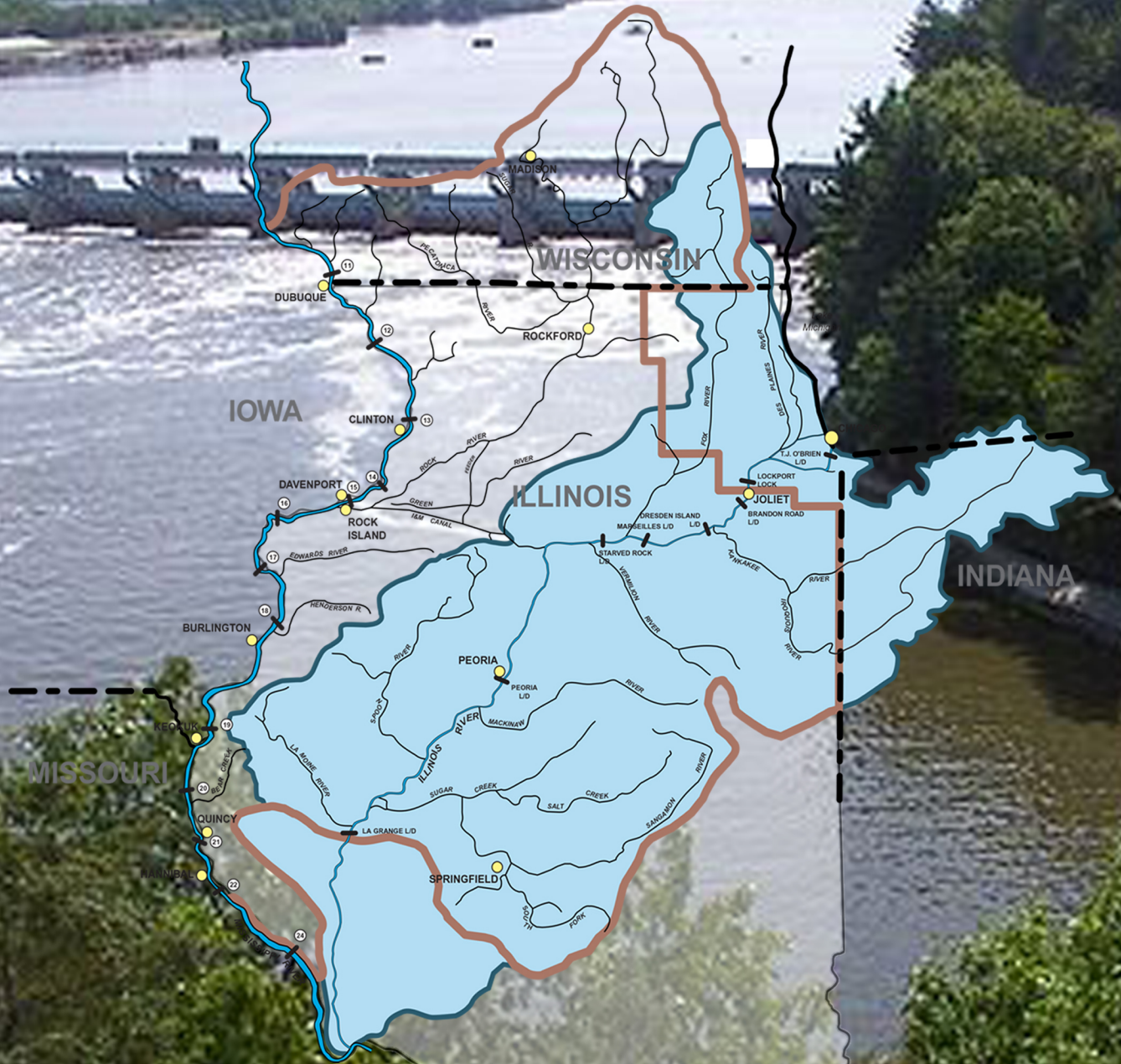




US Army Corps
of Engineers®
Rock Island District

Periodic Basin Management Report 2014



Illinois River Basin Illinois, Indiana and Wisconsin

PERIODIC BASIN MANAGEMENT REPORT 2014

ILLINOIS RIVER BASIN ILLINOIS, INDIANA, AND WISCONSIN

EXECUTIVE SUMMARY

2014 BASIN STATUS

In 2014, planning proceeded on three IL 519 Program Critical Restoration Projects (completing one in FY14, Senachwine). Construction of the Peoria Upper Island project was completed in October of 2013 and the Waubonsie Creek Fish Passage Project was completed in November of 2011. Construction of the Blackberry Creek Fish Passage was initiated by the State of Illinois in 2012. The Comprehensive Plan was approved by HQUSACE in May 2007. In 2008, the Comprehensive Plan was approved by the Assistant Secretary of Army, Civil Works and the Office of Management and Budget. Four construction projects—Pekin Lake North, Pekin Lake South Backwater, Starved Rock, and Alton Pool—are on hold pending Federal funding.

The Upper Mississippi River Restoration, formerly known as Environment Management Program, continues to plan, design and construct 33 projects on the Upper Mississippi River and the Illinois Waterway. Additional systemic monitoring of habitat conditions of the Illinois River continues in partnership with the States of Illinois, Iowa, and Wisconsin, the U.S. Geological Survey, and the U.S. Fish and Wildlife Service.

The Illinois Waterway provides a world class inland navigation link between the Lake Michigan/Chicago Metropolitan area and the Mississippi River. Approximately 30-35 million tons of commerce transits the Illinois Waterway annually. In addition to the regular maintenance activities that keep the system open for business year round, major rehabilitation was initiated on the Lockport Pool Canal walls. This critical multi-year project will replace portions of the canal walls that are over 100 years old.

A direct Federal investment of approximately \$66 million has been made in the Illinois River Basin in FY 2014 to maintain a world class navigation system, restore critical ecosystem structure and function and manage flood risks within the Basin. Additional investments were made in the Upper Mississippi River System of which the Illinois River Basin is a significant portion.

Illinois River Basin

2014 BASIN STATUS

Illinois River Basin Fiscal Year 2014 Allocations-Rock Island District

	FY 2014 Direct Project Funding in the Illinois	FY 2014 Indirect Program Funding in the Illinois Basin
GENERAL INVESTIGATIONS		
IL River Basin Restoration (Sec 519)	\$400,000	\$0
CONSTRUCTION, GENERAL		
Upper Mississippi River Restoration (EMP) (Rock Island District)	\$25,746,000	\$6,225,000
Illinois Waterway -Lockport	\$28,000	\$0
CONTINUING AUTHORITIES PROGRAM-TRADITIONAL		
Sec 205 Marseilles	\$50,000	\$0
OPERATIONS & MAINTENANCE		
Illinois Waterway	\$39,500	\$0
Farm Creek Reservoirs	\$312,000	\$0

**PERIODIC BASIN MANAGEMENT REPORT
2014**

**ILLINOIS RIVER BASIN
ILLINOIS, INDIANA, AND WISCONSIN**

EXECUTIVE SUMMARYES-I

SECTION I INTRODUCTION I-1

A. Purpose of the Periodic Basin Management Report..... 1
B. Watershed Perspective Policy 1
C. Basin Description and Location.....4

SECTION II BUSINESS LINE ASSESSMENT.....II-1

A. Navigation 1
B. Ecosystem Restoration 10
C. Flood Risk Management..... 26
D. Emergency Response and Flood Recovery PL (84-99)..... 27
E. Flood Area Engineer..... 28
F. Regulatory..... 29

SECTION III PROGRAM ADMINISTRATION..... III-1

A. Upper Mississippi River Restoration -Coordinating Committee 1
B. River Resources Action Team..... 3
C. River Resources Coordinating Team..... 4
D. Metropolitan Water Reclamation District of Greater Chicago..... 4
E. Illinois River Basin Restoration Program..... 5
F. Illinois River Coordinating Council..... 7
G. Fish and Wildlife Interagency Committee 8

SECTION IV HISTORICAL OVERVIEWIV-1

A. Ongoing Corps of Engineers Study..... 1
B. Corps Studies in the Basin..... 1
C. Study by Others 2
D. Studies by Stakeholders..... 2

Illinois River Basin

Figure I-1 Illinois River Basin I-4

Figure II-1 Illinois Waterway Navigation Pools and Elevations..... II-2

Figure II-2 Critical 519 Restoration Projects II-11

Figure II-3 Fox River Watershed..... II-17

Figure II-4 Yellow River Watershed II-19

Figure II-5 Emiquon Study Area II-25

Figure II-6 Rock Island District Flood Response Boundaries..... II-28

Figure III-1 Study Organizational Structure III-6

Table II-1 Goals, Objectives and Potential Features of the Emiquon HREP II-26

APPENDICES

Appendix A Fact Sheets

Appendix B Basin Map

Appendix C Stakeholders in the Basin

SECTION I. INTRODUCTION

A. PURPOSE OF THE PERIODIC BASIN MANAGEMENT REPORT

The intent of this document is to provide a comprehensive reference for all U.S. Army Corps of Engineers (Corps) programs and projects in the Illinois River Basin. The Corps is responsible for a number of major mission responsibilities within the Basin. This document seeks to integrate these activities regardless of District or Division boundaries or Program restrictions. The Illinois River Basin is cooperatively managed by four Corps Districts: Rock Island, Chicago, Detroit and St. Louis. Those programs or projects being centrally managed from Rock Island District (District) that fall within other District boundaries are included in this document.

The District is responding to the region's water resource challenges through integrated water resources management with a watershed (river basin) focus. The benefit of the District's watershed approach is that it requires us to think about water resources development and management in the context of a larger system, rather than a single project, function or business program and thus facilitates the search for comprehensive and integrated solutions to achieve objectives set by all concerned parties. By taking into account a multitude of water uses over a wide area as opposed to concentrating on a single use at one project site, it becomes possible to integrate a complete array of public values, institutional policies and priorities, regulatory procedures, planning criteria, public participation, and private sector business interests. The District has had a historical presence in these basins and is committed to providing future products and services to meet the needs of the region and Nation.

B. WATERSHED PERSPECTIVE POLICY

The concept of "watershed" is not new to the Corps. Throughout the history of the Corps, a watershed approach has been, at varying levels, integrated into the process by which water resource systems have been investigated. The geographic "basin" organization of the Corps' Civil Works programs supports the Corps' historic understanding of the necessity of managing water resource activities within a watershed context. There is a growing recognition that "locally perceived water resources problems" have regional dimensions and are of concern to numerous, diverse interest groups. Many activities occurring in a watershed are inter-related and, therefore, managing water resources has evolved to more of a holistic, collaborative effort. The Corps has developed its own watershed perspective to guide water resources development, protection, and management within the Civil Works program. This watershed perspective accommodates the multi-objective, multi-purpose planning and investigations necessary for exploring these concerns. It is being adopted to help improve performance, customer satisfaction, and overall program efficiency and effectiveness and to assure use of the water resources in a sustainable manner, taking into account environmental protection, economic development, and social well-being.

1. Applicability: The watershed perspective applies to all Civil Works programs through planning, design, construction, operation, maintenance, restoration, rehabilitation, and regulatory activities. The application of this perspective into the Civil Works program encourages opportunities for enhancing the operations and maintenance (O&M) of existing projects, especially the management of the natural resources. In addition, this perspective facilitates the integration of the nine Corps' Civil Works business programs into the identification and development of new Corps' initiatives. The perspective recognizes the responsibility of the Corps as a major stakeholder in many of the Nation's watersheds.

2. Definitions: Federal, tribal, state, and local agencies and organizations have varying interpretations of the definition of a watershed, the identification of the range of water resources issues, and the methods of evaluation. They also have differing views on the anticipated purposes and goals of watershed initiatives. These interpretations are based on defining manageable units and specific issues that a particular agency or organization has determined to be appropriate for its individual mission areas and identifying ways to meet its program goals. For the purpose of Corps Civil Works initiatives, the following definitions apply:

Watershed perspective is the viewpoint which requires that all activities be accomplished within the context of an understanding and appreciation of the impacts of those activities on other resources in the watershed. The watershed perspective encourages the active participation of all interested groups and requires the use of the full spectrum of technical disciplines in activities and decision making. This viewpoint takes into account (1) the interconnectedness of water and land resources, (2) the dynamic nature of the economy and environment, and (3) the variability of social interests over time. It recognizes that watershed activities are not static, and that the strategy for managing the resources of the watershed needs to be adaptive.

A ***watershed*** is an area of land within which all surface waters flow to a single point. It encompasses the area necessary to adequately scope, analyze, and manage related water and land resources.

Watershed management is the administration of and potential adjustments to the level and type of interaction among various human activities and natural processes occurring in the watershed through the application of the watershed perspective. Watershed management includes the planning, development, use, monitoring, regulation and preservation of the water and land resources. It should achieve a desirable balance among multiple, and often competing, watershed goals and objectives.

Watershed studies are planning initiatives that have a multi-purpose and multiobjective scope and that accommodate flexibility in the formulation and evaluation process. The outcome of a watershed study will generally be a watershed management plan, which identifies the combination of recommended actions to be undertaken by various partners and stakeholders in order to achieve the needs and opportunities identified in the study and may or may not identify further Corps studies or implementation projects. However, budgetary priority will be given to those studies likely to result in further Corps activities or which will provide benefits to an existing Corps project, the utilization of which is being impaired by activities or conditions within the watershed.

3. Policy: The Corps will integrate the watershed perspective into opportunities within, and among, Civil Works elements. Opportunities should be explored and identified where joint watershed resource management efforts can be pursued to improve the efficiency and effectiveness of the Civil Works Programs. The Corps will solicit participation from Federal, tribal, state, and local agencies, organizations, and the local community to ensure that their interests are considered in the formulation and implementation of the effort. Due to the complexity and interrelation of systems within a watershed, an array of technical experts, stakeholders, and decision-makers should be involved in the process. This involvement will provide a better understanding of the consequences of actions and Activities and provide a

mechanism for sound decision making when addressing the watershed resource needs, opportunities, conflicts, and trade-offs.

The watershed perspective encourages collaborative efforts, which advocate the integration of interests in the watershed by identifying, scoping, and developing comprehensive water resources management goals. This approach improves opportunities for public and private groups to identify and achieve common goals by unifying on-going efforts and leveraging resources. The specific roles and amount of involvement by the Corps and other parties will vary depending on the initiative, and the level of involvement may also vary throughout the process. The analytical framework will be founded on factual scientific, social, and economic information, allowing for the assessment, evaluation, and comparison of alternative plans, including positive and negative effects on economic development, the environment, and social well-being.

4. The Corps Civil Works watershed perspective includes:

- use of the water resources in a manner that is sustainable, taking into account environmental protection, economic development, and social well-being;
- coordinated planning and management of water and related land resources by the responsible Federal, tribal, state or local government;
- interagency cooperation, including cost-shared collaboration on initiatives that incorporate local, tribal, regional, and national water resources management goals;
- consideration of adaptive management of resources in the watershed;
- leveraging resources and integrating programs and activities within and among Civil Works programs—with other Federal, tribal state and non-governmental organizations—to improve consistency and cost effectiveness;
- identifying future water resource use demands, including local, tribal, regional, and Federal goals;
- using interdisciplinary teams to include a wide range of engineering and scientific expertise, as well as skills in public involvement, geographic information systems, alternative dispute resolution and other skills;
- public input to watershed resources development and management; and
- evaluating of the monetary and non-monetary trade-offs to be considered.

5. Implementation. The watershed perspective and principles will be incorporated into the existing guidance for the affected Civil Works programs. Guidelines are being developed to integrate the Corps watershed perspective into each Civil Works mission area. These guidelines will provide a useful tool for developing approaches, ranges of involvement, applications of process, and potential outcomes of Civil Works initiatives using the watershed perspective. The first guidelines will focus on the Corps Civil Works Planning mission. Additional guidelines will focus on the Regulatory Program, Natural Resources Management, Emergency Management, and Water Control Management.” (*Policy Guidance Letter #61 – Application of Watershed Perspective to Corps of Engineer Civil Works Programs and Activities, Jan 27, 1999*)

Illinois River Basin

C. BASIN DESCRIPTION AND LOCATION

The Illinois River begins at the point where the Des Plaines and Kankakee Rivers converge near the Will and Grundy County lines. The river flows for a distance of 273 miles, ultimately entering the Mississippi at Grafton, IL, about 40 miles north of St. Louis. The Illinois River is the largest tributary to the Mississippi River above the mouth of the Missouri River. Major tributaries to the Illinois include the Des Plaines, Kankakee, Fox, Vermilion, Mackinaw, Spoon, Sangamon, and La Moine Rivers. The Illinois Environmental Protection Agency (ILEPA) 305(b) report (2002) states that nearly 11,000 miles of perennial streams occur in the Illinois River Basin, with an estimated 20,000-25,000 additional miles of ephemeral streams. The entire Illinois River Basin is presented in figure I-1.



Figure I-1. Illinois River Basin

The entire Illinois River Basin encompasses approximately 33,000 square miles (19.2 million acres), covering 44 percent (16.5 million acres) of the land area of the States of Illinois, Indiana and Wisconsin and includes more than a dozen tributaries of the main river. About 1,000 square miles of the watershed, the upper portions of the Fox and Des Plaines Rivers, extend into Wisconsin. The Kankakee and Iroquois Rivers extend 3,200 square miles into Indiana. The Illinois River Basin includes 46 percent of the state's agricultural land; 28 percent of its forests; 37 percent of its surface waters and streams; and 95 percent of its urban areas.

Illinois River Basin

Counties located in the Illinois River Basin by state include:

Illinois

Adams	Brown	Bureau	Cass
Champaign	Christian	Cook	De Witt
DeKalb	DuPage	Ford	Fulton
Grundy	Hancock	Iroquois	Kane
Kankakee	Kendall	Knox	Lake
LaSalle	Lee	Livingston	Logan
Macon	Marshall	Mason	McDonough
McHenry	McLean	Menard	Peoria
Piatt	Putnam	Schuyler	Springfield
Stark	Tazewell	Warren	Will
Woodford			

Indiana

Benton	Elkhart
Fulton	Jasper
Kosciusko	Lake
LaPorte	Marshall
Newton	Porter
Pulaski	St. Joseph
Starke	White

Wisconsin

Jefferson
Kenosha
Racine
Walworth
Waukesha

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SECTION II. BUSINESS LINE ASSESSMENT

The Corps is the Nation's primary water resources development agency; this civil works responsibility is assigned by Congress. The Corps is responsible for the Inland Waterway Navigation System including the locks and dams on the Illinois River. Additionally the Corps manages the Upper Mississippi River Restoration (UMRR) formerly known as Environmental Management Program (EMP), which focuses on habitat rehabilitation and enhancement projects as well as long-term resources monitoring.

The primary Corps Missions in the Illinois River Basin are:

- A. Navigation
- B. Flood Risk Management
- C. Ecosystem Restoration
- D. Regulatory
- E. Emergency Response and Management

A. NAVIGATION

The Illinois Waterway (IWW) is part of the Federal Inland Waterway Navigation System. The inland waterway is essential to the economy of the Midwest and the nation. Consequently one of the Corps primary missions is to operate and maintain navigation along the Illinois River. The IWW (figure II-1) refers to the river and the navigation system that connects to Lake Michigan through the Des Plaines and Chicago Rivers and manmade navigation channels. With this added length, the IWW spans 336 miles from Lake Michigan to its confluence with the Mississippi River. A series of eight lock and dam (L/D) facilities, including Chicago Harbor Lock in Chicago District, Corps of Engineers (LRC), maintain conditions suitable for navigation.

1. Illinois Waterway Locks and Dams

- **Thomas J. O'Brien – Chicago, IL.** Placed into operation in 1960, T. J. O'Brien is the only commercial access from the IWW to Lake Michigan.
- **Lockport – Lockport, IL.** Lockport Lock Canal Walls Rehabilitation (Construction) \$88,861,000. In addition to the regular maintenance activities that keep the system open for business year round, major rehabilitation was initiated on the Lockport Pool Canal walls. This critical multi-year project will replace portions of the canal walls that are over 100 years old.
- **Brandon Road – Joliet, IL.** Opened in 1933, Brandon Road L/D is located 286 miles above the confluence of the Illinois River with the Mississippi at Grafton, IL
- **Dresden Island – Morris, IL.** This lock was designed by the State of Illinois from 1928 to 1930 and turned over to the Federal government at 35 percent completion. The lock opened in 1933.
- **Marseilles- Marseilles, IL.** The Marseilles complex was one of five begun by the State of Illinois in 1920. The dam was 95 percent complete when construction was turned over to the Federal government. The dam was completed in 1933.

Illinois River Basin

- **Starved Rock – Ottawa, IL.** The lock was turned over to the Federal government at 95 percent completion. It opened in 1933. As an added benefit to navigation missions, the District is able to provide a variety of public recreational opportunities at our two reservoirs and along the Illinois River at our Visitors Center at Starved Rock L/D.
- **Peoria – Creve Coeur, IL.** Opened in 1939, following the Supreme Courts decree of April 21, 1930, limiting the diversion of water from Lake Michigan. This lock is used only during low and moderate river flows. Peoria is one of only two wicket dams on the Illinois and is the location of the IWW Project Office.
- **LaGrange – Versailles, IL.** Also opened in 1939, following the Supreme Courts decree, limiting the diversion of water from Lake Michigan. This lock is used only during low and moderate river flows. LaGrange is one of only two wicket dams on the Illinois.

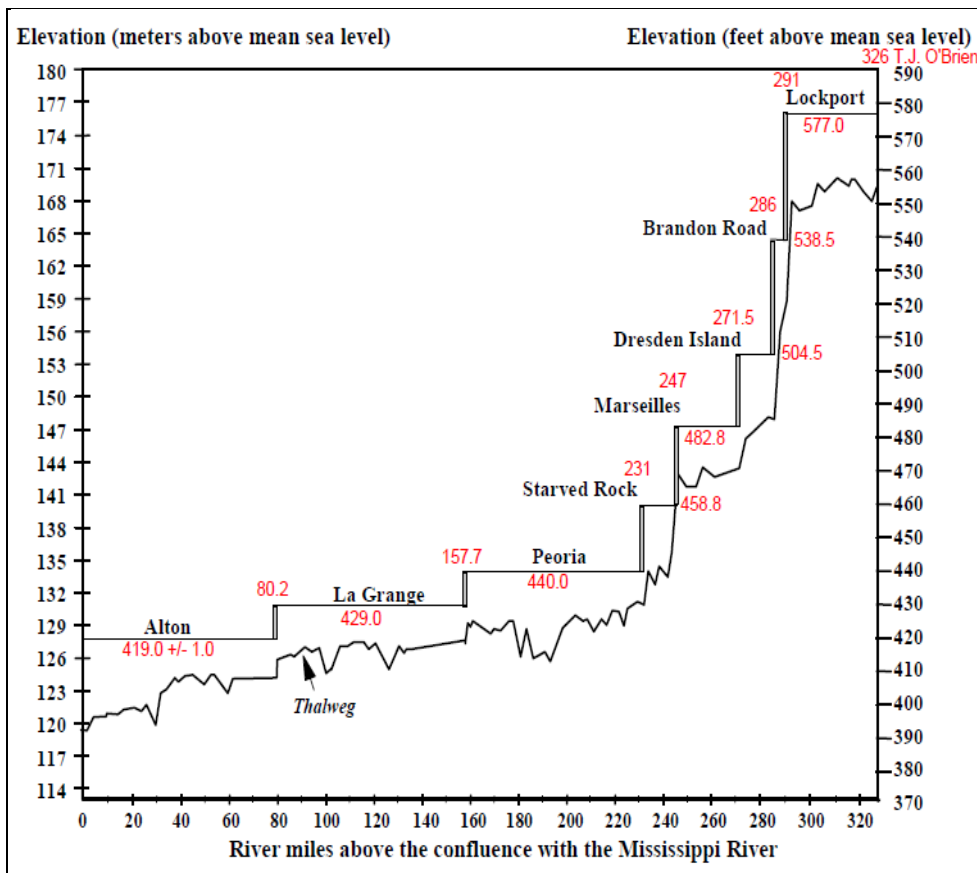


Figure II-1. Illinois Waterway Navigation Pools and Elevations

Two privately operated hydro power facilities are co-located with Corps navigation facilities at Starved Rock L/D and Lockport Lock.

2. Dredged Material Management Program (DMMP). The Rock Island District is preparing long-term (20- to 40-year capacity) Dredged Material Management Plans (DMMP) and Channel Maintenance Pool Plans (ChaMPPs) for the placement of channel maintenance dredged material in support of the operation and maintenance of the 9-foot navigation channel. The program ensures that all practicable and reasonable alternatives for the placement of dredged material are fully considered.

Illinois River Basin

This includes the placement of dredged material in the least costly manner, at the most practicable location, and consistent with engineering and environmental requirements. Within the Rock Island District, plans are being developed for 38 recurrent dredge cuts on the IWW and 44 recurrent dredge cuts on the UMR.

The Rock Island District has been developing plans and implementing sites for the long term placement of channel maintenance dredged material since the completion of GREAT II (Great River Environmental Action Team) studies in the early 1980s. The Dredged Material Management Program (DMMP) evaluates and identifies preferred alternative dredged material placement site(s) using a six-step planning process and, where applicable, a matrix with six evaluation criteria: dredging cost; natural resources; beneficial use of dredged material; recreational resources; cultural resources; and social impacts. Active projects include:

- Cal Sag
- Bull's Island
- Beardstown
- Spring Valley
- Mackinaw

Summarized Project Costs

The DMMP is funded out of the District's O&M budget.

The FY14 DMMP obligations and expenditures: IWW: \$705,700; \$275,500

FY14 work allowances: IWW: \$876,000

Additional Project Information

DMMPs Completed Thru FY14

Treats Island, Dresden Island Pool	Dresden Lower, Marseilles Pool
Marseilles Canal, Marseilles Pool	Milliken Creek, Starved Rock Pool
Bulls Island, Starved Rock Pool	Lick Creek and Peoria Lower, LaGrange Pool
Copperas Creek, LaGrange Pool	Mackinaw River/Kingston Mines, LaGrange Pool
Senate/Duck Island, LaGrange Pool	Beardstown, LaGrange Pool
Pekin/LaMarsh, LaGrange Pool	Grand Island Reach, LaGrange Pool
LaSalle Reach, Peoria Pool	Spring Valley Reach, Peoria Pool
IWW Plans remaining to be completed	Grist Island, Marseilles Pool
Kickapoo Creek, Peoria Pool	Lancaster, LaGrange Pool
Brigg's Landing, LaGrange Pool	Beardstown (new/add'l sites), LaGrange Pool
Mackinaw River, LaGrange Pool	Bull's Island, Starved Rock Pool
Blue Creek, Peoria Pool	Senachwine, Peoria Pool
Cal-Sag Channel	Quiver Island, LaGrange Pool

Major Work Item: FY14: IWW Program

- Initiate/advance LaSalle Site 17 land access plan
- Complete Dresden Site 10 land access plan and Real Estate Design Memorandum
- Complete Dresden Site 10 land access pre-acquisition requirements
- Acquire Dresden Site 10 land access
- Re-initiate/advance Bull's Island additional site(s) plan formulation

Illinois River Basin

- Advance Mackinaw Island additional site(s) plan formulation
- Acquire and implement Beardstown Site 2
- Complete Spring Valley Site 4 pre-acquisition requirements
- Acquire Spring Valley Site 9
- Complete Spring Valley plans & specs and implement site
- Advance Cal-Sag plan formulation

Major Work Item (Next Fiscal Year): FY15: IWW Program

- Initiate preparation of land access plans for Grand Island Site 2 and Pekin/LaMarsh Site 2
- Complete Cal Sag plan formulation
- Re-initiate Bull's Island additional site(s) plan formulation
- Re-initiate Beardstown additional site(s) plan formulation
- Complete pre-acquisition req's for LaSalle Site 17 land access
- Acquire LaSalle Site 17 land access
- Complete pre-acquisition req's for Spring Valley Site 4
- Acquire Spring Valley Site 4
- Complete post-acquisition req's for Spring Valley Site 9 and Dresden Site 10 land access
- Complete plans & specs for Dresden Site 10 land access and Spring Valley Site 9

Authority. O&M - Rivers and Harbors Acts of 1927, 1930, and 1935 in accordance with the Section 404 CWA & 33CFR, Parts 335-338

3. Channel Maintenance Dredging Projects. In order to maintain the 9-foot navigation channel, maintenance dredging is performed at various locations in the reach of the IWW in the District. The affected reach of the IWW includes approximately

- 271 river miles (RM) from LaGrange L/D, RM 80.2, to its source at the confluence of the Des Plaines and the Kankakee Rivers at RM 273;
- 17 miles of the Des Plaines River to the Chicago Sanitary & Ship Canal (CS&SC) at RM 290;
- the CS&SC to the South Branch of the Chicago River at RM 321.7; and
- the South Branch of the Chicago River to RM 325.6.

Also included are the Calumet Sag Channel, the Little Calumet River, and the Calumet River, extending from the channel's mouth at RM 303.4 on the CS&SC to just above the T. J. O'Brien L/D, RM 326.4. It is divided into seven pools by navigation dams (or a hydroelectric dam at Lockport). The present navigation system was initiated when Congress passed the River and Harbor Act of 1927, which authorized funds for its development from Utica, IL to St. Louis, MO. This legislation was modified in 1930 to include the State of Illinois initiated project from Utica to Lockport, and further modified in 1935 to increase the lower portion to its present 300-foot width. The CS&SC was completed in 1900 as a 22-foot depth project, and the Cal Sag Channel was completed in 1922 and modified, including widening, in 1960.

The 9-foot navigation channel project in the District is composed of eight L/Ds. Upstream of each dam and extending to the next dam is a slack-water navigation pool. Annual dredging is required at various locations in the main channel. Annual maintenance dredging of the IWW 9-foot Channel Project is generally required at 5 to 15 sites, and the volume of material dredged is approximately 250,000 cubic yards per year. Due to the large sediment load carried by the waterway and continually

Illinois River Basin

changing flows, specific dredging locations and quantities to be dredged vary from year-to-year. The dredged material is usually removed from the navigation channel by a contractor hydraulic cutterhead dredge and discharged to placement sites by floating pipeline. The contract dredge is a 14-to 16-inch hydraulic dredge. Under optimum conditions, the dredge can pump as much as 350 cubic yards per hour as far as 5,500 feet, including 1,500 feet inland. Dredged material is usually placed along the shoreline or in upland sites located in close proximity to the dredging site. Depending on location, dredged material is placed in the following manner:

- **Shoreline:** material is placed linearly along the shoreline for bankline stabilization or to rejuvenate recreational beaches that have diminished because of erosion; or.
- **Upland:** material is placed out of the river in bottomland forest, industrial sites, on levees, or in beneficial use sites.

Prior to the discharge of any dredged material, representatives of the Corps and the On-Site Inspection Team (OSIT) meet to determine the preferred placement site for the dredged material. The OSIT is composed of representatives of the appropriate Federal and State agencies. The U.S. Department of the Interior, the U. S. Fish & Wildlife Service (USFWS), along with representatives of Illinois, participate in the OSIT. At the end of each dredging season, the OSIT inspects each placement site and makes recommendations to the Corps for future maintenance dredging events. In addition, the OSIT prepares a Post Placement Evaluation Report and submits this information to each involved agency for review. Channel maintenance activities typically require coordination with the following additional agencies:

U.S. Coast Guard Eighth District-New Orleans, LA
USEPA, Region V-Chicago, IL
U.S. Department of the Interior, USFWS -Rock Island, IL
IL EPA Agency-Springfield, IL
ILDNR-Springfield, IL
Illinois Natural History Survey-Havana, IL
Illinois Department of Agriculture, Bureau of Land and Water Resources-Springfield, IL

Sites of reoccurring channel maintenance activities include the following:

Lockport Lower Cut	Brandon Road Lower Cut	Treats Island
Dresden Island	Grist Island	Marseilles Lock Lower Cut
Bull's Island	Starved Rock Lower Cut	Deer Park Light Spring
Creek/Huse Slough	Henry	Senachwine
Blue Creek	USACE Boat Yard at Peoria	Pekin Bend
LaMarsh Creek	Mackinaw River	Kinston Mines
Lancaster Landing	Duck Island	Senate Island
Quiver Island	Grand Island	Anderson Lake
Barr Island	Briggs Landing	

Authority: O&M - River and Harbor Acts of 1927 and 1930

4. Navigation and Ecosystem Sustainability Program. The Navigation and Ecosystem Sustainability Program (NESP) began a reach planning process on the four major reaches of the Upper Mississippi River-Illinois Waterway (UMR-IWW) System. Ecosystem Restoration planning for the Illinois River Reach was initiated in January 2009 and has led to formation of the Illinois River Working Group. The NESP falls into the Ecosystem Restoration business line as well.

Illinois River Basin

The program area comprises the Upper Mississippi River System, as defined by Congress in the Water Resources Development Act of 1986 (WRDA 1986), which includes the Upper Mississippi River from Minneapolis, Minnesota, to Cairo, IL; the IWW from Chicago to Grafton, IL; and navigable portions of the Minnesota, St. Croix, Black and Kaskaskia Rivers. This multi-use resource supports an extensive navigation system (made up of 1,200 miles of 9 foot channel and 37 L/D sites), a diverse ecosystem (2.7 million acres of habitat supporting hundreds of fish and wildlife species), floodplain agriculture, recreation and tourism. Based on the recommendation of the 2004 completed UMR-IWW System Navigation Feasibility Study that examined system needs over the next 50 years, the NESP was implemented to achieve the dual purposes of UMRS ecosystem restoration and navigation improvements.

Program implementation was suspended in June 2011 due to exhaustion of funds. Implementation had progressed since 2005 under Investigation funding for preconstruction engineering and design (PED). Work will resume when funds are again available. No Construction funds have been appropriated. Construction of ecosystem restoration projects and small-scale navigation projects could start within the first year following allocation of Construction funds. PED activities have included formulation and design of some 30 navigation efficiency and ecosystem restoration projects. Approximately \$54 million worth of small-scale navigation and ecosystem construction projects are prepared for immediate implementation. Despite the 2007 WRDA authorization of construction, the Corps has yet to receive construction funding for this program. In addition, the Inland Waterway Trust Fund contains insufficient funding to cost share implementation of navigation components. NESP is subject to be considered for de-authorization in FY17 if no further funds are appropriated before then. NESP requires an updated cost estimate and economic analysis to be eligible for inclusion in the future President's budget. The 75+ year-old navigation system continues to experience some of the longest lockage delays in the country due to a combination of the one-way nature of undersized 600-foot lock chambers and downtime for repair of aged gates and machinery. Modernization to provide increased efficiency and reliability of the UMR-IWW locks and dams would reduce outages and delays and improve the competitiveness and timely delivery of bulk commodities to and from the global marketplace.

