

**Feasibility Report with Integrated
Environmental Assessment**

**Peoria Riverfront Development
(Ecosystem Restoration) Study, Illinois**
May 2002

STATEMENT OF FINDINGS

I. Project Description.

A. This statement concerns a proposal by the Rock Island District of the U.S. Army Corps of Engineers (Corps) to dredge and construct islands in Lower Peoria Lake.

B. A Feasibility Report with Integrated Environmental Assessment (EA) for the Peoria Riverfront Development (Ecosystem Restoration) Study, Illinois, dated May 2002, addressing sedimentation issues associated with Peoria Lake at Peoria, Illinois was prepared and then circulated for public review. A Clean Water Act Section 404(b)(1) Evaluation was included as appendix A-4.

II. Public Interest Review.

A Joint Public Notice (CEMVR-OD-P-430620) dated July 25, 2002, was issued for public review and expired on August 23, 2002.

III. Public Review Comments.

The following is a summarized list of the comments received during the public review period for the document and permit public notice. Each is followed by the Rock Island District's response where appropriate. A copy of the public notice and response letters follow the Statement of findings (SOF), Findings of No Significant Impact (FONSI), and Findings of Compliance (FOC).

Response to Public Review:

A. The Illinois Department of Natural Resources (IL DNR), Division of Resources Review and Coordination, responded by letter dated June 24, 2002. It states that they reviewed the draft document, Cultural Resources were appropriately addressed, and they have no concerns regarding the treatment of cultural resources.

B. The US Fish and Wildlife Service (FWS) responded by letter dated September 10, 2002. They requested that the 3rd sentence on page 5-7 of the report be removed because it is inaccurate. They stated that they concur with our findings that the project would have no effect on federally listed endangered species. They also stated that their letter provides comments under the authority and in accordance with provisions of the Fish and Wildlife Coordination Act and the Endangered Species act of 1973, as amended.

Response: The sentence has been removed from the report as requested.

C. The Illinois Department of Agriculture Bureau of Land and Water Resources responded by letter dated July 17, 2002. Their letter recommended proceeding with the proposed project.

D. The Peoria Tribe of Indians of Oklahoma responded by letter dated July 29, 2002. They have no objection to the proposed construction.

E. The IL DNR Office of Reality and Environmental Planning responded to the permit application by letter dated August 20, 2002. They stated that they had no objection to the issuance of Permit No. 430620. They responded to review of the feasibility report by letter dated September 19, 2002. They stated that they had nothing to add to their July 18, 2001 letter on pages A-1-22 and 23 of the report. Overall they felt that the project would provide major benefits to the long-term environmental and recreational values of Peoria Lake.

F. The Sac and Fox NAGPRA Confederacy responded by letter dated August 27, 2002. They stated that in the event that human remains are found, Mr. Johnathan Buffalo should be contacted.

Response: If human remains are inadvertently found, Mr. Buffalo will be contacted.

G. Mr. Tom Edwards (River Rescue) sent several documents (news letters, memos, notes, and articles) from June 2002 through September 2002. Those documents can be found with the other letters received (minus duplications) followed by the Corps' response to Mr. Edwards. While Mr. Edwards "letters" cover a variety of concerns, his main focus seems to be that the Corps should be performing a Peoria Pool drawdown rather than building islands.

Response: The Corps has determined that island construction is *an appropriate alternative* to address the issues investigated by the study team. Hydraulics engineers and hydrologists from the Illinois State Water Survey and the Corps examined the data and supplied input to help determine the selected alternative. Pool drawdowns and other issues Mr. Edwards raised are being looked at in the larger feasibility study for the Illinois watershed.

H. The Illinois Environmental Protection Agency (IL EPA) responded by letter dated December 9, 2002. Their letter states that they concur “with the continued development of the proposed project plans and specifications with the goal of Section 401 water quality certification of the project and eventual project completion.” They will issue Section 401 certification after final plans and specifications have been submitted and reviewed by their offices.

Response: The Corps will resubmit project plans and specifications at a later date when project design has been essentially finalized, but prior to them being signed by the Chief Engineer.

IV. Summary of Environmental Impact Review.

A. A Feasibility Report with integrated EA was prepared for this project. This review has not identified any potentially significant adverse effects resulting from the implementation of the project as proposed. Thus, a Finding of No Significant Impact was prepared and is included in that document.

B. The activity will comply with Section 404 of the Clean Water Act, and the guidelines set forth in 40 CFR 230. Section 401 Certification will be received from the state of Illinois prior to project implementation.

V. Summary of Findings.

I find that the implementation of the project, as proposed, and under the conditions set forth and as prescribed by applicable regulations published in 33 CFR Part 230 (Appendix B), 33 CFR Parts 320 to 340, 40 CFR Part 230 (if applicable), and 33 CFR Part 250 (Implementation of Executive Order 11988, Flood Plain Management) is in the public interest.

20 Dec 02

Date


William J. Bayles
Colonel, U.S. Army
District Engineer

Finding of No Significant Impact

I have reviewed the information provided by this Feasibility Study with integrated Environmental Assessment, along with data obtained from Federal and State agencies having jurisdiction by law or special expertise, and from the interested public. I find that the proposed Peoria Riverfront Development (Ecosystem Restoration) Project would not significantly affect the quality of the human environment. Therefore, it is my determination that an Environmental Impact Statement is not required. This determination may be reevaluated if warranted by further developments.

An array of features and alternatives was considered for the Peoria Riverfront Development (Ecosystem Restoration) Project. Alternatives considered were:

Alternatives for Peoria Lake:

1. No Federal Action
2. Dredging to create aquatic habitat and a small island (9-acre island and 17 acres increased depth diversity) – Upstream of the McClugage Bridge (U.S. Highways 24 and 150)
3. Dredging to create aquatic habitat and a mid-sized island (21-acre island and 55 acres increased depth diversity) – Upstream of the McClugage Bridge (U.S. Highways 24 and 150)
4. Dredging to create aquatic habitat and two islands with a flowing side channel (17- and 37-acre islands and 144 acres increased depth diversity) – Downstream of the McClugage Bridge (U.S. Highways 24 and 150)
5. Dredging to create aquatic habitat and a large island (46-acre island and 99 acres increased depth diversity) – Downstream of the McClugage Bridge (U.S. Highways 24 and 150)

The preferred alternative consists of:

- Dredging in Peoria Lake with construction of the mid-sized island above and two islands with a flowing side channel below the McClugage Bridge (U.S. Highways 24 and 150). We also anticipate construction of one or two test islands within the same area prior to construction of the two larger islands below the bridge.

Factors considered in making a determination that an Environmental Impact Statement was not required were as follows:

- The project is anticipated to improve the value of Peoria Lake for migratory and resident birds, fish, and wildlife species.
- Aside from temporary disturbance during construction periods, no long-term adverse effects to natural resources or historic properties are anticipated. No State or Federal endangered or threatened species would be affected by the proposed action.
- The project is in compliance with Section 404 of the Clean Water Act. Section 401 certification from the State of Illinois will be received prior to project construction.
- No significant economic impacts are expected to occur in the project area.

20 Dec 02

(Date)



William J. Bayles
Colonel, U.S. Army
District Engineer

**SECTION 3 - FINDINGS OF COMPLIANCE OR NONCOMPLIANCE
WITH THE RESTRICTIONS ON DISCHARGE**

**PEORIA RIVERFRONT DEVELOPMENT
(ECOSYSTEM RESTORATION) STUDY, ILLINOIS**

1. No significant adaptations of the 404(b)(1) guidelines were made relative to this evaluation.
2. Evaluation of Practicable Alternatives. Refer to Section 2 - Plan Formulation of the main report.
 - a. **No Federal Action.** This alternative was not selected because sedimentation within Peoria Lake has reduced it to a state of deterioration that is currently unacceptable.
 - b. **Proposed Action.** The proposed action is considered environmentally and economically acceptable and operationally feasible as planned. The construction of islands using geotextile tubes and berms to contain dredged material from the lake bottom has been selected to reduce water quality impacts as well as impacts to the riverine system. Materials discharged would be contained and have been evaluated for chemical and physical properties and have been determined to be acceptable for the environment.
3. Section 401 certification of the Clean Water Act will be obtained prior to project implementation. The project will be in compliance with water quality requirements of the State of Illinois.
4. The project is not anticipated to induce toxic substances into nearby waters or result in appreciable increases in existing levels of toxic materials.
5. No adverse impact to Federal or state-listed endangered species would result from the proposed actions. No marine sanctuaries would be impacted.
6. No municipal or private water supplies would be affected by the proposed actions, and no degradation of waters of the United States is anticipated.
7. Removal of sediments to construct islands and deepwater channels as well as shallow water areas would provide improved water quality and habitat diversity to Peoria Lake and is deemed beneficial for the environment.
8. No other practical alternatives have been identified. The proposed actions are in compliance with Section 404(b)(1) of the Clean Water Act, as amended. The proposed actions would not adversely impact water quality and would improve habitat diversity in Peoria Lake.

20 Dec 02

Date


William J. Bayles
Colonel, U.S. Army
District Engineer



US Army Corps
of Engineers
Rock Island District

PUBLIC NOTICE

Applicant: U. S. Army Corps of Engineers

Date: July 25, 2002

Expires: August 23, 2002

CEMVR-OD-P-430620

Section: 404

**Joint Public Notice
U.S. Army Corps of Engineers
Illinois Environmental Protection Agency
Illinois Department of Natural Resources/Office of Water Resources**

1. **Applicant.** U.S. Army Corps of Engineers, Clock Tower Building, Rock Island, Illinois 61204-2004.

2. **Project Location.**

a. **Island Creation.** Sections 10 and 15, Township 26 North, Range 4 West; approximate Illinois River mile 165.3; near East Peoria, Tazewell County, Illinois; approximate Illinois River miles 162 – 167.

b. **Farm Creek.** Section 18, Township 26 North, Range 2 West; approximately 2 miles north of Washington, Tazewell County, Illinois.

3. **Project Description.** The principal goal of the project is to enhance aquatic habitat through the restoration of depth diversity in Peoria Lake and reduction of sediment deposition, with ancillary benefits to recreational boating and fishing. Implementation would be cost shared 65 percent by the Federal Government and 35 percent by the Illinois Department of Natural Resources, the non-Federal sponsor.

a. **Background.** The Peoria Riverfront Development (Ecosystem Restoration) Project area includes Lower Peoria Lake and the Farm Creek Watershed. The area lies within Peoria and Tazewell Counties, Illinois, and includes Illinois River Miles 162-167. Average water depth in the area is approximately 2 feet.

b. **Proposed Projects.**

(1) **Island Creation.** The purpose of the island creation portion of the project is to increase water depth in a portion of Peoria Lake and to create some diversity of habitat. The proposed project includes dredging (both mechanical and hydraulic) in Peoria Lake and the construction of 3 islands using the dredged material. The islands will be protected in locations from erosion with 18 inches of riprap on 6 inches of bedding stone. Fish jetties will be spaced approximately 250 feet apart around the created islands. The structures will be 2 feet high with side slopes no steeper than 2:1.

