardous or toxic substances)

Examples of critical facilities where flood protection is recommended include:
Sewage treatment plants
Water treatment plants
Pumping stations

B. "Development" or "Developed" means the placement or erection of structures (including manufactured homes) or earthworks; land filling, excavation or other alteration of the ground surface; installation of public utilities; channel modification; storage of materials or any other activity undertaken to modify the existing physical features of a floodplain.

C. "Flood Protection Elevation" means one foot above the applicable base flood or 100-year frequency flood elevation.

D. "Office of Water Resources" means the Illinois Department of Natural Resources, Office of Water Resources.

E. "Special Flood Hazard Area" or "Floodplain" means an area subject to inundation by the base or 100-year frequency flood and shown as such on the most current Flood Insurance Rate Map published by the Federal Emergency Management Agency.

F. "State Agencies" means any department, commission, board or agency under the jurisdiction of the Governor; any board, commission, agency or authority which has a majority of its members appointed by the Governor; and the Governor's Office.

2. All State Agencies engaged in any development within a Special Flood Hazard Area shall undertake such development in accordance with the following:

   A. All development shall comply with all requirements of the National Flood Insurance Program (44 C.F.R. 59-79) and with all requirements of 92 Illinois Administrative Code Part 700 or 92 Illinois Administrative Code Part 708, whichever is applicable.

   B. In addition to the requirements set forth in preceding Section A, the following additional requirements shall apply where applicable:

      1. All new Critical Facilities shall be located outside of the floodplain. Where this is not practicable, Critical Facilities shall be developed with the lowest floor elevation equal to or greater than the 500-year frequency flood elevation or structurally dry floodproofed to at least the 500-year frequency flood elevation.

      2. All new buildings shall be developed with the lowest floor elevation equal to or greater than the Flood Protection Elevation or structurally dry floodproofed to at least the Flood Protection Elevation.

      3. Modifications, additions, repairs or replacement of existing structures may be allowed so long as the new development does not increase the floor area of the existing structure by more than twenty (20) percent or increase the market value of the structure by fifty (50) percent, and does not obstruct flood flows. Floodproofing activities are permitted and encouraged, but must comply with the requirements noted above.

3. State Agencies which administer grants or loans for financing development within Special Flood Hazard Areas shall take all steps within their authority to ensure that such development meets the requirements of this Order.

4. State Agencies responsible for regulating or permitting development within Special Flood Hazard Areas shall take all steps within their authority to ensure that such development meets the requirements of this Order.

5. State Agencies engaged in planning programs or programs for the promotion of development shall inform participants in their programs of the existence and location of Special Flood Hazard Areas and of any State or local floodplain requirements in effect in such areas. Such State Agencies shall ensure that proposed development within Special Flood Hazard Areas would meet the requirements of this Order.

6. The Office of Water Resources shall provide available flood hazard information to assist State Agencies in carrying out the responsibilities established by this Order. State Agencies which obtain new flood elevation, floodway, or encroachment data developed in conjunction with development or other activities covered by this Order shall submit such data to the Office of Water Resources for their review. If such flood hazard information is used in determining design features or location of any State development, it must first be approved by the Office of Water Resources.

7. State Agencies shall work with the Office of Water Resources to establish procedures of such Agencies for effectively carrying out this Order.

8. **Effective Date**. This Order supersedes and replaces Executive Order Number 4 (1979) and shall take effect on the first day of.

_____
Rod R. Blagojevich, Governor

Issued by Governor: March 7, 2006
Filed with Secretary of State: March 7, 2006