NESP is critical to the long-term sustainability of the UMR-IWW navigation system and eco-system through the construction of small scale navigation projects (mooring cells & switchboats), seven new 1,200-foot locks, and ecosystem/habitat restoration projects. The purpose of this program is to improve efficiency and capacity of this nationally significant navigation system while protecting preserving and enhancing the structure, diversity and function of the nationally significant ecosystem. This multi-use resource supports an extensive navigation system (made up of 1,200 miles of 9 foot channel and 37 L/D sites), a diverse ecosystem (2.7 million acres), floodplain agriculture, recreation and tourism. It will take at least 15-20 years of efficient funding to implement NESP in order to construct the navigation and ecosystem projects to improve the ecosystem and navigation system. Investment in small scale navigation efficiency projects, new locks, ecosystem project will create long-term jobs that will help ensure that UMR-IWW will remain a functioning and living river system. The program consists of a combination of small-scale navigation improvements, new 1,200-foot lock chambers at seven of the oldest and most congested locks on the Inland Marine Transportation System, ecosystem restoration, and dual-purpose operation for navigation and the environment. The Chief's Report was approved December 2004, authorized by Title VIII WRDA 2007, and the Record of Decision was issued June 2008. The existing locks and dams were constructed in the 1930s and 1940s with 600-foot locks. Current lock delays average 4.5 hours. Lack of funding for L/D rehabilitation and major maintenance activities in recent years has increased the risk of component failures and lock closures. Lock operation efficiency can be initially enhanced by constructing small-

scale navigation measures such as mooring cells which cost less than \$2 million each and are ready for immediate implementation.

The June 2012 Institute for Water Resources report on U.S. Port and Inland Waterway Modernization found that the UMR-IWW system has adequate capacity through 2020 and possibly beyond, but will require maintenance of existing capacity. Although the UMR-IWW tonnage has decreased over the last decade, this trend is expected to reverse due to increased demand for grain exports and enlargement of the Panama Canal. A long-term strategy is essential for maintaining reliable and cost effective inland navigation that is aligned with the USDOT MARAD M-55 intermodal transportation corridor. Inland navigation is estimated to save \$23.74 per ton compared to overland transportation (Planning Center for Expertise for Inland Navigation, 31 January 2012). The estimated savings for the UMR and the IWW based on 2010 tonnage values would be \$1.44 billion and \$0.86 billion, respectively.

Major Work Item (This Fiscal Year) FY 2014: \$50K was reprogrammed to NESP to initiate development of updated cost estimates.

Major Work Item (Next Fiscal Year) FY 2015: The Corps has capability to immediately restart the program up to \$14.2M in PED funding and up to \$20M in construction funding. Priority work will initially focus on updating the project cost estimate and economic analysis to address concerns raised by the Assistant Secretary of Army, Civil Works [ASA(CW)] and to be eligible for inclusion in future President's Budgets.

5. LaGrange Lock. One of the NESP components is a large program of navigation efficiency projects; it is recommended that UMR LaGrange Lock will receive a new 1,200 ft lock. LaGrange Lock is part of the IWW System that includes 8 locks and stretches 327 miles across the state of Illinois from Lake Michigan to the Mississippi River, with confluence at Grafton, IL. It is the last lock encountered on the system before reaching the Mississippi. The new lock at LaGrange is one of a system of seven proposed locks; five at UMR Locks 20-25, and one at each of LaGrange and Peoria on the IWW. The new LaGrange Lock will be constructed landward of the existing 600-foot lock. When combined with other proposed new locks, congestion on the navigation system will be reduced. In order to accommodate the landward lock there will be significant channel, approach and site work. The current project cost estimate is \$261,300,000 (2004 dollars).

Major Work Item (This Fiscal Year) FY 2014: None

Major Work Item (Next Fiscal Year) FY 2015: None

Authority: General Investigation (GI)-WRDA 2007

6. Lockport Upper Pool Approach Dike & Wall. The project consists of the following stages: Stage 1 (Approach Dike) constructed a 4,300 feet cut off wall within the Approach Dike embankment (completed in FY2009); Stage 1-C (Forebay Wall) design work is currently ongoing with a FY2014 contract award to repair the Forebay Wall; Stage 2 (Controlling Works) repairing concrete bulkheads and replacing brink, limestone and granite facades (completed in FY2012); Stage 3 (Canal Walls) constructed 2 miles of precast concrete panel wall to replace existing wall (completed in FY2012); and Stage 4 (Powerhouse Exciter Bay Infill and Embankment Clearing) stabilized the powerhouse structure and cleared overgrown embankments to allow visual inspection (completed in FY2009) The project is located within a 3-mile reach of the Lockport Lock Pool of the IWW (RM 291.0-294.1) at

Illinois River Basin

Lockport, IL. As part of the CS&SC, which extends from the Chicago River to the IWW, the structures extend from the Lockport Lock. Lockport upper pool is a perched pool 38 feet above surrounding communities. The Lockport Pool Approach Dike and Walls were ranked in 2005 as a Category DSAC II, which is defined as a dam that has confirmed (unsafe) or unconfirmed (potentially unsafe) dam safety issues. Dam safety funds in FY06 and FY07 were used to initiate design efforts. The embankment requires significant repairs and rehabilitation to ensure continued structural integrity, continued retention of navigation pool, stability of the embankments and substructures, safe access to the hydropower plant, continued safe use of the controlling works, and avoids downstream flooding in the event of failure. Maintenance of critical environmental ecosystems adjacent to the dike is also needed. Without major funding, the District's ability to adequately restore the embankment's water retaining function will be prevented.

The Metropolitan Water Reclamation District of Greater Chicago (MWRDGC), through Congressional action, transferred the O&M responsibilities of the substructures and support structures to the Corps in the early 1980s for this roughly 45-foot high embankment, the controlling works and powerhouse substructures, and all pool retention structures. The embankment has had a long history of sinkhole development and surface slumping. The District made significant improvements to the structural stability and erosion resistance of the embankment with the addition of a rock fill shell. In an attempt to prevent further sinkhole development, a shallow cutoff trench was also constructed in the early 1990s and although it has performed satisfactorily for nearly 10-11 years, sinkhole development has resumed in 2001 and 2002. The age and non-homogeneous nature of the original embankment, an extension of the embankment's original height and the numerous "quick" inexpensive repairs that have been made through the years makes it difficult to guarantee continued satisfactory performance. There is also a great concern that individuals (MWRDGC employees) traversing this embankment to reach the hydropower plant are in danger of driving into a sinkhole, which has not yet surface expressed itself.

Major Work Item (This Fiscal Year) FY2014: Complete design, solicit and award to repair Forebay Wall (Stage 1-C)

Major Work Item (Next Fiscal Year) FY2015: Contract administration for repair of Forebay Wall (Stage 1-C)

Authority: CG-Construction General – WRDA 1986

7. T.J. O'Brien Lock & Controlling Works Rehabilitation. T. J. O'Brien Lock and Controlling Works were placed into operation in 1960. After 43 years of service reliability and operation, problems are a recurring threat and have significant impacts to the navigation users. A plan to reduce the width of the Chicago River in the City of Chicago, near the Chicago Lock has already rerouted the barge traffic using the Chicago Lock to the O'Brien Lock. Although this will not cause a significant change in traffic flow, it does mean that O'Brien will be the only commercial access from the IWW to Lake Michigan. The completed Rehabilitation Evaluation Report (RER) FY03 was approved in 2004. The project is located at the entrance to Lake Michigan (RM 326.0), in Chicago, IL. The facility is a unit of the Inland Waterway Navigation System and is one of nine such facilities between Chicago, IL, and LaGrange, IL. O'Brien Lock is a low lift sector gate lock. It provides a maximum lift of 5.0 feet for traffic passing from Lake Michigan to the Little Calumet River. The lock chamber is 1,000 feet long by 110 feet wide. The adjacent dam is 257 feet in length and comprised of two sections. The fixed section is 204 feet of steel sheet pile cellular construction. The controlling segment, a reinforced concrete structure with four slide gate sections, is 53 feet in length. Significant features of the work

Illinois River Basin

include rehabilitation of the sector gate electric system, the lock electrical distribution system, and injection grouting of the lock land & river walls. The existing lock mechanical and electrical systems are original equipment installed in the 1960s.

The electric power utility service was upgraded in 1998, but the other components have been in operation since the original construction of the lock. An electrical component failure of the lock electrical distribution system or the sector gate electrical system could result in lock failure, which could cause delays to navigation traffic. The sheet piling for the lock land wall and river walls have also been in service since the original construction of the lock. O'Brien Rehabilitation Evaluation Report (dated March 2003, revised June 2003) estimates that should one of the sheet pile cells rupture, T.J. O'Brien Lock would have an unscheduled closure to navigation for a minimum of 60-days. The repair costs are estimated at \$530,000 and the transportation impacts associated with a 60 day closure would approach \$18.1 million dollars. New lock dewatering bulkheads are needed to replace the old set of bulkheads that has been decommissioned due to age and deterioration.

Major Work Item (This Fiscal Year) FY 2014: None.

Major Work Item (Next Fiscal Year) FY 2015: Once funding begins, \$5 million could be utilized to procure lock chamber bulkheads and to begin Plans & Specs for major rehabilitation of the facility. \$1.5 million of O&M funds could be utilized to develop Plans & Specs for major maintenance of the facility.

Authority: Construction General (CG) - River and Harbor Act of 1930

8. Marseilles Dam Emergency. On April 18, 2013, an incident occurred where seven barges broke loose and impacted the dam, causing residential flooding; damage to five dam gates, leaving two inoperable; erosion of the earthen dike; and inundation of equipment at Marseilles Lock. Temporary repairs were made to keep the dam operational, and a contract was awarded in FY14 for permanent repairs. All dam and earthen dike repairs are expected to be completed by the end of 2017.

9. Routine O&M Maintenance The IWW project is in operation. Historically flat line budgets for the IWW Project have resulted in numerous backlogged maintenance items. Additional funding in the amount of \$15,451,000 would accomplish several major maintenance items as well as reduce some backlogged items, and dredge to full channel requirements.

The project includes a total of 268 river miles of 9-foot commercial navigation channel—from Chicago to LaGrange L/D, near Beardstown, IL—with eight locks and seven dams. The navigable portions of this river and the locks and dams that allow waterway traffic to move from one pool to another are integral parts of a regional, national, and international transportation network. The system is significant for certain key exports and the Nation's balance of trade. Recreation facilities include a Visitor Center at Starved Rock L/D.

Major Work Item (This Fiscal Year) FY2014:

- Routine Operation & Maintenance
- Procure Miter Gates – LaGrange
- Rehab Lockport Emergency Gate Hydraulic System
- Bulkhead Procurements
- Economic Analysis for LaGrange RER
- Economic Analysis for O'Brien RER

Illinois River Basin

- Marseilles Dam
- Dredging & Dredge Site Acquisition

Major Work Item (Next Fiscal Year) FY2015:

- Routine Operation & Maintenance
- Procure Miter Gates – Peoria
- Dewater O’Brien L/D
- Economic Analysis LaGrange RER
- Economic Analysis O’Brien RER
- Marseilles Dam
- Dredging and Dredge Site Acquisition

Authority: O&M- River & Harbors Act of 1927 & 1930

B. ECOSYSTEM RESTORATION

The District’s environmental efforts include multiple ecosystem restoration projects, forest management programs, and watershed studies. The District works with local sponsors to aid with ecosystem restoration throughout the five river basins. As an example, under the UMRR-EMP, the District plans, designs, and builds environmental enhancement projects to restore and create spawning and feeding habitats for fish and wildlife in the backwaters and side channels of the Mississippi and Illinois Rivers. The District’s Natural Resources Management mission also manages and conserves natural resources, consistent with ecosystem management principles, while providing quality public outdoor recreation experiences.

1. Illinois River Basin Restoration (Section 519). Section 519 of the WRDA of 2000 authorized: (1) Comprehensive Plan to develop and implement a restoration program, long-term resource monitoring program, and evaluate new technologies and innovative approaches, and (2) construction of critical restoration projects (figure II-2). Section 519 and the related Illinois River Ecosystem Restoration Feasibility Study, Sec 216, resulted in a joint Comprehensive Plan for the restoration of the basin Completed in 2007. These efforts relate to the State’s Illinois Rivers 2020 initiative, a proposed 20-year, Federal/State effort to restore and enhance the 30,000 square-mile Illinois River Basin. Anticipated benefits include reducing sediment delivered to the Illinois River mainstem and backwaters, reducing streambank erosion, and improving critical habitats for fish, waterfowl, and other aquatic organisms. This project involves four districts (Rock Island, St. Louis, Chicago, and Detroit). Section 519 was further expanded in WRDA 2007 with an increase in the per project limit from \$5 million to \$20 million.

The District’s environmental efforts include multiple ecosystem restoration projects, forest management programs, and watershed studies. The District works with local sponsors to aid with ecosystem restoration throughout the five river basins. As an example, under the UMRR-EMP, the District plans, designs, and builds environmental enhancement projects to restore and create spawning and feeding habitats for fish and wildlife in the backwaters and side channels of the Mississippi and Illinois Rivers. The District’s Natural Resources Management mission also manages and conserves natural resources, consistent with ecosystem management principles, while providing quality public outdoor recreation experiences.

Illinois River Basin

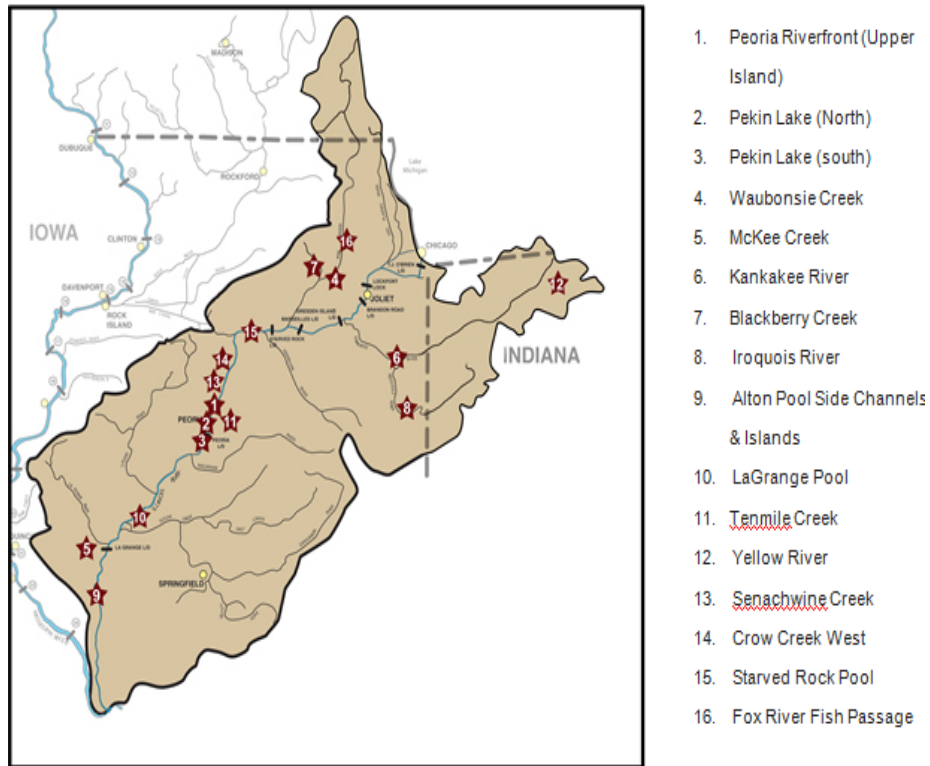


Figure II-2. Critical 519 Restoration Projects

2. Kankakee River Basin Feasibility Study. The Kankakee River is located in northeastern Illinois and northwestern Indiana. The basin has a total area of approximately 5,800 square miles and encompasses portions of 22 counties in both states. The Kankakee River originates near South Bend, Indiana, and flows west for about 140 miles to its confluence with the Des Plaines River in Will County, IL. The confluence of the Des Plaines and Kankakee Rivers forms the Illinois River. The Kankakee’s three principal tributaries are the Yellow River in Indiana and the Singleton Ditch and Iroquois River in Illinois and Indiana. The study area for this fact sheet is the mainstem of the Kankakee River in Illinois, upstream of the Kankakee Dam, which includes RM)3 to 58.

Sedimentation of important aquatic habitats is a major problem in the Kankakee River mainstem. The high mussel diversity and high biological stream characterization rating indicate the high quality of available aquatic habitat. Sand deposition threatens the quality of many of the high quality pool, riffle, and side channel habitats. Potential opportunities that could be addressed by the Corps or in collaboration with the non-Federal sponsors and other Federal and local agencies include:

- Restore riffle, pool, and side channel habitats
- Increase suitable mussel habitat
- Increase submerged aquatic vegetation
- Reduce sedimentation in pool, riffle, and side channel areas

Major Work Item (FY14): Complete Summary Report

Major Work Item (FY15): None

Illinois River Basin

3. Waubonsie Creek. The area of consideration for this critical restoration project is Waubonsie Creek, a roughly 30-square mile watershed in northeastern Illinois. Waubonsie Creek is 10.8 miles long and flows into the Fox River, one of two tributaries that join to form the Illinois River (figure I-1). The project area is approximately 40 miles west of downtown Chicago in a rapidly urbanizing area that drains portions of the towns of Aurora, Naperville, Montgomery, and Oswego. There are four major potential restoration areas within the watershed. There are small dams in the steeper lower portions of the creek. A publicly owned greenway and stormwater detention basin are located in the middle reaches of the creek. Another publicly owned greenway is located in the middle to upper portion of the creek.

The Fox River and its tributaries, including Waubonsie Creek, are high quality habitats that are highly fragmented by dams, which negatively affect fish and other aquatic organisms. There is the potential for significant restoration by increasing stream connectivity. The five dams in the lower, steep portions block connectivity with the Fox River and prevent Fox River fish from using suitable spawning and rearing habitat available in the creek. Land use changes in the creek have reduced stream length and instream diversity thus reducing aquatic habitat. Changed flow regimes resulting from land use changes flush fish and mussels downstream during extreme flow events. The dams also prevent or slow re-colonization of fish and mussels following these events.

The Recommended Plan provides fish passage through ramping or removing the five dams and two riffles. The Recommended Plan would restore access between the Fox River and 7 miles of tributary habitat on Waubonsie Creek. The fully funded estimated first cost of the Recommended Plan is \$2,806,600 (March 2004 price levels)

Major Work Item (FY14): Construction Complete

Major Work Item (FY15): Closeout

4. Iroquois River. The Iroquois River Watershed is a 2,137-square-mile watershed in eastern Illinois and western Indiana. Approximately half of the watershed is located in Iroquois County, IL. The Iroquois River is 94 miles long. The Illinois portion of the river is 55 miles long. The Iroquois River includes the incorporated areas of Watseka, Gilman, and Loda, as well as unincorporated areas of Iroquois County. The primary problems in the Iroquois River Basin are flow obstructions, high sediment load, unstable banks, and unstable tributary streams. All of these problems reduce the suitability and diversity of the aquatic and riparian ecosystems. The principal focus of study is to identify opportunities to restore degraded ecosystem structure and function, including the ecosystem's hydrology, plant, fish, and wildlife communities.

Modifications of tributaries to the Iroquois River are expected to continue. Continued ditching and straightening will increase velocities, bed and bank erosion, and the sediment load carried by the streams to the Iroquois River and eventually Illinois River. Dead and dying trees along the Iroquois River upstream of Watseka will eventually fall into the stream and further aggravate bank erosion and flow obstructions. The Iroquois Basin is expected to continue to be a significant source of nutrients.

Major Work Item (FY14): None

Major Work Item (FY15): None

5. LaGrange Pool Side Channels and Islands. LaGrange Pool is the portion of the Illinois River that extends from LaGrange L/D (RM 80.2) to the base of Peoria L/D (RM 157.6), for a total length of 77.4 miles. There are numerous islands and side channels in this pool of the Illinois River.

Illinois River Basin

A dramatic loss in productive backwaters, side channels, and channel border areas due to excessive sedimentation is limiting ecological health and altering the character of this unique floodplain river system. In particular, the Illinois River has lost much of its critical spawning, nursery, and overwintering areas for fish, habitat for diving ducks and aquatic species, and backwater aquatic plant communities. Areas sheltered from the main river flows provide beneficial resting habitat for aquatic animals. Islands often provide such protection to their side channels, so protection of side channel habitat is tied to the protection of islands. A related problem is the need for timely action. If restoration is not undertaken soon, additional productive backwater and side channel aquatic areas will be converted to lower value, and increasingly common, mudflat and extremely shallow water habitats.

Major Work Item (FY14): Funding Limitations - On Hold

Major Work Item (FY15): None

6. McKee Creek. McKee Creek drainage area encompasses approximately 450 square miles (288,250 acres) and is located in the counties of Adams, Brown, and Pike. The upper end of the watershed begins southwest of LaGrange Pool Side Channels and Islands. LaGrange Pool is the portion of the Illinois River that extends from LaGrange L/D (RM 80.2) to the base of Peoria L/D (RM 157.6), for a total length of 77.4 miles. There are numerous islands and side channels in this pool of the Illinois River. A dramatic loss in productive backwaters, side channels, and channel border areas due to excessive sedimentation is limiting ecological health and altering the character of this unique floodplain river system. In particular, the Illinois River has lost much of its critical spawning, nursery, and overwintering areas for fish, habitat for diving ducks and aquatic species, and backwater aquatic plant communities. Areas sheltered from the main river flows provide beneficial resting habitat for aquatic animals. Islands often provide such protection to their side channels, so protection of side channel habitat is tied to the protection of islands. A related problem is the need for timely action. If restoration is not undertaken soon, additional productive backwater and side channel aquatic areas will be converted to lower value, and increasingly common, mudflat and extremely shallow water habitats.

Sedimentation is a problem in the McKee Creek Watershed that has far-reaching effects. The Natural Resources Conservation Service (NRCS) routinely addresses upland soil erosion problems, and has developed a myriad of “cultural” and structural practices to effectively address sheet, rill, and ephemeral erosion, and for areas subjected to concentrated flow. The following opportunities could be addressed by the Corps or in collaboration with the non-Federal sponsors and other Federal and local agencies.

- Improve in-stream habitat
- Restore stabilization, habitat, and filtration value of riparian buffers
- Restore existing wetlands and buffer from future impacts
- Restore riparian and floodplain habitat and depressional wetlands
- Restore and improve wildlife habitat
- Utilize upland “best management conservation practices” which will provide off-site benefits to the riparian corridor and stream

Major Work Item (FY14): None

Major Work Item (FY15): None

7. Alton Pool Side Channels and Islands. Alton Pool is the portion of the Illinois River that extends from the confluence of the Mississippi and Illinois Rivers (RM 0) to the base of LaGrange L/D (RM 80.2), for a total length of 80.2 miles. The primary islands, with their associated side

Illinois River Basin

channels in this pool of the Illinois River, going from downstream to upstream; include Twelve Mile, Mortland, Diamond, Hurricane, Crater, Willow, Twin, Fisher, Spar, Wing, Van Geson, Buckhorn, McEvers, Big Blue, Meredosia, Wilson, and Moores Islands.

A dramatic loss in productive backwaters, side channels, and channel border areas due to excessive sedimentation is limiting ecological health and altering the character of this unique floodplain river system. In particular, the Illinois River has lost much of its critical spawning, nursery, and overwintering areas for fish, habitat for diving ducks and aquatic species, and backwater aquatic plant communities. Areas sheltered from the main river flows provide beneficial resting habitat for aquatic animals. Islands often provide such protection to their side channels, so protection of side channel habitat is tied to the protection of islands. A related problem is the need for timely action. If restoration is not undertaken soon, additional productive backwater and side channel aquatic areas will be converted to lower value, and increasingly common, mudflat and extremely shallow water habitats.

Major Work Item (FY14): Complete Feasibility Report

Major Work Item (FY15): Sign PPA, Initiate construction if funds are available.

8. Tenmile Creek. The Tenmile Creek Watershed is a subwatershed of the Illinois River Basin. Draining 11,027 acres in Worth and Springbay Townships of Woodford County, and Washington and Fondulac Townships in Tazewell County, Tenmile Creek is approximately 10 miles long and flows northwest from Washington Township to the Narrows of Peoria Lake at the Illinois River. Most of the Tenmile Creek Watershed is unincorporated; however, 136 acres are within the Village of Germantown Hills and 415 acres within the city of Washington. As of 2000, the population of the watershed is 2,967. From source to mouth, Tenmile Creek falls from approximately 820 feet above sea level at the source to 440 feet at the mouth at Illinois RM 166.

Numerous small creeks and streams that drain from bluff-line watersheds are often significant sources of fine sediment (silt and clay). In fact, although the local tributaries of Peoria Lake contain only 4 percent of the drainage area of the basin, the sediment budget developed by Demissie et al. (2003b) indicates that they contribute approximately 31 percent of the sediment delivered to this reach of the Illinois River. The Illinois Department of Natural Resources [ILDNR (non-Federal Sponsor)] initiated watershed planning, through a local agency, to identify ecological resource concerns in this watershed in 2001. As a result, a Watershed Restoration Plan completed in 2004 identified a number of ecosystem problems present in the watershed. These problems include: (1) invasive plant species are decreasing species diversity in natural areas and are resulting in erosion and habitat loss; (2) large fluctuations in surface water volume and rates that result in increased streambed and bank erosion; and (3) delivery of approximately 23,500 tons of sediment on an annual basis to Upper Peoria Lake contributes to the ecological decline of Peoria Lake. Tenmile Creek discharges immediately upstream of the Peoria Riverfront Development (Mid-Sized Upper Island) Section 519 Critical Restoration Project, the purpose of which is to increase overwintering fish habitat by restoring depth diversity. Implementation of restoration measures within the Tenmile Creek Watershed will improve local ecological integrity but also improve the sustainability of the Peoria Riverfront Development project scheduled for construction during the current FY.

Major Work Item (FY14): Initiate Feasibility

Major Work Item (FY15): Continue Feasibility

9. Senachwine Creek. Senachwine Creek is located within Peoria and Marshall Counties in Illinois. The watershed drains approximately 85 square miles and is predominately agricultural in

Illinois River Basin

nature. In 1994, the Peoria County Soil and Watershed Conservation District partnered with the USEPA 319 program to implement a project directed at improving water quality in Senachwine Creek by addressing non-point sources of sediment. The 319 project improved water quality through treatment of uplands and floodplains in the Senachwine Creek Watershed through the implementation of best management practices (BMPs). Cost share assistance was provided to the landowners to implement watershed stabilization systems. Upland BMPs include, but are not limited to, grade stabilization structures, water storage structures, terraces, grassed waterways, permanent seeding, livestock exclusion, animal waste management systems, wetlands, shallow water impoundments, timberland improvement, native plant seeding and management, and tree planting. Floodplain BMPs include, but are not limited to, willow posts, riprap, gabions, bend way weirs, riffles, and restoration of wetlands and riparian strips. The watershed currently has need for additional sediment reduction measures as well as in-stream and riparian habitat restoration suitable for Corps planning, design and implementation.

Major Work Item (FY14): Complete Summary Report

Major Work Item (FY15): None

10. Crow Creek West. The Crow Creek Watershed is located in Marshall, Putnam and Bureau counties, about 35 miles north of Peoria, IL in the west-central part of Illinois. Crow Creek drains Henry, Whitefield, and Saratoga townships in Marshall County, Senachwine Township in Putnam County, and Wheatland and Milo townships in Bureau County. The Crow Creek watershed is largely agricultural. Dominant land uses are cropland (72 percent), grassland (18 percent), and woodlands (8 percent). There are no towns or villages in the watershed. The 1990 population of the watershed is approximately 1,045. The watershed covers 51,637 acres. From its origin about 15 miles west of Henry, IL, the creek flows northeast into Bureau County, then southeast into Marshall County within 1 mile of Henry. It goes south to Route 29 just north of Camp Grove Road and under the railroad bridge. The creek then enters the Cameron National Wildlife Refuge and finally outlets to the Illinois River.

Numerous small creeks and streams that drain from bluff line watersheds are often significant sources of fine sediment (silt and clay). In fact, although the local tributaries of Peoria Lake contain only 4 percent of the drainage area of the basin, the sediment budget developed by Demissie et al. (2003b) indicates that they contribute approximately 31 percent of the sediment delivered to this reach of the Illinois River. Completed in 2003, the Crow Creek West watershed resource plan is a coordinated approach to outline how local philosophies and technical expertise may be utilized to solve natural resource problems and concerns. The Crow Creek West Watershed committee, in cooperation with the Marshall-Putnam Soil and Water Conservation District (SWCD), the Bureau County SWCD, and the USDA NRCS, prepared the watershed plan for Crow Creek West. This plan was developed with the input and assistance of numerous local, state, and Federal agencies. It defines the existing conditions, the future without project condition, identifies a set of alternatives to address those conditions, and encourages joint public and private action to implement some of planned alternatives. This multi-agency and stakeholder approach to water resource planning is consistent with the Corps' Environmental Operating Principles. Several measures of the Recommended Plan remain unimplemented, and are consistent with established ecosystem goals for the Illinois River Basin Restoration (IRBR) Program and would be suitable for Corps planning and design.

Major Work Item (FY14): None

Major Work Item (FY15): None

Illinois River Basin

11. Starved Rock Pool Side Channels and Islands. Starved Rock Pool is the portion of the Illinois River that extends from Starved Rock L/D (RM 231) to the base of Marseilles Dam (RM 247), for a total length of 16 miles. The primary islands in this pool of the Illinois River, going from downstream to upstream, are Sheehan; Mayo; Hitt; Scherer; Bulls; and Bell's Islands. A dramatic loss in productive backwaters, side channels, and channel border areas, due to excessive sedimentation, is limiting ecological health and altering the character of this unique floodplain river system. In particular, the Illinois River has lost much of its critical spawning, nursery, and overwintering areas for fish, habitat for diving ducks and aquatic species, and backwater aquatic plant communities. Areas sheltered from the main river flows provide beneficial resting habitat for aquatic animals. Islands often provide such protection to their side channels, so protection of side channel habitat is tied to the protection of islands. A related problem is the need for timely action. If restoration is not undertaken soon, additional productive backwater and side channel aquatic areas will be converted to lower value, and increasingly common, mudflat and extremely shallow water habitats. Sedimentation is the primary cause of degradation of these areas.

Major Work Item (FY14): Complete Feasibility Report

Major Work Item (FY15): Sign PPA, Initiate Construction if funds available

12. Fox River Dams. The Fox River (figure II-3) is the third largest tributary to the Illinois River and drains approximately 1,720 square miles in northeastern Illinois and 940 square miles in Wisconsin. The Fox River Watershed occupies portions of McHenry, Lake, Cook, Kane, Du Page, De Kalb, Lee, LaSalle, Kendall, Grundy and Will counties in northeastern Illinois. The total length of the river is 185 miles, 115 miles of which are in Illinois. Dominant land uses are agricultural (66 percent) and urban/residential (18 percent). The remainder is woods (9.2 percent), wetlands (4.5 percent), and lakes and streams (2.3 percent). The northern portion of the watershed is diverse in the type and distribution of land cover, the central portion has the highest concentration of urban/residential land, and the southern portion is primarily agricultural. Approximately 11 percent of Illinois' population lives in the Fox River basin and 8 million people live within 100 miles of the Fox River. The Fox River enters the Illinois River near Ottawa, IL.

The Illinois portion of the Fox River supports a high diversity of aquatic organisms including 32 species of mussels and 96 species of fish. The Fox River suffered from pollution problems in the 1960s and 1970s, but abatement measures have resulted in improved water quality and subsequent response in fish populations.

Illinois River Basin

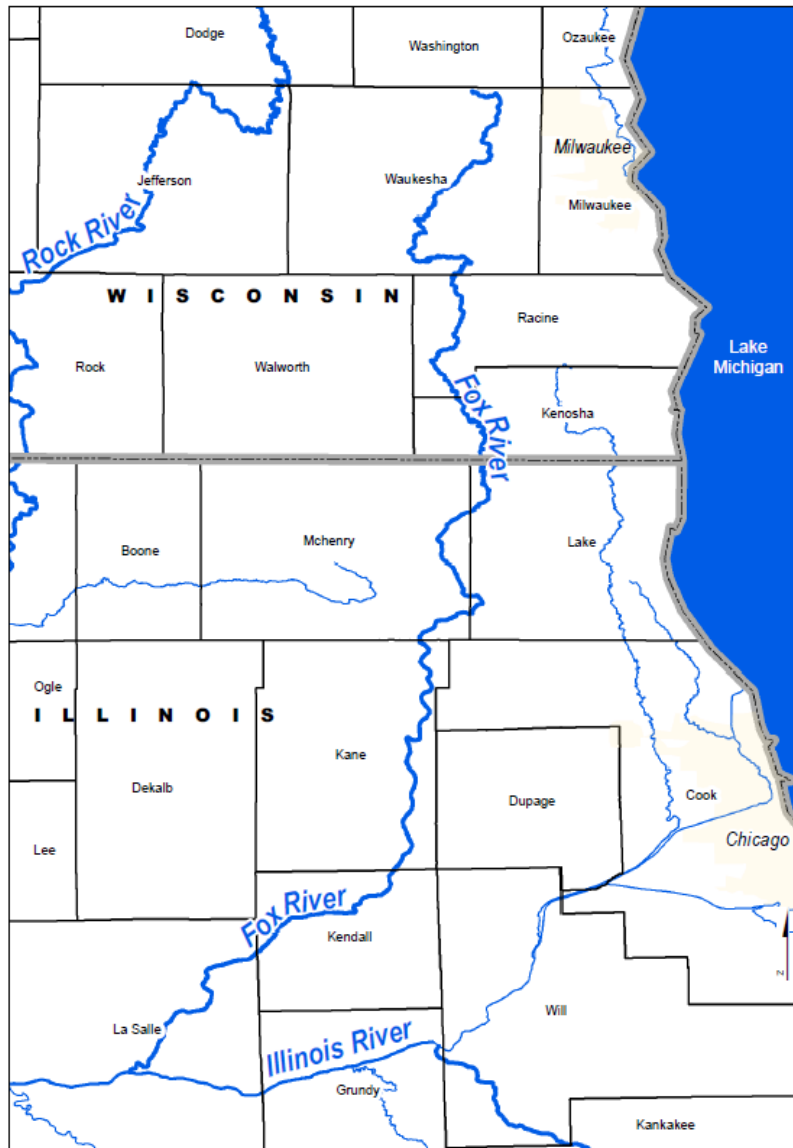


Figure II-3. Fox River Watershed

There are 15 channel dams on the Fox River in Illinois and an unknown number of tributary dams. The dams range in length from 143 feet to 600 feet and their height varies from 2.8 feet to 29.6 feet. The Fox River Fish Passage Feasibility Study (Santucci and Gephard, 2003) evaluated the effects of the dams on the aquatic organisms and found that the dams adversely affected the biotic integrity of the Fox River on both local and landscape scales. The landscape-level effects arise from the fragmentation of the river basin and restricted movements of fish. Local effects were largely related to the impoundments formed upstream of each dam. The impoundments had lower abundance, taxa richness and biotic integrity scores for fish and invertebrates. The impoundments have adverse effects on habitat, water quality and aquatic biota in the Fox River. The study found that the natural flowing river segments had more species, four times the number of individuals, double the number of harvestable-sized sport fish, more suckers, darters and intolerant fishes (including state-threatened river redhorse), a higher percentage of insectivorous minnows, and a lower proportion of diseased individuals than the impounded areas. The dams also affect distribution of fishes by acting as

Illinois River Basin

upstream barriers to fish movement with thirty fish species having truncated or discontinuous distributions. Species found only in the lower portions of the river included sauger, bigmouth buffalo, black buffalo, small mouth buffalo, American eel, mooneye, skipjack herring and the state endangered river redhorse. Species with discontinuous distributions include black crappie, orangethroat darter, shorthead redhorse, and rock bass. Dams may also be negatively affecting the distribution of mussels. The free-flowing reaches had higher quality macroinvertebrate communities. The study recommends reconnecting and restoring the Fox River by removing and modifying all mainstem and tributary dams. Options to reconnect include removing dams completely, lowering dams and ramping the remaining structures, constructing traditional fishways (e.g., Denil fishways), and constructing more natural fish bypass channels.