- Mid-Sized Island above McClugage Bridge (U.S. Highways 24 and 150). Approximately 465,000 cubic yards of material will be dredged from the 53.4-acre backwater area. Water depth will be increased to 4 feet around the island and 10 feet in the deeper channels. The dredged material will be used to create an island measuring approximately 2210 feet long by 485 feet wide, creating 21 acres of terrestrial habitat. Side slopes of the island will be 5:1 to 6:1. Riprap will be placed along 2500 feet of the created island. There will be a closing structure constructed of riprap on the upstream end of the island to minimize bed load transport into the dredged areas.
- East Island below McClugage Bridge (U.S. Highways 24 and 150). Approximately 815,000 cubic yards of material will be dredged from the 144-acre backwater area. Water depth will be increased to 4 feet around the island and 10 feet in the deeper channels. The island is approximately 3960 feet long by 475 feet wide, creating 37 acres of habitat. Riprap will be placed along 2500 feet of the created island. There will be a closing structure constructed of riprap on the east side of the island to minimize bed load transport into the dredged areas.

- West Island below McClugage Bridge (U.S. Highways 24 and 150). Approximately 275,000 cubic yards of material will be dredged from the same 144-acre backwater area. Water depth will be increased to 4 feet around the island and 10 feet in the deeper channels. The island is approximately 3775 feet long by 235 feet wide, creating 17 acres of habitat. Riprap will be placed along 4700 feet of the created island.

(2) Farm Creek. The purpose of the Farm Creek portion of the project is to demonstrate sediment removal in the upper reaches of watershed. The proposed project includes the construction of earthen dams on 2 unnamed tributaries to create 2 wetland ponds (a 4-acre surface area impoundment and a 3-acre surface area impoundment). Wetland plantings include 6 rows of vegetation within and around the perimeter of each of the ponds. The project also includes approximately 35 acres of prairie plantings located around the impoundment and wetland plantings. The 600-foot-long west dam for 3-acre impoundment will have a top width of 6 feet and a maximum pool volume of 48 acre-feet. Approximately 2750 cubic yards of material will be used to construct the dam. Material to construct the dam will be from an area measuring approximately 185 feet long by 100 feet wide just upstream of the impoundment. The 515-foot-long east dam for 4-acre impoundment will have a top width of 6 feet and a maximum pool volume of 39 acre-feet. Approximately 2115 cubic yards of material will be used to construct the dam. Material to construct the dam will be from an area measuring approximately 380 feet long by 200 feet wide just upstream of the impoundment.

4. Agency Review and Where to Reply.

a. Department of the Army, Corps of Engineers. The project plans are being processed under the provisions of Section 404 of the Clean Water Act (33 U.S.C. 1344).

b. State of Illinois.

(1) The applicant has applied to the Illinois Environmental Protection Agency (IEPA) for water quality certification, or waiver thereof, for the proposed activity in accordance with Section 401 of the Clean Water Act. Certification or waiver indicates that IEPA believes the activity will not violate applicable water quality standards. The review by the IEPA is conducted in accordance with the Illinois water quality standards under 35 Illinois Administrative Code Subtitle C. The water quality standards provide for the IEPA to review individual projects by providing an antidegradation assessment, which includes an evaluation of alternatives to any proposed increase in pollutant loading that may result from this activity. The "Fact Sheet" containing the antidegradation assessment for this proposed project may be found on the IEPA's web site, at www.epa.state.il.us/public-notices/. In the event that the IEPA is unable to publish the "Fact Sheet" corresponding to the timeframe of this Joint Public Notice, a separate public notice and "Fact Sheet" will be published by the IEPA at the web site identified above. You may also obtain a copy of the "Fact Sheet" by contacting the IEPA at the address or telephone number shown below. Written comments specifically concerning possible impacts to water quality should be addressed to: Illinois Environmental Protection Agency, Bureau of Water, Watershed Management Section, 1021 N. Grand Avenue East, P.O. Box 19276, Springfield, Illinois 62794-9276. A copy of the written comments should be provided to the Corps of Engineers. If you have any questions please contact IEPA at (217) 782-3362."

(2) The Illinois Department of Natural Resources, Office of Water Resources (IDNR/OWR), application is being processed pursuant to an Act in Relation to the Regulation of the Rivers, Lakes and Streams of the State of Illinois, Chapter 615, ILCS 5 (Illinois Compiled Statutes (1994)). Comments concerning the IDNR/OWR permit should be addressed to the Illinois Department of Natural Resources, Office of Water Resources, 524 South Second Street, Springfield, Illinois 62701-1787, with a copy provided to the Corps of Engineers (see paragraph 4.a. of this public notice for address). Mr. Mike Diedrichsen, IDNR/OWR (217/782-4426), may be contacted for additional information.

5. Historical/Archaeological.

a. Island Creation. The Illinois Historic Preservation Agency concurred with the District by letters dated December 4, 2000, and October 30, 2001, that no historic properties are affected by the proposed island creation element of the project, including the rock jetties and closing structures (IHPA Log No. 0011090020K-P).

b. **Farm Creek.** The Illinois Historic Preservation Agency (IHPA) concurred by letter dated December 4, 2001 (IHPA Log #0011090020k-P) with the District's proposed Phase I intensive archaeological survey on the tributary watershed restoration project. The Archaeological Short Survey Report documents the discovery of historic property 11-T-410, located in Section 18, Township 26 North, and Range 2 West, within the tributary watershed restoration. Site 11-T-410 is potentially eligible to the National Register of Historic Places because of the presence of 19th century artifacts. The project boundaries of the Farm Creek Watershed restoration were changed to avoid the site. Site 11-T-410 is no longer included within the area of potential effect for a determination **No Historic Properties Affected** as required by 36 CFR Part 800.3(a)(1) of the NHPA. The IHPA concurred with the findings of the draft report and the District's determination by letter dated October 30, 2001 (IHPA Log #0011090020k-P).

6. **Endangered Species.** Three federally threatened or endangered species are present in the Peoria Lake area: the threatened bald eagle (*Haliaeetus leucocephalus*), the threatened floodplain species decurrent false aster (*Boltonia decurrens*), and the threatened lakeside daisy (*Hymenoxys herbacea*). The Indiana bat (*Myotis sodalis*), while a federally endangered species, is not federally listed as currently found in the counties surrounding the project site. However, it is listed by Illinois as potentially occurring throughout the State of Illinois.

a. **Island Creation.** The dredging and construction of the islands will not adversely affect any state or Federally listed threatened or endangered species at the project site.

b. **Farm Creek.** There are no known state or Federally listed threatened or endangered species at the project site.

7. **Dredge/Fill Material Guidelines.** The evaluation of the impact of the proposed activity on the public interest will also include application of the guidelines promulgated by the Administrator of the United States Environmental Protection Agency under authority of Section 404(b) of the Clean Water Act (40 CFR Part 230).

8. **Environmental Documentation.** The District staff has prepared a document entitled "Peoria Riverfront Development (Ecosystem Restoration) Study, Illinois; Feasibility Report with Integrated Environmental Assessment, U.S. Army Corps of Engineers, Rock Island District" for the project. This documentation is available for review at the Clock Tower Building (see address in paragraph 1.) during working hours (7:30 am to 4:00 pm).

9. **Public Interest Review.** The decision whether to proceed with the project will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people.

10. **Who Should Reply.** The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to proceed with the project. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity. These statements should be submitted on or before the expiration date specified at the top of page 1. These statements should bear upon the adequacy of plans and suitability of locations and should, if appropriate, suggest any changes considered desirable.

11. **Public Hearing Requests.** Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. A request may be denied if substantive reasons for holding a hearing are not provided.

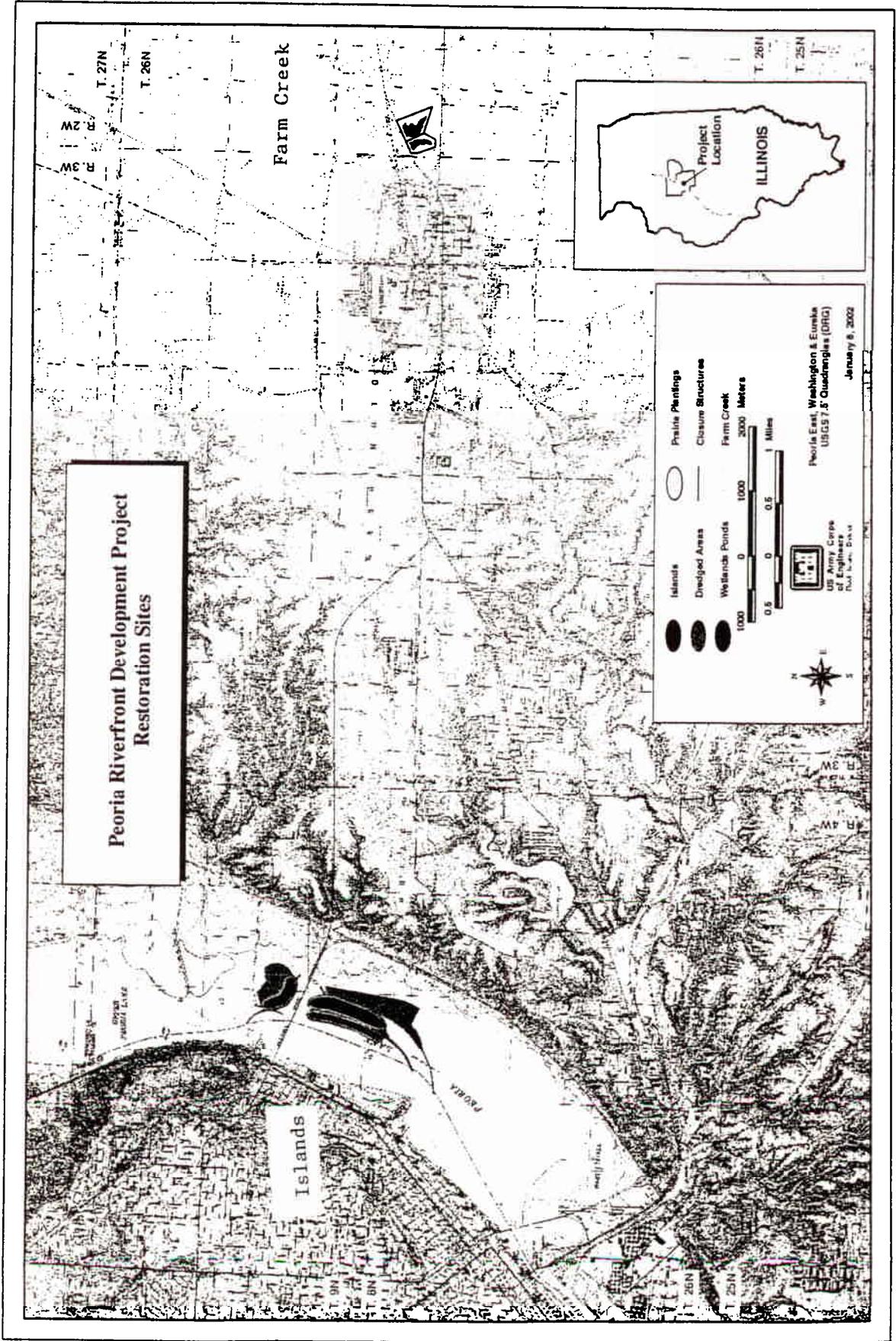
12. **Reply to the Corps of Engineers.** Comments concerning the project should be addressed to the District Engineer, U. S. Army Corps of Engineers, Rock Island District, ATTN: OD-P (Wayne Hannel), Clock Tower Building - Post Office Box 2004, Rock Island, Illinois 61204-2004. Mr. Wayne Hannel (309/794-5378) may be contacted for additional information concerning regulatory issues. Mr. Randy Kraciun (309/794-5174) may be contacted for additional information concerning environmental issues.