Major Work Item (FY14): Initiate Feasibility
Major Work Item (FY15): Continue Feasibility

13. Blackberry Creek. The Blackberry Creek Watershed is a 73-square-mile watershed in northeast Illinois located in south-central Kane County and north-central Kendall County. Blackberry Creek is a 32-mile-long stream originating north of Elburn in central Kane County and draining to the Fox River near Yorkville in Kendall County. The Blackberry Creek Watershed includes incorporated areas of Elburn, Sugar Grove, North Aurora, Aurora, Montgomery and Yorkville, as well as unincorporated areas of Kane and Kendall Counties. Urbanization of the Blackberry Creek Watershed is expected to continue. As the watershed is developed, open space and farmland will be converted to impervious and less pervious land uses, such as parking lots and turf grass. Additional wetland loss and degradation are expected to continue. With these land use changes, rainwater will be conveyed to the stream more quickly, thus increasing flood flows. Flooding and flood damages are expected to continue or worsen. Development of “flow destabilization” is possible. Flow destabilization is the condition when there are higher high flow events and lower low flow events. As future floodwaters wash fish and macro invertebrates downstream, diversity in the stream will continue to decrease because fish and other organisms cannot move upstream past the dam near the confluence with the Fox River.

In 2013, fish passage was constructed by the State of Illinois at the Blackberry dam in response to a partial failure of the dam. The State of Illinois implemented what, at this time, was the Recommended Plan in the draft feasibility report.

Major Work Item (FY14): Construction Complete
Major Work Item (FY15): Closeout

14. Yellow River. The 281,000-acre Yellow River Watershed (figure II-4) is located in Starke, Marshall, St. Joseph, Elkhart, and Kosciusko Counties in Northern Indiana. The Yellow River flows through the 4,095-acre Kankakee Fish and Wildlife Area (maintained by the Indiana DNR) before it merges with the Kankakee River. Historically, the Yellow River was an integral component of the 500,000-acre Grand Kankakee Marsh, one of the largest freshwater marshes in the United States. In the mid-1800s and early 1900s, the marsh was drained and sections of some of the rivers that fed it were straightened, including the Yellow River. Levees constructed along the banks of the Yellow River further isolated the river from its floodplain and the marsh.

Land use in the Yellow River Watershed is largely agricultural. There are several towns and villages in the watershed, including: Plymouth, Knox, Argos, Lakeville, Bremen, Nappanee, and La Paz. The population of the watershed is approximately 27,500.

Illinois River Basin

Sedimentation problems in the Yellow River Basin have been observed since the channelization of the 13-mile reach that extends from upstream of Knox, Indiana, to the confluence with the Kankakee River. The Yellow River is a major contributor of sand bed load to the Kankakee River system and was most likely named for the appearance resulting from this sediment transport characteristic. Sand aggradations is so severe in the lower reaches of the Yellow River that the current streambed is higher in elevation than the surrounding agricultural land. Side-cast levees constructed during the channelization of the river are holding the river above the adjacent land.

Several regional, state and national organizations and governments have recognized the importance of the Kankakee River Basin, which includes the Yellow River Basin. Habitat restoration and protection potential exists for several rare communities in the area. The Yellow River Basin is used during migration and breeding by waterfowl and several species of grassland birds. The Kankakee River Basin Commission is very interested in improving habitat and reducing the flooding along the Yellow River and they have been very involved in previous studies that have looked at ecosystem restoration and flood damage reduction in the Kankakee River Basin. The Nature Conservancy (TNC) is restoring land in the region and the Indiana DNR manages land along the Yellow River.

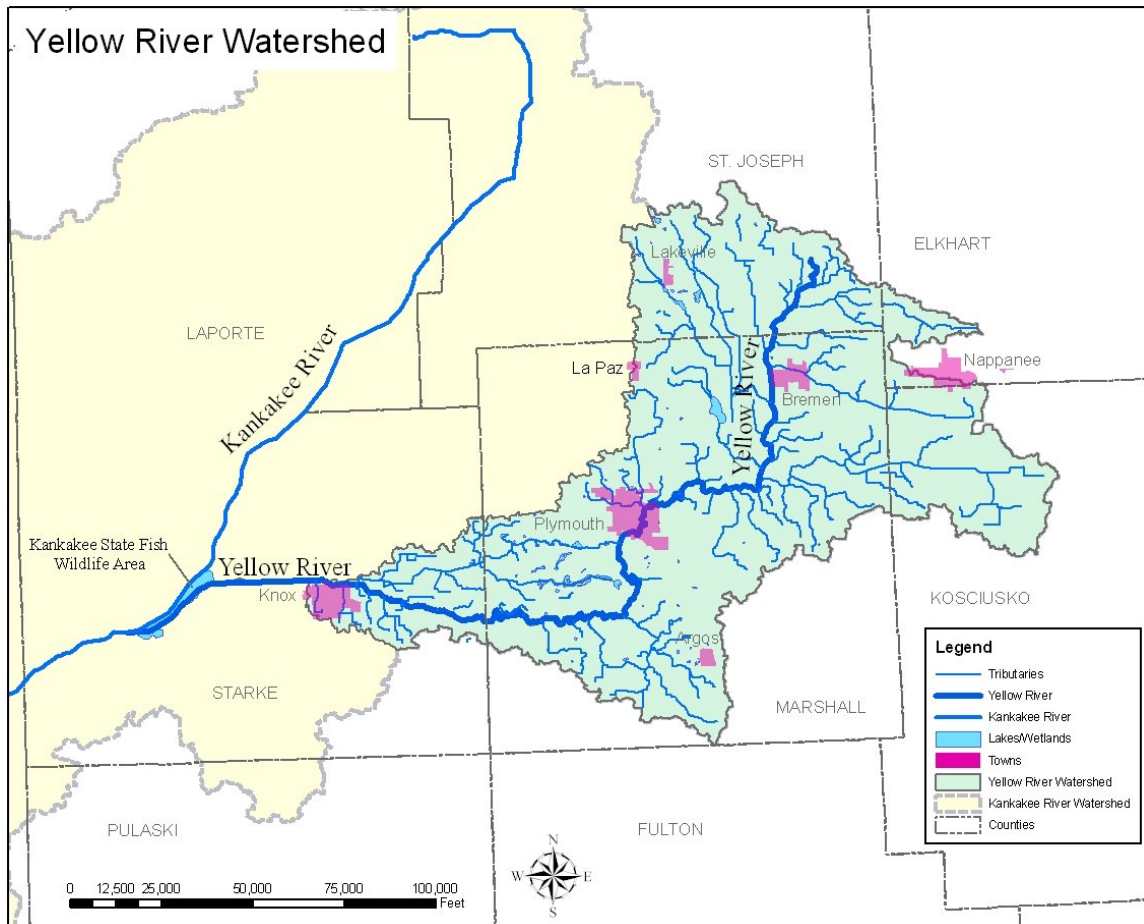


Figure II-4. Yellow River Watershed

Major Work Item (FY14): None

Major Work Item (FY15): None

Illinois River Basin

15. Peoria Riverfront (Upper Island). Peoria Lake, the largest bottomland lake in the valley, reflects changes similar to other lakes. There are 60 backwater lakes along the Illinois River. The Illinois State Water Survey has estimated that average volumetric loss of all lakes since 1903 is 70 percent, with several approaching 100 percent loss. The oldest complete survey of the river system was done in 1903. This loss of aquatic habitat due to sedimentation is viewed as the greatest threat to the Illinois River. This conclusion was reached because of the statewide planning process that resulted in the *Integrated Management Plan*. Since 1903, the volume of Peoria Lake below elevation 440 feet has decreased by approximately 61 percent. Elevation 440 is considered “flat pool” for Peoria Lake. The elevation is a function of the height of Peoria L/D. Areas outside of the navigation channel have experienced sedimentation that is even more rapid. The loss of backwater lake depth and volume has severely impacted off-channel overwintering, spawning, and nursery habitats for fish. Shallow water areas are subject to wave action that re-suspends sediment, further limiting fish, aquatic vegetation, macro-invertebrate, and mussel production.

In Peoria Lake sedimentation has resulted in the loss of deeper, off-channel parts of the lake from an estimated maximum of 8 feet to 1-2 feet in recent years. Off-channel areas will remain shallow and subject to re-suspension of sediment by waves. This transformation of Peoria Lake into a narrow navigation channel with bordering shallow, wind-swept areas will negatively impact fish and wildlife habitat and also reduce aesthetic values and recreation opportunities. Opportunities explored in Peoria Lake included the creation, restoration, and improvement of aquatic habitat by restoring depth diversity and reducing sediment delivery and deposition in Peoria Lake, with ancillary benefits to recreation.

In 2009, construction was initiated in the Peoria Riverfront (Ecosystem Restoration) Upper Mid Sized Island Critical Restoration Project under the IRBR Program, and completed in 2013. A contract was awarded for \$9.2 million dollars to Midwest Foundations of Tremont, IL. The project restores approximately 55 acres of overwintering fish habitat while creating 21 acres of island habitat.

Major Work Item (FY14): Construction Completed

Major Work Item (FY15): Closeout

16. Pekin Lake Northern Unit. The area of consideration for this critical restoration project is the Northern Unit of the Pekin Lake State Fish & Wildlife Area (SFWA). This area is located along the Illinois River immediately downstream of Peoria L/D and adjacent to and west of the community of Pekin, IL. The area is generally bounded by the Illinois River to the west, the City of Pekin to the east, and Lick Creek to the north, and the Central Illinois Light Company (CILCO) causeway to the south. Several manmade features divide the area. First, in the northern portion of the site is Lick Creek, which crosses perpendicular to the site and is incised to such a degree that it provides virtually no hydraulic benefit to the north end. This creek drains residential and commercial areas of Pekin, IL, through the Pekin Lake SFWA to the Illinois River. Farther south of Lick Creek is a rubble causeway supporting Central Illinois Light Company (CILCO) high voltage transmission lines. This causeway is also perpendicular to the north-south orientation of the Pekin Lake SFWA and divides the northern unit from the southern unit. The corridor is 400 feet wide and owned by CILCO.

The principal problems at Pekin Lake SFWA-Northern Unit are altered hydrologic regimes, sedimentation, the loss of moist soil plant communities and foraging areas for herons due to sedimentation and willow invasion, resulting in reduced habitat value and biodiversity. These impacts have been experienced and are likely to be more pronounced as continued inputs of sediment and willow encroachment replace quality habitats. Backwater lakes and side channels along the Illinois

Illinois River Basin

River formerly provided a great variety of high quality habitat types with greater depth diversity. These areas formerly provided large areas of deep and shallow water habitat, numerous sloughs, and forested and non-forested wetland habitats. Pekin Lake SFWA-Northern Unit provides an excellent opportunity for restoration of many of these habitat types. The Recommended Plan includes Water Level Management, Pump and Well, Rehabilitate Slim and Round Lakes, and Sculpting for Drainage Plan in the Northern Unit. Water level management includes the reconstruction of an existing causeway into a levee and installation of a water control structure to allow for management of water levels within the northern unit. Pumps and wells will be installed to further improve the ability of site managers to control water levels for habit during critical times of the year. Slim and Round Lakes will have large areas of willow trees removed as well as shallow layers of underlying sediments. This will allow for continued use of these areas for moist soil plant production throughout the 50-year period of analysis. Portion of Worley Lake bottom sediments will be removed and sculpted so that water may drain through the water control structure. The current estimated first cost of the Recommended Plan is \$6,056,350 (May 2003 price levels).

Major Work Item (FY14): None

Major Work Item (FY15): Sign PPA, Initiate Construction if funds available.

17. Pekin Lake Southern Unit. The project area south of the Ameren CILCO causeway was once deepwater fish overwintering habitat that has been degraded by excess sedimentation from the Illinois River. Further, the diversion of Lake Michigan water and creation of the navigation pools has eliminated much of the topographic diversity that had produced large areas of mast producing trees. The Southern Unit project is intended to address the lack of overwintering fish habitat and declines in diverse bottomland forest areas. The need for overwintering fish habitat in this reach of the Illinois River is acute. No existing overwintering habitat exists within approximately twenty miles of Pekin Lake SFWA. Further, higher water levels throughout the system have nearly eliminated mast producing hardwood forest in the Illinois Floodplain. The alternatives (11) considered to date include dredging for overwintering habitat ranging from approximately 15 acres up to 66. Placement of material is both on and offsite, with the potential to create suitable areas for mast producing trees. Habitat benefits range from 14.7 average annual habitat units to 32.1.

The area of consideration for this critical restoration project is the Southern Unit of the Pekin Lake SFWA. This area is located along the Illinois River immediately downstream of Peoria L/D and adjacent to and west of the communities of Pekin, North Pekin, and Marquette Heights, IL. The area is generally bounded by the Illinois River to the west, the communities mentioned above to the east, Peoria L/D /Interstate 474 to the north, and Illinois Highway Route 9 to the south. Several manmade features divide the area. A rubble causeway supporting Central Illinois Light Company (CILCO) high voltage transmission lines forms the northern boundary of the Southern Unit project area. This causeway is also perpendicular to the north south orientation of the Pekin Lake SFWA and divides the Northern Unit from the Southern Unit. The Southern Unit project site extends southward to the Illinois Route 9 bridge and is bounded on the west by the Illinois River and on the east by the City of Pekin.

The feasibility report has been approved by the ASA(CW) for construction. The Recommended Plan for this project includes constructing in Pekin Lake SFWA – Southern Unit, 45.7 Acres of Dredging with Onsite Placement for Mast Trees and Wetland Restoration. This alternative involves dredging deep channels into Soldwedel Lake and Lake of the Woods from the Illinois River with additional dredging of fingers, shelves, and deep holes in Lake of the Woods and Soldwedel Lake. Dredged material would be sidecast adjacent to the channels with additional placement of 13,000 CY of

Illinois River Basin

material at Site E and 320,720 CY of material at Site B. Material would also be placed to create islands.

The current estimated first cost of the Recommended Plan is \$9,002,000. This total estimated project cost includes construction of the project features, planning, engineering, and design, construction management, real estate, and monitoring. Implementation would be cost shared 65 percent by the Federal Government and 35 percent by the ILDNR, the non-Federal Sponsor. The ILDNR would provide all Lands, Easements, Rights-of-Way, Relocation, and Dredged or Excavated Disposal Areas (LERRDs). The ILDNR would also be responsible for the operation and maintenance of the project. The operation and maintenance of these features is estimated to cost \$7,115 annually.

Major Work Item (FY14): Prepare PPA

Major Work Item (FY15): Sign PPA, Initiate Construction if funds available.

18. The Upper Mississippi River Restoration (UMRR) Formerly known as Environmental Management Program (EMP), the UMRR continues to plan and design 33 projects on the UMR and IWW. Additional systemic monitoring of habitat conditions of the Illinois River continues in partnership with the State of Illinois, U.S. Geological Survey (USGS) and USFWS.

The UMRR consists of two primary components: (1) Habitat Rehabilitation and Enhancement Projects (HREP) and (2) Long Term Resource Monitoring (LTRM). WRDA 99 re-authorized program funding continually with reports being submitted to Congress every sixth year to document evaluation of the program, accomplishments, and habitat needs, and recommended adjustments. Additional information on the UMRR can be found at the following website:

<http://www.mvr.usace.army.mil/Missions/EnvironmentalProtectionandRestoration/UpperMississippiRiverRestoration.aspx>.

The UMRR, authorized by the WRDA of 1986 and extended indefinitely by the WRDA of 1999, has come to be recognized as the single most important effort committed to ensuring the viability and vitality of the UMRS's diverse and significant fish and wildlife resources since establishment of the National Wildlife Refuges on that system. This systemic program provides a well-balanced combination of monitoring, research, and habitat restoration activities. Program accomplishments to date include (1) the completion of 48 habitat restoration projects benefiting approximately 83,000 acres of ravine and floodplain habitats, 33 more projects in various stages of construction and design will benefit another 45,000 acres of habitat when implemented), (2) the collection of millions of data samples (primarily fish, water quality, vegetation, and invertebrates) critical to carrying out the applied research that is leading to enhanced understanding of the dynamics of large floodplain rivers and successful multi-purpose resource management, (3) the development of extensive digital data bases, mapping products, and establishment of an information clearinghouse through which UMRS data and information can be universally accessed, and (4) a partnership of unparalleled dimensions between a multitude of Federal and State agencies, non-governmental organizations, and the general public.

As with the two previous Reports to Congress in 1997, 2004 and 2010, these reports documented the program accomplishments to date and recommended that the LTRMP and HREP components of the current program be continued to serve the ecosystem restoration and resource monitoring needs on the UMRS. The Report to Congress concluded that the UMRR authority should be amended to specifically allow nongovernmental organizations (NGOs) to serve as non-Federal sponsors of HREPs. Such a provision is consistent with other Corps' ecosystem restoration authorities, would help leverage scarce resources, and would offer a potentially more efficient approach to accomplishing

projects that involve land acquisition. The Report for Congress also concluded that Funding for the operation and maintenance (O&M) of HREPs should be coordinated in annual Federal budgets to ensure that the USFWS has the resources needed to operate and maintain the growing inventory of HREPs on the refuge lands it manages. The USFWS is a key partner in the UMR program as a whole and must be able to meet its HREP obligations on refuges. The next report to Congress is due in 2016.

Major Work Item (This Fiscal Year) FY 2014: Complete construction on one habitat project, initiate construction on two habitat projects, and continue construction on eight habitat projects. This will also allow the program to continue planning, engineering and/or design of 20 projects. It will also provide funding sufficient to accomplish base monitoring to track systemic trends in water quality, fish, and submerged aquatic plants for the UMR and conduct 12 to 15 research efforts that will help to enhance habitat rehabilitation efforts.

Major Work Item (Next Fiscal Year) FY 2015: The proposed budget for UMR-EMP will allow the Program to complete construction on five habitat rehabilitation projects, continue construction on seven habitat rehabilitation projects, initiate construction on two projects, and initiate or continue planning, engineering and/or design on 20 projects.

Authority: CG – Construction General-WRDA 1986

19. Rice Lake. Rice Lake is a 6,800 acre backwater complex located 24 miles southwest of Peoria, IL, in Fulton County. The project lands are state owned and are managed by the ILDNR as a fish and wildlife area.

Project Features

- Reestablish the Hate Levee with a riprap over-flow structure to function as the major water control facility for the entire complex,
- Locate a pumping facility on the IWW,
- Excavate channels for water supply to management areas,
- Install two fish passage structures,
- Construct interior levees for moist soil management, and,
- Plant mast trees and native grasses on Duck Island.

Increased flood and sedimentation levels have resulted in degradation of what has historically acted as excellent mid-migration waterfowl and aquatic habitat. The lack of reliable and flexible water management capability over half of the project area severely limits its effectiveness in providing feeding and resting habitat for the 2.7 million annual waterfowl use days. Habitat degradation also has negatively affected the other migratory and resident species using the facility.

The project goals are to enhance wetland, aquatic, and floodplain terrestrial habitat. Reestablishing the Hate Levee and installing a pumping facility for Big Lake would increase reliability and flexibility of water level management. Habitat would be improved for waterfowl, wading birds, shorebirds, and other wetland species that utilize the area. Structures for fish passage and escapement would protect aquatic habitat and maintain connectivity with deep water areas. Restoration of native grasslands and mast tree species would enhance habitat for numerous floodplain species.

General Design and Construction Costs are estimated to be \$7,355,000. In accordance with Section 906(e) of the WRDA of 1986 (Public Law 99-662), general design and construction costs would be

Illinois River Basin

shared on a 65 percent Federal/ 35 percent non-Federal basis. The non-Federal Sponsor, the ILDNR, will assume all annual operation, maintenance, and repair costs, estimated at \$15,300.

Major Work Item (This Fiscal Year FY 2014): Continuation of construction and the execution of contract modifications to repair 2013 flood damages.

Major Work Item (Next Fiscal Year) FY 2015: Complete work on the Stage I construction contract. Complete engineering P&S for Stage II and begin development of the O & M manual.

Authority: CG-Construction General – WRDA 1986

20. Emiquon Complex Habit Rehabilitation & Enhancement Project. The Emiquon Project (figure II-5) represents landscape scale restoration of one of the largest and historically most productive portions of the Illinois River. The site has been identified by TNC as a demonstration project. They expect that it will be an example of how degraded floodplains throughout the nation and world can be restored to functional wetlands. The goal is to restore, to the extent practical, quality functional floodplain habitat and ecological processes that will sustain plant and animal communities that were native to the Illinois River Valley. The Corps expertise is assisting in hydrology, floodplain construction, and project management to make the restoration a success.

The Emiquon preserve has been managed for fish, migratory birds and other wetland dwelling species since The National Conservancy (TNC) purchased the Project area. Site management by TNC includes removal of invasive species, planting of native species and intermittent operation of a pump station to support fishery health and to provide reliable food production for migrating waterfowl. The opportunity exists to increase overall preferred habitat quality and quantity by simulating a more natural hydrologic river-floodplain ecosystem. This would include responding to and adaptively managing the ecosystem needs by drawing down water levels to compact sediments and grow aquatic vegetation and increasing water levels to flood invasive woody vegetation and improve fishery habitat. The goals, objectives, and potential project features to achieve the objectives are in table II-1.

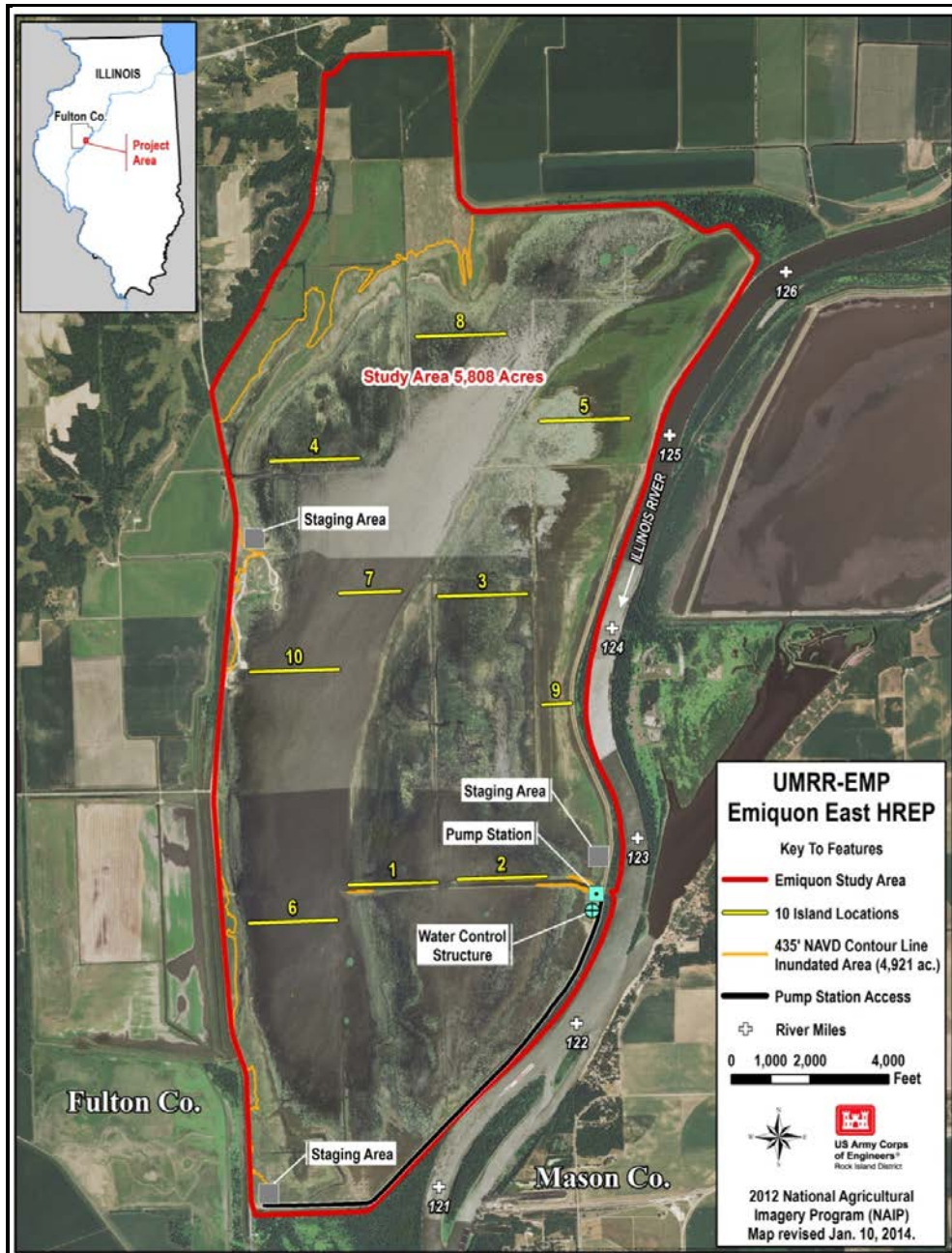


Figure II-5. Emiquon Study Area

Illinois River Basin

Table II-1. Goals, Objectives and Potential Features of the Emiquon HREP

GOAL	OBJECTIVES	POTENTIAL FEATURES
<ul style="list-style-type: none"> • Restore, to the extent practical, quality, functional, floodplain habitat and ecological processes in an Illinois River backwater area • Restore floodplain connectivity from the Illinois River to a productive backwater area, which serves as fish spawning grounds and a nutrient recharge to the river 	<ul style="list-style-type: none"> • Restore the natural hydrograph of the Emiquon Preserve/ Illinois River backwater to approximate pre-settlement conditions • Restore native aquatic habitat and ecological processes • Increase the presence of a reliable food source and quality habitat for migratory waterfowl, shorebirds, and other breeding birds • Improve processing of nutrients and sediments by reducing sediment resuspension • Restore river floodplain connectivity to provide habitat and function similar to pre-settlement conditions • Increase connectivity to fish nursery and spawning habitats 	<ul style="list-style-type: none"> • Levee Removal • Water Control Structure / Fish passage structure • Pump Station • Reinforced Levee Spillway • Levee Improvements • Berms/Islands

C. FLOOD RISK MANAGEMENT

The Corps’ flood risk management (FRM) system is comprised of three major components--urban levees or floodwalls, agricultural levees, and reservoirs. When performance of a FRM system is evaluated, all components must be considered and evaluated as a whole system and not as separate features. As a Federal leader in FRM, it is the District’s vision to provide and sustain a comprehensive FRM system within the River Basins that reliably minimizes risk to lives and property damage.

Urban levees are built very high to protect cities and towns against floods of great magnitude. Agricultural levees are smaller levees that provide relatively lower levels of protection to thousands of acres of cropland against more frequent, less severe floods. Reservoirs provide flood storage capacity and support other Corps’ missions, such as water supply, hydropower, environments stewardship and recreation.

Federal levees are built by the Corps and then turned over to the customer (state, city, county, levee district) for operation and maintenance. Non-Federal levees are built by public entities or are publicly sponsored. In order to qualify for Federal assistance following a flood event, these privately-funded levees must be built to Corps standards and pass annual inspections. Private levees, built by private concerns, are typically built to a lower level of protection than Corps standards, although some private levees may meet or exceed Corps standards. If an eligibility inspection is requested and passed, private levees can be eligible for Federal funding to help recover from damages through the P.L. 84-99 program.

The system in this region cannot prevent all damages caused by all floods because it is not designed to do so. The Corps is working with Federal, state and local officials and with levee districts and Corps, through its Flood Plain Management Services, advises communities, industries and property owners on protection measures they can take themselves, such as zoning regulations, warning systems and flood proofing. The Corps was first called up to address flood problems along the Illinois River in the

Illinois River Basin

early 1900s. The Flood Control Act (FCA) of 1936 gave the Corps the mission to provide flood protection to the entire country.

1. Silver Jackets. The Silver Jackets is an innovative program that provides an opportunity to consistently bring together multiple state, Federal, and sometimes tribal and local agencies to learn from one another and apply their knowledge to reduce risk. State agencies, including those of the State Hazard Mitigation Officer and State NFIP Coordinator, come together with the Federal family of agencies, including the Corps and the Federal Emergency Management Agency (FEMA), in a common forum to address the state's flood risk management priorities. Silver Jacket programs are developed at the state level. There are currently 43 active state teams and 7 states developing teams, the ultimate goal is to offer an interagency team in every state. The states included in the Illinois Basin are all currently active states.

2. Continuing Authorities Program (CAP). This program allows the Corps to plan, design, and construct smaller projects under existing program authorities in place from Congress. The potential cost-share sponsor must request the Corps to investigate potential water or land related resource issues that might fit the program. The District can then request funds to initiate a planning process to determine Federal interest in proceeding with the project.

- CAP 205 – Marseilles
- Potential New Starts:
 - CAP 205-Peoria Sanitary
 - CAP 205 or SEC 14-Roanoke – Panther Creek

D. EMERGENCY RESPONSE AND FLOOD RECOVERY: PUBLIC LAW 84-99 (PL84-99)

Managed by the Emergency Management Division and under the National Response Plan, the Federal emergency response to a disaster is divided among different Emergency Support Functions. The Corps has the lead for Emergency Support Function #3, which is Public Works and Engineering. Though the Corps has capabilities to support Federal Emergency Management Agency (FEMA) or other Federal Agencies in a large number of ways, typical activities and mission assignments include:

Emergency Power	Temporary Roofing
Temporary Housing	Structural Safety Assessments
Debris Clearance and Removal	Urban Search and Rescue
Drinking Water	Ice Distribution
Technical Assistance	Unwatering

Managed by Emergency Management Division, PL84-99 is the discretionary authority given to the Corps by Congress to act and react to emergencies caused by floods, contaminated water sources, draught, or dam failures. This authority allows the Corps to repair and/or rehabilitate any qualified flood control project (levee) whether it is federally constructed or privately owned. Total cost through FY 2014-\$84,071,392.

2013 Flood Repair Projects on the Illinois River:

Coal Creek	Lower Pleasant Valley Rehab
Hager Slough	Spoon River
Spring Lake	Sny Island
Crane Creek	

Illinois River Basin

E. FLOOD AREA ENGINEER

The Flood Area Engineer (FAE) serves as the primary point of contact between the local sponsors, community governments and the Corps on all matters pertaining to flooding of municipalities and or FRM Projects. The FAE shall develop and maintain a flood fight plan and oversee a trained team of Assistant FAEs for the purposes of providing technical assistance and support to local entities on recommended flood fight operations. The FAE shall monitor flood conditions within their assigned flood area and shall inform local officials of potential changes (figure II-6).

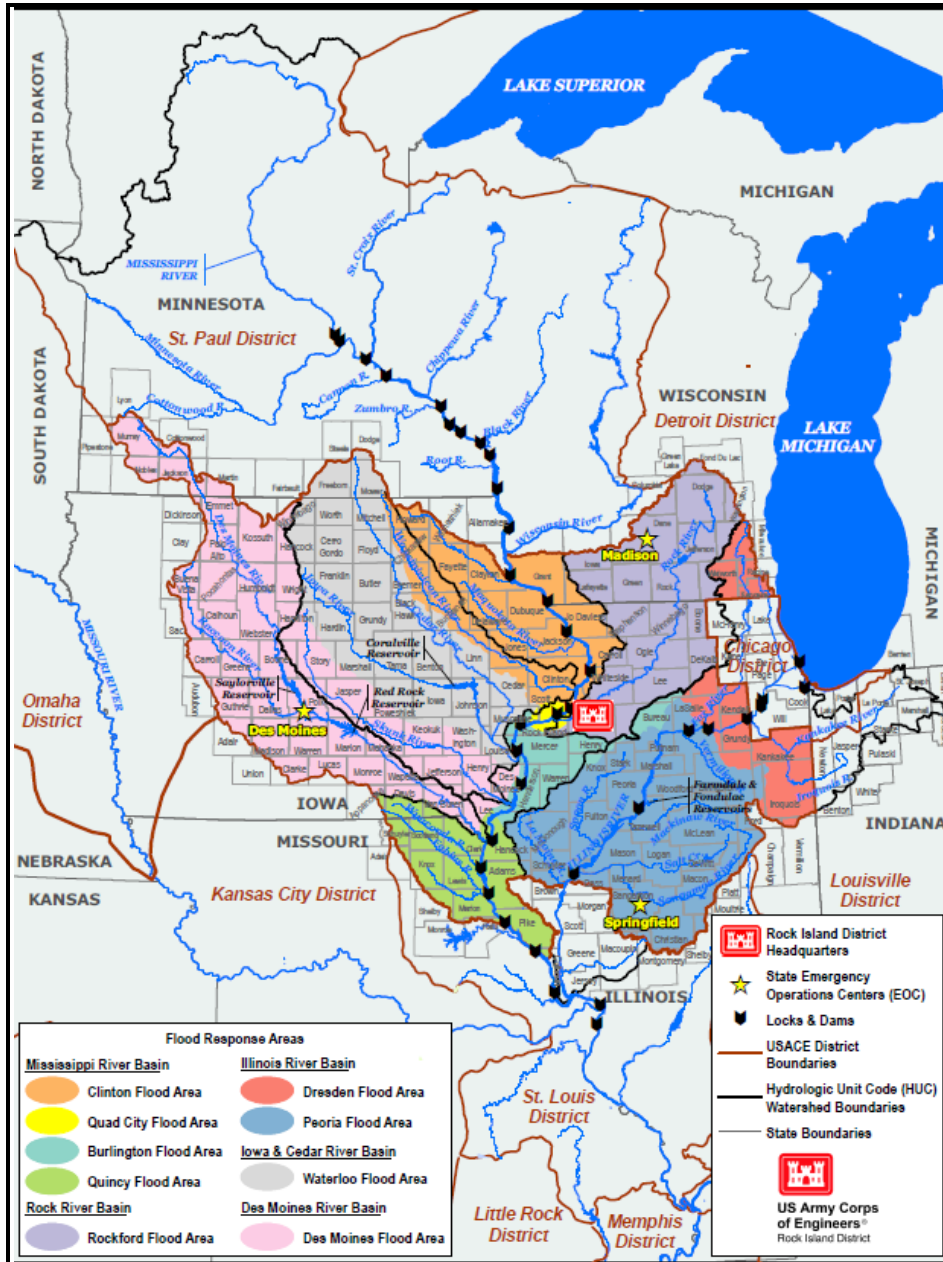


Figure II-6. Rock Island District Flood Response Boundaries

F. REGULATORY

The mission of the Corps' Regulatory Program is to protect the Nation's aquatic resources, while allowing reasonable development through fair, flexible and balanced permit decisions. The Corps evaluates permit applications for essentially all construction activities that occur in the Nation's waters, including wetlands. Corps permits are also necessary for any work, including construction and dredging, in the Nation's navigable waters. The Corps balances the reasonably foreseeable benefits and detriments of proposed projects, and makes permit decisions that recognize the essential values of the Nation's aquatic ecosystems to the general public, as well as the property rights of private citizens who want to use their land. During the permit process, the Corps considers the views of other Federal, state and local agencies, interest groups, and the general public. The results of the careful public interest review are fair and equitable decisions that allow reasonable use of private property, infrastructure development, and growth of the economy, while offsetting the authorized impacts to the waters of the U.S.. The adverse impacts to the aquatic environment are offset by mitigation requirements, which may include restoring, enhancing, creating and preserving aquatic functions and values. The Corps strives to make its permit decisions in a timely manner that minimizes impacts to the regulated public. The District's regulator program ensures that any environmental impact on aquatic resources from construction projects is avoided, minimized or mitigated. The District reviews nearly 1,800 permit requests a year for construction of structures and facilities, and the discharge of dredged material in wetlands and the District's navigable waterways.

Some activities have portions of the Illinois River Basin within their jurisdictions. Projects related to the above-mentioned missions can be found at the following districts websites:

Detroit District: www.lre.usace.army.mil

St. Louis: www.mvs.usace.army.mil

Chicago: www.lrc.usace.army.mil and www.mwrdr.org

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SECTION III. PROGRAM ADMINISTRATION

A. UPPER MISSISSIPPI RIVER RESTORATION -COORDINATING COMMITTEE

Authorization of the UMRR-EMP in 1986 marked the culmination of a controversial debate surrounding replacement of L/D 26 near Alton, IL. In the 1970s, a proposal to replace L/D 26 and increase its capacity, sparked considerable debate and protracted litigation. Environmental groups and Midwestern railroads were particularly opposed to proposed construction of twin 1,200-foot locks. Seeking to balance this concern with the navigation system needs, Congress, in 1978, authorized construction of a new dam with a single, 1,200-foot lock and directed the Upper Mississippi River Basin Commission to conduct studies and make recommendations related to further navigation capacity expansion and its ecological impacts. In 1982, the Commission presented its findings and recommendations in a landmark document, the *Comprehensive Master Plan for the Management of the Upper Mississippi River System*.

Among other things, the Master Plan recommended that Congress authorize a second lock, 600 feet in length, at L/D 26, a habitat rehabilitation and enhancement program, a long term resource monitoring program, a computerized inventory and analysis system, recreation projects, and a study of the economic impacts of recreation. While not all of the Commission's recommendations were ultimately acted upon by Congress, the key elements were authorized as part of the WRDA of 1986 (Public Law 99-662). Section 1103 of that law authorized both a second lock at L/D 26 and a variety of environmental initiatives on the Upper Mississippi River. Those environmental authorities have come to be known as the Upper Mississippi River System Environmental Management Program (UMRS-EMP), though the law does not confer that name.

The provisions of Section 1103 that constitute the original programmatic elements of the UMRR are those that authorized the Corps, in partnership with the Department of the Interior and the States of Illinois, Iowa, Minnesota, Missouri, and Wisconsin to undertake:

- a program for the planning, construction, and evaluation of measures for fish and wildlife habitat rehabilitation and enhancement,
- a long term resource monitoring program,
- a computerized inventory and analysis system,
- a program of recreational projects,
- an assessment of the economic benefits generated by recreational activities, and
- monitoring of traffic movements.

Other provisions of Section 1103 provide both context and statutory direction regarding implementation of the UMRR. Of particular note are the provisions that:

- express Congress' desire "to ensure the coordinated development and enhancement of the Upper Mississippi River System,"
- declare that the river is a "nationally significant ecosystem and a nationally significant commercial navigation system,"

Illinois River Basin

- declare that the system should be administered and regulated in recognition of its several purposes,
- define the UMRS as the commercially navigable portions of the Mississippi River north of Cairo, IL, and the Minnesota, Black, Saint Croix, Illinois, and Kaskaskia Rivers,
- provide Congressional consent for the basin States to establish interstate agreements or agencies,
- provide for transfer of funds to agencies of the Department of the Interior,
- designate the Upper Mississippi River Basin Association as “caretaker” of the Master Plan, and
- establish the applicability of cost share formulas and clarify that none of the appropriations for the habitat, monitoring, or computerized information and analysis programs shall be considered chargeable to navigation.

1. Coordination and Implementation. As the Federal agency authorized to implement the UMRR, the Corps is accountable for management and execution of the program. As a result, the UMRR has been shaped in many ways by Corps policies and procedures. Yet the UMRR is truly a partnership program. This fact can be traced not only to the UMRR’s origins in the Upper Mississippi River Basin Commission, but also to the UMRR authorizing legislation, which directs the Corps to undertake the UMRR “in consultation with” the Department of the Interior and the five basin States. The region has a rich tradition of interagency partnership that the UMRR has been fortunate to be able to build upon and nourish.

For the specific purpose of providing interagency coordination for UMRR, the Corps established the UMRR-CC in 1987 to address Congress’ directive to the Corps to implement the UMRR in consultation with State and Federal partners. The UMRR-CC is the primary consultative body used to discuss and seek consensus on UMRR budgetary and policy issues. The Corps and the USFWS co-chair the UMRR-CC. Membership consists of representatives from the USGS, each of the five State resource agencies, and a variety of Federal agencies that have an interest in the UMRR, even though they have no specific implementation responsibilities.

To provide more detailed scientific guidance on implementation of Long Term Resource Monitoring, another interagency committee called the Analysis Team, or “A-Team,” was formed. This team provides science and technical advice and recommendations on Long-Term Resource Monitoring (LTRM) work priorities, annual work plans, and research activities. The team is comprised of biologists and other technical staff from Federal and State agencies. The planning and prioritization of habitat projects is guided by interagency teams in each of the Corps Districts. These teams include the River Resources Forum (St. Paul District), the River Resources Coordinating Team (Rock Island District), and the River Resources Action Team (St. Louis District). The teams provide specific Habitat Rehabilitation and Enhancement Project (HREP) guidance and endorsement and establish critical links to other river management activities.

The UMRR authorizing legislation designates the Upper Mississippi River Basin Association as the “caretaker” of the Master Plan. As such, major UMRR policy and budgetary issues are often addressed in this forum, and the Association has a longstanding commitment to the program’s successful implementation. The public participates in the UMRR through the involvement of local governments, sport, conservation, and industry nongovernmental organizations, and individual

participation. The public was influential in the original UMRR authorization and has continued to influence the program by providing input and monitoring the implementation of both the HREP and LTRMP components.

2. Roles and Responsibilities. In addition to the various interagency consultative and coordination bodies associated with the UMRR, individual Federal and State agencies have their own specific responsibilities under the UMRR.

U.S. Army Corps of Engineers. The Mississippi Valley Division has overall responsibility for the UMRR-EMP and has assigned many of the program management responsibilities to the Rock Island District. The St. Paul, Rock Island, and St. Louis Districts are also responsible for leading the planning, design, construction, and monitoring of habitat projects.

U.S. Fish and Wildlife Service. Region 3 of the Service, which encompasses almost the entire UMRS, coordinates the UMRR involvement of Service personnel from the refuges, ecological services field offices, and fisheries resources offices. All of these Service offices participate in the planning, design, and construction of HREPs, both on and off refuge lands. The Service is also responsible for operation and maintenance of projects on lands it manages, and participates in pre- and post project monitoring. The Corps, in compliance with the Fish and Wildlife Coordination Act and Endangered Species Act, consults with the Service during planning of all habitat projects. Through this consultation process, the Service helps to identify proposed projects' biological effects.

U.S. Geological Survey. The USGS provides science leadership for the UMRR and administers the Long Term Resource Monitoring Program, headquartered at the Upper Midwest Environmental Sciences Center in La Crosse, Wisconsin. This includes program administration, management, and planning, as well as research, analysis, and data management planning with the Analysis Team.

States. Resource agencies in each of the five states are actively involved in planning HREPs in their jurisdictions. These agencies participate on the St. Paul, Rock Island, and St. Louis District planning and design teams, the A-Team, and the UMRR-CC. Each state funds 35 percent of the total costs of any project within its borders that is not on lands managed as a national wildlife refuge. Upon completion of construction, the respective state is also responsible for 100 percent of the operation and maintenance of projects on lands that it manages. The states are also actively engaged in pre- and post-project monitoring of habitat projects. In addition, the LTRMP field stations are staffed and operated by state employees with funding transferred from the Corps to the States through the USGS. State agencies also contribute in a variety of other ways to the LTRMP's design and execution.

B. RIVER RESOURCES ACTION TEAM

The River Resources Action Team is a state and Federal agency partnership for addressing resource issues concerning the UMRS within the St. Louis District jurisdiction which includes the lower 80 miles of the Illinois River. Participating agencies include: the Corps, the USFWS, the U.S. Coast Guard, the U.S. Environmental Protection Agency, the NRCS, the National Park Service, the Minnesota Pollution Control Agency and the departments of natural resources and transportation from Missouri and Illinois.

C. RIVER RESOURCES COORDINATING TEAM

The objectives of the River Resources Coordinating Team (RRCT) are to:

- provide a mechanism for all Federal and State agencies with management or regulatory responsibilities along the Mississippi River and tributaries in the Rock Island District area to facilitate the coordination of their programs and activities
- allow other interested parties to express their concerns and views to the agencies

1. Participants. Representatives of the following Federal and State agencies are invited to participate in the RRCT, as well as any others that may have an interest in doing so.

Federal

Coast Guard Illinois
Corps of Engineers
EPA, Region V
EPA, Region VII
Fish and Wildlife Service
Soil Conservation Service

State

Department of Natural Resources
Illinois Department of Transportation
Iowa Department of Natural Resources
Iowa Department of Transportation
Missouri Department of Conservation
Maritime Administration, USDOT

Public Notice will be given of the meetings and the views of any affected or interested party will be welcome. A list of agency representatives to the RRCT and a list of persons to be notified of the meetings is contained in the RRCT Mailing List which is maintained by the Rock Island District.

2. Authority. The authority for each agency's participation in the activities of the RRCT lies within that individual agency's programs, authorities, and management or regulatory responsibilities. Participation in the RRCT does not affect an individual agency's statutory or regulatory responsibility to issue permits, to manage programs, or to operate projects. The views of agencies expressed at the RRCT are not binding on that agency.

3. Operation. The RRCT would meet normally three times annually to discuss issues pertinent to the involved river resource management agencies. Meeting places and times would be determined by the RRCT. The Co-chairs for the RRCT will be the Corps and one of the other members. The other Co-chair will rotate, for a two year period, between the other agencies in alphabetical order beginning with the ILDNR. All meetings will be open to the public. All Participants would be welcomed into subject discussions, however, formal RRCT recommendations would be based on a consensus vote of the RRCT. Each state and Federal agency will formally designate one voting member.

D. METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

The Metropolitan Water Reclamation District (MWRDGC) was originally organized as the Sanitary District of Chicago in 1889 under an act of the Illinois General Assembly. The enabling act was in direct response to a typhoid and cholera epidemic. The MWRDGC reversed the flow of the Chicago and Calumet River systems to divert contaminated water from Lake Michigan so it could be diluted as it flowed downstream into the Mississippi River. Subsequently, the MWRDGC built collection treatment facilities to treat sewage in an environmentally effective manner.

Illinois River Basin

The MWRDGC operates primarily within the boundaries of Cook County. Although the MWRDGC exercises no direct control over wastewater collection and transmission systems maintained by cities, towns, and villages in Cook County, it does control municipal sewer construction by permits in suburban Cook County. Furthermore, the MWRDGC provides the main sewer lines for the collection of wastewater from local sewer systems together with the treatment and disposal thereof. Combined sewage and stormwater runoff is stored, treated, and released using MWRDGC facilities. The MWRDGC owns and operates seven water reclamation plants (WRP) and 23 pumping stations that treat an average of 1.5 billion gallons of wastewater each day. The Central (Stickney) WRP is the largest plant in the world. The MWRDGC controls approximately 76 miles of navigable waterways that serve as headwaters of the IWW system. Stringent Federal and state standards require that the MWRDGC's wastewater treatment processes keep the waterways free of pollution. The MWRDGC monitors industries in Cook County to assure that hazardous substances not suitable for a sewer are disposed of in an environmentally responsible way that complies with applicable laws.

The MWRDGC's mission is to protect the health and safety of the public in its service area, protect the quality of the water supply source (Lake Michigan), improve the quality of water in watercourses in its service area, protect businesses and homes from flood damages, and manage water as a vital resource for its service area.

Due to the unique history, co-location of facilities, and operational requirements of both MWRDGC and the Corps mission, coordination occurs at various levels of both organizations. For instance the need to draw down pools in anticipation of large storm events requires communication between MWRDGC and Corps water control. These management activities are coordinated with Coast Guard and navigation industry representatives. For further information on MWRDGC or the Corps IWW operations within Chicago, visit their website at <http://www.mwr.org>

E. ILLINOIS RIVER BASIN RESTORATION PROGRAM

The Comprehensive Plan was formulated to address system restoration needs and was not specific to Corps and ILDNR activities. As a result, the total restoration costs include a relatively large portion of work for other agencies. The process of identifying agency missions and programs has been initiated and documented in the following section, but the process of full multiple agency implementation will continue to develop over the initial years of the program. This section presents the organizational framework for continued coordination and implementation of projects. It is acknowledged that there are funding challenges for all agencies, which highlights the need to partner in the implementation of the IRBR. This continued agency coordination will be done in the spirit of cooperative conversation, where the resources of numerous agencies are focused on solving a resource problem.

Since the Comprehensive Plan formulation addresses total needs, some recommended measures could potentially be conducted by more than one agency. Estimates of the allocation of effort by agency were developed, but represent only rough approximations due to funding uncertainties for each agency. This funding uncertainty is a key reason for the proposed interagency coordination and adaptive implementation framework for the restoration activities. Restoration and monitoring activities will be conducted under the organizational structure shown in figure III-1.

Illinois River Basin

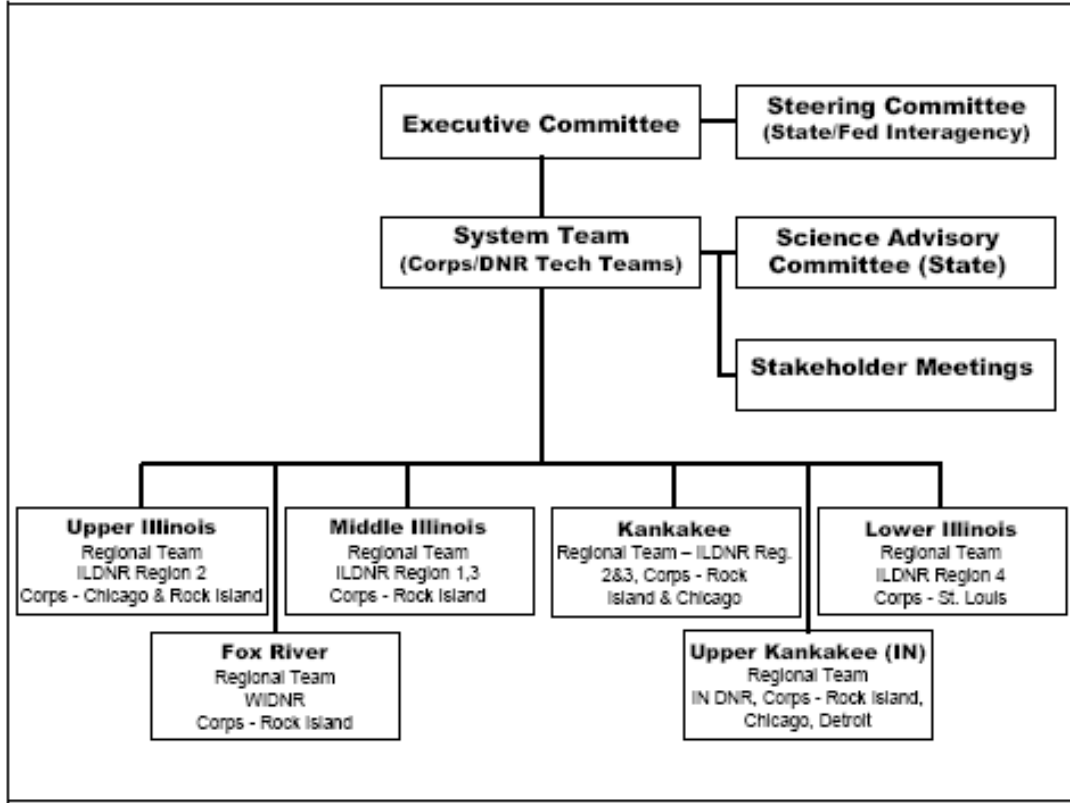


Figure III-1. Study Organizational Structure

1. Executive Committee. The Committee will have representatives from two Corps Regional Headquarters (Mississippi Valley Division and Great Lakes and Ohio River Division, four Corps Districts (Rock Island, St. Louis, Chicago, and Detroit), and the non-Federal sponsors (ILDNR and representatives from the States of Indiana and Wisconsin). The Executive Committee will be chaired by the Mississippi Valley Division. It will be responsible for oversight of the management and implementation of the project, including decisions on project funding. The Executive Committee will meet approximately twice a year, with meeting schedules timed to synchronize receipt or provision of input from other committee meetings as needed.

Members of this committee will sit on the NESP’s River Resources Illinois Team, to assure consistence and coordination between the IRBR (Section 519) efforts and any restoration work resulting from the UMR-IWW System Navigation Study (if authorized).

2. Steering Committee. The Steering Committee will be the interagency group responsible for coordinating the Illinois River Basin and Ecosystem Restoration efforts. It will be co-chaired by the Corps and the ILDNR, and will be composed of State and Federal agency representatives. This Committee will meet approximately twice a year to exchange views, information, and advice to ensure coordination among various agency programs.

3. System Team. The System Team will be composed of the multi-disciplinary technical staff primarily from the Corps and State DNRs. Additional team members may be selected. This team will have primary responsibilities for overall project delivery and system evaluations. The team will incorporate the expertise of scientists and technical staff as necessary.

Illinois River Basin

Team size is anticipated to be approximately 10 members with suggested disciplines to include:

Geomorphology	Hydrology
Limnology	Wildlife Ecology/Management
Fish ecology/Management	Wetlands
Forestry	Engineering

4. Science Advisory Committee. The existing State of Illinois Science Advisory Committee (SAC), a sub-committee of the Illinois River Coordination Council, can exchange views and provide information to the System Team.

5. Regional Teams. Organizing efforts by geographic region allows for the more efficient accomplishment of project activities. Six regions established for the basin are Upper Illinois, Fox River, Kankakee, Upper Kankakee, Middle Illinois, and Lower Illinois. Each regional team, consisting of Corps and State DNR personnel, will have primary responsibilities for the evaluation and implementation of Critical Restoration Projects. Regional Team meetings will provide a forum for groups—with detailed information on resource concerns—to exchange views and information regarding areas in need of assessment and potential Critical Restoration Projects, evaluate the proposed site-specific projects, and facilitate the detailed study of these projects.

Invited attendees include the ILEPA, Illinois Department of Agriculture, representatives from the States of Indiana and Wisconsin, USDA-NRCS and Farm Service Administration (FSA), USFWS, USEPA, USGS, Ecosystem Partnership Groups, SWCDs, NGOs, Levee and Drainage Districts, and Local Governments.

6. Stakeholder Meetings. Stakeholder meetings will provide a forum to present study status and information on implementation and management to all interested Federal, State, and local agencies, as well as NGOs. Stakeholder meetings will be held approximately once a year in each of the six regions or as interim products are completed. Their primary focus will be public involvement, information sharing, and dialog among all groups and interests.

F. ILLINOIS RIVERS COORDINATING COUNCIL

The restoration and conservation of the Illinois River Watershed is in the ecological and economic interests of the citizens of the State of Illinois. It is further in the public interest to stimulate watershed management projects by local, state, and Federal agencies, local communities, not-for-profit conservation organizations, and private landowners. The Illinois River Watershed Restoration Action sought to create a group of leaders representing agriculture, business, conservation, and the environment to encourage the implementation of efforts to restore the Illinois River Watershed in accordance with the recommendations of the Office of the Lieutenant Governor's Integrated Management Plan for the Illinois River Watershed Technical Report (1997), to work with local communities to develop projects and regional strategies, and to make recommendations to appropriate state and Federal agencies.

The Illinois Rivers Coordinating Council consists of 13 voting members appointed by the Governor. One member shall be the Lieutenant Governor who shall serve as a voting member and as chairperson of the Council. The Agency members of the Council include the Director, or his or her designee, of each of the following agencies: the Department of Agriculture, the Department of Commerce and Community Affairs, the Illinois EPA, the DNR, and the DOT. In addition, the Council includes one member representing SWCDs located within the Watershed of the Illinois River and its tributaries and

Illinois River Basin

six members representing local communities, not-for-profit organizations working to protect the Illinois River Watershed, business, agriculture, recreation, conservation, and the environment. The Governor may, at his or her discretion, appoint individuals representing Federal agencies to serve as ex officio, non-voting members. Currently the District Commanders of Rock Island, Chicago and St. Louis Districts are non-voting members of the Council. The Councils' duties include:

- periodically reviewing of activities and programs administered by state and Federal agencies that directly impact the Illinois River Watershed,
- working with local communities and organizations to encourage partnerships that enhance awareness and capabilities to address watershed and water resource concerns and to encourage strategies that protect, restore, and expand critical habitats and soil conservation and water quality practices,
- working with state and Federal agencies to optimize the expenditure of funds affecting the Illinois River Watershed,
- advising and make recommendations to the Governor and State agencies on ways to better coordinate the expenditure of appropriated funds affecting the Illinois River Watershed, including Illinois River 2020,
- encouraging local communities to develop watershed management plans to address stormwater, erosion, flooding, sedimentation, and pollution problems and shall encourage projects for the natural conveyance and storage of floodwaters, the enhancement of wildlife habitat and outdoor recreation opportunities, the recovery, management, and conservation of the Illinois River and its tributaries, the preservation of farmland, prairies, and forests, and the use of measurable economic development efforts that are compatible with the ecological health of the Watershed and this State,
- helping identify possible sources of additional funding for watershed management projects, and
- advising and make recommendations to the Governor on funds and the priority of projects.

To the extent practical, the Council shall perform its duties in accordance with the Office of the Lt. Governor's Integrated Management Plan for the Illinois River Watershed Technical Report (1997).

G. FISH AND WILDLIFE INTERAGENCY COMMITTEE

The Fish and Wildlife Interagency Committee (FWIC) is a field staff-level coordination forum sanctioned by the State and Federal agencies which participated in the Great River Environmental Action Team (GREAT) process of the late 1970s and the Master Plan process of the early 1980s.

The FWIC currently has two standing subcommittees or teams: the Water Level Management Subcommittee and the 404 Team. The Water Level Management Subcommittee works with Rock Island District staff to seek opportunities for modified river regulation that would provide benefit to fish and wildlife. This subcommittee supported the planning and implementation of an experimental drawdown in Pool 13, and is currently seeking other opportunities for both pool-wide and small-scale drawdowns. The 404 team was formed to support development of targeted research on the effects of dredged material disposal on fish, vegetation, and invertebrates. Study results to date may be found at the [U.S. Army Corps of Engineers-Rock Island District website](#).

Questions on any projects mentioned in this report can be directed to cemvr-pm-web@usace.army.mil

SECTION IV. HISTORICAL OVERVIEW

The following section includes ongoing Corps studies in the basin, to include studies done by the Corps as well as studies done by stakeholders.

A. ONGOING CORPS OF ENGINEERS STUDY

Great Lakes & Mississippi River Interbasin Study (GLMRIS). The GLMRIS report presents the results of a multi-year study regarding the range of options and technologies available to prevent aquatic nuisance species (ANS) movement between the Great Lakes and Mississippi River basins through aquatic connections. Through a structured study process, USACE identified thirteen ANS of Concern established in one basin that posed a high or medium risk of adverse impacts by transfer and establishment in the opposite basin. USACE analyzed and evaluated available controls to address these ANS, and formulated alternatives specifically for the Chicago Area Waterway System (CAWS) with the goal of preventing ANS transfer between the two basins.

Additional information can be found at: <http://glmris.anl.gov/>

Specifically authorized by WRDA 2007, FY14 funding of \$3 million.

B. CORPS STUDIES IN THE BASIN

Illinois River from Henry to Naples, Illinois, Peoria Lake and LaGrange Pool, Illinois River Basin. Corps Reconnaissance Study, March 1987. This study, authorized in Section 109 of Section 1304 of the Supplemental Appropriations Act, investigates the advisability of the preservation, enhancement, and rehabilitation of Peoria Lake near Peoria, IL

Upper Mississippi River System-Environmental Management Program, Peoria Lake Habitat Rehabilitation and Enhancement Project Definite Project Report. Corps, July 1990.

Initial Assessment, Illinois River Basin Restoration, Section 519 of the Water Resources Development Act (WRDA) of 2000. Corps, Rock Island District, May 2002. The initial assessment served as a reconnaissance-level report outlining the Federal interest, work for future phases, relationship to the Illinois River Ecosystem Restoration Study, and summary of proposed Critical Restoration Projects and Long-Term Resource Monitoring. This technical publication, complete with NEPA documentation and engineering plans, was the authorizing document by which a 16-acre barrier island was created in Upper Peoria Lake. This project enhanced migratory waterfowl, fish, and aquatic habitat. Project monitoring indicates an increase in absolute numbers and diversity of water bird and fish species at the project site.

Section 216 Initial Appraisal, Illinois Waterway System Ecosystem Restoration and Sedimentation, Illinois. Corps, Rock Island District, August 1996. This document recommends further study of the IWW ecosystem in light of changed physical and economic conditions since the 9-foot navigation channel was constructed.

General Investigation Reconnaissance Study, Illinois River, Peoria Riverfront Development (Environmental/Ecosystem Restoration). Corps, Rock Island District, May 1998. This study determined the Federal interest in: (1) reducing sedimentation impacts in the Illinois River at Peoria

Illinois River Basin

Lake, (2) restoring fish and wildlife habitat, and/or (3) providing flood damage reduction measures as related to riverfront development near Peoria. This reconnaissance effort led to the following study.

General Investigation Reconnaissance Study, Illinois River, Peoria Riverfront Development (Environmental/Ecosystem Restoration). Corps, Rock Island District, May 1998. This study determined the Federal interest in: (1) reducing sedimentation impacts in the Illinois River at Peoria Lake, (2) restoring fish and wildlife habitat, and/or (3) providing flood damage reduction measures as related to riverfront development near Peoria. This reconnaissance effort led to the following study

Peoria Riverfront Development, Illinois (Ecosystem Restoration) Feasibility Study with Integrated Environmental Assessment. Corps, Rock Island District, March 2003. This Feasibility Study was conducted by the Corps of Engineers and the ILDNR (non-Federal sponsor) to investigate the Federal and State interest in ecosystem restoration within Peoria Lake and the Farm Creek Watershed. The Recommended Plan includes dredging approximately 200 acres within Lower Peoria Lake to create deepwater habitats and constructing three islands with a total area of 75 acres.

2004 Report to Congress, Upper Mississippi River System Environmental Management Program. Corps, Rock Island District, Rock Island, IL. This Report to Congress is the second formal evaluation of the EMP. This report evaluates the EMP, describes its accomplishments, including development of a systemic habitat needs assessment, and identifies certain program adjustments.

UMR-IWW System Navigation Feasibility Study, Feasibility Report 2004. Corps, Rock Island, St. Paul, and St. Louis Districts. This feasibility study examines multiple navigation and environmental restoration alternatives, and contains the preferred integrated plan as a framework for modifications and operational changes to the Upper Mississippi River and IWW System to provide for navigation efficiency and environmental sustainability.

Reconnaissance Analysis. Corps, Rock Island District, January 1999. This report concluded that ecosystem restoration in the Illinois River Basin is within the Federal interest and that Corps of Engineers involvement is appropriate. Further, measures to address the loss of backwaters, changed hydrologic regimes and water fluctuations, and other impacts upon the system were identified and found to have no anticipated negative environmental impacts. The resulting Project Study Plan and Cost Sharing Agreements with the ILDNR resulted in the initiation of the Illinois River Ecosystem Restoration Feasibility Study.

C. STUDY BY OTHERS

The Fate of Lakes in the Illinois River Valley, Bellore, Frank C., et al. Illinois Natural History Survey, 1983. This document uses historical sedimentation rates for Illinois River backwater lakes to develop mathematical models of the life expectancy of Illinois River backwater lakes. Most backwaters filled dramatically with sediment at an average annual rate of 0.10 to 0.74 inches since the 1930s. System-wide, backwater lakes have lost an average of 70 percent of their volume since 1903.

D. STUDIES BY STAKEHOLDERS

The ILDNR is the program sponsor for the IRBR Program, which includes 16 critical restoration projects in various stages of completion. In 1999 the ILDNR and MVR initiated an ecosystem restoration study on the Rock River Basin, similar to the Illinois Ecosystem and IRBR studies. A great deal of information was gathered and a systemic fish passage plan developed. However, in 2004, ILDNR funding priorities and USACE budgeting criteria changed and the study was put on

hold. It has been financially closed out; however, the study authority still exists and could be reactivated if sufficient stakeholder interest re-emerged.

Peoria Lake Sediment Investigation. Prepared for the Corps by the Illinois Department of Energy and Natural Resources, State Water Survey Division, January 1986. This report summarizes the impacts of human activities on sedimentation using data from bathymetric profiles and core samples. It concludes that controlling sedimentation in Peoria Lake would require some combination of controlling sediment input, managing in-lake sediment, drawing down Peoria Lake, creating artificial islands, selective dredging, and creating marshy areas.

Sediment Yield of Streams in Northern and Central Illinois. Adams, J. Roger, et al., Illinois State Water Survey, December 1984. This report developed mathematical models to estimate sediment yields for streams in the Illinois River Basin based on sediment monitoring data

Hydraulic Investigation for the Construction of Artificial Islands in Peoria Lake. Illinois Department of Energy and Natural Resources, State Water Survey Division, Champaign, IL, July 1988. This investigation identifies alternative locations for building islands in Upper and Lower Peoria Lakes. Hydraulic modeling was used to determine the effects of islands upon water surface elevations, sedimentation patterns, and current velocities.

The Illinois River: Working for Our State. Talkington, Laurie McCarthy, Illinois State Water Survey, January 1991. This document summarizes information on the past, current, and projected future conditions of the Illinois River.

Mackinaw River Watershed Management Plan. TNC, June 1998. This document provides a long-range plan for the 1,138-square-mile watershed of this tributary of the Illinois River that recommends the establishment or restoration of 22,500 acres of wetlands.

Threats to the Illinois River Ecosystem. TNC, December 1998. The document summarizes the results of the threat assessment, which concludes that altered hydrology, habitat loss, sedimentation, and altered water quality are the four most critical stresses to the system.

Unified Watershed Assessment and Watershed Restoration Priorities for Illinois. Watershed Management Committee, 1998. This report and the associated action plan list priority watersheds in the State of Illinois and call for coordination of activities and resources to help protect and/or restore water resources. The Illinois River Watershed and many of its tributary watersheds are listed as priority watersheds.

Illinois River Site Conservation Plan. TNC, December 1998. This document presents a plan for the implementation of conservation measures in the Illinois River Basin.

The Classification of Aquatic Communities in the Illinois River Watershed and Their Use in Conservation Planning. TNC, December 1998. This report focuses on the aquatic conservation planning process, beginning with a description of the aquatic community classification system and the rationale for its development. The abiotic classification of stream and lake habitats is outlined, followed by a description of the biotic classification of fish alliances. The use of this classification system in conservation planning is discussed, followed by conclusions drawn from this work.

Ecological Status and Trends of the Upper Mississippi River System, 1998: A report of the Long Term Resource Monitoring Program. USGS, Upper Midwest Environmental Sciences Center, La Crosse, WI. 1998. This is the first report since the inception of the EMP and beginning of data

Illinois River Basin

collection under LTRMP in which the monitoring data are summarized into one report, alongside historical observation and other scientific findings. This report also serves as background material for the Corps' Report to Congress that provided recommendations for future environmental management of the UMRS. In addition, this report provides a timely assessment of river conditions.

Erosion and Sedimentation in the Illinois River Basin. Demissie, Misganaw, et al., Illinois State Water Survey, June 1992. This report estimates a sediment budget for the Illinois River Valley. The report also discusses the effect of changed crop practices upon sediment loads.