Attach
Plan


William J. Bayles
Colonel, U.S. Army
District Engineer

REQUEST TO POSTMASTERS: Please post this notice conspicuously and continuously until the expiration date specified at the top of page 1.

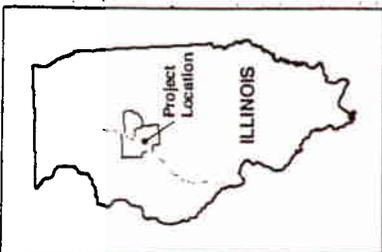
NOTICE TO EDITORS: This notice is provided as background information for your use in formatting news stories. This notice is not a contract for classified display advertising.



**Peoria Riverfront Development Project
Restoration Sites**

Islands
 Dredged Areas
 Wetlands Ponds
 Prairie Penstings
 Closure Structures
 Farm Creek
 1000 0 1000 2000 Meters
 0.5 0 0.5 1 Miles

Peoria East, Washington & Eureka
 US Army Corps
 of Engineers
 Peoria, Illinois, District
 January 8, 2002



9:Peoria_Riverfront\A32_projects\loc_mation.dwg 1/8/02 1:28



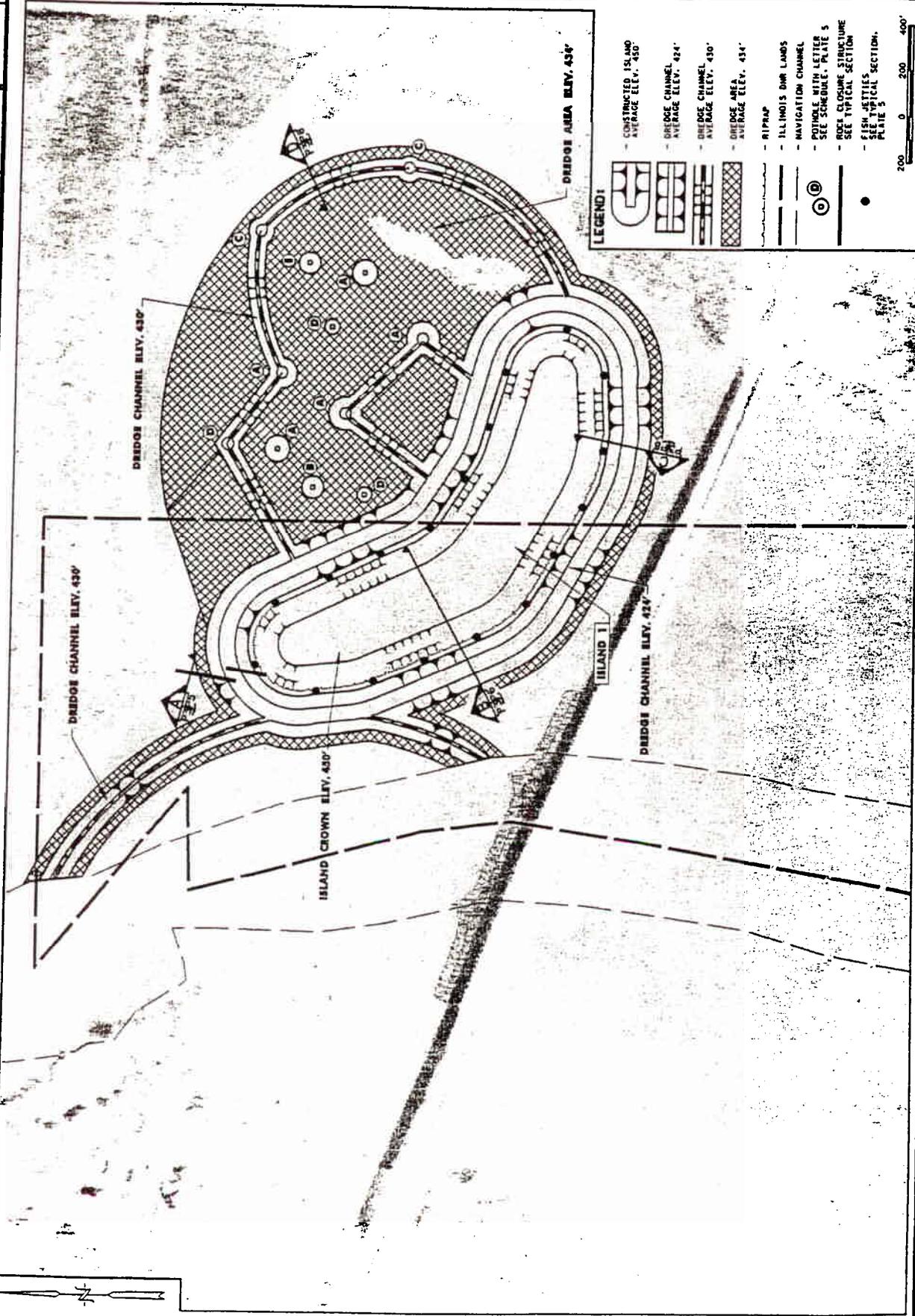
NO.	DATE	DESCRIPTION

PROJECT NO.	6533-01-0-0000
DATE	11/74
DESIGNED BY	
CHECKED BY	
SCALE	AS SHOWN
PROJECT NAME	
LOCATION	
STATE	
CITY	
DESIGNED BY	
CHECKED BY	
SCALE	
PROJECT NAME	
LOCATION	
STATE	
CITY	

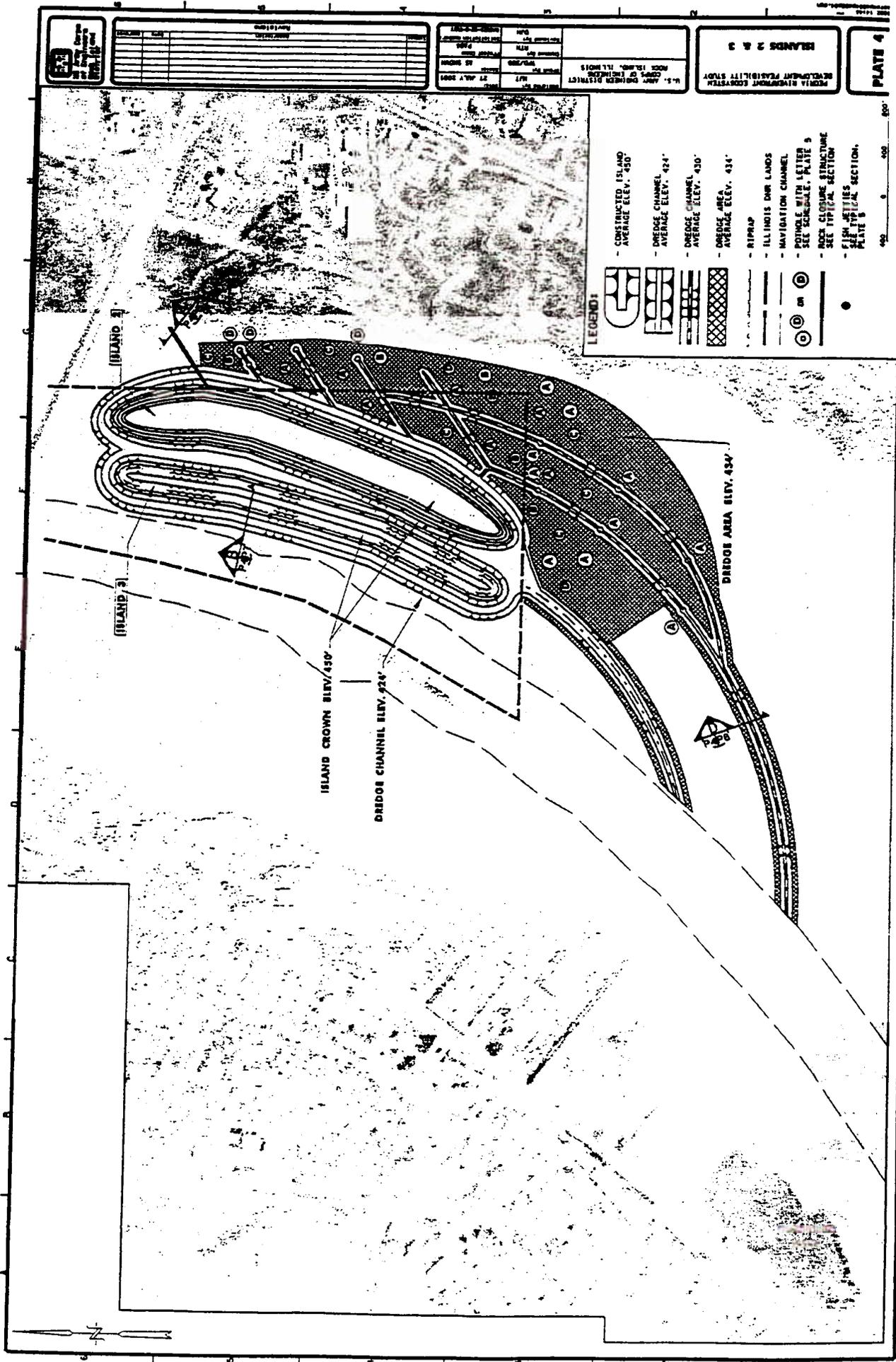
ISLAND 1

U.S. ARMY ENGINEER DISTRICT
MOBILE DISTRICT, MOBILE, ALABAMA
MOBILE DISTRICT, MOBILE, ALABAMA
MOBILE DISTRICT, MOBILE, ALABAMA