Integrated Management Plan for the Illinois River Watershed. January 1997. This plan was prepared by the Illinois River Strategy Team in cooperation with nearly 150 participants, chaired by Lt. Governor Bob Kustra. The plan contains 34 recommendations divided into six sections: *In the Corridor, Soil and Water Movement, Agricultural Practices, Economic Development, Local Action, and Education.*

Conservation Priorities for Freshwater Biodiversity in the Upper Mississippi River Basin. R. Weitzell, E. McKhoury, P. Gagnon, B. Schreurs, D. Grossman, and J. Higgins, Nature Serve and TNC, July 2003. This study evaluates the components and patterns for the freshwater biodiversity of the UMRB and identifies the most significant places to focus conservation opportunities to maintain it.

Critical Trends in Illinois Ecosystems. Critical Trends Assessment Program (CTAP), ILDNR, Springfield, IL. 2001. This report provides an overview of each of the 16 CTAP projects. The report summarizes the findings of each project, describes land cover, and provides initial ecosystem monitoring results and results of regional assessments, including resource rich areas.

Restoration of Large River Ecosystems: Hydrologic and Hydraulic Analyses of LaGrange Pool of the Illinois River. Xia, R. and M. Demissie, 1997. Hydrology Division, Illinois State Water Survey, Champaign. This report documents the hydrologic and hydraulic analysis of the LaGrange Pool conducted for the Strategic Renewal of Large Floodplain Rivers research effort.

Strategic Renewal of Large Floodplain Rivers. University of Illinois, Water Resources Center. This ongoing research effort at the University of Illinois, Urbana, IL, aims to develop a combined hydrologic, ecological, and economic restoration model for the LaGrange Pool of the Illinois River.

Illinois River Characterization for Restoration and Beneficial Use of Sediment. Marlin, John C., ILDNR Waste Management and Research Center, April 1997. Proposal to U.S. Department of Agriculture. This document reviews available information on the sediment characteristics of the Illinois River and its potential beneficial uses.

Source Monitoring and Evaluation of Sediment Inputs for Peoria Lake. Bhowmik, Nani G., et al., Illinois State Water Survey, February 1993. The objectives of this study were to identify the sediment sources to Peoria Lake and to evaluate sediment loads from local tributaries. This study evaluated the sources of sediment in Peoria Lake and estimated that a large percentage of sediment in the lake comes from local tributaries.

**PERIODIC BASIN MANAGEMENT REPORT
2014**

ILLINOIS RIVER BASIN

APPENDIX A

FACT SHEETS



Thomas J. O'Brien Lock & Dam

(Chicago, Illinois)
Calumet River

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

Construction: 1957-1960

Congressional District: IL-2

Description

Thomas J. (T.J.) O'Brien Lock and Dam is 326.0 miles above the confluence of the Illinois River with the Mississippi river at Grafton, Illinois. It is approximately 35 miles upstream of the Lockport Lock and Dam, in the southeastern portion of Chicago.

O'Brien is located at the entrance to Lake Michigan in Chicago. The facility is a unit of the Inland Waterway Navigation System and is one of eight such facilities between Chicago and Versailles, Ill. It is composed of a navigational lock, fixed dam, and controlling works.



O'Brien is a low-lift sector gate lock. It provides a maximum lift of five feet for traffic passing from Lake Michigan to the Calumet River. The lock chamber is 1,000-feet long by 110-feet wide. The dam is 296.75 feet long. The controlling works consist of four large vertical slide gates (10 feet square) located near the center of the dam to regulate water flow. There are also two sets of sector gates weighing 216 tons each at both the river and lake ends. These are unique on the Illinois Waterway and; consequently, there is no need for tunnels in the lock walls.

T.J. O'Brien Lock and Dam controls the movement of water between Lake Michigan and the Calumet River while maintaining navigation. The lock and dam are used for flood control and waterway flushing, and also function as components of the diversion control system.

History/Significance

The lock opened in 1960. The lock and dam elements of the complex were completed at a cost of \$6,954,700.

Annual Tonnage (20-Year Historical)

<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>
1992	7,759,545	1997	10,483,007	2002	7,618,898	2007	7,294,890
1993	8,690,366	1998	8,854,284	2003	6,975,080	2008	6,822,254
1994	13,291,318	1999	7,371,509	2004	9,674,528	2009	4,641,383
1995	11,997,055	2000	8,436,175	2005	9,048,078	2010	5,131,780
1996	12,837,902	2001	6,778,306	2006	9,482,367	2011	6,455,575

U.S. ARMY CORPS OF ENGINEERS – ROCK ISLAND DISTRICT

CLOCK TOWER BUILDING, P.O. BOX 2004, ROCK ISLAND, IL 61204-2004
Corporate Communications Office, (309) 794-5274, www.mvr.usace.army.mil

Commodity Tonnage & Lockages (2011)

Coal	1,874,100	<u>Subtotals:</u>	Grain	96,000
Petroleum	738,300		Steel	1,150,700
Chemicals	370,398			
Crude Materials	1,700,235	<u>Lockages:</u>	Commercial Boats:	1,770
Manufactured Goods	1,451,450		Recreation Boats:	10,668
Farm Products	137,500		Light Boats:	197
Manufactured Machinery	170,231		Other Boats:	82
Waste Material	0		Total Boats:	12,717
Containers & Pallets	0		Total Cuts:	5,569
Unknown	13,361			

Current Maintenance Issues – Thomas J. O'Brien

Item (Critical Rank Order)

- | | |
|---|--|
| <ul style="list-style-type: none"> • Lock - Major Rehabilitation • Lock & Dam - Major Maintenance • Install New High Mast Lighting | <ul style="list-style-type: none"> • Systemic Filling Valve Replacement • New Maintenance Building • Scour Repair |
|---|--|

TOTAL ESTIMATED COST: \$48,400,000

After 50 years of service, reliability, and operation, problems are a recurring threat and have significant impacts to the navigation users. A plan to reduce the width of the Chicago River in the City of Chicago, near the Chicago Lock, has already rerouted the barge traffic using the Chicago Lock to the O'Brien Lock.

Although this will not cause a significant change in traffic flow, it does mean that O'Brien will be the only commercial access from the Illinois Waterway to Lake Michigan.

Frequent flooding and temperature extremes, combined with high usage, has resulted in significant deterioration of lock concrete and the decline of mechanical and electrical systems performance and reliability. The vertical concrete has deteriorated to the point that sections have had to be removed and/or threaten to fall into the lock chamber. Barges can become wedged under the armor, resulting in a dangerous situation for deck hands, lock personnel, and potential damage to the barges. Hazardous working conditions exist due to deteriorated horizontal concrete on the land and river walls of the lock chamber. The mechanical and electrical systems require constant patching and labor intensive repairs. Parts are difficult to obtain and have to be specially made in most cases. The probability of failure of the mechanical and electrical systems requiring extensive and expensive repairs in the next several years is very high. The potential at any time for an incident to occur due to deteriorated lock concrete, in which the lock had to be closed for more than a week, is very probable with the potential increasing every year the lock concrete is not rehabilitated.

A Rehabilitation Evaluation Report was approved in 2004, and we are awaiting a new construction start.

Significant features of the work include rehabilitation of the sector gate electric system, the lock electrical distribution system, and injection grouting of the lock land & river walls. The existing lock mechanical and electrical systems are original equipment installed in the 1960s. The electric power utility service was upgraded in 1998, but the other components have been in operation since the original construction of the lock. An electrical component failure of the lock electrical distribution system or the sector gate electrical system could result in lock failure, which could cause delays to navigation traffic. The sheet piling for the lock land wall and river walls have also been in service since the original construction of the lock. Should one of the sheet pile cells rupture, the lock would have an unscheduled closure to navigation for a minimum of 60 days. The repair costs are estimated at \$530,000 and the transportation impacts associated with a 60-day closure would approach \$18.3 million dollars. New lock dewatering bulkheads are needed to replace the old set of bulkheads that has been decommissioned due to age and deterioration.

UPDATE: October 2012



Lockport Lock & Dam

(Lockport, Illinois)
Chicago Sanitary & Ship Canal

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

Construction: 1923-1933

Congressional District: IL-13

Description

Lockport Lock and Dam is 291.0 miles above the confluence of the Illinois River with the Mississippi river at Grafton, Illinois. The complex is two miles southwest of the city of Lockport, Illinois.

The lock is 110 feet wide by 600 feet long. Maximum vertical lift is 42.0 feet, the average lift is 39 feet. It averages 22.5 minutes to fill the lock chamber; 15 minutes to empty.

The Lockport Dam consists of the Metropolitan Water Reclamation District of Greater Chicago (MWRD) lock, powerhouse and associated controlling works. The MWRD, through Congressional action, transferred the maintenance responsibilities of the substructures and support structures to the Corps in the early 1980s for the roughly forty-five foot high embankment, controlling works, powerhouse substructures, and all pool retention structures. The Corps controls the lock; however, has no ownership of the controlling works.

Rehabilitation of the lock was completed in 1989 at a cost of \$22,681,000.

History/Significance

The lock opened in 1933. Lockport Lock was one of five designed and partially constructed by the state of Illinois over a period from 1923 to 1930. The complex was about 97 percent complete when construction was turned over to the federal government due to state financial difficulties.

The government, by the authority of the Rivers and Harbors Act of 1930, completed construction of the lock in 1933. The opening of the Lockport Lock coincided with the opening of the downstream Brandon Road, Dresden Island, Marseilles, and Starved Rock locks and dams. The total cost of the lock was \$2,153,867, of which \$2,020,259 was state funded and \$133,608 was funded by the federal government.

Annual Tonnage (20-Year Historical)

<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>
1992	16,663,957	1997	15,415,018	2002	16,872,206	2007	13,507,517
1993	17,030,027	1998	17,102,920	2003	15,310,005	2008	12,460,893
1994	19,698,080	1999	16,039,564	2004	17,341,066	2009	10,240,591
1995	14,986,564	2000	16,788,986	2005	16,929,707	2010	9,853,988
1996	14,846,540	2001	15,970,297	2006	17,253,650	2011	10,552,834



U.S. ARMY CORPS OF ENGINEERS – ROCK ISLAND DISTRICT

CLOCK TOWER BUILDING, P.O. BOX 2004, ROCK ISLAND, IL 61204-2004
Corporate Communications Office, (309) 794-5274, www.mvr.usace.army.mil

Commodity Tonnage & Lockages (2011)

Coal	1,607,210
Petroleum	1,580,305
Chemicals	1,550,197
Crude Materials	3,592,954
Manufactured Goods	1,801,459
Farm Products	214,572
Manufactured Machinery	179,520
Waste Material	17,400
Containers & Pallets	1,600
Unknown	7,617

<u>Subtotals:</u>	Grain	98,800
	Steel	1,021,364

<u>Lockages:</u>	Commercial Boats:	2,696
	Recreation Boats:	545
	Light Boats:	413
	Other Boats:	34
	Total Boats:	3,688
	Total Cuts:	3,437

Current Maintenance Issues

Item (Critical Rank Order)

- | | |
|--|---|
| <ul style="list-style-type: none"> • Channel Concrete Wall - Major Rehabilitation (ongoing, 90% complete) • Lock Emergency Gate Hydraulic System Rehabilitation • Lock Emergency Gate Replacement • Systemic Miter Gate Replacement • Systemic Miter Gate Machinery Replacement • Bulkhead - Vertical Gate | <ul style="list-style-type: none"> • Systemic Filling Valve Replacement • Replace Lock Controlling Works (ongoing, 40% complete) • Major Maintenance - Spillway Design & Construction • Power House Guide Wall Rehabilitation • New Maintenance Building |
|--|---|

TOTAL ESTIMATED COST: \$39,000,000

Lockport upper pool is a perched pool 38 feet above surrounding communities. The Lockport Pool Approach Dike (4,300 feet on the right descending bank and two-mile-long perched Canal Walls on the left descending) are defined as a dam that has confirmed "unsafe" or unconfirmed "potentially unsafe" dam safety issues. The Controlling Works that control the operation of the Chicago Sanitary Ship Canal and parts of the Dam were also identified as needing renovation to maintain the pool. The embankment requires significant repair and rehabilitation to ensure continued structural integrity, continued retention of the navigation pool, stability of the embankments and substructures, safe access to the hydropower plant, continued safe use of the controlling works, and avoids downstream flooding in the event of failure.

The current rehabilitation project has been divided into 6 Stages funded through Operation and Maintenance funds, American Recovery and Reinvestment Act funds, and Major Rehabilitation appropriations. The 6 stages are:

- Stage 1 (Approach Dike) - Construct 4,300 feet of cut-off wall. (Completed in FY09)
- Stage 2 (Controlling Works) - Under construction. Repair concrete bulkheads and replace brick, limestone and granite facades to the structure. (40% Completed)
- Stage 3 (Canal Walls) - Under construction, Repair two miles of concrete wall with panel construction. (90% completed)
- Stage 4 (Powerhouse Exciter Bay Infill) – Operations and maintenance and embankment clearing. (Completed FY09)
- Stage 5 (Interim Risk Reduction Measures) - Updated FY11 and activities are ongoing.
- Stage 6 (Forebay Wall) – Evaluation. (Completed FY12)

UPDATE: October 2012



Brandon Road Lock & Dam

(Joliet, Illinois)
Des Plaines River

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

Construction: 1927-1933

Congressional District: IL-11

Description

Brandon Road Lock and Dam is 286 miles above the confluence of the Illinois River with the Mississippi river at Grafton, Illinois. The complex is located 27 miles southwest of Chicago; 2 miles southwest of Joliet, Illinois, near Rockdale.

The lock is 600 feet long, 110 feet wide. Nominal lift is 34 feet with an average 19-minute fill time, 15-minute emptying time. The dam is 2,391 feet long (exclusive of fixed embankment and river wall). It contains 21 operational Tainter gates (50 feet wide x 2 feet, 3-1/2 inches high), six sluice gates (7 feet, 9 inches wide x 8 feet, five inches high, bulkheaded closed), and 16 pairs of 16-foot high x 15-foot wide headgates (eight operational, eight bulkheaded closed).



From the upper limits of the city of Joliet to Brandon Road Lock and Dam, the Illinois Waterway is contained between concrete gravity walls which are from 15 to 40-feet high. The walls extend approximately three miles upstream from the lock and dam. Failure of these walls could result in flooding Joliet. Repair of the deteriorated walls and manholes was completed from 1985-1988. In 2007, the Corps began a multi-million dollar, multi-year program to repair and reinforce the walls to ensure their continued integrity.

History/Significance

The lock opened in 1933. Brandon Road Lock and Dam was one of five designed and partially constructed by the state of Illinois over a period from 1927 to 1930. The complex was about 70 percent complete when construction was turned over to the federal government due to state financial difficulties.

The government, by the authority of the Rivers and Harbors Act of 1930, completed construction of the lock in 1933. The lock and dam elements of the complex were completed at a total cost of \$4,500,000, of which \$2,031,683 were state funds and \$2,434,748 were federal funds.

Annual Tonnage (20-Year Historical)

<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>
1992	16,750,453	1997	15,542,395	2002	17,177,894	2007	13,862,037
1993	17,094,868	1998	17,260,536	2003	15,784,153	2008	12,665,246
1994	20,042,969	1999	16,073,774	2004	17,656,488	2009	10,465,777
1995	15,105,886	2000	16,939,884	2005	17,341,109	2010	10,010,190
1996	15,062,517	2001	16,418,031	2006	17,811,849	2011	10,760,631

U.S. ARMY CORPS OF ENGINEERS – ROCK ISLAND DISTRICT

CLOCK TOWER BUILDING, P.O. BOX 2004, ROCK ISLAND, IL 61204-2004
Corporate Communications Office, (309) 794-5274, www.mvr.usace.army.mil

Commodity Tonnage & Lockages (2011)

Coal	1,622,706
Petroleum	1,553,955
Chemicals	1,554,847
Crude Materials	3,703,640
Manufactured Goods	1,932,124
Farm Products	219,272
Manufactured Machinery	147,470
Waste Material	17,400
Containers & Pallets	1,600
Unknown	7,617

<u>Subtotals:</u>	Grain	100,200
	Steel	1,005,629

<u>Lockages:</u>	Commercial Boats:	2,548
	Recreation Boats:	628
	Light Boats:	415
	Other Boats:	16
	Total Boats:	3,607
	Total Cuts:	3,460

Current Maintenance Issues

Item (Critical Rank Order)

- | | |
|---|--|
| <ul style="list-style-type: none"> • Rehabilitation Evaluation Report • Tainter Gate Concrete Repairs • Systemic Miter Gate Replacement • Systemic Control Stand Replacement • Paint/Repair Service Bridge, Tainter Gate Section • Systemic Dam Machinery Replacement | <ul style="list-style-type: none"> • Systemic Filling Valve Replacement • Concrete Repairs Downstream I-Wall and Land Wall • Install Traveling Keel and Remove Pier • New Maintenance Building • Repair Joliet Channel Wall |
|---|--|

TOTAL ESTIMATED COST: \$48,500,000

The existing 9-foot Channel Navigation Project was largely constructed in the 1930s and extends down the Upper Mississippi River from Minneapolis-St. Paul to its confluence with the Ohio River and up the Illinois Waterway to the Thomas J. O'Brien Lock in Chicago. It includes 37 Locks and approximately 1,200 miles of navigable waterway in Illinois, Iowa, Minnesota, Missouri and Wisconsin.

The maintenance needs of the aging infrastructure are increasing at a rate much greater than the operations and maintenance funding provided for the system. This is adversely affecting reliability of the system. Long-established programs for preventative maintenance of major lock components have essentially given way to a fix-as-fail strategy, with repairs sometimes requiring weeks or months to complete. Depending on the nature of a lock malfunction, extended repairs can have major consequences for shippers, manufacturers, consumers, and commodities investors.

The system's 600-foot locks do not accommodate today's modern tows without splitting and passing through the lock in two operations. This procedure requires uncoupling barges at midpoint which triples lockage times and exposes deckhands to increased accident rates.

More than 580 manufacturing facilities, terminals, and docks ship and receive tonnage in the Upper Mississippi River basin. Grains (corn and soybeans) dominate traffic on the system. Other commodities, mainly cement and concrete products, comprise the second largest group. A modern 15-barge tow transports the equivalent of 1,050 large semi-trucks (26,250 cargo tons, 875,000 bushels, or 17,325,000 gallons). Annually, the 9-foot project generates an estimated \$1 billion of transportation cost savings compared with the operation and maintenance costs of approximately \$115 million.

UPDATE: October 2012



Dresden Island Lock & Dam

(Morris, Illinois)
Illinois River

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

Construction: 1928-1930

Congressional District: IL-11

Description

Dresden Island Lock and Dam is 271.5 miles above the confluence of the Illinois River with the Mississippi river at Grafton, Illinois. The complex is 1-1/2 miles downstream from the mouth of the Kankakee River and about 15 miles southwest of Joliet, Illinois.

The complex consists of a gated concrete gravity dam. The total length of the lock and dam between abutments is about 1,320 feet. Lock dimensions are 110 feet wide by 600 feet long with a maximum lift of 22 feet. Average filling time of the lock chamber is 14 minutes; 12 minutes emptying time.



The dam consists of an arch dam section, a fixed spillway section, nine Tainter gates (60 feet wide by 17 feet high), 18 plugged headgates, and a 500-foot-long earthfill section with steel sheet pile cut-off wall connecting the headgate section to the Illinois and Michigan Canal embankment.

It takes two hours for water to travel from Brandon Road Lock and Dam to Dresden Island during flood or high flow conditions.

History/Significance

The lock opened in 1933. Dresden Island Lock and Dam was one of five designed and partially constructed by the state of Illinois over a period from 1928 to 1930. Excavation and masonry work began in December 1928. The complex was about 35 percent complete when construction was turned over to the federal government due to state financial difficulties.

The government, by the authority of the Rivers and Harbors Act of 1930, completed construction in 1933. The estimated cost was \$2,306,000, however, the actual cost of the project was \$3,915,964, of which \$1,412,588 was funded by the state and \$2,503,376 was funded by the federal government.

Annual Tonnage (20-Year Historical)

<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>
1992	19,126,380	1997	16,795,745	2002	18,712,254	2007	16,532,747
1993	19,373,151	1998	19,058,830	2003	18,556,711	2008	15,188,254
1994	22,140,378	1999	17,761,340	2004	20,389,783	2009	13,162,751
1995	16,872,322	2000	18,835,137	2005	19,371,418	2010	12,733,367
1996	16,629,120	2001	18,876,400	2006	20,548,035	2011	13,417,907

U.S. ARMY CORPS OF ENGINEERS – ROCK ISLAND DISTRICT

CLOCK TOWER BUILDING, P.O. BOX 2004, ROCK ISLAND, IL 61204-2004
Corporate Communications Office, (309) 794-5274, www.mvr.usace.army.mil

Commodity Tonnage & Lockages (2011)

Coal	1,045,181
Petroleum	3,677,865
Chemicals	2,303,204
Crude Materials	3,991,625
Manufactured Goods	1,914,851
Farm Products	293,394
Manufactured Machinery	163,570
Waste Material	17,400
Containers & Pallets	1,600
Unknown	9,217

<u>Subtotals:</u>	Grain	120,500
	Steel	956,456

<u>Lockages:</u>	Commercial Boats:	2,365
	Recreation Boats:	969
	Light Boats:	311
	Other Boats:	45
	Total Boats:	3,690
	Total Cuts:	3,630

Current Maintenance Issues

Item (Critical Rank Order)

- | | |
|--|--|
| <ul style="list-style-type: none"> • Rehabilitation Evaluation Report • Rehabilitate Lock - I-wall Electrical Gallery • Replace Dam Gates • Replace Dam Steam System • Systemic Miter Gate Replacement • Emergency Miter Gates for District Use • Systemic Miter Gate Machinery Replacement • Rehabilitate Tainter Gate Piers 6 and 7 (Engineering & Design) | <ul style="list-style-type: none"> • Systemic Control Stand Replacement • Systemic Dam Machinery Replacement (Engineering & Design) • Systemic Filling Valve Replacement • Replace Standby Generator • Repair Upstream Guidewall and Mooring Cell • New Maintenance Building |
|--|--|

TOTAL ESTIMATED COST: \$80,000,000

The existing 9-foot Channel Navigation Project was largely constructed in the 1930s and extends down the Upper Mississippi River from Minneapolis-St. Paul to its confluence with the Ohio River and up the Illinois Waterway to the Thomas J. O'Brien Lock in Chicago. It includes 37 Locks and approximately 1,200 miles of navigable waterway in Illinois, Iowa, Minnesota, Missouri and Wisconsin.

The maintenance needs of the aging infrastructure are increasing at a rate much greater than the operations and maintenance funding provided for the system. This is adversely affecting reliability of the system. Long-established programs for preventative maintenance of major lock components have essentially given way to a fix-as-fail strategy, with repairs sometimes requiring weeks or months to complete. Depending on the nature of a lock malfunction, extended repairs can have major consequences for shippers, manufacturers, consumers, and commodities investors.

The system's 600-foot locks do not accommodate today's modern tows without splitting and passing through the lock in two operations. This procedure requires uncoupling barges at midpoint which triples lockage times and exposes deckhands to increased accident rates.

More than 580 manufacturing facilities, terminals, and docks ship and receive tonnage in the Upper Mississippi River basin. Grains (corn and soybeans) dominate traffic on the system. Other commodities, mainly cement and concrete products, comprise the second largest group. A modern 15-barge tow transports the equivalent of 1,050 large semi-trucks (26,250 cargo tons, 875,000 bushels, or 17,325,000 gallons). Annually, the 9-foot project generates an estimated \$1 billion of transportation cost savings compared with the operation and maintenance costs of approximately \$115 million.

UPDATE: October 2012

U.S. ARMY CORPS OF ENGINEERS – ROCK ISLAND DISTRICT
 CLOCK TOWER BUILDING, P.O. BOX 2004, ROCK ISLAND, IL 61204-2004
 Corporate Communications Office, (309) 794-5274, www.mvr.usace.army.mil



Marseilles Lock & Dam

(Marseilles, Illinois)
Illinois River

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

Construction: 1920-1933

General Contractors:

Lock: Green and Sons Company, Chicago, Illinois & Independent Bridge Company, Pittsburgh, Pa.

Marseilles Canal: Callahan Construction Company, St. Louis, Mo.

Congressional District: IL-11

Description

Marseilles Lock is 244.6 miles above the confluence of the Illinois River with the Mississippi river at Grafton, Illinois, at the foot of Bells Island. Marseilles Dam is 2.5 miles upstream of the lock at the head of Bells Island.

The lock and dam is located southwest of Marseilles, Ill., near Illini State Park. The Marseilles Canal, adjacent to the left bank of the Illinois, extends from the dam to the lock. There are hydroelectric generating facilities at the dam.



The lock is 110 feet wide by 600 feet long. The maximum lift is 24.5 feet with an average lift lower than 24 feet. It takes an average of 15 minutes to fill the lock chamber; 10 minutes to empty it.

The dam is a fixed, gated-concrete, gravity dam. The main dam is 598.5-feet long with eight submersible Tainter gates (60-feet wide, 16-feet high, 25-foot radius) and Ogee spillway at Ice Chute. The gates are remotely controlled by the lockmaster at the lock. The South Channel Headrace dam is 111-feet long with one Tainter gate. The North Channel Headrace dam is 206-feet long with two Tainter gates. It takes six hours for water to travel from Dresden Island Lock and Dam to Marseilles during flood or high flow conditions.

History/Significance

The Marseilles complex was one of five begun by the state of Illinois in 1920. The dam was about 95 percent complete when construction was turned over to the federal government due to state financial difficulties. The lock was completed, except for the steel work, in August 1923. The contract for the lock gates, valves and lower approach wall was let in 1927. Marseilles Dam was completed in 1933 at a cost \$3,079,372, of which \$1,796,372 was funded by the state and \$1,283,000 was funded by the government.

Annual Tonnage (20-Year Historical)

<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>
1992	20,696,379	1997	18,883,637	2002	20,132,588	2007	17,221,068
1993	21,175,753	1998	21,002,312	2003	19,619,082	2008	15,657,070
1994	23,964,211	1999	19,155,838	2004	21,754,394	2009	14,182,160
1995	19,109,651	2000	20,237,408	2005	20,139,348	2010	14,125,162
1996	18,383,546	2001	20,886,084	2006	21,043,379	2011	14,548,844

U.S. ARMY CORPS OF ENGINEERS – ROCK ISLAND DISTRICT

CLOCK TOWER BUILDING, P.O. BOX 2004, ROCK ISLAND, IL 61204-2004
Corporate Communications Office, (309) 794-5274, www.mvr.usace.army.mil

Commodity Tonnage & Lockages (2011)

Coal	1,148,481
Petroleum	3,509,660
Chemicals	2,649,928
Crude Materials	3,896,544
Manufactured Goods	1,822,696
Farm Products	1,216,824
Manufactured Machinery	242,694
Waste Material	38,900
Containers & Pallets	1,600
Unknown	21,517

<u>Subtotals:</u>	Grain	963,680
	Steel	813,896

<u>Lockages:</u>	Commercial Boats:	2,487
	Recreation Boats:	1,173
	Light Boats:	277
	Other Boats:	83
	Total Boats:	4,020
	Total Cuts:	3,944

Current Maintenance Issues

Item (Critical Rank Order)

- | | |
|---|--|
| <ul style="list-style-type: none"> • Systemic Miter Gate Replacement • Causeway Concrete Repairs • Rebuild Miter Gate Machinery • Lock Concrete and Steel Repairs • Install New High Mast Lighting • Systemic Control Stand Replacement | <ul style="list-style-type: none"> • Systemic Filling Valve Replacement • Repair Electrical Cable Trenches • Repair Concrete Upper Right Guidewall • Lower Guidewall Rehabilitation • Replace Standby Generator • New Maintenance Building |
|---|--|

TOTAL ESTIMATED COST: \$40,000,000

The existing 9-foot Channel Navigation Project was largely constructed in the 1930s and extends down the Upper Mississippi River from Minneapolis-St. Paul to its confluence with the Ohio River and up the Illinois Waterway to the Thomas J. O'Brien Lock in Chicago. It includes 37 Locks and approximately 1,200 miles of navigable waterway in Illinois, Iowa, Minnesota, Missouri and Wisconsin.

The maintenance needs of the aging infrastructure are increasing at a rate much greater than the operations and maintenance funding provided for the system. This is adversely affecting reliability of the system. Long-established programs for preventative maintenance of major lock components have essentially given way to a fix-as-fail strategy, with repairs sometimes requiring weeks or months to complete. Depending on the nature of a lock malfunction, extended repairs can have major consequences for shippers, manufacturers, consumers, and commodities investors.

The system's 600-foot locks do not accommodate today's modern tows without splitting and passing through the lock in two operations. This procedure requires uncoupling barges at midpoint which triples lockage times and exposes deckhands to increased accident rates.

More than 580 manufacturing facilities, terminals, and docks ship and receive tonnage in the Upper Mississippi River basin. Grains (corn and soybeans) dominate traffic on the system. Other commodities, mainly cement and concrete products, comprise the second largest group. A modern 15-barge tow transports the equivalent of 1,050 large semi-trucks (26,250 cargo tons, 875,000 bushels, or 17,325,000 gallons). Annually, the 9-foot project generates an estimated \$1 billion of transportation cost savings compared with the operation and maintenance costs of approximately \$115 million.

UPDATE: October 2012

U.S. ARMY CORPS OF ENGINEERS – ROCK ISLAND DISTRICT
 CLOCK TOWER BUILDING, P.O. BOX 2004, ROCK ISLAND, IL 61204-2004
 Corporate Communications Office, (309) 794-5274, www.mvr.usace.army.mil



Starved Rock Lock & Dam

(Ottawa, Illinois)
Illinois River

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

Construction: 1926-1933

General Contractors:

Woods Brothers Construction Company, Lincoln, Neb., and
Independent Bridge Company, Pittsburgh, Pa.

Congressional District: IL-11

Description

Starved Rock Lock and Dam is 231.0 miles above the confluence of the Illinois River with the Mississippi river at Grafton, Illinois. The lock and dam is located about 1.5 miles southeast of Utica, Ill.

The dam is a gated, concrete, gravity dam, 1,280 feet long. A 680-foot-long Tainter gate section contains 10 Tainter gates. The headgate section contains 30 headgates that were plugged with concrete in 1982. The 52-foot-long ice chute section of the dam includes a 52-foot-long inoperable Tainter gate. The lock is the standard 600 feet long by 110 feet wide. The maximum lift is 18.5 feet with an average lift of 17 feet. It takes approximately 12 minutes to fill the lock chamber; nine minutes to empty.



It takes two hours for water to travel from Marseilles Lock and Dam to Starved Rock during flood or high flow conditions.

History/Significance

The lock opened in 1933. Starved Rock Lock and Dam was one of five designed and partially constructed by the state of Illinois over a period from 1926 to 1930. The original contractor, selected in 1923, failed to appear for the signing of the contract documents. Land litigation issues were resolved in 1925 and a second contract was awarded in 1926. Starved Rock Lock and Dam was about 95 percent complete when construction was turned over to the federal government due to state financial difficulties.

The government, by the authority of the Rivers and Harbors Act of 1930, completed construction of the lock in 1933. The lock and dam elements of the complex were completed at a total cost of \$4,462,737, of which \$3,577,419 were state funds and \$885,318 were federal funds.

Annual Tonnage (20-Year Historical)

<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>
1992	22,795,545	1997	21,110,155	2002	22,432,189	2007	19,052,616
1993	23,257,612	1998	22,995,604	2003	21,837,185	2008	17,038,590
1994	26,327,462	1999	21,384,458	2004	23,796,648	2009	16,146,996
1995	22,127,619	2000	22,377,658	2005	22,070,208	2010	15,987,381
1996	20,758,366	2001	23,300,035	2006	23,187,461	2011	16,412,979

U.S. ARMY CORPS OF ENGINEERS – ROCK ISLAND DISTRICT

CLOCK TOWER BUILDING, P.O. BOX 2004, ROCK ISLAND, IL 61204-2004
Corporate Communications Office, (309) 794-5274, www.mvr.usace.army.mil

Commodity Tonnage & Lockages (2011)

Coal	1,119,281
Petroleum	3,581,958
Chemicals	2,772,345
Crude Materials	4,219,579
Manufactured Goods	1,838,571
Farm Products	2,584,448
Manufactured Machinery	236,180
Waste Material	36,000
Containers & Pallets	1,600
Unknown	23,017

<u>Subtotals:</u>	Grain	2,291,830
	Steel	825,571

<u>Lockages:</u>	Commercial Boats:	2,537
	Recreation Boats:	1,201
	Light Boats:	247
	Other Boats:	74
	Total Boats:	4,059
	Total Cuts:	3,926

Current Maintenance Issues

Item (Critical Rank Order)

- | | |
|---|---|
| <ul style="list-style-type: none"> • Lock - Concrete Repairs • Floating Mooring Bit Concrete Repairs • Repair Upstream Guidewall • Systemic Miter Gate Replacement • Systemic Dam Machinery Replacement (Engineering and Design) • Rebuild Miter Gate Machinery • Systemic Filling Valve Replacement | <ul style="list-style-type: none"> • Install New High Mast Lighting • Replace Tainter Gates • Submersible Tainter Gate Construction • Repair Lower Riverwall Bullnose • Lower Guidewall Concrete Repairs • Replace Standby Generator • New Maintenance Building • Remove Mooring Cell |
|---|---|

TOTAL ESTIMATED COST: \$181,000,000

The existing 9-foot Channel Navigation Project was largely constructed in the 1930s and extends down the Upper Mississippi River from Minneapolis-St. Paul to its confluence with the Ohio River and up the Illinois Waterway to the Thomas J. O'Brien Lock in Chicago. It includes 37 Locks and approximately 1,200 miles of navigable waterway in Illinois, Iowa, Minnesota, Missouri and Wisconsin.

The maintenance needs of the aging infrastructure are increasing at a rate much greater than the operations and maintenance funding provided for the system. This is adversely affecting reliability of the system. Long-established programs for preventative maintenance of major lock components have essentially given way to a fix-as-fail strategy, with repairs sometimes requiring weeks or months to complete. Depending on the nature of a lock malfunction, extended repairs can have major consequences for shippers, manufacturers, consumers, and commodities investors.

The system's 600-foot locks do not accommodate today's modern tows without splitting and passing through the lock in two operations. This procedure requires uncoupling barges at midpoint which triples lockage times and exposes deckhands to increased accident rates.

More than 580 manufacturing facilities, terminals, and docks ship and receive tonnage in the Upper Mississippi River basin. Grains (corn and soybeans) dominate traffic on the system. Other commodities, mainly cement and concrete products, comprise the second largest group. A modern 15-barge tow transports the equivalent of 1,050 large semi-trucks (26,250 cargo tons, 875,000 bushels, or 17,325,000 gallons). Annually, the 9-foot project generates an estimated \$1 billion of transportation cost savings compared with the operation and maintenance costs of approximately \$115 million.

UPDATE: October 2012

U.S. ARMY CORPS OF ENGINEERS – ROCK ISLAND DISTRICT
 CLOCK TOWER BUILDING, P.O. BOX 2004, ROCK ISLAND, IL 61204-2004
 Corporate Communications Office, (309) 794-5274, www.mvr.usace.army.mil



Peoria Lock & Dam

(Creve Coeur, Illinois)
Illinois River

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

Construction: 1936-1939

Congressional District: IL-18

Description

Peoria Lock and Dam is 157.7 miles above the confluence of the Illinois River with the Mississippi river at Grafton, Illinois. The lock and dam is located four miles downstream of Peoria, Ill.

The lock is the standard 600-feet long by 110-feet wide. The maximum lift is 11 feet with an average lift of six feet. It takes ten minutes to fill or empty the lock chamber. The dam is a Chanoine wicket dam, the navigable pass type. Overall length of the dam is 570 feet. The movable dam is 432-feet long containing 108 wickets (3.75-feet wide, 16.42-feet high, 0.25-foot gap between wickets). The dam includes a single 84-foot-long submersible Tainter gate.



From 1987-1990, a major rehabilitation changed the physical components of the dam and operating procedures by replacing 26 of the original 134 wickets with a single 84-foot long submersible Tainter gate adjacent to the lock wall.

It takes two days for water to travel from Starved Rock Lock and Dam to Peoria.

History/Significance

The lock opened in 1939. Following the Supreme Court's decree of April 21, 1930, limiting the diversion of water from Lake Michigan, a new navigation plan was developed calling for removing four old locks and dams at Henry, Copperas Creek, LaGrange and Kampsville; new locks at Peoria and LaGrange, and a dam on the Mississippi River at Alton, Missouri, to provide the required navigation depth from the mouth of the Illinois to LaGrange. The lock is used only during low and moderate river flows when the wicket dams are raised to maintain the nine-foot navigation depth. During high flows, the wickets are lowered and open river conditions prevail.

Peoria is one of only two wicket dams on the Illinois Waterway. The lock and dam elements of the complex were completed at a cost of \$3,381,030.

Annual Tonnage (20-Year Historical)

<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>
1992	30,988,124	1997	30,765,137	2002	32,080,328	2007	26,391,793
1993	31,779,743	1998	32,604,311	2003	31,878,067	2008	23,483,059
1994	35,445,137	1999	31,143,398	2004	32,321,149	2009	22,512,568
1995	33,900,177	2000	31,730,582	2005	29,734,319	2010	22,758,072
1996	31,229,178	2001	33,668,096	2006	30,514,817	2011	22,779,470

U.S. ARMY CORPS OF ENGINEERS – ROCK ISLAND DISTRICT

CLOCK TOWER BUILDING, P.O. BOX 2004, ROCK ISLAND, IL 61204-2004
Corporate Communications Office, (309) 794-5274, www.mvr.usace.army.mil

Commodity Tonnage & Lockages (2011)

Coal	2,380,922
Petroleum	3,630,134
Chemicals	4,441,417
Crude Materials	3,699,173
Manufactured Goods	1,898,361
Farm Products	6,477,628
Manufactured Machinery	161,085
Waste Material	50,550
Containers & Pallets	1,600
Unknown	38,600

<u>Subtotals:</u>	Grain	5,284,458
	Steel	844,397

<u>Lockages:</u>	Commercial Boats:	3,098
	Recreation Boats:	373
	Light Boats:	221
	Other Boats:	40
	Total Boats:	3,732
	Total Cuts:	4,204

Current Maintenance Issues

Item (Critical Rank Order)

- Systemic Miter Gate Replacement
- Add Guide Cells
- Motor Vessel Sangamon Replacement
- Emergency Stackable Miter Gates

- Systemic Filling Valve Replacement
- Paint Tainter Gate, Service Bridge and Machinery
- Permanently Close Butterfly Valves

TOTAL ESTIMATED COST: \$36,000,000

The existing 9-foot Channel Navigation Project was largely constructed in the 1930s and extends down the Upper Mississippi River from Minneapolis-St. Paul to its confluence with the Ohio River and up the Illinois Waterway to the Thomas J. O'Brien Lock in Chicago. It includes 37 Locks and approximately 1,200 miles of navigable waterway in Illinois, Iowa, Minnesota, Missouri and Wisconsin.

The maintenance needs of the aging infrastructure are increasing at a rate much greater than the operations and maintenance funding provided for the system. This is adversely affecting reliability of the system. Long-established programs for preventative maintenance of major lock components have essentially given way to a fix-as-fail strategy, with repairs sometimes requiring weeks or months to complete. Depending on the nature of a lock malfunction, extended repairs can have major consequences for shippers, manufacturers, consumers, and commodities investors.

The system's 600-foot locks do not accommodate today's modern tows without splitting and passing through the lock in two operations. This procedure requires uncoupling barges at midpoint which triples lockage times and exposes deckhands to increased accident rates.

More than 580 manufacturing facilities, terminals, and docks ship and receive tonnage in the Upper Mississippi River basin. Grains (corn and soybeans) dominate traffic on the system. Other commodities, mainly cement and concrete products, comprise the second largest group. A modern 15-barge tow transports the equivalent of 1,050 large semi-trucks (26,250 cargo tons, 875,000 bushels, or 17,325,000 gallons). Annually, the 9-foot project generates an estimated \$1 billion of transportation cost savings compared with the operation and maintenance costs of approximately \$115 million.

UPDATE: October 2012

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LaGrange Lock & Dam

(Versailles, Illinois)
Illinois River

U.S. ARMY CORPS OF ENGINEERS

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Construction: 1936-1939

Congressional District: IL-18

Description

LaGrange Lock and Dam is 80.2 miles above the confluence of the Illinois River with the Mississippi river at Grafton, Illinois, 7.8 miles below Beardstown, Illinois.

LaGrange Lock and Dam consists of a 1,066-foot-long dam and a 110-foot-wide by 600-foot-long lock. The maximum lift is 10 feet with an average lift of 4.5 feet. It takes approximately 10 minutes to fill or empty the lock chamber.

LaGrange uses a Chanoine wicket dam, the navigable pass type. The wicket section is 436 feet long containing 109 wickets. Each wicket is 3.75 feet wide by 14.92 feet high, with a .25-foot gap between wickets. From 1987-1991, a major rehabilitation changed the physical components of the dam and operating procedures by replacing 26 of the original 135 wickets with a single 84-foot long submersible Tainter gate adjacent to the lock wall.



It takes 24-36 hours for water to travel from Peoria Lock and Dam to LaGrange during flood or high flow conditions.

History/Significance

The lock opened in 1939. Following the Supreme Court's decree of April 21, 1930, limiting the diversion of water from Lake Michigan, a new navigation plan was developed calling for removing four old locks and dams at Henry, Copperas Creek, LaGrange and Kampsville; new locks at LaGrange and Peoria, and a dam on the Mississippi River at Alton, Illinois, to provide the required navigation depth from the mouth of the Illinois to LaGrange. The lock is used only during low and moderate river flows when the wicket dams are raised to maintain the nine-foot navigation depth. During high flows, the wickets are lowered and open river conditions prevail.

LaGrange is one of only two wicket dams on the Illinois Waterway. The lock and dam elements of the complex were completed at a cost of \$2,744,592.

Annual Tonnage (20-Year Historical)

<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>
1992	33,124,929	1997	34,871,796	2002	35,858,094	2007	29,046,034
1993	33,320,840	1998	36,097,504	2003	35,136,029	2008	26,690,243
1994	38,343,363	1999	35,59,7851	2004	34,681,667	2009	25,119,313
1995	38,952,953	2000	35,164,245	2005	31,708,944	2010	25,241,087
1996	35,369,900	2001	36,729,826	2006	32,903,584	2011	25,355,072

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Commodity Tonnage & Lockages (2011)

Coal	1,126,031
Petroleum	3,639,922
Chemicals	4,947,221
Crude Materials	3,767,628
Manufactured Goods	1,904,161
Farm Products	9,757,894
Manufactured Machinery	121,550
Waste Material	53,053
Containers & Pallets	1,600
Unknown	36,012

<u>Subtotals:</u>	Grain	8,251,924
	Steel	816,697

<u>Lockages:</u>	Commercial Boats:	2,774
	Recreation Boats:	183
	Light Boats:	221
	Other Boats:	76
	Total Boats:	3,055
	Total Cuts:	3,739

Current Maintenance Issues

Item (Critical Rank Order)

- | | |
|---|--|
| <ul style="list-style-type: none"> • Lock - Major Rehabilitation • Lock - Major Maintenance • Systemic Miter Gate Replacement • Permanently Close Butterfly Valves • Add Guide Cells | <ul style="list-style-type: none"> • Paint Dam Tainter Gate, Service Bridge and Machinery • Emergency Stackable Miter Gates • Systemic Filling Valve Replacement • Office and Maintenance Building |
|---|--|

TOTAL ESTIMATED COST: \$75,900,000

The Water Resources Development Act of 2007 (WRDA 07) Title VIII authorized the dual-purpose navigation and ecosystem restoration plan for the Upper Mississippi River and Illinois Waterway. The new 1,200-foot lock, which is located landside, will cost approximately \$261,000,000. The design and construction of the new lock is dependent upon annual appropriations.

LaGrange Lock is in need of a major rehabilitation of lock concrete, electrical and mechanical systems. The lock went through rehabilitation in 1986 to 1988; it included minor concrete repairs, repositioning lock machinery, and installing a traveling level.

For more than 70 years, the lock has been exposed to multiple freeze/thaw cycles and flooding, causing a gradual but incessant degradation of the lock components. Frequent flooding and temperature extremes, combined with high usage, has resulted in significant deterioration of lock concrete and the decline of mechanical and electrical systems performance and reliability. The vertical concrete has deteriorated to the point that sections have had to be removed and/or threaten to fall into the lock chamber. Barges can become wedged under the armor, resulting in a dangerous situation for deck hands, lock personnel, and potential damage to the barges. Hazardous working conditions exist due to deteriorated horizontal concrete on the land and river walls of the lock chamber. The mechanical and electrical systems require constant patching and labor intensive repairs. Parts are difficult to obtain and have to be specially made in most cases. The probability of failure of the mechanical and electrical systems, requiring extensive and expensive repairs, in the next several years is very high. The potential at any time for an incident to occur due to deteriorated lock concrete, in which the lock has to be closed for more than a week, is very probable with the potential increasing every year the lock concrete is not repaired. In 2004, an expert panel concluded that the lock concrete was in need of rehabilitation at the earliest possible opportunity.

Bulkhead slots are needed on the downstream end of the lock to allow for lock dewatering with bulkhead sections. As there are currently no bulkhead sections available on the Illinois Waterway, a set would need to be purchased under this project for lock dewatering during the rehabilitation. A Rehabilitation Evaluation Report was approved in 2005 with an estimated total cost of \$64 million. A preliminary schedule of work was developed with construction spanning over a three year period. Three lock closures will be required of approximately 30 days each with two of the three closures involving lock dewatering.

UPDATE: October 2012



Illinois Waterway - Operations & Maintenance

U.S. ARMY CORPS OF ENGINEERS

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Location

Entire Illinois Waterway

State(s)

IL

Congressional District(s)

IL-11, IL-13, IL-14, IL-15, IL-16, IL-17, IL-18, IL-2, IL-3

Status

Project in operation.

Description

The project includes a total of 268 river miles of 9-foot commercial navigation channel from Chicago to LaGrange Lock and Dam, near Beardstown, Illinois; with 8 locks and 7 dams. The navigable portions of this river and the locks and dams that allow waterway traffic to move from one pool to another are integral parts of a regional, national, and international transportation network. The system is significant for certain key exports and the Nation's balance of trade. Recreation facilities include a Visitor Center at Starved Rock Lock and Dam. Regional FY2013 economic impacts are \$2,200,000 from approximately 78,000 visits.

Summarized Project Costs

Allocations thru FY 2013	\$765,664,000
Budget for FY2015	\$39,389,000
House Allocation for FY 2015	TBD
Senate Allocation for FY 2015	TBD
FY 2014 Allocation	\$39,185,000
FY 2014 Funding Pots	\$16,300,000
FY 2014 Marseilles Emergency Funding	\$10,900,000

Additional Project Information

These numbers represent an illustrative distribution of operation and maintenance activities subject to revision during the course of the year, and therefore individual project estimates should not be considered as budget amounts.

Additional Congressional Districts: IL-1, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-12

Major Work Item (This Fiscal Year)

Routine Operation and Maintenance of Project Infrastructure.
Dredging and Dredged Material Management



Illinois Waterway - Operations & Maintenance

U.S. ARMY CORPS OF ENGINEERS

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Operation and Maintenance of Visitor Center at Starved Rock L/D
Repair - Marseilles Dam Barge Allision
Procure Miter Gates for Lagrange Lock
Rehab Lockport Emergency Gate Hydraulic System
Economic RER Update Lagrange and O'Brien
Structural Rehab, Blast and Paint Brandon Upper Miter Gates

Major Work Item (Next Fiscal Year)

Routine Operation and Maintenance of Project Infrastructure.
Dredging and Dredged Material Management
Operation and Maintenance of Visitor Center at Starved Rock L/D
Repair - Marseilles Dam Barge Allision
Procure Miter Gates for Peoria Lock
Dewater O'Brien Lock Chamber
Economic RER Update Lagrange and O'Brien

Authority Details

River & Harbors Act of 1927 & 1930

Point of Contact: Illinois Waterway Operations Manager
Phone: (309)676-4601 x 4104
Email: NONE PROVIDED



Dredged Material Management Program (DMMP) - Overview

U.S. ARMY CORPS OF ENGINEERS

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Location

Rock Island District Illinois Waterway and Upper Mississippi Reaches

State(s)

IA,IL,MO,WI

Congressional District(s)

IA-4, IL-1, IL-11, IL-16, IL-17, IL-18, IL-2, IL-3, IL-4, MO-6, WI-3

Status

The Rock Island District is preparing long-term (20-40 year capacity) Dredged Material Management Plans (DMMP) and Channel Maintenance Pool Plans (ChaMPPs) and acquiring and implementing sites for the placement of channel maintenance dredged material in support of the operation and maintenance of the Upper Mississippi and Illinois Waterway nine-foot navigation channels. The program ensures that all practicable and reasonable alternatives for the placement of dredged material are fully considered on an equal basis. This includes the placement of dredged material in the least costly manner, at the most practicable location, and consistent with engineering and environmental requirements. Within the Rock Island District plans are being developed for thirty-eight recurrent dredge cuts on the Illinois Waterway and forty-four recurrent dredge cuts on the Upper Mississippi River.

Description

The Rock Island District has been developing plans and acquiring and implementing sites for the long term placement of channel maintenance dredged material since the completion of GREAT II (Great River Environmental Action Team) studies in the early 1980s. The Dredged Material Management Program (DMMP) evaluates and identifies preferred alternative dredged material placement site(s) using a six-step planning process and, where applicable, a matrix with six evaluation criteria: dredging cost; natural resources; beneficial use of dredged material; recreational resources; cultural resources; and social impacts.

Summarized Project Costs

The DMMP is funded out of the District's O&M budget. The FY14 DMMP obligations and expenditures (to date):

- Upper Mississippi River: \$169,500; \$169,500
- Illinois Waterway: \$705,700; \$275,500

FY14 work allowances (to date):

- Upper Mississippi River: \$937,500
- Illinois Waterway: \$876,000

Additional Project Information

Updated on 2014-Aug-26

Page 1 of 4

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Dredged Material Management Program (DMMP) - Overview

U.S. ARMY CORPS OF ENGINEERS

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ILLINOIS WATERWAY

Dredged Material Management Plans completed thru FY13

- Treats Island, Dresden Island Pool
- Dresden Lower, Marseilles Pool
- Marseilles Canal, Marseilles Pool
- Milliken Creek, Starved Rock Pool
- Bulls Island, Starved Rock Pool
- Lick Creek and Peoria Lower, La Grange Pool
- Mackinaw River/Kingston Mines, La Grange Pool
- Copperas Creek, La Grange Pool
- Senate/Duck Island, La Grange Pool
- Beardstown, La Grange Pool
- Pekin/LaMarsh, LaGrange Pool
- Grand Island Reach, LaGrange Pool
- LaSalle Reach, Peoria Pool
- Spring Valley Reach, Peoria Pool

ILWW Plans remaining to be completed

- Grist Island, Marseilles Pool
- Kickapoo Creek, Peoria Pool
- Lancaster, LaGrange Pool
- Brigg's Landing, LaGrange Pool
- Beardstown (new/additional sites), LaGrange Pool
- Mackinaw River, LaGrange Pool
- Bull's Island, Starved Rock Pool
- Blue Creek, Peoria Pool
- Senachwine, Peoria Pool
- Cal-Sag Channel
- Quiver Island, LaGrange Pool

MISSISSIPPI RIVER

Dredged Material Management Plans completed thru FY13

- Pool 11 Plans
- St. Louis Woodyard, Turkey River, Turkey River Lower, Pool 11
- Finley's Landing, Pool 11
- Island 241, Pool 12
- Maquoketa River, Pool 13
- Savanna Bay, Pool 13
- Steamboat Slough, Pool 14
- Lock 15 Lower/Centennial Bridge, Pool 16
- Buffalo, Pool 16
- Hershey Chute, Pool 16
- Bass Island, Pool 17
- Keithsburg Reach, Pool 18
- Keithsburg Lower/ Huron Island, Pool 18
- Benton Island, Pool 18
- Craigel Island/Kemps Landing & Kemps Landing Lower, Pool 19



Dredged Material Management Program (DMMP) - Overview

U.S. ARMY CORPS OF ENGINEERS

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- Buzzard Island, Pool 20
- Hogback/Willow Islands and Lonetree Light, Pool 21
- Howard's/Howard's Crossing/LaGrange, Pool 21
- Northeast Missouri Power/Bebee Island, Pool 22
- Whitney Light, Pool 22
- Lock 22 Upper & Lower, Pools 22 & 24
- Sabula Reach, Pool 13
- L&D 21 Lower, Pool 21
- Oquawka, Pool 18
- Beaver Island
- Cave Hollow, Pool 22

UMR Plans remaining to be completed:

- Benton Island, Pool 18
- Hurricane Island, Pool 11

Major Work Item (This Fiscal Year)

FY14: Illinois Waterway program:

- Initiate/advance LaSalle site 17 land access plan
- Complete Dresden site 10 land access plan and Real Estate Design Memorandum (REDM)
- Complete Dresden site 10 land access pre-acquisition requirements
- Acquire Dresden site 10 land access
- Re-initiate/advance Bull's Island additional site(s) plan formulation
- Advance Mackinaw Island additional site(s) plan formulation
- Acquire and implement Beardstown site 2
- Complete Spring Valley site 4 pre-acquisition requirements
- Acquire Spring Valley site 9
- Complete Spring Valley plans & specifications and implement site
- Advance Cal-Sag plan formulation

Upper Mississippi River program:

- Acquire Keithsburg site 4
- Complete Keithsburg site 4 plans and specifications and implement site
- Advance Hogback Island plan formulation
- Advance Lock 20 plan formulation
- Advance Hurricane Island plan formulation
- Complete pre-acquisition requirements for Oquawka sites 1, 3a & 3b
- Complete acquisition of Kemps/Craigel site 2
- Complete Kemps/Craigel site 2 plans and specifications and implement site
- Relocate Beaver Island site power lines

Major Work Item (Next Fiscal Year)

FY15 Illinois Waterway program

- Initiate preparation of land access plans for Grand Island site 2 and Pekin/Lamarsh site



Dredged Material Management Program (DMMP) - Overview

U.S. ARMY CORPS OF ENGINEERS

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2

- Complete Cal Sag plan formulation
- Re-initiate Bull's Island additional site(s) plan formulation
- Re-initiate Beardstown additional site(s) plan formulation
- Complete pre-acquisition requirements for LaSalle site 17 land access
- Acquire LaSalle site 17 land access
- Complete pre-acquisition requirements for Spring Valley site 4
- Acquire Spring Valley site 4
- Complete post-acquisition requirements for Spring Valley site 9 and Dresden site 10 land access
- Complete plans and specifications for Dresden site 10 land access and Spring Valley site 9

Upper Mississippi River program

- Complete Hurricane Island plan formulation
- Complete post-acquisition requirements for Keithsburg site 4
- Complete Keithsburg site 4 plans and specifications and implement site
- Complete pre-acquisition requirements for Oquawka sites 1, 3a & 3b
- Acquire Oquawka sites 1, 3a & 3b
- Complete post-acquisition requirements for Kemps/Craigel site 2
- Advance preparation of Hogback Island plan formulation
- Complete Lock 20 plan formulation
- Complete NE MO Power site O&M manual

Authority Details

Rivers and Harbors Acts of 1927, 1930, and 1935 in accordance with the SECTION 404 CWA & 33CFR, Parts 335-338

Point of Contact: Project Management Branch

Phone: (309) 794-5605

Email: cemvr-pm-web@usace.army.mil



Illinois Waterway Maintenance Dredging Operations & Maintenance

U.S. ARMY CORPS OF ENGINEERS

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Location

Entire Illinois Waterway

State(s)

IL

Congressional District(s)

IL-11, IL-13, IL-14, IL-15, IL-16, IL-17, IL-18, IL-2, IL-3

Status

Project in operation.

Description

In order to maintain the 9-foot navigation channel, maintenance dredging is performed at various locations in the reach of the Illinois Waterway in the Rock Island District. The affected reach of the Illinois Waterway includes approximately 271 river miles (RM) from La Grange Lock and Dam (L/D), RM 80.2, to its source at the confluence of the Des Plaines and the Kankakee Rivers at RM 273, 17 miles of the Des Plaines River to the Chicago Sanitary and Ship Canal (CS&SC) at RM 290, the CS&SC to the South Branch of the Chicago River at RM 321.7, and the South Branch of the Chicago River to RM 325.6. Also included is the Calumet Sag Channel, the Little Calumet River, and the Calumet River, extending from the channel's mouth at RM 303.4 on the CS&SC to just above the T. J. O'Brien L/D, RM 326.4. It is divided into seven pools by navigation dams (or a hydroelectric dam at Lockport). The present navigation system was initiated when Congress passed the River and Harbor Act of 1927, which authorized funds for its development from Utica to St. Louis. This legislation was modified in 1930 to include the State of Illinois initiated project from Utica to Lockport, and further modified in 1935 to increase the lower portion to its present 300-foot width. The CS&SC was completed in 1900 as a 22-foot depth project, and the Cal Sag Channel was completed in 1922 and modified, including widening, in 1960. The 9-foot navigation channel project in the Rock Island District is composed of 8 L/Ds. Upstream of each dam and extending to the next dam is a slackwater navigation pool. Annual dredging is required at various locations in the main channel. Annual maintenance dredging of the Illinois Waterway 9-foot Channel Project is generally required at 5 to 15 sites, and the volume of material dredged is approximately 250,000 cubic yards per year. Due to the large sediment load carried by the waterway and continually changing flows, specific dredging locations and quantities to be dredged vary from year-to-year. The dredged material is usually removed from the navigation channel by a contractor hydraulic cutterhead dredge and discharged to placement sites by floating pipeline. The contract dredge is a 14- to 16-inch hydraulic dredge. Under optimum conditions, the dredge can pump as much as 350 cubic yards per hour as far as 5,500 feet, including 1,500 feet inland. Dredged material is usually placed along the shoreline or in upland sites located in close proximity to the dredging site. Depending on location, dredged material is placed in the following manner: a. Shoreline - material is placed linearly along the shoreline for bankline stabilization or to rejuvenate recreational beaches that have diminished because of erosion. b. Upland - material is placed out of the river in bottomland forest, industrial sites, on levees, or in beneficial use sites.

Prior to the discharge of any dredged material, representatives of the Corps of Engineers and



Illinois Waterway Maintenance Dredging Operations & Maintenance

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the On-Site Inspection Team (OSIT) meet to determine the preferred placement site for the dredged material. The OSIT is composed of representatives of the appropriate Federal and State agencies. The U.S. Department of the Interior, U.S. Fish and Wildlife Service, along with representatives of Illinois, participate in the OSIT. At the end of each dredging season, the OSIT inspects each placement site and makes recommendations to the Corps of Engineers for future maintenance dredging events. In addition, the OSIT prepares a Post Placement Evaluation Report and submits this information to each involved agency for review. Coordination with Other Federal and State Agencies: Channel maintenance activities typically require coordination with the following agencies:

- U.S. Coast Guard Eighth District - New Orleans, Louisiana
- U.S. Environmental Protection Agency, Region V - Chicago, Illinois
- U.S. Department of the Interior, Fish and Wildlife Service - Rock Island, Illinois
- Illinois Environmental Protection Agency - Springfield, Illinois
- Illinois Department of Natural Resources - Springfield, Illinois
- Illinois Natural History Survey - Havana, Illinois
- Illinois Department of Agriculture, Bureau of Land and Water Resources - Springfield, Illinois

Additional Project Information

Additional Congressional Districts: IL-1, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-12

Authority Details

River and Harbor Acts of 1927 and 1930

Point of Contact: Dredging Project Manager, Technical Support Branch, Operations
Division

Phone: (309) 794-5240

Email: cemvr-pm-web@usace.army.mil



Innovative Dredging Technology, Peoria Lakes, Illinois

U.S. ARMY CORPS OF ENGINEERS

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Location

Peoria Lakes portion of the Illinois River

State(s)

IL

Congressional District(s)

IL-18

Status

Authorized, but not funded. Potential Congressional Add.

Description

The Water Resources Development Act of 1999 Section 503 authorized the review of innovative dredging technologies for potential implementation in the Peoria Lakes, Illinois, area. Potential tasks include reviewing innovative dredging technologies designed to minimize or eliminate contamination of a water column on removal of contaminated sediments and conducting actual tests and demonstration projects using selected technologies. The Illinois River Basin Restoration project of Section 519 of WRDA 2000 also calls for evaluation of sediment removal technology, sediment characterization, sediment transport, and beneficial uses of sediment. Future funding under Section 519 may be directed towards those items.

Summarized Project Costs

Federal Cost	\$2,000,000
Non-Federal Cost	\$0
Total Cost	\$2,000,000
Allocations through FY 2008	\$0
Allocations for FY 2009	\$0
Budget Request for FY 2010	\$500,000
Balance to Complete after FY 2010	\$1,500,000

Major Work Item (This Fiscal Year)

FY 2014: None. Insufficient funds.

Major Work Item (Next Fiscal Year)

FY 2015: If funds were available, \$500k could be used to initiate a review of innovative dredging technologies for potential implementation in the Peoria Lakes area. Follow-on funding in the amount of \$1,500,000 would be required in future fiscal years to complete the effort.

Authority Details

Updated on 2014-Aug-21

Page 1 of 2

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Innovative Dredging Technology, Peoria Lakes, Illinois

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Section 503 of the Water Resources Development Act of 1999

Point of Contact: Program Manager, Project Management Branch

Phone: (309)794-5399

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Calumet-Sag Channel and Chicago Sanitary and Ship Canal, Cook County, IL

U.S. ARMY CORPS OF ENGINEERS

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Location

Calumet-Sag Channel and Chicago Sanitary and Ship Canal, Cook County, IL

State(s)

IL

Congressional District(s)

IL-3

Status

The Cal-Sag currently has not required dredging to meet minimally acceptable channel dimensions; however, a narrowing of the channel is occurring. Emergency maintenance dredging is expected to be necessary in the near future. Sediments in the canal are contaminated and require placement in a confined disposal facility (CDF). Lucas-Berg CDF was modified in the 1980s to meet the requirements for confined placement of contaminated sediments at that time. The facility was never used and would have required major updating to meet current standards before any dredged material could be placed. Section 6004(a)(6) of WRRDA 2014, regarding Lucas-Berg, Illinois Waterway and Grand Calumet River, Illinois, "The portion of the project for navigation, Illinois Waterway and Grand Calumet River, Illinois, authorized by the first section of the Act of July 24, 1946 (60 Stat. 636; chapter 595), that consists of the Lucas-Berg Pit confined disposal facility, Illinois is no longer authorized beginning on the date of enactment of this Act." The Corps Rock Island and Chicago Districts are considering a regional Dredged Material Management Plan (DMMP) for channel, canal and harbor dredged material placement. The associated planning process has considered multiple sites and alternatives.

Due to budgetary limitations, study efforts, including plan formulation and alternatives evaluation, continue to be constrained. Collaboration with Chicago District and other interests are continuing, including consideration of a joint regional DMMP. This project remains one of very few, if any, other joint regional DMMP projects involving two Districts, two Divisions, as well as several non-Federal sponsors.

Description

The Calumet-Sag connects Lake Michigan at the Calumet River and Harbor with the Illinois Waterway. The Cal-Sag channel extends 23 miles from T.J. O'Brien lock and dam to the confluence with the main channel of the Chicago Sanitary and Ship Canal at river mile 303.5. Agencies with facility ownership, operation, and regulation responsibilities for the Chicago Area Waterways System include the Chicago and Rock Island Districts, USACE, and the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC). Over the 20 years from 1992 through 2011, Annual Tonnage through T.J. O'Brien Lock has ranged from 4.6 million to 13.3 million tons. During 2011 lockages included 10,668 recreation boats and 1,770 commercial boats. In that year, commodity tonnages included over a million tons each of coal, petro-chemicals, crude materials, manufactured goods, and steel. Normal Cal-Sag Channel water levels are managed at -2 Chicago City Datum (CCD). The Cal-Sag channel is shoaling. Deferred maintenance has resulted in the 225' authorized channel width to have narrowed to a minimally acceptable width of 160'. Continuing to defer channel maintenance will negatively impact navigation. An emergency dredging action was almost required in 2013. Sediments in the channel contain contaminants. Removal and placement of these sediments requires additional isolation or processing to protect the environment and human populations. Sediment samples were collected for the Environmental Research and Development Center (ERDC) to conduct environmental fate analyses during FY2015 which will guide design of placement facilities.

Summarized Project Costs

FY 2014 allocation: \$ 272,400 (funding source: District O&M budget)
FY 2015: TBD

Major Work Item (This Fiscal Year)

Rock Island District has initiated the environmental fate analyses of Cal-Sag sediments by the Engineering Research and Development Center in Vicksburg, MS. Collaboration continues with the Chicago District and others interested in the development of a regional dredged material management plan for the Chicago Area Waterways System, including the Chicago Sanitary and Ship Canal, Calumet-Sag channel, and the Chicago and Calumet Rivers and Harbors. Due to expected needs in 2019, Chicago District submitted a draft Alternative Formulation Briefing (AFB) report to the Great Lakes and Rivers Division and Mississippi Valley Division in February 2014. Based on a June 2014 In Progress Review, a revised draft report is expected in the second quarter of FY 2015.

Major Work Item (Next Fiscal Year)

Pending funding, if a feasible joint regional DMMP would be economically justified, Rock Island District would continue to



Calumet-Sag Channel and Chicago Sanitary and Ship Canal, Cook County, IL

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collaborate with Chicago District and other interests in the development of a regional dredged material management plan toward implementation.

Point of Contact: Dredged Material Management Program Manager

Phone: (309)794-5605

Email: cemvr-pm-web@usace.army.mil

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Upper Mississippi River - Illinois Waterway System Navigation and Ecosystem Sustainability Program (NESP)

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Location

Upper Midwest - IA, IL, MN, MO and WI

State(s)

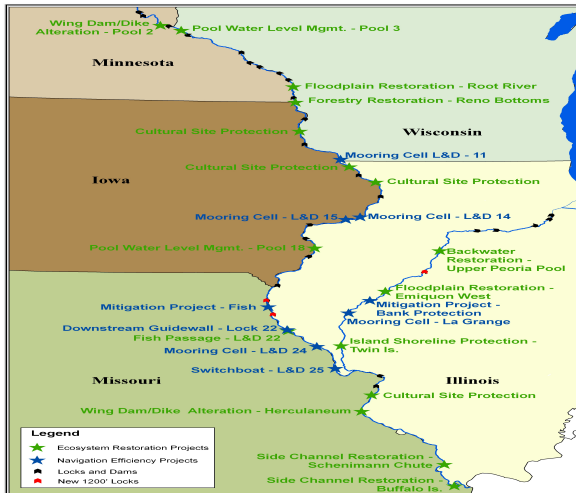
IA, IL, MN, MO, WI

Congressional District(s)

IA-2, IA-4, IL-11, IL-14, IL-16, IL-17, IL-18, MN-1, MO-6, WI-1, WI-3

Status

Navigation & Ecosystem Sustainability Program (NESP) implementation has been suspended since June 2011. Funding was appropriated from FY2002 to FY2010 by Congressional action and was used from 2005 to 2010 to conduct preconstruction engineering and design (PED) work. No Construction funds have been appropriated. Construction of ecosystem restoration projects and small-scale navigation projects could start within the first year following allocation of Construction funds.



In WRDA 2007, NESP was authorized to construct small-scale navigation improvements costing \$256,000,000; seven (7) new 1200-foot lock chambers costing \$1,948,000,000, ecosystem/habitat restoration costing \$1,717,000,000. It will take at least 15 - 20 years of efficient funding to implement NESP in order to construct the navigation and ecosystem projects to improve the ecosystem and navigation system. Lock operation efficiency can be initially enhanced by constructing small-scale navigation measures such as mooring cells which cost less than \$2 million each and are ready for immediate implementation. New 1,200 locks will increase efficiency and reliability of the UMR-IWW locks and dams would reduce outages and delays and improve the competitiveness and timely delivery of bulk commodities to and from the global marketplace. Investment in small scale navigation efficiency projects, new locks, ecosystem project will create long-term jobs that will help ensure that UMR-IWW will remain a functioning and living river system.

PED activities have included formulation and design of some 30 navigation efficiency and ecosystem restoration projects. Approximately \$54 million worth of small-scale navigation and ecosystem construction projects were being developed for implementation.

Description

NESP is critical to the long-term sustainability of the Upper Mississippi River – Illinois Waterway (UMR-IWW) navigation system and ecosystem. The program purpose is to improve efficiency and capacity of this nationally significant navigation system while protecting preserving and enhancing the structure, diversity and function of the nationally significant ecosystem. This multi-use resource supports an extensive navigation system (made up of



Upper Mississippi River - Illinois Waterway System Navigation and Ecosystem Sustainability Program (NESP)

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1,200 miles of 9 foot channel and 37 lock and dam sites), a diverse ecosystem (2.7 million acres), floodplain agriculture, recreation and tourism.