PLATE 3



CEMVR-OD-P-430620
Plan - Island 1
Sheet 2 of 4



NO.	DATE	DESCRIPTION

PROJECT NO.	
DATE	
DESIGNED BY	
CHECKED BY	
APPROVED BY	
SCALE	
PROJECT TITLE	
LOCATION	
DATE	

ISLANDS 2 & 3

PORTAL REVENUE FEASIBILITY STUDY

PLATE 4

- LEGEND:
- CONSTRUCTED ISLAND
AVERAGE ELEV. 430'
 - DREDGE CHANNEL
AVERAGE ELEV. 424'
 - DREDGE CHANNEL
AVERAGE ELEV. 430'
 - DREDGE AREA
AVERAGE ELEV. 434'
 - RIPRAP
 - ILLINOIS DNR LANDS
 - NAVIGATION CHANNEL
 - POINTS WITH LETTERS
SEE "GENERAL" PLATE 5
 - ROCK COASTLINE STRUCTURE
SEE TYPICAL SECTION
PLATE 6
 - PILE-DRIVEN STRUCTURE
SEE TYPICAL SECTION
PLATE 6

CEMVR-OD-P-430620
Plan - Islands 2 & 3
Sheet 3 of 4



Illinois
Department of
Natural Resources

<http://dnr.state.il.us>

One Natural Resources Way • Springfield, Illinois 62702-1271

George H. Ryan, Governor • Brent Manning, Director

June 24, 2002

Mr. Ron Diess
Economic and Environmental Analysis Branch
Department of the Army
Rock Island District, Corps of Engineers
Clock Tower Building
P.O. Box 2004
Rock Island, Illinois 61204-2004

Dear Ron,

Thank you for the opportunity to review the draft document, "Peoria Riverfront Development Study, Illinois Feasibility Report with Integrated Environmental Assessment." Cultural Resources were appropriately addressed and the Department of Natural Resources has no concerns regarding the treatment of cultural resources.

Sincerely,

Harold Hassen, Ph.D.
Cultural Resource Coordinator
Division of Resource Review and Coordination



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Rock Island Field Office
4469 48th Avenue Court
Rock Island, Illinois 61201
Phone: (309) 793-5800 Fax: (309) 793-5804



IN REPLY REFER
TO:

FWS/RIFO

July 15, 2002

Marshall Plumley
U.S. Army Corps of Engineers
Rock Island District
Clock Tower Building, P.O. Box 2004
Rock Island, Illinois 61204-2004

Dear Mr. Plumley:

This provides our review comments on the Public Review Draft of the *Peoria Riverfront Development (Ecosystem Restoration) Study, Illinois, Feasibility Report with Integrated Environmental Assessment* dated May 2002.

Technical Comments

The third sentence in the Endangered Species section on page 5-7, which begins with "Their review of," is inaccurate and should be removed from the final report.

Endangered Species Act Comments

We concur with your findings that the proposed project will have no effect on federally listed endangered species. This conclusion is based upon the following:

1. As stated in the Endangered Species section beginning on page 4-2, staging and access activities associated with the Peoria Lake dredging and island construction will take place on existing boat ramp or marina facilities and will not impact any additional areas in the Illinois River floodplain.
2. Forested habitats will not be impacted by the project.

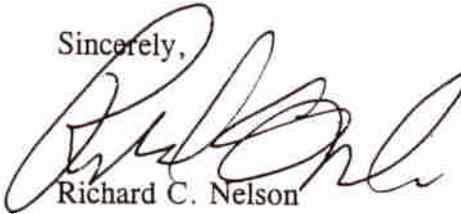
Provided the above statements are true, this precludes the need for further action on this project as required under Section 7 of the Endangered Species Act of 1973, as amended. Should the project be modified, or if new information indicates listed or proposed species may be affected, consultation or additional coordination with this office, as appropriate, should be initiated.

Marshall Plumley

2

This letter provides comments under the authority of and in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.); and the Endangered Species Act of 1973, as amended.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard C. Nelson". The signature is fluid and cursive, with a large initial "R" and "C".

Richard C. Nelson
Supervisor

G:\WP_Docs\LAUR\peoria_rivr_devel.wpd



Bureau of Land and Water Resources

State Fairgrounds • P.O. Box 19281 • Springfield, IL 62794-9281 • 217/782-6297 • TDD 217/524-6858 • Fax 217/557-0993

July 17, 2002

Colonel William J. Bayles, District Engineer
U.S. Army Engineer District, Rock Island
ATTN: Planning Division
Clock Tower Building - P.O. Box 2004
Rock Island, Illinois 61204-2004

Re: Peoria Riverfront Development (Peoria and Tazewell Counties)
Ecosystem Restoration Study for the Lower Peoria Lake and Farm Creek Watershed
Feasibility Report with Integrated Environmental Assessment
May 2002

Dear Colonel Bayles:

The Illinois Department of Agriculture (IDA) has completed its review of the agricultural impacts associated with the Peoria Riverfront Restoration project. Our analysis also relates to the federal Farmland Protection Policy Act (7 USC 4201 et seq.), which specifies that federal actions affecting farmland conversion shall be consistent with the state's Farmland Preservation Act (505 ILCS 75/1 et seq.).

The Peoria Riverfront Development (Ecosystem Restoration) Project area includes Lower Peoria Lake and the Farm Creek Watershed. The principal goal of the Ecosystem Restoration Feasibility Plan is to enhance aquatic habitat through the ecosystem restoration of depth diversity in Peoria Lake and reduction of sediment delivery and deposition. According to the summary of the environmental impacts of the selected plan for Peoria Lake, no farmland will be affected.

The proposed project also consists of constructing wetland impoundments and prairie plantings in the Farm Creek Watershed on a 135-acre parcel. This farmland parcel, owned by the City of Washington and leased for agricultural production, is adjacent to Washington's corporate boundaries. The USDA NRCS Form AD-1006 that tracks farmland conversion was completed for the 135-acre site in November 2001.

Because the 135-acre site is adjacent to the City of Washington and is already publicly owned, the IDA recommends that the U.S. Army Corps of Engineers, in conjunction with the non-federal sponsor, the Illinois Department of Natural Resources (IDNR), proceed with the Peoria Riverfront Development (Ecosystem Restoration of Peoria Lake and Farm Creek Watershed) project. The IDA would consider such an action to be consistent with the IDNR's Agricultural Land Preservation Policy and in compliance with the state's Farmland Preservation Act.

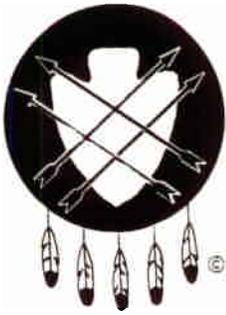
Thank you for the opportunity to provide these comments. Should you have any questions regarding our review of this project or our study, please contact Terry Savko of my staff at 217-785-4458.

Sincerely,

Steve Frank, Chief
Bureau of Land and Water Resources

SF:TS

cc: Agency Project File



PEORIA TRIBE OF INDIANS OF OKLAHOMA

118 S. Eight Tribes Trail (918) 540-2535 FAX (918) 540-2538
P.O. Box 1527
MIAMI, OKLAHOMA 74355

CHIEF
John P. Froman
SECOND CHIEF
Joe Goforth

July 29, 2002

Wayne Hannel
U.S. Army Corps of Engineers
Rock Island District
Clock Tower Building P.O. Box 2004
Rock Island, IL 61204-2004

RE: CEMVR-OD-P-430620

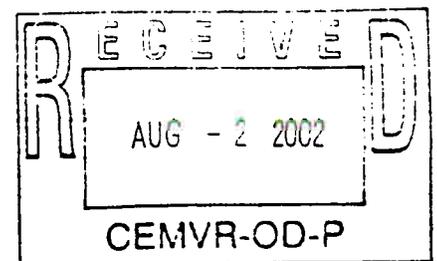
Thank you for notice of the referenced project. The Peoria Tribe of Indians of Oklahoma is currently unaware of any documentation directly linking Indian Religious Sites to the proposed construction. In the event any items falling under the Native American Graves Protection and Repatriation Act (NAGPRA) are discovered during construction, the Peoria Tribe request notification and further consultation.

The Peoria Tribe has no objection to the proposed construction. However, if any human skeletal remains and/or any objects falling under NAGPRA are uncovered during construction, the construction should stop immediately, and the appropriate persons, including state and tribal NAGPRA representatives contacted.

A handwritten signature in black ink, appearing to read 'John P. Froman'.

John P. Froman
Chief

xc: Bud Ellis, Repatriation/NAGPRA Committee Chairman



TREASURER
LeAnne Reeves

SECRETARY
Hank Downum

FIRST COUNCILMAN
Claude Landers

SECOND COUNCILMAN
Jenny Rampey

THIRD COUNCILMAN
Jason Dollarhide



Illinois

Department of
Natural Resources

One Natural Resources Way • Springfield, Illinois 62702-1271

<http://dnr.state.il.us>

George H. Ryan, Governor • Brent Manning, Director

August 20, 2002

Mr. Richard J. Baugh, P.E.
Chief, Permit Evaluation Section
Regulatory Branch
Rock Island District, Corps of Engineers
Clock Tower Building, P.O. Box 2004
Rock Island, Illinois 61204-2004

Attn: OD-S

Dear Mr. Baugh:

The Illinois Department of Natural Resources, Office of Realty and Environmental Planning, has reviewed the project(s) listed below and has no objections to permit issuance:

<u>Permit No.</u>	<u>Applicant</u>
430620	U.S. Army Corps of Engineers
430270	U.S. Army Corps of Engineers
431740	Steve Champion

Please contact me if we can be of further assistance.