The UMRS ecosystem consists of 2.7 million acres of bottomland forest, islands, backwaters, side channels and wetlands, all of which support more than 300 bird species, 57 mammal species, 45 amphibian and reptile species, 150 fish species, and nearly 50 mussel species. More than 40 percent of North America's migratory waterfowl and shorebirds depend on the food resources and other life requisites (shelter, nesting habitats, etc.) that the system provides. It also provides boating, camping, hunting, fishing and other recreational opportunities. The diversity and abundance of native aquatic plants and animals are seriously threatened by degradation, loss of habitat and the arrival of several exotic species. Ecosystem restoration endeavors have had positive localized influence on species diversity, abundance and their ability to cope with new exotic invaders. The adaptive systemic approach authorized for this program would address these issues in a manner and on a scale necessary to ensure long-term ecological health and sustainability.

The 85+ year-old navigation system continues to experience some of the longest lockage delays in the country due to a single, undersized 600' lock chambers (most tows are 1,200 feet in length), and downtime for repair of aged gates and machinery. The existing locks and dams were constructed in the 1930s and 1940s with 600-foot locks. Current lock delays average 4.5 hours. Lack of funding for lock and dam rehabilitation and major maintenance activities in recent years has increased the risk of component failures and lock closures.

The June 2012 Institute for Water Resources report on U.S. Port and Inland Waterway Modernization found that the Upper Mississippi River - Illinois Waterway (UMR-IWW) system has adequate capacity through 2020, but will require maintenance of existing capacity. Although the UMR-IWW tonnage has decreased over the last decade, this trend is expected to reverse due to increased demand for grain exports and enlargement of the Panama Canal. A long-term strategy is essential for maintaining reliable and cost effective inland navigation that is aligned with the USDOT MARAD M-55 intermodal transportation corridor. Inland navigation is estimated to save \$23.74 per ton compared to overland transportation (Planning Center for Expertise for Inland Navigation, 31 January 2012). The estimated savings for the Upper Mississippi River and Illinois Waterway based on 2010 tonnage values would be \$1.44 billion and \$0.86 billion, respectively.

Summarized Project Costs

	PED	Construction
Federal Cost	\$148,860,837	\$4,836,197,758
Non-Federal Cost	\$0	\$193,447,910
Total Cost	\$148,860,837	\$5,029,645,669
Federal Allocations through FY 2013	\$61,916,287	\$0
FY 14 Appropriation*	\$50,000	\$0

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Upper Mississippi River -Illinois Waterway System Navigation and Ecosystem Sustainability Program (NESP)

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Budget Request for FY 2015	\$0	\$0
Balance to Complete after FY 2015	\$86,894,550	\$5,029,645,669

* Funds reprogrammed to NESP from another project.

Additional Project Information

Additional Congressional Districts: IL-3; MO-1, MO-2, MO-3, MO-8; MN-2, MN-8

Major Work Item (This Fiscal Year)

FY 2014: \$50,000 has been reprogrammed to NESP to initiate development of updated cost estimates.

Major Work Item (Next Fiscal Year)

FY 2015: The Corps has capability to immediately restart the program up to \$14.2M in PED funding and up to \$20M in construction funding. Priority work will initially focus on updating the project cost estimate and economic analysis to address concerns raised by the ASA(CW) and to be eligible for inclusion in future President's Budgets.

Authority Details

Title VIII of WRDA 2007

Point of Contact: Program Manager, Project Management Branch
Phone: (309) 794-5593
Email: cemvr-pm-web@usace.army.mil

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LaGrange Lock, Illinois Waterway (Major Rehabilitation/Major Maintenance)

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Location

Versailles, Illinois

State(s)

IL

Congressional District(s)

IL-18

Status

A Rehabilitation Evaluation Report was approved in August 2005. A preliminary schedule of work has been developed with construction spanning over a three year period. Three lock closures will be required with two of the three closures involving lock dewatering. Funding for this Major Rehabilitation project as a new start is not expected before FY 2016. Minimal funding under the Major Maintenance program has been used to begin to develop scoping for Plans and Specifications for the hydraulic operating system replacement. Funding to award the Major Maintenance construction contract is not expected before FY 2016.



Description

LaGrange Lock, located on the Illinois Waterway at river mile 80.2, was put into service in 1939 and is in need of a major rehabilitation of lock concrete, electrical and mechanical systems. The lock went through rehabilitation in 1986 to 1988; it included minor concrete repairs, repositioning lock machinery, and installing a traveling keel. For 70 years, the lock has been exposed to multiple freeze/thaw cycles and flooding causing a gradual but incessant degradation of the lock components. Frequent flooding and temperature extremes combined with high usage has resulted in significant deterioration of lock concrete and the decline of mechanical and electrical systems performance and reliability. The vertical concrete has deteriorated to the point that sections have had to be removed and/or threaten to fall into the lock chamber. Barges can become wedged under the armor, resulting in a dangerous situation for deck hands and lock personnel and potential damage to the barges. Hazardous working conditions exist due to deteriorated horizontal concrete on the land and river walls of the lock chamber. The mechanical and electrical systems require frequent patching and labor intensive repairs. Parts are difficult to obtain and have to be specially made in many cases. The probability of failure of the mechanical and electrical systems requiring extensive and expensive repairs in the next several years is very high. The potential at any time for an incident to occur due to deteriorated lock concrete in which the lock had to be closed for more than a week is very probable with the potential increasing every year the lock concrete is not rehabilitated.

Summarized Project Costs

	Major Rehab	Major Maint
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LaGrange Lock, Illinois Waterway (Major Rehabilitation/Major Maintenance)

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Estimated Federal Cost	\$37,138,000	\$22,823,00
Inland Water Way Trust Fund Costs	\$37,138,000	\$ 0
Total Estimated Project Cost	\$74,276,000	\$22,823,000
Allocation Thru FY 2013	\$ 0	\$ 114,000
FY 2014 Allocations	\$ 0	\$ 0
FY 2015 Budget	\$ 0	\$ 0
Balance to Complete	\$74,276,000	\$22,823,000

Additional Project Information

An unscheduled 30 day closure of LaGrange Lock due to major component failure would have an estimated transportation impact cost of \$34 million. LaGrange Lock and Dam is rated a Dam Safety Action Class (DSAC) 2, indicating an unsafe or potentially unsafe facility, on a scale of 5 (adequately safe) to 1 (unsafe). LaGrange Lock has an Operational Condition Assessment (OCA) rating of F (failed), on a scale of A (good) to F (failed)

Major Work Item (Next Fiscal Year)

Once Major Rehabilitation funding begins, \$10.0M would be utilized to award a contract for procurement of lock chamber bulkheads and development of Plans & Specifications for major rehabilitation of the facility. \$1.5M of O&M funds would be utilized to develop Plans & Specifications for the major maintenance of the facility.

Authority Details

River and Harbor Act of 1930

Point of Contact: Senior Project Manager / Program Manager

Phone: (309)794-5593

Email: cemvr-pm-web@usace.army.mil



LaGrange Lock, Illinois Waterway (Major Rehabilitation/Major Maintenance)

U.S. ARMY CORPS OF ENGINEERS

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Location

Versailles, Illinois

State(s)

IL

Congressional District(s)

IL-18

Status

A Rehabilitation Evaluation Report was approved in August 2005. A preliminary schedule of work has been developed with construction spanning over a three year period. Three lock closures will be required with two of the three closures involving lock dewatering. Funding for this Major Rehabilitation project as a new start is not expected before FY 2016. Minimal funding under the Major Maintenance program has been used to begin to develop scoping for Plans and Specifications for the hydraulic operating system replacement. Funding to award the Major Maintenance construction contract is not expected before FY 2016.



Description

LaGrange Lock, located on the Illinois Waterway at river mile 80.2, was put into service in 1939 and is in need of a major rehabilitation of lock concrete, electrical and mechanical systems. The lock went through rehabilitation in 1986 to 1988; it included minor concrete repairs, repositioning lock machinery, and installing a traveling keel. For 70 years, the lock has been exposed to multiple freeze/thaw cycles and flooding causing a gradual but incessant degradation of the lock components. Frequent flooding and temperature extremes combined with high usage has resulted in significant deterioration of lock concrete and the decline of mechanical and electrical systems performance and reliability. The vertical concrete has deteriorated to the point that sections have had to be removed and/or threaten to fall into the lock chamber. Barges can become wedged under the armor, resulting in a dangerous situation for deck hands and lock personnel and potential damage to the barges. Hazardous working conditions exist due to deteriorated horizontal concrete on the land and river walls of the lock chamber. The mechanical and electrical systems require frequent patching and labor intensive repairs. Parts are difficult to obtain and have to be specially made in many cases. The probability of failure of the mechanical and electrical systems requiring extensive and expensive repairs in the next several years is very high. The potential at any time for an incident to occur due to deteriorated lock concrete in which the lock had to be closed for more than a week is very probable with the potential increasing every year the lock concrete is not rehabilitated.

Summarized Project Costs

	Major Rehab	Major Maint
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LaGrange Lock, Illinois Waterway (Major Rehabilitation/Major Maintenance)

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Estimated Federal Cost	\$37,138,000	\$22,823,00
Inland Water Way Trust Fund Costs	\$37,138,000	\$ 0
Total Estimated Project Cost	\$74,276,000	\$22,823,000
Allocation Thru FY 2013	\$ 0	\$ 114,000
FY 2014 Allocations	\$ 0	\$ 0
FY 2015 Budget	\$ 0	\$ 0
Balance to Complete	\$74,276,000	\$22,823,000

Additional Project Information

An unscheduled 30 day closure of LaGrange Lock due to major component failure would have an estimated transportation impact cost of \$34 million. LaGrange Lock and Dam is rated a Dam Safety Action Class (DSAC) 2, indicating an unsafe or potentially unsafe facility, on a scale of 5 (adequately safe) to 1 (unsafe). LaGrange Lock has an Operational Condition Assessment (OCA) rating of F (failed), on a scale of A (good) to F (failed)

Major Work Item (Next Fiscal Year)

Once Major Rehabilitation funding begins, \$10.0M would be utilized to award a contract for procurement of lock chamber bulkheads and development of Plans & Specifications for major rehabilitation of the facility. \$1.5M of O&M funds would be utilized to develop Plans & Specifications for the major maintenance of the facility.

Authority Details

River and Harbor Act of 1930

Point of Contact: Senior Project Manager / Program Manager

Phone: (309)794-5593

Email: cemvr-pm-web@usace.army.mil



Thomas J. O'Brien Lock and Controlling Works, Illinois Waterway, Illinois (Major Rehabilitation/Major Maintenance)

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Location

Entrance to Lake Michigan (River Mile 326.0), in Chicago, Illinois

State(s)

IL

Congressional District(s)

IL-2, IL-3

Status

T. J. O'Brien Lock and Controlling Works were placed into operation in 1960. After over 50 years of service reliability and operation, problems are a recurring challenge and have significant impacts to the navigation users. T. J. O'Brien Lock and Controlling Works is the only commercial access from the Illinois Waterway to Lake Michigan. The completed Rehabilitation Evaluation Report was approved in 2004. The project is currently awaiting a new start which not expected until at least FY2016.



Description

The T.J. O'Brien Lock and Controlling Works is an aging structure which is at an increasing risk of failure. A component failure of the aging lock structure, mechanical equipment, or electrical distribution system would result in an unscheduled lock closure causing significant navigation traffic delays on the waterway for traffic entering and exiting Lake Michigan. The project is located at the entrance to Lake Michigan (River Mile 326.0), Calumet River, in Chicago, Illinois. The facility is a unit of the Inland Waterway Navigation System and is one of nine such facilities between Chicago, Illinois, and Versailles, Illinois. O'Brien Lock is a low lift sector gate lock. It provides a maximum lift of 5.0 feet for traffic passing from Lake Michigan to the Little Calumet River. The lock chamber is 1000 feet long by 110 feet wide. The adjacent dam is 257 feet in length and comprised of two sections. The fixed section is 204 feet of steel sheet pile cellular construction. The controlling segment, a reinforced concrete structure with four slide gate sections, is 53 feet in length. Significant features of the work include rehabilitation of the sector gate electric system, the lock electrical distribution system, and injection grouting of the lock land & river walls cells. The existing lock mechanical and electrical systems are original equipment installed in the 1960s. An electrical component failure of the lock electrical distribution system or the sector gate electrical system could result in lock failure, which could cause delays to navigation traffic. The sheet piling for the lock land wall and river walls have also been in service since the original construction of the lock. New lock dewatering bulkheads are needed to replace the old bulkheads that have been decommissioned due to age and deterioration.

Summarized Project Costs

	Rehab	Major Maintenance
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Updated on 2014-Aug-22

Page 1 of 2

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Thomas J. O'Brien Lock and Controlling Works, Illinois Waterway, Illinois (Major Rehabilitation/Major Maintenance)

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Estimated Federal Cost	\$25,621,400	\$27,613,407
Inland Waterway Trust Fund Cost	\$25,621,400	\$ 0
Total Estimated Cost	\$51,242,800	\$27,613,407
Allocation thru FY 2013	\$ 0	\$ 0
FY 2014 Appropriation	\$ 0	\$ 0
Budget for FY 2015	\$ 0	\$ 0
Balance to Complete	\$51,242,800	\$27,613,407

Additional Project Information

The Rehabilitation Evaluation Report estimates that should one of the sheet pile cells rupture, T.J. O'Brien Lock would have an unscheduled closure to navigation for a minimum of 60-days. The transportation impacts associated with a 60 day closure would approach \$18.3 million dollars. TJ O'Brien Lock & Controlling Works is rated a Dam Safety Action Class (DSAC) 2, indicating an unsafe or potentially unsafe facility, on a scale of 5 (adequately safe) to 1 (unsafe). TJ O'Brien Lock has an Operational Condition Assessment (OCA) rating of C (poor) on a scale of A (good) to F (failed).

Major Work Item (Next Fiscal Year)

Once funding begins, \$5.0M could be utilized to procure lock chamber bulkheads and to begin Plans & Specifications for major rehabilitation of the facility. \$1.5M of O&M funds could be utilized to develop Plans & Specifications for major maintenance of the facility.

Authority Details

River and Harbor Act of 1930

Point of Contact: Senior Project Manager / Program Manager

Phone: (309)794-5593

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Illinois River Marseilles Dam Emergency Response

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Location

Marseilles, IL

State(s)

IL

Congressional District(s)

IL-16

Status

Project Timeline

- Barge Incident – April 18, 2013 – Seven barges break loose and impact dam
 - Aftermath – Severe residential flooding, five Dam gates damaged (two inoperable), erosion of Earth Dike, inundation of equipment at Lock
- Barge Recovery (barge company) – April 25 to June 17, 2013
- Construction of Rock Dike – April 27 to May 15, 2013
 - Constructed to stop flow through inoperable gates
 - Allowed recovery of barges and installation of bulkheads
- Installation of Bulkheads – June 18 to June 27, 2013
 - Installed to block flow through inoperable gates
- Emergency raise of Earth Dike – May 30 to June 1, 2013
 - Installed to mitigate impact of Rock Dike on upstream river levels during high flow
- Detailed Dam Assessments – Summer & Fall 2013
- Permanent Dam Design – Fall 2013 to Summer 2014
- Installation of additional flood protection at headrace (city) – March 2014
- Award Permanent Dam Repair Contract – 23 September 2014
- Perform Permanent Dam Repair Construction – 2015 & 2016 Construction Seasons
- Permanent Earth Dike Design – 2016
- Award Permanent Earth Dike Repair Contract – Fall 2016
- Perform Permanent Earth Dike Repair Construction – 2017 Construction Season
- All Dam and Earth Dike Repairs Complete – End of Calendar Year 2017



Description

- Marseilles Lock is 244.6 miles above the confluence of the Illinois River with the Mississippi river at Grafton, Illinois, at the foot of Bells Island. Marseilles Dam is 2.5 miles upstream of the lock at the head of Bells Island.
- The lock and dam is located southwest of Marseilles, Ill., near Illini State Park. The Marseilles Canal, adjacent to the left bank of the Illinois, extends from the dam to the lock.
- The lock is 110 feet wide by 600 feet long. The maximum lift is 24.5 feet with an average lift lower than 24 feet. It takes an average of 15 minutes to fill the lock chamber; 10 minutes to empty it.



Illinois River Marseilles Dam Emergency Response

U.S. ARMY CORPS OF ENGINEERS

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Project Components

- Dam: Concrete structure with eight Tainter gates between Bells Island and right bank
- Headraces: Gated structures controlling flow to hydropower facility (not currently in use)
- Earth Dike: Earthen embankment extending upstream from the Headraces along the right bank
- Lock: Located downstream of Dam, via canal between Bells Island and left bank

Additional Project Information

Project Scope

- **Phase I (Temporary Repairs) - (Completed)**
 - Dam Repairs
 - Construction of Rock Dike / Work Platform
 - Fabrication and installation of Bulkheads
 - Repair of erosion at Dam and Island
 - Complete assessment of Dam Structure
 - Earth Dike Repairs
 - Filling in areas eroded from the overtopping event
 - Removal of large trees
 - Placement of HESCO bastions and embankment to raise dike
- **Phase II (Permanent Repairs) - (2014 – 2017)**
 - Dam Repairs
 - Trunnion Anchor Replacement on one pier
 - Repair 2 Tainter Gates
 - Replace 3 Tainter gates
 - Repair Upstream Pier Bullnoses
 - Remove Rock Work Platform
 - Earth Dike Repairs
 - Removal of HESCO Bastions
 - Removal of all woody vegetation
 - Removal of encroachments
 - Re-establish dike cross-section, working within existing easement

Project Issues / Areas of Emphasis

- Continue Monitoring
 - River Levels
 - Earth Dike
- Maintain Communication
 - City
 - Navigation Industry
- Prioritization to ensure receipt of funds in FY16, FY17
- Flood Risk Study Request
 - Section 205 (Continuing Authority Program)



Illinois River Marseilles Dam Emergency Response

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Major Work Item (This Fiscal Year)

Administer contract for Permanent Dam Repair

Major Work Item (Next Fiscal Year)

Administer contract for Permanent Dam Repair, Design Permanent Earth Dike Repair

Point of Contact: Project Manager

Phone: NONE PROVIDED

Email: NONE PROVIDED

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Farm Creek, Illinois - Operations & Maintenance

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Location

Farm Creek, Illinois

State(s)

IL

Congressional District(s)

IL-17, IL-18

Status

Project in operation.

Description

The project includes two dry reservoirs (Fondulac and Farmdale) located on tributary streams to the Illinois Waterway upstream of Peoria, Illinois, providing flood control for East Peoria, Illinois. Regional FY2013 economic impacts are \$892,000 from an estimated 55,000 visits.

Summarized Project Costs

Allocations thru FY 2013	\$17,984,000
Budget for FY2015	\$370,000
House Allocation for FY2015	TBD
Senate Allocation for FY2015	TBD
FY 2014 Allocation	\$309,000

Additional Project Information

These numbers represent an illustrative distribution of operation and maintenance activities subject to revision during the course of the year, and therefore individual project estimates should not be considered as budget amounts.

Major Work Item (This Fiscal Year)

Routine maintenance.

Install Debris Screen at Farmdale.

Major Work Item (Next Fiscal Year)

Routine Maintenance.

Periodic Assessment.

Authority Details

Flood Control Act of 1944



Farm Creek, Illinois - Operations & Maintenance

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Point of Contact: Operations Manager, Illinois Waterway Project
Phone: (309)676-4601, x4104
Email: NONE PROVIDED

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Illinois River Basin Restoration (sec 519, WRDA 2000)

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Location

Entire Illinois River Basin including tributaries.

State(s)

IL

Congressional District(s)

IL-1, IL-11, IL-13, IL-14, IL-15, IL-16, IL-17, IL-18, IL-2, IL-3, IL-4, IL-7

Status

Planning is proceeding on three Critical Restoration Projects (completing one in FY14, Senachwine). Construction of the Peoria Upper Island project was completed in October of 2013 and the Waubonsie Creek Fish Passage Project was completed in November 2011. Construction of the Blackberry Creek Fish Passage project was initiated by the State of Illinois in 2012. The Comprehensive Plan was approved by HQUSACE in May 2007. In 2008 the Comprehensive Plan was approved by the ASA for Civil Works and OMB. The Comprehensive Plan and cover letters were sent to Congress. Four construction projects (Pekin Lake North, Pekin Lake South Backwater, Starved Rock, and Alton Pool) are on hold pending Federal funding.



Description

Section 519 of WRDA 2000 authorized: (1) Comprehensive Plan to develop and implement a restoration program, long-term resource monitoring program, and evaluate new technologies and innovative approaches, and (2) construction of critical restoration projects. Section 519 and the related Illinois River Ecosystem Restoration Feasibility Study, Sec 216, resulted in a joint Comprehensive Plan for the restoration of the basin. These efforts relate to the State's Illinois Rivers 2020 initiative, a proposed 20-year, Federal-state effort to restore and enhance the 30,000 square-mile Illinois River Basin. Anticipated benefits include reducing sediment delivered to the Illinois River mainstem and backwaters, reducing streambank erosion, and improving critical habitats for fish, waterfowl, and other aquatic organisms. This project involves four districts (Rock Island, St. Louis, Chicago, and Detroit).

Summarized Project Costs

Financial Data	Feasibility	Construction
Estimated Federal Cost	\$11,710,000	\$84,305,000
Estimated Non-Federal Cost	\$6,305,000	\$45,395,000
Estimated Total Cost	\$18,015,000	\$129,700,000
Allocation thru FY 2013	\$7,071,000	\$3,400,000
Allocations for FY 2014	\$400,000	\$0
Budget for FY 2015	\$400,000	\$0

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Illinois River Basin Restoration (sec 519, WRDA 2000)

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Balance to Complete after FY2105	\$3,839,000	\$80,905,000
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Major Work Item (This Fiscal Year)

FY 2014: Complete feasibility planning for the Senachwine Creek project and initiate feasibility efforts on the Fox River and Ten Mile Creek projects.

Major Work Item (Next Fiscal Year)

FY 2015: Construction funds in the amount of \$450k would initiate and complete a PPA and initiate design on Pekin North. \$6,367k would allow for construction of Pekin Lake South. Continue feasibility on Ten Mile Creek and Fox River.

Authority Details

Section 519 of WRDA 2000; as amended by Section 5071, WRDA 2007

Point of Contact: Program Manager, Project Management Branch

Phone: (309) 794-5399

Email: cemvr-pm-web@usace.army.mil



Peoria Illinois, Riverfront Development (Environmental Restoration)

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Location

Illinois River between Henry and Naples, Illinois with specific focus on Peoria Lake from Illinois River Mile 181.0 to 158.0 and tributaries draining into Peoria Lake.

State(s)

IL

Congressional District(s)

IL-18

Status

Planning, Engineering, and Design phase is authorized and funded. WRDA 07 (Section 1001) provided construction authorization for lower islands at a total cost of \$20.2M with the cost of inflation.



Description

The State of Illinois, Department of Natural Resources, is the sponsor for this project. The feasibility study phase was completed in 2003 and the Planning, Engineering, and Design (PED) Phase was initiated in Jan 2004 following receipt of state funding. The principal goal is to improve depth diversity enhancing aquatic habitat in Peoria Lake with ancillary recreational benefits. The recommended plan includes dredging approximately 200 acres within Lower Peoria Lake to create deepwater habitats and constructing three islands with a total area of 75 acres. In September 2004, approval was given to construct the Upper Island (55 acres of dredging with 21 acre island) as a Critical Restoration Project under the Illinois River Basin Restoration Authority (Sec 519, WRDA 2000). The Upper Island construction is currently 75% complete. WRDA 07 authorization will be used to construct the Lower Islands (145 acre dredging with 54 acre islands).

Summarized Project Costs

	PED	DI
Estimated Federal Cost	\$ 735,000	\$14,142,000
Estimated Non-Federal Cost	\$ 245,000	\$7,765,000
Total Estimated Project Cost	\$ 980,000	\$21,907,000
Allocation thru FY 2013	\$ 735,000	\$ 0
FY 2014 Allocation	\$ 0	\$ 0
Budget for FY 2015	\$ 0	\$ 0
Balance to Complete	\$ 0	\$14,142,000



Peoria Illinois, Riverfront Development (Environmental Restoration)

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Major Work Item (This Fiscal Year)

FY 2014: Complete PED phase and await construction funding.

Major Work Item (Next Fiscal Year)

FY 2015: Negotiate and execute PPA and begin Phase I construction if funded.

Authority Details

Resolution 2500 of Committee on Transportation and Infrastructure, adopted May 9, 1996, and Section 216 of the 1970 Flood Control Act.

Point of Contact: Program Manager, Project Management Branch

Phone: NONE PROVIDED

Email: cemvr-pm-web@usace.army.mil



Kankakee River Basin Feasibility Study

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Location

The Kankakee River basin extends for 200 miles and drains more than 5,200 square miles in Illinois and Indiana.

State(s)

IL

Congressional District(s)

IL-11

Status

Approved for Feasibility. On hold due to lack of funding.

Description

Recurrent flooding of the area has caused damages to agriculture and infrastructure. This USACE Chicago District study addresses the issues of flood damage reduction, sedimentation and ecosystem restoration along the river basin. A basin-wide flood reduction program was determined to be not economically justifiable. Preliminary analyses of sediment transport and ecosystem restoration opportunities was completed. An Interim Report was prepared that provided recommendations for potential future ecosystem restoration work along the Kankakee that could provide environmental, as well as incidental flood relief and sediment reduction, benefits. The initial draft of the Interim Report was reviewed within the Corps. Reviewers concluded that additional computer modeling of sediment transport would add significant benefit to the report.

Summarized Project Costs

Estimated Federal Cost	\$1,215,000
Estimated Non-Federal Cost	\$441,000
Total Estimated Cost	\$1,656,000
Allocations thru FY 2007	\$1,019,000
Allocations for FY 2008	\$ 0
Budget Request for FY 2009	0
Balance to Complete after FY 2009	196,000

Additional Project Information

Project Sponsors: Indiana Department of Natural Resources, Kankakee River Basin Commission (Indiana - co-signatory with Indiana DNR), and Illinois Department of Natural Resources
Additional Congressional Districts: IN-1, IN-2

Major Work Item (This Fiscal Year)

FY 2013: On hold due to lack of funding.



Kankakee River Basin Feasibility Study

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Major Work Item (Next Fiscal Year)

FY 2014: If funded, complete additional computer modeling of sediment transport and advance project towards completion of the feasibility phase.

Authority Details

This project is authorized under House Resolution (Docket 2468) dated 14 Sep 1995.

Point of Contact: Program Manager, Program and Project Management Branch

Phone: (312) 846-5568

Email: cemvr-pm-web@usace.army.mil



Section 204 Overview

U.S. ARMY CORPS OF ENGINEERS

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Location

United States

State(s)

IA,IL,MN,MO,WI

Congressional District(s)

IA-1, IA-2, IA-3, IA-4, IL-11, IL-13, IL-14, IL-15, IL-16, IL-17, IL-18, IL-2, IL-3, MN-1, MN-7, MO-6, WI-1, WI-2, WI-3, WI-5, WI-6

Description

AUTHORITY AND SCOPE Section 204 of the 1992 Water Resources Development Act, as amended, provides authority for the Corps of Engineers to restore, protect, and create aquatic and wetland habitats in connection with construction or maintenance dredging of an authorized navigation project. **CASH CONTRIBUTION** The initial study and all planning costs are 100% federally funded. Design and construction costs above the "Base Plan" are cost shared 65% Federal and 35% non-Federal. The "Base Plan" represents the dredging placement work that would have occurred without the proposed 204 project. The sponsor cost share can be a contribution of cash, lands, easements, rights-of-way, relocations, and disposal areas (LERRDs). No work-in-kind is allowed. **LOCAL COOPERATION** Formal assurance of local cooperation must be furnished by a local sponsoring agency. The sponsoring agency must normally agree to the following: a. Provide without cost to the United States all LERRDs necessary for the construction and subsequent maintenance of the project; b. Maintain and operate the project after completion without cost to the United States; and, c. Assume responsibility for all costs in excess of the Federal cost of \$5 million. **HOW TO REQUEST ASSISTANCE** Investigations of an environmental improvement project under Section 204 can be initiated upon receipt of a request from a prospective sponsoring agency. Section 204 project requests should be directed to Mr. Hank DeHaan.

POINT OF CONTACT

U.S. Army Engineer, Rock Island District
Clock Tower Building
P.O. Box 2004
Rock Island, Illinois 61204-2004
(309) 794-5853
cemvr-pm-web@usace.army.mil

Point of Contact: Program Manager, Project Management Branch
Phone: NONE PROVIDED
Email: cemvr-pm-web@usace.army.mil

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Section 206 Overview

U.S. ARMY CORPS OF ENGINEERS

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Location

United States

State(s)

IA,IL,MN,MO,WI

Congressional District(s)

IA-1, IA-2, IA-3, IA-4, IL-11, IL-13, IL-14, IL-15, IL-16, IL-17, IL-18, IL-2, IL-3, MN-1, MN-7, MO-6, WI-1, WI-2, WI-3, WI-5, WI-6

Status

Informational only.

Description

AUTHORITY AND SCOPE Section 206 of the 1996 Water Resources Development Act, as amended, provides authority for the Secretary to carry out an aquatic ecosystem restoration and protection project. Such projects will usually include manipulation of the hydrology in and along bodies of water, including wetlands and riparian areas. A project is adopted for construction only after a detailed investigation determines that the project will improve the quality of the environment and is in the best interest of the public, and clearly shows the engineering feasibility and economic justification of the improvement. Each project is limited to a Federal cost share of not more than \$5 million. The Federal limitation includes all project-related costs for feasibility studies, planning, engineering, construction, and supervision and administration. **CASH CONTRIBUTION** The initial study is 100% federally funded up to \$100,000. All planning costs after the first \$100,000 are cost shared 50/50. Design and construction costs are cost shared 65% Federal and 35% non-Federal. The sponsor cost share can be a contribution of cash, lands, easements, rights-of-way, relocations, disposal areas (LERRDs), or work-in-kind. Work-in-kind may be provided subsequent to the execution of the Project Partnership Agreement (PPA), and the value may not exceed 80% of the non-Federal share. **LOCAL COOPERATION** Formal assurance of local cooperation in the form of a Project Cooperation Agreement (PCA) must be executed with the local sponsoring agency. The sponsoring agency just normally agree to the following: a. Provide without cost to the United States all LERRDs necessary for the construction and subsequent maintenance of the project. b. Provide without cost to the United States all necessary alterations of buildings, utilities, highways, bridges, sewers, and related and special facilities.

c. Hold and save the United States free from damages due to the construction and subsequent maintenance of the project, except damages due to the fault or negligence of the United States or its contractors. d. Maintain and operate the project after completion without cost to the United States. e. Prevent future encroachment, which might interfere with proper functioning of the project. f. Assume responsibility for all costs in excess of the Federal cost limitation of \$5 million. g. Provide guidance and leadership in preventing unwise future development of the flood plain by use of appropriate flood plain management techniques to reduce flood losses. h. If the value of the sponsor's contribution above does not equal or exceed 35 percent of the project cost, provide cash contribution to make the

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Section 206 Overview

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sponsor's total contribution equal to 35 percent. **HOW TO REQUEST ASSISTANCE**
Investigations of an environmental improvement project under Section 206 can be initiated upon receipt of a request from a prospective sponsoring agency. Section 206 project requests should be directed to Mr. Hank DeHaan.

POINT OF CONTACT

U.S. Army Engineer, Rock Island District
Clock Tower Building
P.O. Box 2004
Rock Island, Illinois 61204-2004
(309) 794-5853
cemvr-pm-web@usace.army.mil

Point of Contact: Program Manager, Project Management Branch
Phone: NONE PROVIDED
Email: cemvr-pm-web@usace.army.mil



Yellow River, Freeport, IL - CAP Section 205

U.S. ARMY CORPS OF ENGINEERS

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Location

Freeport, IL

State(s)

IL

Congressional District(s)

IL-17

Status

Awaiting New Start funding.

Description

The City of Freeport, Illinois is interested in completing a Flood Risk Management study with the U.S. Army Corps of Engineers to determine if there are any measures that could be implemented to reduce future flood damages. The Yellow River is threatening public infrastructure in Freeport, IL. The Illinois Route 26 corridor on the south side of Freeport has experienced major flooding events in 2010 and 2011. The flooding damaged some residential neighborhoods and a commercial area adjacent to IL Route 26. The flooding also closed IL Route 26 for an extended period of time. An opportunity exists to implement Flood Risk Management measures to protect lives and property.

Summarized Project Costs

	Feasibility
Federal Cost	\$100,000
Non-Federal Cost	\$ 0
Total Cost	\$100,000
Allocations through FY 2013	\$ 0
Allocation for FY 2014	\$ 0
Balance to Complete	\$100,000

(Note: Costs for Initiation of Feasibility Study only are presented. Total Project cost TBD)

Major Work Item (This Fiscal Year)

None (no funding).

Major Work Item (Next Fiscal Year)

Complete Federal Interest Determination and Initiate Feasibility, pending funding.

Point of Contact: Program Manager
Phone: (309) 794-5561
Email: cemvr-pm-web@usace.army.mil



Yellow River, Freeport, IL - CAP Section 205

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Yellow River, Pearl City, IL -- CAP Section 205

U.S. ARMY CORPS OF ENGINEERS

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Location

Pearl City, IL

State(s)

IL

Congressional District(s)

IL-17

Status

Awaiting New Start funding.

Description

The City of Pearl, Illinois is interested in completing a Flood Risk Management study with the U.S. Army Corps of Engineers to determine if there are any measures that could be implemented to reduce future flood damages. The Yellow River is threatening public infrastructure in Pearl City, IL. The Illinois Route 73 corridor has experienced major flooding events in 2010 and 2011. The flooding damaged some residential neighborhoods and the City sewage lagoons. An opportunity exists to implement Flood Risk Management measures to protect lives and property.

Summarized Project Costs

	Feasibility
Federal Cost	\$100,000
Non-Federal Cost	\$ 0
Total Cost	\$100,000
Federal Allocations through FY 2013	\$ 0
Federal Allocation for FY 2014	\$ 0
Balance to Complete	\$100,000

(Note: Costs for Initiation of Feasibility Study only are presented. Total Project cost TBD)

Major Work Item (This Fiscal Year)

None (no funding).

Major Work Item (Next Fiscal Year)

Complete Federal Interest Determination and Initiate Feasibility, pending funding.

Point of Contact: Program Manager
Phone: (309) 794-5561
Email: cemvr-pm-web@usace.army.mil

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Illinois River, Marseilles, IL - CAP Section 205

U.S. ARMY CORPS OF ENGINEERS

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Location

Marseilles, Illinois

State(s)

IL

Congressional District(s)

IL-16

Status

The City of Marseilles sent a letter of request dated August 29, 2013, to the U.S. Army Corps of Engineers requesting a Section 205 study. The study would determine if there are any flood risk management measures that could help mitigate future flood damages. The study is awaiting new start funding.

Description

The Marseilles Lock and Dam Project located on the Illinois Waterway was completed by the Federal Government in 1933. The project is part of the 9-foot Navigation System and consists of three main components: the Lock, Dam and an Earthen Dike. All three components were damaged during an April 2013 flood event. The Earthen Dike extends approximately ½ mile upstream of the dam along the right descending bank and was built to contain the 9-foot Navigation Pool, although it provides some minimal flood protection to the portion of Marseilles that subsequently developed behind it. The Earthen Dike was not designed or constructed to provide flood risk reduction. The Earthen Dike overtopped by 3 to 4 feet during the April 2013 flood event, causing scour to many areas along the Earthen Dike and flooding the adjacent neighborhood. Over 200 homes were damaged and the Marseilles K-8 school received over \$6 Million in damages. A permanent levee designed and built for flood risk reduction is needed to provide Marseilles adequate flood protection.

Summarized Project Costs

	Feasibility
Estimated Federal Cost	\$ 100,000
Estimated Non-Federal Cost	\$ 0
Total Estimated Cost	\$ 100,000
Allocations thru FY13	\$ 0
FY14 Allocations	\$ 0
Balance to Complete	\$ 100,000

(Note: Costs for Initiation of Feasibility Study only are presented. Total Project cost TBD)

Additional Project Information

The study is awaiting new start funding

Major Work Item (Next Fiscal Year)

Assuming new start funding, complete Federal Interest Determination.



Illinois River, Marseilles, IL - CAP Section 205

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Point of Contact: Program Manager
Phone: (309)794-5561
Email: cemvr-pm-web@usace.army.mil

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Illinois River, Peoria Sanitary District, IL - CAP Section 205

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Location

Peoria, Illinois

State(s)

IL

Congressional District(s)

IL-17

Status

The study is awaiting new start funding.

Description

The Greater Sanitary District (GSD) is interested in determining and implementing flood risk management measures that will help mitigate future flood damages. The GSD has started into the information gathering stages and have developed some preliminary plans. The prior capital investment in the development of the preliminary plans should make this study progress quickly.

Summarized Project Costs

	Feasibility
Estimated Federal Cost	\$ 100,000
Estimated Non-Federal Cost	\$ 0
Total Estimated Cost	\$ 100,000
Allocations thru FY13	\$ 0
FY14 Allocations	\$ 0
Balance to Complete	\$ 100,000

(Note: Costs for Initiation of Feasibility Study only are presented. Total Project cost TBD)

Major Work Item (Next Fiscal Year)

Assuming new start funding, complete the Federal Interest Determination.

Point of Contact: Program Manager
Phone: (309)794-5561
Email: cemvr-pm-web@usace.army.mil

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Fox River, Ottawa, IL - CAP Section 208

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Location

Ottawa, IL

State(s)

IL

Congressional District(s)

IL-16

Status

Awaiting new start approval

Description

Snags and shoaling in the Fox River are causing flooding upstream in Ottawa, IL and are threatening the stability of the Historic Illinois & Michigan Canal viaduct. The opportunity exists to remove the snags and realign the channel, preventing future flood damages.

Summarized Project Costs

	Feasibility
Federal Cost	\$50,000
Non-Federal Cost	\$0
Total Cost	\$50,000
Federal Allocations through FY 2013	\$0
FY 2014 Allocations	\$0
FY 2015 Budget	\$0
Balance to Complete	TBD

(Note: Costs for Initiation of Feasibility Study only are presented. Total Project cost TBD)

Major Work Item (This Fiscal Year)

none - no funding available

Major Work Item (Next Fiscal Year)

Initiate Feasibility Study, pending funding

Point of Contact: Program Manager
Phone: (309) 794-5561
Email: cemvr-pm-web@usace.army.mil

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Plum River, Wacker Road, Carroll County, IL - CAP Section 14

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Location

Savanna, Illinois

State(s)

IL

Congressional District(s)

IL-17

Status

Project is awaiting new start funding.

Description

The Plum River is eroding its right descending streambank threatening the stability of the adjacent Wacker Drive and Savanna Township Bridge #008-3503. The road is a high traffic county road which includes a school bus route, emergency vehicle access to a local subdivision and would require an extensive detour route if the road was lost due to excessive erosion. There exists an opportunity to stabilize the eroding streambank and provide protection to this critical public infrastructure.

Summarized Project Costs

	Feasibility
Estimated Federal Cost *	\$ 100,000
Estimated Non-Federal Cost	\$ 0
Total Estimated Cost	\$ 100,000
Allocations thru FY 2013	\$ 0
FY 2014 Allocations	\$ 0
Balance to Complete*	\$ 100,000

(Note: Costs for Feasibility Study only are presented. Total Project cost TBD)

Major Work Item (This Fiscal Year)

None - No funding available.

Major Work Item (Next Fiscal Year)

Initiate feasibility and determine Federal interest, pending funding.

Point of Contact: Program Manager
Phone: 309-794-5561
Email: cemvr-pm-web@usace.army.mil

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UMRR-EMP IL, IA, MO, MN, WI, Upper Mississippi River Restoration - Environmental Management Program

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Location

The program includes the Upper Mississippi River between the Twin Cities, Minnesota and the mouth of the Ohio River, the Illinois Waterway, and small portions of tributaries that have commercial navigation channels.

State(s)

IA, IL, MN, MO, WI

Congressional District(s)

IA-2, IA-4, IL-11, IL-13, IL-14, IL-15, IL-16, IL-17, IL-18, IL-2, IL-3, MN-1, MN-7, MO-6, WI-1, WI-2, WI-3, WI-5, WI-6

Status

The Upper Mississippi River Restoration - Environmental Management Program (UMRR-EMP) consists of two primary program elements: 1) habitat rehabilitation projects, and 2) systemic monitoring and research. The Program was authorized by the Water Resources Development Act (WRDA) of 1986, as amended, and is recognized as the first large river ecosystem restoration and scientific monitoring program in the nation. One of the major strengths of the Program is a robust regional Partnership of five states, five federal agencies, many NGO's, and strong public support. Over the past 27 years, the Program has completed several major initiatives. These include: three Reports to Congress, the Habitat Needs Assessment, two Status and Trends Reports, two Habitat Restoration Manuals, two LTRM element Strategic Plans, development of an explicit approach to Adaptive Management, and the continuous practice of implementing, evaluating, and improving UMRR-EMP management and technical procedures. Brief overview of FY14 activities: 1) the Program developed a vision statement that includes increasing the resilience and health of the UMRS, 2) development of tools to measure progress towards accomplishing the Vision, 3) initiated a major revision to its website, 4) the development of a systemic Program data base, 5) development of a Strategic Plan for the entire Program, 6) completion of one habitat project, 7) continued construction on eight habitat projects, 8) initiation of construction on two new habitat projects, 9) continued planning and design on 20 habitat projects, 10) development of a new aquatic vegetation model, 11) providing seamless LiDAR and bathymetric data, 12) collection of the annual systemic data on key environmental attributes of the UMRS, and 13) initiation of several important research efforts.

Description

The Upper Mississippi River Restoration - Environmental Management Program (UMRR-EMP) consists of two primary elements: (1) habitat rehabilitation projects and (2) systemic monitoring and research. The program was re-authorized by WRDA 99. Some of the key provisions that were included in reauthorization were that: 1) it established a continuing authority for the program, 2) increased the total authorized annual funding amount from \$19,000,000 to \$33,170,000, 3) required the program to submit reports to Congress every six years to document progress and evaluate the program and its accomplishments, identify systemic habitat needs, and recommend adjustments as needed, and 4) increased the cost share formula for non-federal sponsors from 25% to 35% for habitat restoration projects. UMRR-EMP was the first environmental restoration and monitoring program undertaken on a large river system in the United States. UMRR-EMP has pioneered many new and innovative engineering and planning techniques for ecosystem restoration in large river systems. In addition, the science element of the UMRR-EMP has developed state-of-the-art techniques to monitor and conduct research on the river. Scientific monitoring, engineering design, and environmental modeling techniques have been shared throughout the United States and in more than five countries.

Additional information on the UMRR-EMP can be found at the following website:

<http://www.mvr.usace.army.mil/Missions/EnvironmentalProtectionandRestoration/UpperMississippiRiverRestoration>.

The UMRR-EMP was initially authorized by the Water Resources Development Act (WRDA) of 1986 and has come to be recognized as the single most important effort committed to ensuring the viability and vitality of the Upper Mississippi River System (UMRS) diverse and significant fish and wildlife resources since establishment of the National Wildlife Refuges on that system in the 1920's. This systemic program provides a well-balanced combination of monitoring and research, along with habitat restoration activities. Program accomplishments to date include: (1) the completion of 55 habitat restoration projects benefiting approximately 100,700 acres of riverine and floodplain habitats; 35 additional projects are in various stages of construction and design, these will benefit another 87,000 acres of habitat when implemented); (2) the collection of millions of data samples on key environmental attributes of the UMRS (primarily fish, water quality, vegetation, and invertebrates) and applied research that is leading to enhanced understanding of the dynamics of large floodplain rivers and successful multi-purpose resource management; (3) the development of extensive digital systemic data bases, mapping products, and establishment of an information clearinghouse through which UMRS data and information can be



UMRR-EMP IL, IA, MO, MN, WI, Upper Mississippi River Restoration - Environmental Management Program

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universally accessed; and (4) a partnership of unparalleled dimensions between a multitude of federal and state agencies, non-governmental organizations, and the general public.

The 3rd partnership-based Report to Congress on this program was completed in December 2010. This report documented the program accomplishments to date and recommended that the Program be continued to serve the ecosystem restoration and resource monitoring needs on the Upper Mississippi River Reach. The Report to Congress concluded that the UMRR-EMP authority should be amended to specifically allow nongovernmental organizations (NGOs) to serve as non-federal sponsors of HREPs. Such a provision is consistent with other Corps of Engineers' ecosystem restoration authorities, would help leverage scarce resources, and would offer a potentially more efficient approach to accomplishing projects that involve land acquisition.

The Report to Congress also concluded that funding for the operation and maintenance (O&M) of HREPs should be coordinated in annual federal budgets to ensure that the U.S. Fish and Wildlife Service has the resources needed to operate and maintain the growing inventory of HREPs on the refuge lands it manages. In addition to being a key program partner, the U.S. Fish and Wildlife Service is also the sponsor of nearly 70% of all constructed habitat restoration projects and as such is responsible for the operations and maintenance for many of the Programs restoration projects.

Summarized Project Costs

Authorized Federal Cost Per Year (Habitat Restoration element)*	\$22,750,000
Authorized Federal Cost Per Year (Long Term Monitoring and science element)*	\$10,420,000
Total Authorized Amount for the entire UMRR-EMP	\$33,170,000

*WRDA99 authorized the transfer up 20% of the amounts appropriated between the two elements of the UMRR-EMP.

Financial Status

FY13 Appropriation (Work Plan) - \$24,131,640 FY14 Appropriation - \$31,968,000 FY15 President's Budget - \$33,170,000

Additional Project Information

The UMRR-EMP will continue to serve as a national model for riverine ecosystem evaluation and enhancement. The past and future success of this program can be attributed to the active involvement and strong support from Congress, state and federal resource agencies, non-governmental organizations, and the general public. Re-authorization was supported by all five state governors; federal, state, and local agencies; and many non-governmental organizations. Additional Congressional Districts: MN-8, MN-3, MN-4, MN-5, MN-2, MN-6; IL-12; MO-1, MO-2, MO-3, MO-8. Program was formerly known as the Upper Mississippi River System Environmental Management Program (UMRS-EMP).

Major Work Item (This Fiscal Year)

FY 2014: The budget amount will allowed significant progress to be made in both the Program elements. The FY14 funds are being used to complete construction on one habitat project, initiate construction on two habitat projects, and continue construction on eight habitat projects. This will also allow the program to continue planning, engineering and/or design of 20 projects. It will also provide funding sufficient to accomplish base monitoring to track systemic trends in water quality, fish, and submerged aquatic plants for the UMRS and conduct 12 - 15 research efforts that will help to enhance habitat rehabilitation efforts. UMRR-EMP has a long history of engaging the public and this will continue. In addition, continuation of work to fully operationalize the explicit approach for the use of adaptive management procedures. The UMRR-EMP will complete a Strategic Plan which will include adoption of a vision to make the UMRS more resilient and healthier and develop tools to help measure progress towards meeting the Vision. All aspects of the Program will be coordinated to ensure that they directly contribute to advancing the Program Vision. In addition, the UMRR-EMP will continue developed the website and regional projects data base.

Major Work Item (Next Fiscal Year)

FY 2015: The proposed budget for UMRR-EMP will allow the Program to complete construction on on five habitat



UMRR-EMP IL, IA, MO, MN, WI, Upper Mississippi River Restoration - Environmental Management Program

U.S. ARMY CORPS OF ENGINEERS

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rehabilitation projects, continue construction on seven habitat rehabilitation projects, initiate construction on two projects, and initiate or continue planning, engineering and/or design on 20 projects. In addition, the Program will complete the 3rd decadal update of systemic LandUse/Land cover, continuation of development of systemic seamless LiDAR and bathymetric coverage. In addition, it will support collection and analysis of key environmental attributes the UMRS at six field stations in five states. It will also support applied research that is designed to enhance the Program's overall capability to increase resiliency and health of the UMRS and monitor progress towards increasing health and resiliency.

significantly accelerate progress on habitat projects. It will also provide funding sufficient to accomplish systemic base monitoring to track systemic trends in water quality, fish, and submerged aquatic plants for the UMRS. UMRR-EMP has a long history of engaging the public and this will continue. In addition, funding will allow for completion of the 2014 UMRR-EMP Strategic Plan and continue to operationalize the expanded use of adaptive management procedures.

Authority Details

Section 1103 of WRDA 1986, as amended.

Point of Contact: Regional Program Manager, located at CEMVR-PM-M
Phone: (309)794-5428
Email: UMRR-EMP-Regional@usace.army.mil

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UMRR-EMP IL, IA, MO, MN, WI, Upper Mississippi River Restoration - Environmental Management Program - Habitat Rehabilitation and Enhancement Projects (HREP) component

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Location

The program includes the Upper Mississippi River between the Twin Cities, Minnesota and the mouth of the Ohio River, the Illinois Waterway, and small portions of tributaries that have commercial navigation channels.

State(s)

IA,IL,MN,MO,WI

Congressional District(s)

IA-1, IA-2, IA-3, IA-4, IL-11, IL-13, IL-14, IL-15, IL-16, IL-17, IL-18, IL-2, IL-3, MN-1, MN-7, MO-6, WI-1, WI-2, WI-3, WI-5, WI-6

Status

Please refer to the overall Program fact sheet for the Upper Mississippi River Restoration Program for details.

Authority Details

Section 1103 of WRDA 1986 as amended

Point of Contact: Regional Program Manager located at CEMVR-PM-M

Phone: (309)794-5428

Email: UMRR-EMP-Regional@usace.army.mil

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UMRR-EMP - IL, IA, MO, MN, WI - Rice Lake Complex Habitat Rehabilitation & Enhancement Project - LaGrange Pool

U.S. ARMY CORPS OF ENGINEERS

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Location

LaGrange Pool, Illinois Waterway River Miles 132.0 through 138.0, Fulton County, Illinois

State(s)

IL

Congressional District(s)

IL-17

Status

The construction contract was awarded in September of 2011 and construction began in 2012. Spring flooding in 2013 has delayed construction and caused some damages that will require contract modifications. Construction is scheduled for completion in 2014.

Description

Rice Lake is a 6,800 acre backwater complex located 24 miles southwest of Peoria, Illinois, in Fulton County. The project lands are state owned and are managed by the Illinois Department of Natural Resources (ILDNR) as a fish and wildlife area. STAGE I PROJECT FEATURES INCLUDES CONSTRUCTION OF:

- a reinforced concrete pump station (3-48") on H-piles, and a masonry pump station control building,
- a water discharge channel from the pump station to distribute water to the moist soil management areas,
- a water control structures (stoplog and sluice gate),
- an overflow and natural spillway embankment using both wet and dry material.
- a reinforced concrete outlet structure and mechanical dredging.

SUBSEQUENT CONTRACT(S) MAY INCLUDE:

- removal of the old pump station,
- construction of a fish passage structure into Rice Lake, and
- mast tree/native grass planting on Duck Island.

Increased flood and sedimentation levels have resulted in degradation of what has historically acted as excellent mid-migration waterfowl and aquatic habitat. The lack of reliable and flexible water management capability over half of the project area severely limits its effectiveness in providing feeding and resting habitat for the 2.7 million annual waterfowl use days. Habitat degradation also has negatively affected the other migratory and resident species using the facility. The project goals are to enhance wetland, aquatic, and floodplain terrestrial habitat. Reestablishing the Hate Levee and installing a pumping facility for Big Lake would increase reliability and flexibility of water level management. Habitat would be improved for waterfowl, wading birds, shorebirds, and other wetland species that utilize the area. Structures for fish passage and escapement would protect aquatic habitat and maintain connectivity with deep water areas. Restoration of native grasslands and mast tree species would enhance habitat for numerous floodplain species.

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UMRR-EMP - IL, IA, MO, MN, WI - Rice Lake Complex Habitat Rehabilitation & Enhancement Project - LaGrange Pool

U.S. ARMY CORPS OF ENGINEERS

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Summarized Project Costs

In accordance with Section 906(e) of the Water Resources Development Act of 1986 (Public Law 99-662), general design and construction costs would be shared on a 65% Federal/ 35% non-Federal basis. The non-Federal sponsor, the ILDNR, will assume all annual operation, maintenance, and repair costs, estimated at \$42,000.

Federal Cost	\$20,800,000
Non-Federal Cost	\$7,200,000
Total Cost	\$20,800,000
Federal Allocations Through FY 2014	\$9,947,000
Scheduled Federal Allocation for FY 2015	\$125,000
Balance to Complete	\$3,203,000

Major Work Item (This Fiscal Year)

FY 2014 Continuation of construction and the execution of contract modifications to repair 2013 flood damages.

Major Work Item (Next Fiscal Year)

FY 2015 Complete work on the Stage I construction contract. Complete engineering P&S for Stage II and begin development of the O & M manual.

Point of Contact: Regional Program Manager
Phone: (309)794-5428
Email: UMRR-EMP-Regional@usace.army.mil



UMRR-EMP - IL, IA, MO, MN, WI - Emiquon Complex Habitat Rehabilitation & Enhancement Project, LaGrange Pool

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

Location

LaGrange Pool, Illinois Waterway River Miles 142.0 through 148.0, Fulton County, Illinois

State(s)

IL

Congressional District(s)

IL-17

Status

The Rock Island District prepared the draft feasibility report integrated with National Environmental Policy Act documentation and a draft Finding of No Significant Impact (FONSI). The report underwent a 30-day public review ending on April 24, 2014. The draft feasibility report and FONSI can be found at the ADDITIONAL INFO tab above. If you would like to provide comments on the project report and FONSI, please follow the instructions in the Cover Letter found at the ADDITIONAL INFO tab above. Due to the size of the files, the appendices are not included in this Project Fact Sheet. If you are interested in obtaining a copy, please contact Joe Jordan, at (309)794-5791, or email him at joseph.w.jordan@usace.army.mil. The District submitted the draft feasibility report for Mississippi River Division (MVD) final approval. The MVD's approval is expected in September 2014.

Description

Thompson Drainage and Levee District (TDLD) is located immediately north of Havana, Illinois and approximately 40 miles south of Peoria, Illinois, on the right descending bank of the Illinois River between River Miles 121 and 126. The TDLD is part of the Conservancy's larger 7,100 acre Emiquon Project property, which also includes part of the Globe Drainage and Levee District and some adjacent areas. The Conservancy's Emiquon Project includes approximately 98% or 5,400 acres of the TDLD. The Emiquon Project represents landscape scale restoration of one of the largest and historically most productive portions of the Illinois River. The site has been identified by The Nature Conservancy (TNC) as a demonstration project. They expect that it will be an example of how degraded floodplains throughout the nation and world can be restored to functional wetlands. The principle problem is ecosystem degradation due to historic conversion of Illinois River floodplain (aquatic, wetland, forest, and prairie) habitat to agricultural uses and loss of ecological connections between the floodplain and Illinois River eliminating natural flood pulse and preventing use of the floodplain by native species during various life stages and times of the year. The goal is to restore, to the extent practical, quality, functional floodplain habitat and ecological processes that will sustain plant and animal communities that were native to the Illinois River Valley. TNC is actively seeking the Corps expertise in hydrology, floodplain construction, and project management to assist in making the restoration a success.

Summarized Project Costs



UMRR-EMP - IL, IA, MO, MN, WI - Emiquon Complex Habitat Rehabilitation & Enhancement Project, LaGrange Pool

U.S. ARMY CORPS OF ENGINEERS

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	FEASIBILITY	Design & Implementation
Estimated Federal Cost	\$1,620,000	\$12,226,000
Estimated Non-Federal Cost	\$0	\$6,583,000
Total Estimated Cost	\$1,620,000	\$18,809,000
Allocation through FY 2013	\$1,340,000	0
Allocation for FY 2014	\$235,000	0
Budget for FY 2015	\$45,000	\$200,000
Balance to Complete after FY 2015	\$0	\$18,609,000

Financial Status

	FEASIBILITY	Design & Implementation
Estimated Federal Cost	\$1,620,000	\$12,226,000
Estimated Non-Federal Cost	\$0	\$6,583,000
Total Estimated Cost	\$1,620,000	\$18,809,000
Allocation through FY 2013	\$1,340,000	0
Allocation for FY 2014	\$235,000	0
Budget for FY 2015	45,000	\$200,000
Balance to Complete after FY 2015	\$0	\$18,609,000

Major Work Item (This Fiscal Year)

FY 2014: Complete Definite Project Report, negotiate the Project Partnership Agreement with the sponsor, and initiate project design and construction.

Major Work Item (Next Fiscal Year)

FY 2015: Complete and sign the Project Partnership Agreement and continue design while preparing for 2nd quarter FY16 construction contract award.

Authority Details

Section 1103 of WRDA 1986, as amended.

Point of Contact: Program Manager, Project Management Branch

Phone: (309) 794-5428

Email: Marvin.E.Hubbell@usace.army.mil



Joint Permit Applications in Iowa and Illinois

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG ®

Location

Iowa and Illinois

State(s)

IA,IL

Congressional District(s)

IA-1, IA-2, IA-3, IA-4, IL-11, IL-13, IL-14, IL-15, IL-16, IL-17, IL-18, IL-2, IL-3

Status

Informational only.

Description

Joint application packets have been developed in cooperation with the Corps of Engineers and State regulatory agencies allowing one stop shopping for permit applicants in each state. The one stop shopping approach concurrently initiates independent processes required by respective State agencies and the Corps, and improves inter-agency communication, coordination and efficiency. For applicants, this approach eliminates the need for multiple application forms, makes it easier and faster to obtain necessary application forms, and reduces overall permit processing time. In Iowa and Illinois, one stop shopping has proven to be a very effective means to simplify the regulatory process/burden on the general public, yet allow for protection and regulation of natural resources through efficient and timely means. The one stop shopping concept was first developed within Iowa (and the first nationwide) in 1978. In 1985, a new joint application packet, "Protecting Iowa Waters", was implemented. The joint application packet is currently utilized by the 2 Corps Regulatory Districts in Iowa (Omaha and Rock Island Districts) and the Iowa Department of Natural Resources, factions of which encompass numerous State regulatory functions. In 1981, joint application procedures were developed and instituted through the cooperative efforts of the Corps and Illinois State regulatory and resource agencies. "Protecting Illinois Waters" was developed and has been actively utilized since that time by 5 Corps Districts (Chicago, Louisville, Memphis, Rock Island, and St. Louis Districts), The Illinois Environmental Protection Agency (IEPA), and the Illinois Department of Natural Resources (IDNR). The concurrent process aids in obtaining Section 401 water quality certification from the IEPA, review, input and a state floodplain construction permit from the IDNR, and the Corps permit.

Point of Contact: Regulatory Branch

Phone: (309)794-5370

Email: cemvr-odpublicnotice@usace.army.mil

U.S. ARMY CORPS OF ENGINEERS - ROCK ISLAND DISTRICT

CLOCK TOWER BLDG. - P.O. BOX 2004 - ROCK ISLAND, IL 61204-2004

www.mvr.usace.army.mil

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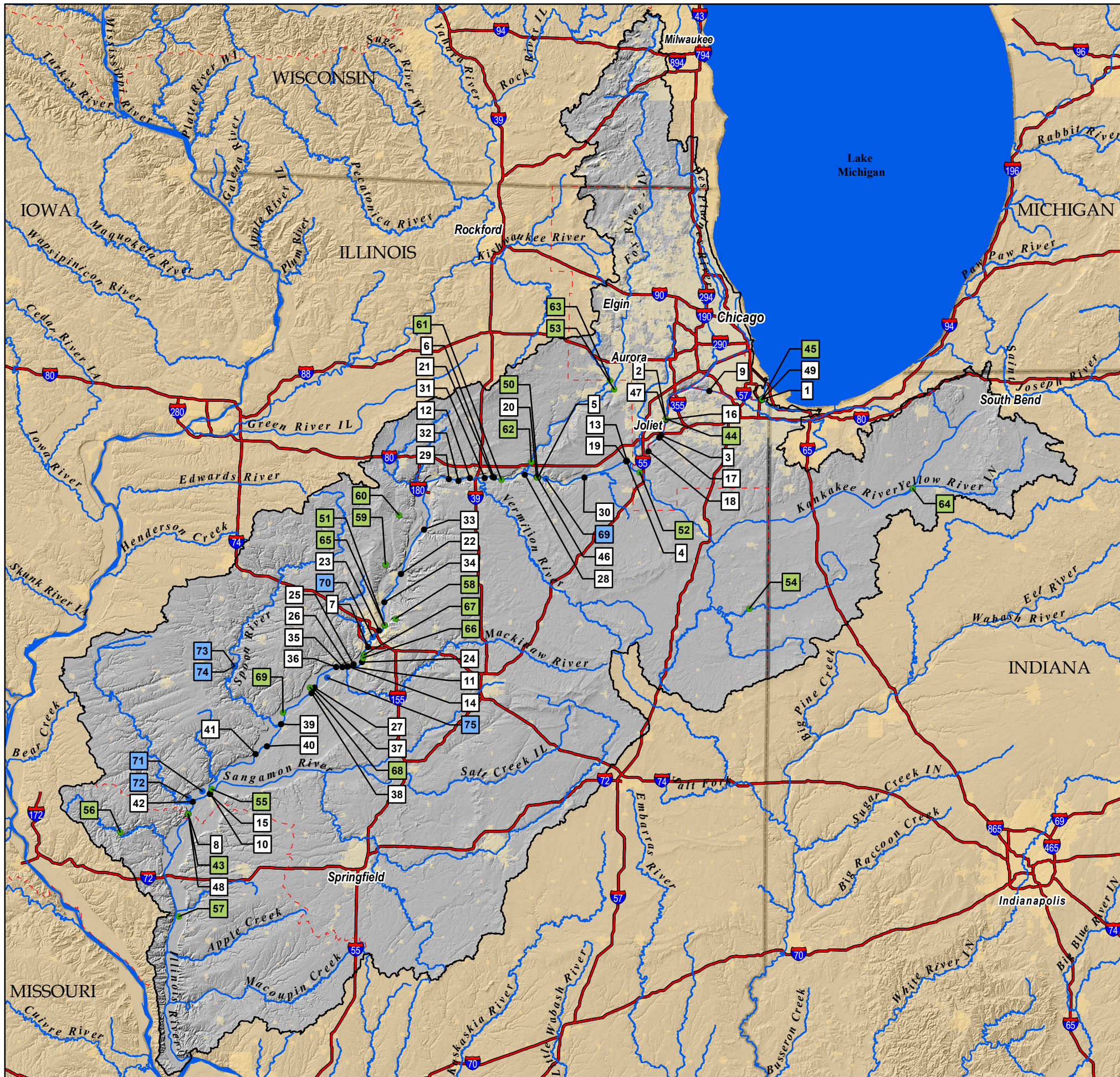
**PERIODIC BASIN MANAGEMENT REPORT
2014**

ILLINOIS RIVER BASIN

APPENDIX B

BASIN MAP

Illinois River Basin Projects - USACE 2014



Navigation

Map ID	Project	Program
16	Lockport Lower Cut	Channel Maint.
17	Brandon RD Lower Cut	Channel Maint.
18	Treats Island	Channel Maint.
19	Dresden Island	Channel Maint.
20	Marseilles Lower Lock Cut	Channel Maint.
21	Starved Rock Lower Cut	Channel Maint.
22	Senachwine	Channel Maint.
23	Peoria Boat Yard	Channel Maint.
24	Pekin Bend	Channel Maint.
25	LaMarsh Creek	Channel Maint.
26	Mackinaw River	Channel Maint.
27	Duck Island	Channel Maint.
28	Bulls Island	Channel Maint.
29	Spring Valley	Channel Maint.
30	Grist Island	Channel Maint.
31	Deer Park Light	Channel Maint.
32	Spring Creek/ Huse Slough	Channel Maint.
33	Henry	Channel Maint.
34	Blue Creek	Channel Maint.
35	Kingston Mines	Channel Maint.
36	Lancaster Landing	Channel Maint.
37	Duck Island	Channel Maint.
38	Senate Island	Channel Maint.
39	Quiver Island	Channel Maint.
40	Grand Island	Channel Maint.
41	Anderson Lake	Channel Maint.
42	Briggs Landing	Channel Maint.
9	Calumet Sag	DMMP
10	Beardstown	DMMP
11	Mackinaw	DMMP
12	La Salle site 17	DMMP
13	Dresden Site 10 Land Access	DMMP
14	Mackinaw Island Site Plan	DMMP
15	Beardstown Site 2	DMMP
1	T J O'Brien Lock & Dam	O&M
2	Lockport Lock & Dam	O&M
3	Brandon RD Lock & Dam	O&M
4	Dresden Island Lock & Dam	O&M
5	Marseilles Lock & Dam	O&M
6	Starved Rock Lock & Dam	O&M
7	Peoria Lock & Dam	O&M
8	La Grange Lock & Dam	O&M
47	Lockport Emerg. Gate Rehab	O&M
48	LaGrange RER Econ Analysis	O&M
49	O'Brien RER Econ Analysis	O&M
50	Marseilles Dam	O&M

Ecosystem Restoration

Map ID	Project	Program
51	Peoria Riverfront (Upper Island)	Illinois 519
52	Kankakee River Basin Feas. Study	Illinois 519
53	Waubonsie Creek	Illinois 519
54	Iroquois River	Illinois 519
55	LaGrange Channels & Islands	Illinois 519
56	McKee Creek	Illinois 519
57	Alton Channels & Islands	Illinois 519
58	Tenmile Creek	Illinois 519
59	Senachwine Creek	Illinois 519
60	Crow Creek West	Illinois 519
61	Starved Rock Channels & Islands	Illinois 519
62	Fox River Dams	Illinois 519
63	Blackberry Creek	Illinois 519
64	Yellow River	Illinois 519
65	Peoria Riverfront (Upper Island)	Illinois 519
66	Peoria Lake Southern Unit	Illinois 519
67	Peoria Lake Northern Unit	Illinois 519
43	LaGrange Lock new '200' Lock	NESP
44	Lockport Upper Pool Dike & Wall	NESP
45	T J O'Brien Rehab	NESP
46	Marseilles Dam Emergency	NESP
68	Rice Lake	UMRR
69	Emiquon	UMRR

Flood Risk Management

Map ID	Project	Program
69	Marseilles	CAP 205
70	Peoria Sanitary	CAP 205
71	Coal Creek Flood Repair	PL84-99
72	Crane Creek Flood Repair	PL84-99
73	Spoon River Flood Repair	PL84-99
74	Lower Pleasant Valley Rehab	PL84-99
75	Spring Lake Flood Repair	PL84-99



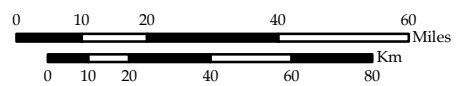
US Army Corps of Engineers
Rock Island District

Illinois River Basin
MVR District Boundary

Projects by Primary Business Line

- Flood Risk Management
- Ecosystem Restoration
- Navigation

Label
Label
Label



1:1,860,970
Map Produced: Oct. 2014
By: USACE MVR GIS

**PERIODIC BASIN MANAGEMENT REPORT
2014**

ILLINOIS RIVER BASIN

APPENDIX C

STAKEHOLDERS IN THE WATERSHED

Illinois Department of Resources

One Natural Resources Way
Springfield, IL 62702-1271
www.dnr.illinois.gov

Illinois Department of Transportation

2300 S. Dirksen Parkway
Springfield, IL 62764
www.idot.illinois.gov

U.S. Department of Agriculture

1400 Independence Ave., S.W.
Washington, DC 20250
www.usda.gov

U.S. Environmental Protection Agency

77 West Jackson Boulevard
Chicago, IL 60604-3507
www.epa.gov

University of Illinois

Illinois State Water Survey
www.isws.illinois.edu
2204 Griffith Dr
Champaign, IL 61820-7463

Illinois State University

100 N. University Street
Normal, IL 61761
www.illinoisstate.edu

The Nature Conservancy

1620 231 Street
Letts, IA 52754
www.nature.org

Fish and Wildlife Service

www.fws.gov

Natural Resources Conservation Service

www.nrcs.usda.gov

Coast Guard Illinois

555 Plainfield Road
Willowbrook, IL 60527
www.uscg.mil

Ducks Unlimited

One Waterfowl Way
Memphis, Tennessee, 38120
www.ducks.org

River Action

822 E. River Drive
Davenport, IA 52803
www.riveraction.org

American Waterways Operators

1113 Mississippi Avenue, Suite 108
St. Louis, MO 63109
www.americanwaterways.com

U.S. Geological Survey

www.usgs.gov

Upper Mississippi River Basin Association

415 Hamm Building
408 St. Peter Street
St. Paul, Minnesota 55102
www.umarba.org

Upper Mississippi, Illinois and Missouri River Association

100 E. Washington St.
Springfield, IL 62701
www.umimra.org

U.S. Department of the Interior

7071 Riverview Road
Thomson, IL 61285
www.doi.gov