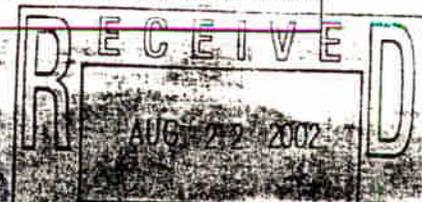
Sincerely,

Robert W. Schanzle
Permit Program Manager

RWS:rs 8-01(02), 8-11(02), 8-12(02)

cc: IDNR/OWR (Dalton), IEPA (Yurdin), USFWS (Fisher), USEPA (Pierard)

This recommendation regarding the issuance/denial of the U.S. Army Corps of Engineers permit by the IDNR, Office of Realty and Environmental Planning does not supersede permit decisions made by the IDNR, Office of Water Resources under the Illinois Rivers, Lakes and Streams Act.





Illinois Department of Natural Resources

<http://dnr.state.il.us>

One Natural Resources Way • Springfield, Illinois 62702-1271

George H. Ryan, Governor • Brent Manning, Director

September 19, 2002

Colonel William J. Bayles
District Engineer
Rock Island District, Corps of Engineers
Clock Tower Building, P.O. Box 2004
Rock Island, Illinois 61204-2004

ATTN: Randy Kraciun
Environmental Analysis Section

Dear Colonel Bayles:

Reference is made to your agency's letter of June 14, 2002 and the accompanying Public Review draft entitled Peoria Riverfront Development (Ecosystem Restoration) Study, Illinois, Feasibility Report with Integrated Environmental Assessment describing the Rock Island District's ongoing investigations of aquatic habitat enhancement and sedimentation reduction in Peoria Lake on the Illinois River. The Illinois Department of Natural Resources is participating with the Rock Island District as a cost-share sponsor.

We have nothing to add at this time to the comments contained in our letter of July 18, 2001, which is reproduced on pages A-1-22 and A-1-23 of the document. Subject to site-specific surveys, we believe the various project elements are unlikely to result in adverse impacts to fish and wildlife resources, including threatened/endangered species. Overall, we anticipate the proposed actions will be of major benefit to the long term environmental and recreational values of Peoria Lake.

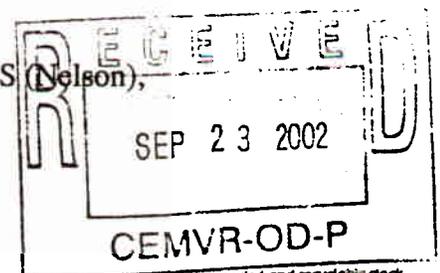
Department representatives are meeting on a regular basis with staff of the Rock Island District to discuss and coordinate the Riverfront Development Plan. Please contact Jim Mick, Illinois River Basin Coordinator (309-543-3316) or myself (217-785-4863) if we can be of any assistance at this time.

Sincerely,

Robert W. Schanzle
Permit Program Manager
Office of Realty and Environmental Planning

RWS:rs

cc: IDNR/ORC (Mick), IDNR/OWR (Kennedy), IEPA (Yurdin), USFWS (Nelson),
USEPA (Pierard)



SAC AND FOX NAGPRA CONFEDERACY



"MESKWAKI"

Sac and Fox of the
Mississippi in Iowa
349 Meskwaki Rd
Tama, IA 52339-9629
641-484-4678
Fax: 641-484-5424
Contact:
Johnathan L. Buffalo

August 27, 2002

District Engineer
US Army Corps of Engineers
Rock Island District
ATTN: OD-P (Wayne Hannel)
Clock Tower Building
Post Office Box 2004
Rock Island, Illinois 61204-2004

Dear Mr. Hannel;

Thank you for your letter, which is in compliance with Section 106 of the National Historic Preservation Act, and Section 110.

The main contact group of the Sac and Fox in issues that result in inadvertent finds of human remains or funerary objects pertaining to:

CEMVR-OD-P-430620
U.S. Army of Corps of Engineers

will be Johnathan Buffalo of the Sac and Fox Tribe of Mississippi in Iowa. Mr. Buffalo's address is listed on this letterhead.

Sincerely,

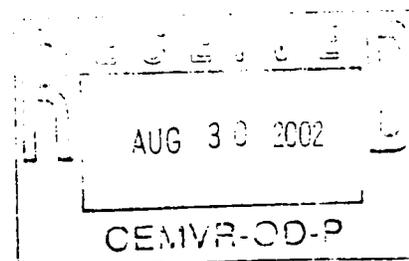
Deanne Bahr
Deanne Bahr
Sac and Fox Nation of Missouri
NAGPRA Contact Representative



Sac and Fox Nation
of Missouri
in Kansas and Nebraska
305 N Main
Reserve, KS 66434
785-742-7471
Fax: 785-742-2979
Contact: Deanne Bahr



Sac and Fox Nation of
Oklahoma
Rt. 2 Box 246
Stroud, OK 74079
918-968-2353
Fax: 918-968-2353
Contact: Sandra Massey



copy to Brad Thompson

River Rescue
Sept. 12, '02

Col. William Bayles

Dear Col. Bayles,

The enclosed paper ("Marinas, Fish. . . Drawdowns") is one that I distributed to your staff and others at the August 7 UMRBA meeting in St. Louis.

In the enclosed copy I have added some words to make it clearer and subheads for readability.

I doubt if any other dam controlled river in the world would benefit more and lend itself better to drawdowns than the Illinois.

Moreover, so can the operations of the Corps itself greatly benefit, as explained in *River Rescue*.

I trust we can discuss this soon.

Sincerely,



Tom L. Edwards
2702 N. Peoria Av.
Peoria, IL 61603

309-681-9069

cc: Loss, Shoemaker

To: Col. Wm. Bayles, District Engineer
Gary Loss, Projects manager
Brad Thompson, Island project
U.S. Army Engineer Dist., Rock Island, IL



Copyright, July, 2002
Tom L. Edwards

1 of 5

FOR THE RETURN OF OUR RIVERS' BOUNTY
MARINAS, FISH HABITAT, AND RIVER DRAWDOWNS

-- EACH CAN HELP THE OTHER*

By Tom L. Edwards

*Brad - For inclusion, tw,
in Perric island comments
Tom*

**"TOGETHER IT IS A DOUBLE ECOLOGICAL
ADVANCEMENT OF EPIC PROPORTIONS"**

"A NEW PARAMETER FOR THE 9-FOOT CHANNEL"

Background

There is, finally, a fast growing realization that periodic warm season drawdowns of dam controlled rivers and the resultant explosion of vegetation on the bared bottoms of their backwaters is a boon to all riverine life, from waterfowl and fish to invertebrates and microorganisms. And people will surely eventually translate this into a realization that this is also a part of their own wellbeing.

To summarize this boon: The bared areas of river edges and the muddy bottoms of their backwaters dry and quickly transform into green, verdant stands of what is called moist soil vegetation, species that have spent millions of years evolving to take advantage of the temporary bare openings of land due to seasonal shrinkage of river levels. This vegetation provides a copious larder of food, cover, and breeding areas for fish and waterfowl when the rivers' waters soon return, and also helps support all wildlife within reach of the river. Even the bare sand and gravel bars exposed are extensively utilized by bird life. Exposure to the sun and air, besides coalescing soupy silt into permanently firm soil, oxidizes and purifies the bottom soil, leaving it a better substrate for aquatic plants and animals, and minimizes potential of septic, disease producing conditions. And the ongoing aerobic activity helps to clean the water itself on its return. Moreover, these plant stalks stand for up to two years, some longer, blocking wind and helping still and clear the water, preventing the resuspension of silt that blocks life giving light. Where the backwaters only become temporarily shallower, resultant changes in the species distribution of emergent and submergent aquatic plants reinforce diversity.

However, it is the virtual disappearance of all aquatic plants from the water of long stretches of riverways, in fact, all of the Illinois River -- due, essentially, to chemical contaminants -- that makes drawdowns and the restoration of the moist soil component of riverine vegetation crucial for maintaining all river related life, indeed, even preserving species from extinction. Improving water quality to permit aquatic plants to survive is most crucial for riverine life. Drawdowns aid that, and are a way we can bring back a vital part of river ecology *now*. That will help do the rest.

*An extension of River Rescue, a comprehensive plan for river drawdowns, published 1988.

Lowering water levels just one or two feet for five to eight weeks beginning in late spring or summer will bare extensive backwater areas and give time for this miracle of plant growth, oxidation, and transformation of silt to soil to take place. And because of the firm bottom that results, conventional earth moving equipment can easily excavate areas of it if desired, *by far* the most expedient, inexpensive way of doing it, and doable in winter as well as summer.

Historically, our great rivers, even the Mississippi, became so shallow in summer dry spells that pioneers were able to drive across them by horse and buggy at numerous spots called "fords." Yet the rivers swarmed with life then. Low water periods are part of their natural ecology as well as high water fluctuations

However, we are still far from achieving major implementation of drawdowns. But it is a gap that can be closed swiftly.

Objections and Solutions

Besides concerns regarding river barge traffic (which are fading), a major objection to instituting drawdowns is that it would curtail recreational boating because for a number of marinas (not all) many boats would be unable to get in and out while water levels were lowered. And the best time for drawdowns also overlaps the prime boating season on rivers as the Mississippi, Illinois, Missouri, and Ohio.

Aside from that issue -- but another that could be used to solve it -- is that fish biologists are urging attention to providing deeper "off-channel" places for fish, particularly for overwinter "lodging" when fish are less mobile, especially for rarer species. There they would be out of the way of barge traffic and possible surges in water volume and velocity that may push them downstream.

All of this -- the benefits of river drawdowns, maintenance and usage of marinas and harbors, and providing fish habitat -- can be meshed together to the advantage and benefit of all, indeed, beautifully so, as follows:

Enlisting and Assisting Marinas

Many marinas are maintained at only 4 or 5-foot depths, and some only 3 feet deep. A majority have to be periodically dredged of silt accumulation to maintain those depths. Most operators wait until dredging becomes imperative to boat passage to do so. As the owner of a small Illinois River marina told me, "When the boats start churning up mud, then I dredge the harbor again." So they look at river drawdowns as at least a one time additional dredging expense to keep their harbors and inlets open to their customers during drawdown periods.

But with fish biologists wanting deeper off-channel spots for fish refuges, and the U.S. Army Corps of Engineers probably willing to provide some to comply with its current **environmental mandate to help rivers ecologically -- why not**, rather than **dredging separate deep water holes for fish**, instead *share some of the cost* with harbor owners, at least the initial cost, of dredging their harbors deeper to meet, or more than meet, the lower level of perhaps annual 5 to 8-week drawdowns? That would dissolve objections to drawdowns.

This approach would not only guarantee marinas boating access to river channel areas during drawdowns, but would also provide a large number of safe and readily reachable refuges for fish. Moreover, it would probably be the last high hurdle in clearing the way for drawdowns and the staggering ecological benefits from them. Together it is a double ecological advancement of epic proportions.

Bountiful Advantages

There are other obvious decided advantages: One is that any dredging of separate “deep” (actually only to depths of 6 or 7 feet, half the depth of river barge channels) water retreats for fish would undoubtedly be done far distant from each other. Relatively few fish would likely find and use them. *But* marinas and other harbors dot the riverways. One is likely to be within a relatively easy swim for fish. There are 20 in the 18-mile length of the Illinois River’s Peoria Lake (where this author is living).

Indeed, marinas and other harbors are already being used by fish (occasionally even beaver), particularly the deeper ones. That is evident by the people that can be seen fishing in them when allowed. Making them generally deeper would make them more conducive to fish use.

Another advantage: Isolated holes dug for fish refuge would rapidly fill with silt, because it is over such deeper spots that silt literally tumbles out of the water, quickly converting any deep places to shallow depressions. But the depths of marinas and other harbors are constantly maintained. And harbors that are now maintained 3 to 5 feet deep, would instead be maintained at 5 to 7-foot depths to meet lower water levels of likely annual drawdowns and keep their customers. All the better for fish *and* boaters.

A Bonanza for Fish -- and Waterfowl

Another plus is that recreational marinas are only active 6 or 7 months a year in the northern half of the country. Therefore, for half the year, and the entire winter season, they are empty and still when fish are somnolent -- havens when they most need it.

Many marinas and harbors, dug into the sides of rivers as they are, have springs or just cleaner ground water feeding into them, still another benefit to fish. Also, boat docks provide shade, and boats must travel at crawl speeds in harbors, safe for man and fish.

The greater bonanza for fish (and man), though, is that drawdowns and the jungles of vegetation that result would hugely benefit rivers ecologically for hundreds of miles, indeed, affect the entire length of rivers, not just a postage stamp area. Besides a bumper summer “crop” of vegetation, they produce a welter of bottom organisms, a total smorgasbord for waterfowl and fish throughout the ensuing year. The vegetation is also a “forest” of refuge for smaller fish, spring spawning areas for larger ones, brood areas and feeding grounds for waterfowl, and food and shelter for fish in their travels between any shoreline harbors and the much deeper barge channels. The vegetation succors life both during its green, growing period and after. Its seeds, tubers and roots are food utilized by aquatic life, too, as are its decomposing leaves and stalks, which also break the force of wind and waves and anchor and shield the bottom. It takes more than just water for fish and other aquatic life to flourish.

Silt Has Value

Since it is the finer “topsoil” silt from farmland that generally reaches riverside harbors, their dredgings are of economic value for landscaping purposes, from homes and shopping centers to roadside cuts -- and is even now so being used. And it can be returned to farms.

Not Difficult

At present harbors are maintained in relation to normal pool levels of rivers. However, with annual drawdowns of, probably, 18 inches, that lower level would become the new level that river users would have to adjust to. But this would certainly be less of an adjustment than to the hugely higher river levels established by dams built on major rivers in the 1930s

It would be a significant change for the Corps of Engineers, too. They legally must maintain a 9-foot deep barge channel, and titularly they do. Actually, they maintain a much deeper river channel -- which is why river drawdowns are so feasible. For instance, only flood flushes of silt and sediment, which are regularly dredged, keep the Illinois River from a constant lineal depth of over 13 feet deep for its lower 250 miles and probably more. In the river’s 18-mile long Peoria Lake, the barge channel averages 15 feet deep and 500 feet wide, *and* is getting deeper due to scouring of barge propellers. It has never been dredged.

Deeper Channel, Too!

A vital change that probably would be brought about by annual 18-inch drawdowns of dam controlled rivers is that, in effect, there would be a new parameter for the so-called “9-foot channel.” It would likely become 1.5 feet deeper. That is, the pool levels from which the “9-foot” channel would be measured would be from a 1.5-foot lower elevation than now, in other words, measured from the “drawdown level.”

No, that wouldn’t be difficult for the Corps to meet in most river stretches, particularly in soft bottom areas.

Boaters Benefit

And it would likely make a welcome, perhaps big difference in boating in many locales. With 18-inch drawdowns barge propellers would be churning closer to river bottoms, scouring them even deeper. The adjacent river bottom areas would then gravitate into a new lower equilibrium with the deeper channels, thus increasing depths and expanding the areas over which boaters could range for all but the month or two of drawdowns in the years they are done. And even during drawdowns they would have at least as much water deep enough for boating as now, given the likely overall increased depths.

In fact, probably because of bigger, more powerful barge towboats, such a “lower equilibrium” is already occurring. Huge areas of both Upper and Lower Peoria Lake became a foot deeper from 1996 to 1999, according to a Corps study. In the Lower Lake the overall volume of the barge channel increased by 11.5% and the backwaters by 8.5%.

Drawdowns Prosper All

Of course, as drawdowns bring a bonanza for waterfowl, so, too, for duck hunters. Also, even wading birds, herons and egrets, prospered during the record Illinois drought of 1988 when a number of Illinois River backwaters dried up for the first time since its dams were built in 1939. How fish and mussels ever survived, they did, *back in force* the very next

year. Also, fish poured that year (1989) into long barren backwater lakes newly covered with vegetation (albeit last year's) to spawn. *This writer actually walked across an entrance channel on their backs, so thick were the fish and intent, in their sexual fever, to reach the lake.*

New Deep Water Sidechannels

Drawdowns clear the way, as well, for providing a great many more sidechannel deep water "ports" for fish or waterfowl. A football field size area could be excavated 6-feet deep (12,000 cubic yards) from a dry lake, and the silt and soil hauled a quarter to a half mile by conventional earth moving equipment for about \$52,000 or less, according to what the Illinois Highway Department is currently paying for earth moving. So for \$10 million over 200 such sidechannel deep water habitats could be dug, and 2.2 million cubic yards of silt removed. *Indeed*, new backwater lakes could be created.

Also, such deepened areas would serve to "trap" and remove silt from the water, and could be located where they can be easily reached and re-excavated. That soil itself would be a resource (see *River Rescue*), particularly because it is the finer grained topsoil that floats in as far as the shore edges of the backwaters.

Far Better Than Raising Water Levels

There is often talk of raising water levels of dam controlled rivers, essentially for boating. But the waters would still be as devoid of vegetation, silt would fill the new water space, flood levels would increase . . . we would soon be back to dealing with all the same problems we already are, and more.

But periodically lowering river levels as described above will bring bountiful new life to our rivers, enable us to deal with the silt in them, help purify their waters, and expand all river related recreation, including boating. *And* it need not subtract from barge traffic. Rather, it will help harmonize barge usage with environmental goals and increasing citizen pressure to meet them.

Major Environmental Action -- the Corps Can

An initial reaction of the Corps to helping marina owners, costwise, to deepen their harbors and inlets might be, "We can't help private enterprise." Of course, it is certainly helping the barge industry. Regardless, Congress has given the Corps an environmental mandate to help improve rivers ecologically, and that certainly intertwines with private use of the river. Helping qualified marinas to become harbors that help sustain fish populations and species, and to assist the ecological miracles produced by drawdowns to take place, is certainly within the Corps' mandate -- and a major environmental action for our nation.

* * *



Tom L. Edwards
2702 N. Peoria Av.
Peoria, IL 61603

Presentation Did Not Mention New Silt Formed Island

MANMADE ISLANDS IN PEORIA LAKE EVIDENTLY INCREASE SILTATION,
YET CORPS WOULD SPEND \$233,000 PER ACRE TO BUILD MORE ISLANDS

(Comments for inclusion in Corps' Peoria Island proposal record)

The cost of the Army Corps of Engineers proposed island project to build 75 acres of islands in the Lower Peoria Lake is \$17.5 million, your representative stated at your June 19 presentation in Peoria (Journal Star, June 20). THAT IS \$233,000 PER ACRE!

Dredging to build the islands would temporarily deepen the water around the islands. But that would be shortlived. In the slow moving Illinois River the rate of re-siltation and filling of any dredged area is rapid. Islands can even increase that rate (see below). (Also, islands in the Illinois have actually been increasing in size due to siltation.)

Why not be forthright with the public that the project would do nothing to stem siltation or to improve water quality? *We need to do only what will.*

Silt Has Formed 3rd Island Next to the 2 You Built: Not Included in Presentation

At your public presentation June 19 in Peoria there was an error that I trust you will want to correct for the people here. It certainly has a strong bearing on the feasibility of your proposed islands in Lower Peoria Lake of the Illinois River.

That error was in the slide you showed, and description, of the 2 long, parallel islands the Corps built 8 years ago (summer, 1994) at the top of Upper Peoria Lake just below the Illinois River's Chillicothe Island and its "East River" sidechannel. The slide was evidently of an artist's rendering of the 2 peninsula islands from an imagined aerial perspective prior to construction rather than a current aerial photograph.

Actually there are now 3 islands there, which an aerial photo would graphically reveal. The third island has formed from silt deposition alongside the two islands you built. It is just short of a half mile long and growing. It evidently is also wider than the other two, and is already completely forested, as are the other two. It is located along and between the river barge channel and the west side of the other two islands. Moreover, at least 200 acres of the lake between the silt made island and the 2 you built is now dry land when the river is at its "normal" 440-foot elevation that the Corps is legally mandated to maintain.

This was certainly not anticipated in the Corps' projections for the 2 islands it built.

This third island's close proximity to the river barge channel, that is, subject to the full force of its current and barge wakes, gives us a lucid example of what siltation can do in relation to island structures in the Illinois River. Also, the silt formed island is just below the narrows of the river at Chillicothe where there is usually a faster current to carry silt away.

Your hoped for faster current resulting from building your proposed islands *well back from the river channel* in the upper, far corner of Lower Peoria Lake is what you also project will help prevent re-silting around them. However, that current would certainly be negligible compared to that of the narrows and sidechannel at Chillicothe. Besides, the flat

gradient of the lower Illinois River makes it slow moving anywhere.

This third island is on what may be largely a sandbar, but one that had so long been under water since dam construction and Lake Michigan diversion that it was virtually forgotten.

Also, the slide and rendering you used of the proposed 75 acres of islands convey an impression they will take up a large area of the 3,000-acre lower lake. Actually, they would take 2.5% of the lake (but would eliminate 1.2 billion gallons of flood water storage space).

There are other major questions to be explored in the light of history regarding the 2 manmade islands at the top of Upper Peoria Lake. Some are:

- The outlet of the East River sidechannel (200 feet wide) itself had silted shut and was dredged open again in 1994 along with the island building project. But now the East River outlet has again become very shallow (3 feet) despite being lineally directly in the path of the main river. Will it again close?
- The "East River" flows into the lake between the silt made and manmade islands. But now that lake area has become mostly land (200 acres) at normal river level due to siltation.
- I was told that the Corps originally dredged 14 feet deep between the two islands it built for the soil used to build them. Whatever, at normal pool level the water depth between those islands is now largely 2 to 4 feet with a probability of silt closing off the downstream end of the channel between the two.
- Reportedly siltation has increased on the lee (east) side of the island peninsulas.
- The Corps projection was that its peninsula ("barrier") islands would be a windbreak behind which aquatic vegetation would again grow in that portion of Peoria Lake in the otherwise long vegetationless Illinois River. None has. Not even the rooted aquatic vegetation the Corps planted there survived.
- The Corps often speaks of greater numbers of aquatic bird life in that area as a measure of the islands' success. They do rest and roost on the open sandbars and shallows -- particularly now on the silt built third island -- (all of which are away from the Woodford Conservation Area's hunting blinds). But notice that they do not feed there. At dawn the ducks and geese fly out to feed in 1) the grain fields (used for old fashioned thrashing demonstrations) of Three Sisters Park on the immediate west side of the river (where I saw 400 geese 2 nights ago), to 2) a large, privately owned -- and well vegetated -- marsh on the immediate opposite side of the river, and to 3) where a nearby river resident has been putting out bushels of corn for them daily. It is one of very few places along the river where there is such a larder of readily accessible food and relative safety. These are major factors that need to be taken into account for the waterfowl presence in that, or any, area.

Sincerely, 

2702 N. Peoria Av.
Peoria, IL 61603

Tom L. Edwards
309-681-9069

Col. William Bayles, District Engineer
Gary Loss, projects manager
Army Corps of Engineers
Clock Tower Building, Box 2004
Rock Island, IL 61204

2702 N. Peoria Av.
Peoria, IL 61603

Aug. 26, 2002

RE: Comments on proposed Peoria Lake island project.

Dear People,

I apologize for not getting all my comments on this project in sooner. An exigency came up and it was necessary for me to devote my time to another matter for the last two weeks.

Forwarded in company with this letter is an alternative proposal ("Enroute Removal of Silt from Streams") for your review and inclusion in the comments on the island project.

In the next two days I will be putting two more papers in the mail regarding this project and remedial measures for the river.

Sincerely,

Tom L. Edwards
309-681-9069

A handwritten signature in cursive script that reads "Tom Edwards".

Col. Wm. Bayle
Corp of Engineers
Rock Island

RE: Comments on Peoria Lake Island project.

~~Peoria Lake~~ River Rescue

Aug. 24, 2002

ENROUTE REMOVAL OF SILT FROM STREAMS

1 of 3

Forward

Building islands has been proposed to help cope with the extreme siltation of Lower Peoria Lake. But islands, as demonstrated by the over 100 already in the Illinois River, do nothing to stem siltation or improve water quality. Also, they only temporarily deepen the river, and take up flood storage space and increase flood heights. Building them simply moves silt and soil from one spot in the river to another.

In contrast, in-stream water and/or silt retention basins or lakes trap the silt, improve water quality, lessen flood heights, alleviate streambank erosion, and maintain and increase viable water area. And they involve local community participation. Below is a proposal for this approach.

(This paper is an extension of the "Stream Delta Lakes" chapter of River Rescue, published 1988.)

Past Projects That 'Saved Peoria Lake'

In the 1970s and 80s there were dire predictions that siltation would eventually fill and erase Peoria Lake, the scientific outlook was gloom and doom, and for citizens, particularly those who remembered bygone eras, it was a depressing view.

But according to a state study, though the top of Upper Peoria Lake continues to fill, huge parts of both Upper and Lower Peoria Lake actually got about a foot deeper from 1996 to 1999, particularly the lower lake. Its backwaters increased in volume by 8.5%, and its channel by 11.5%. Why is uncertain. Some didn't believe it, and, indeed, the rhetoric about its future remains about the same. Nevertheless, there is less gloom.

Yet the 3,200-acre Lower Peoria Lake very likely would now no longer be a lake, just a barge channel in the Illinois River, *except* for three virtually forgotten but vital actions taken 30 and 50 years ago. It wasn't realized then, and still isn't, how vital they were. In short, they were:

-- In 1972 Caterpillar Tractor Company (its name then) built a silt retention basin, actually a small lake, at the outlet of Ten Mile Creek from its proving grounds in East Peoria [triggered by a local feature article by this writer on river siltation]. In the thirty years since, Caterpillar has captured and removed from that retention basin *over one million cubic yards of silt* that otherwise would have been carried on down the creek into Lower Peoria Lake. Imagine how the lake might be today with that much additional silt in it. Before 1972 there was a large and obviously constantly growing delta of silt being deposited at the mouth of Ten Mile where it enters the lake near the narrows above McCluggage Bridge. So little of the silt now escapes Caterpillar's "silt trap" that it is

difficult to tell where the mouth of the creek is.

-- In 1951 the U.S. Army Corps of Engineers built a large flood control dam on Farm Creek, which empties into the downstream end of Lower Peoria Lake. It was in response to a flood of the creek that covered Caterpillar's plant area in East Peoria. The Corps followed with another flood control dam on Fondulac Creek, a tributary of Farm Creek. Farm Creek still pours silt into the lake, and continues to visibly add to the huge, tree covered delta it has built out into Peoria Lake. But that delta would be much bigger, and Peoria Lake smaller and shallower if not for these two dams. During flood episodes (when the silt load is greatest), the creeks' waters back up behind these dams and drop much of their silt load.

-- In 1970, as a result of a major public "Save Peoria Lake" campaign by the local Sierra Club chapter plus intense coverage by the Peoria Journal Star, former Gov. Richard Ogilvie denied an application from the East Peoria City Council and a private contractor for a permit to fill 900 to 1,200 acres of the east side of Lower Peoria Lake for industrial development. At that time there was scant hope for the lake. "It is going to fill up with silt anyway," East Peoria officials argued. But citizens had different visions and won *the first denial of a fill permit application in the history of the state*. No one regrets that decision today. And it opened the door for a new, brighter era.

More Steps to Halt Local Inputs of Silt Will Permanently Revitalize the River

The above efforts preserved the basic integrity of the lake. State erosion control efforts among farmers have been vital, too. And so have the over 3,000 storm water retention basins, ponds, and lakes built in the last 30 years in the Chicago suburbs, all of which drain to the Illinois River.

But it is estimated by state scientists that nearly 45% of the silt entering Peoria Lake comes from its tributary streams. Ten Mile and Farm Creeks are the only two that discharge into Lower Peoria Lake. By adding more water/silt retention basins, ponds, lakes, and/or wetlands (marshes) along their way, their contribution of silt can be virtually ended! *And* with less silt to deal with, the lake's current "self" deepening trend may well continue, *even* accelerate. Its water will be clearer, too.

Also, the water reaching the river will be purified in other respects besides silt removal as a result of passing through such retention facilities. Moreover, they can and do double as park sites, and can provide fishing -- and, naturally, aesthetics. People like to live and play near water. Such facilities, when also employed to retain storm water as well as silt, will lessen erosion of stream banks and, therefore, improve habitat along stream courses.

To facilitate periodic silt removal, lakes could be built with a land split down the middle (two halves side by side) so that one side could be drained at a time for silt removal and, when refilled, would be quickly repopulated with aquatic plant and fish life from the other half. Or the lakes or ponds could be in vertical series. Marshes, too, could be so

employed, used either alone or at the entry point of a stream into a pond. Alternate parts of marshes can also be periodically excavated of silt buildup. (Note: When lakes are drained, most fish will move downstream with the outgoing water, given an outlet, and will likely reach the river, or the next pond.)

Such lakes, ponds, etc., need to become largely the responsibility of the communities in which they are located. They will, too, mirror the erosion and pollution that is coming from their own watershed -- which is the best way to bring these issues home to roost.

Silt has many uses, and as it is made available, it will be employed, municipally or contractually. (Various uses are delineated in *River Rescue* .)

Peoria and East Peoria, the region's population centers, want priority attention to Lower Peoria Lake. However, once Ten Mile and Farm Creek are done, it would be logical and prudent to so outfit other streams on up (and down) the river. It would make a vast difference, both to the river and local communities.

Locations for silt and/or water retention basins:

Ten Mile Creek:

- Improve the efficiency of the Caterpillar silt retention lake.
- Add a silt retention basin or lake on Ten Mile Creek upstream of the proving grounds. Development of that area will swell creek flows.

Farm Creek:

- Convert the Corps' Farm Creek and Fondulac Dams (which are huge) to fulltime rather than only occasional use (when there are floods) for silt and water retention by creating wide, perhaps shallow lakes behind them.
- In or near the Washington community, create a combined storm water and silt retention basin rather than a wetland and prairie, as the Corps now plans. As the Corps itself points out, the wet prairie will have negligible effect on Washington's storm water problems and the creek's overflows and silt loads.
- In the creek's expansive delta in Peoria Lake, create a silt retention basin or lake to strip the creek of its silt before it enters the lake. That may be possible by contracting for a gravel mining operation in that area. Contractors have often mined gravel from the creek's bed just before it enters the delta. Such a lake within the delta would also likely become a spawning site for fish from the river, and a release site for hatchery fish.

Of course, farm ponds, urban water retention ponds, and just wide places anywhere on streams slow velocity, reduce erosion and siltation, and flooding.

* * *



Tom L. Edwards, 2702 N. Peoria Av.
Peoria, IL 61603
309-681-9069

DE
DP
~~Free~~

River Rescue
2702 N. Peoria Av.
Peoria, IL 61603
July 15, 2002

Col. William Bayles, district engineer
Gary Loss, projects manager
Brad Thompson, island project manager
U.S. Army Corps of Engineers, Rock Island District

Dear People, *Re: Extension of island comment time.*

We have been working assiduously (as I am sure you realize from our letters) to meet your July 15 date for comments on your proposed "island project," but need more time.

We have submitted 3 letters (June 14, July 7, and July 11) that we trust are already part of the comment record. We hope to have an initial coalated draft of many or most of our comments in the mail yet today -- given the typist's availability.

However, we have been working on much more in our off hours, and have been up and down the river, and out on it compiling the information. It will include more comments on your island plan, plus alternative suggestions, including expansion of the alternative we have already submitted.

You spent two years and \$1.5 million to compile the volume you submitted to us. Really, the public is just beginning to digest it. River Rescue itself requests another month to compile our complete response, and also to give time for others to do so, too.

We trust that you want what is best for the river, and vice versa. We are certain that we can continue to help, that our comments will do so, and that still better ways can be found to spend available funds.

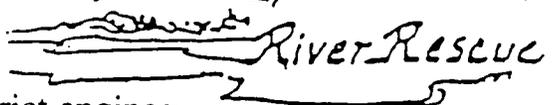


Sincerely,

Tom L. Edwards
for River Rescue

cc: Rep. Ray LaHood

3 new paragraphs (highlighted); plus work changes.



Col. William Bayles, district engineer
Gary Loss, projects manager
Brad Thompson, island project manager
Army Corps of Engineers, Rock Island District

2702 N. Peoria Ave.
Peoria, IL 61603
July 15, 2002

COMMENTS ON CORPS' ISLAND PROPOSAL FOR LOWER PEORIA LAKE
(Preliminary comments. More to follow.)

***** This \$17-\$18 million project would set a precedent for continued filling of flood water storage space by the government agency most responsible for preserving and expanding it.**

The 3 proposed islands in the northeast corner of Lower Peoria Lake will remove 1.2 billion gallons of flood storage space (as well as 75 acres of lake). Your environmental assessment calls this "insignificant." However, under federal impetus Peoria County has taken hard legal steps to preserve remaining flood storage space, even buying up and removing houses from flood prone locations. All of Peoria's original river floodplain and some of the lake was filled in over the last century, and 85% of East Peoria's original floodplain land (the entire Caterpillar plant complex, Wal-Mart, and more) and also some of its lake area. Every bit more that is lost is certainly significant. Peoria's Sears building and River Station Restaurant already have to be sandbagged during high floods, and lesser floods close the string of riverfront parking lots and frontage road. But much more significant will be the precedent set by a federal agency for filling flood storage space, and in this case to take away one vital "bit", this time a whale sized one.

Many -- including professionals in the Corps and water related state agencies, some involved in this island project -- innocently state (I heard two since your June 19 presentation here) that dredging up river soil and piling it in the river above its normal pool level does not eliminate flood storage space because the lake is being deepened. (In justice, there is kind of an optical illusion there. And long ago I was one of those innocents.) But whatever fills the air space above the river and lake and adjacent floodplain land, fills it. And whatever fills the lake, soil or water, fills it. It is not the depth of backwaters that governs flood storage capacity or the rate of flood outflow.

Note: I personally called upon the Corps to intercede to prevent the Par-A-Dice Casino during its construction from filling both out into the lake and into an adjacent wetland. And you did! Also, the reason the Eastport Marina has a floating breakwater for its harbor rather than a permanent earth and riprap dike as was originally planned is, again, because we asked the Corps to intercede. And you did! And we can give more examples of Corps action in the public trust to prevent this kind of erosion of the lake area and its integrity.

Also, in 1972 the Sierra Club and the Journal Star conducted a massive, successful (with Gov. Ogilvie's intercession) "Save Peoria Lake" campaign to block the East Peoria City Council's request to dike off and fill 900 to 1,200 acres of the lake for development. It was the first denial of a river fill permit application in the history of the state. And siltation hasn't turned the lake into land "anyway," as was then argued it would do.

Other points we will be promptly submitting with details are:

- *** Your siltation rate is greatly underestimated. (Plenty of vivid examples of that.)
- *** The project would essentially eliminate a pre-settlement shoreline marsh-wetland extensively used by waterfowl and other wildlife, and one of only two left on the lake. (The other was the one cited above in which the Corps interceded to halt filling.) We need to preserve this marsh and provide deep water winter fish habitat elsewhere. In fact, the lake (and river) has many other places where that can be done more effectively.
- *** The design of the islands is intended to flush silt on down the river. This simply passes on the problem to someplace else downstream -- maybe no further than elsewhere in Lower Peoria Lake.
- *** A reason for the project is "to add terrestrial habitat" to the lake. Terrestrial habitat is constantly being added via ever enlarging creek delta peninsulas, hugely so in the lower end of Peoria Lake via Farm Creek. A paradox is that the possibility of more portions of the lake becoming land is the concern, yet in this project it is being used as the remedy.
- *** A "test" island is to be built in the lake. That is redundant. There is already a maze of islands immediately above and below Peoria Lake. Why not use one or more of them? And why was this not done before \$1.5 million was spent on the island project planning?
- *** R riprapping these proposed islands for "fish jetties" and bank protection: All of the 4-mile Peoria shoreline between the bridges is riprapped, and half of the East Peoria shoreline. Has that helped the fish? Silt covers riprap, too. Waterfowl obviously prefer non-riprapped areas. The river's existing 113 islands are doing very well without riprap.
- *** The public has been ill informed about the island proposal. Such as: Renderings to illustrate the project give a false impression that a huge area of the lower lake will be deepened and available for boating. And that -- unlike everywhere else on the river -- siltation will be a minor problem. Actually, 6% of the lower lake will be deepened, and less than half of that is likely to be (temporarily because of siltation) boatable.
- *** The Corps has given itself a "no adverse environmental impact" pass to avoid doing an environmental impact statement. It is glaringly clear that there is adverse environmental impact. Besides the above points, in this case a major environmental impact is that this project keeps money and energy from being spent on solutions to the siltation plague. Instead, it would build what is recognized by many as only an "island" of temporary retreat from facing this plague. It is a temporary bandaid where a tourniquet is the necessity. Perhaps it would be best to begin with formal impact studies.
- *** At the Eastport Marina deep pilings were first driven all along the lake edge because engineers determined the building development's weight would push down and out, and therefore push up the adjoining lake bottom. Would your islands, also?
- *** The project has not been mentioned to the Upper Mississippi River Basin Assn. Is the UMRBA a rump parliament?

- - - Tom Edwards, River Rescue

MARINAS, FISH HABITAT, AND RIVER DRAWDOWNS -- EACH CAN HELP THE OTHER* By Tom L. Edwards 1 of 4

Background

There is, finally, a fast growing realization that periodic warm season drawdowns of dam controlled rivers and the resultant explosion of vegetation on the bared bottoms of the rivers is a boon to all riverine life, from waterfowl and fish to invertebrates and microorganisms. And people will surely eventually translate this into a realization that this is also a part of their own wellbeing.

To summarize this boon: The bared areas of river edges and the muddy bottoms of their backwaters dry and quickly transform into green, verdant stands of what is called moist soil vegetation, species that have spent millions of years evolving to take advantage of the bare openings of land due to seasonal shrinkage of river levels. This vegetation provides a copious larder of food, cover, and breeding areas for fish and waterfowl when the rivers' waters soon return, and also helps support all wildlife within reach of the river. Even the bare sand and gravel bars temporarily exposed are extensively utilized by bird life. Exposure to the sun and air, besides coalescing soupy silt into permanently firm soil, oxidizes and purifies the bottom soil, leaving it a better substrate for aquatic plants and animals, and minimizes potential of septic disease producing conditions. And the ongoing aerobic activity helps to clean the water itself on its return. Moreover, the plant stalks stand for up to two years and some longer, helping to still and clear the water of suspended silt that blocks life giving light. Where the backwaters only become temporarily shallower, changes in the species distribution of emergent and submergent aquatic plants reinforces diversity. *However*, it is the virtual disappearance of all aquatic plants from the water of long stretches of riverways, in fact, all of the Illinois River -- due, essentially, to chemical contaminants -- that makes drawdowns and the restoration of the moist soil component of riverine vegetation crucial for maintaining all river related life, indeed, even preserving species from extinction. Improving water quality to permit aquatic plants to survive is most crucial for riverine life. Drawdowns aid that, and are a way we can bring back a vital part of river ecology now. That will help do the rest.

Lowering water levels just one or two feet for five to eight weeks beginning in late spring or summer would bare extensive areas of river backwaters and give time for this miracle of plant growth, oxidation, and transformation of silt to soil to take place. And because of the firm bottom that results, conventional earth moving equipment can easily excavate areas of it if desired, by far the most expedient, inexpensive way of doing it.

Historically, our great rivers, even the Mississippi, became so shallow in summer dry spells that pioneers were able to drive across them by horse and buggy at numerous spot called "fords." Yet the rivers swarmed with life then. It is part of their natural ecology.

*An extension of River Rescue, a comprehensive plan for river drawdowns, published 1988.

However, we are still far from achieving major implementation of drawdowns.

Objections and Solutions

Besides concerns regarding river barge traffic (which are fading), a major objection to instituting drawdowns is that it would curtail recreational boating because for a number of marinas (not all) many boats would be unable to get in and out while water levels were lowered. And the best time for drawdowns also overlaps the prime boating season on rivers as the Mississippi, Illinois, Missouri, and Ohio.

Aside from that issue -- but another that could be used to solve it -- is that fish biologists are urging attention to providing deeper "off-channel" places for fish, particularly for overwinter "lodging" when fish are less mobile, especially for rarer species. There they would be out of the way from barge traffic and possible surges in water volume and velocity that push them downstream.

All of this, the benefits of river drawdowns, maintenance and usage of marinas and harbors, and providing fish habitat, can be meshed together to the advantage and benefit of all, indeed, beautifully so, as follows:

Many marinas are maintained at only 4 or 5-foot depths, and some only 3-feet deep. Most (but not all) have to be periodically dredged of silt accumulation to maintain those depths, with the frequency depending on their location. Most operators wait until dredging becomes imperative to boat passage to do so. As the owner of a small Illinois River marina told me, "When the boats start churning up mud, then I dredge the harbor again." So they look at river drawdowns as at least a one time additional dredging expense to keep their harbors and inlets open to their customers during drawdown periods.

But with fish biologists wanting deeper off-channel spots for fish refuges, and the U.S. Army Corps of Engineers probably willing to provide some to comply, given special funding, with its current environmental mandate to help rivers ecologically -- *why not*, rather than dredging separate deep water holes for fish, instead *share some of the cost* with harbor owners of dredging their harbors deeper to meet, or more than meet, perhaps annual 5 to 8-week drawdowns? That would dissolve objections to drawdowns.

This approach would not only guarantee marinas boating access to river channel areas during drawdowns, but would also provide a large number of of safe and readily reachable refuges for fish. Moreover, it would probably be the last high hurdle in clearing the way for drawdowns and the staggering ecological benefits from them. Together it is a double ecological advancement of epic proportions.

There are other obvious decided advantages: One is that any dredging of separate "deep" (actually only to depths of 6 or 7 feet, half the depth of river barge channels) water retreats for fish would undoubtedly be done far distant from each other. Relatively few fish would likely find and use them. *But* marinas and other harbors dot the riverways. One is likely

to be within a relatively easy swim for fish. There are 20 in the 18-mile length of the Illinois River's Peoria Lake (where this author is living).

Indeed, marinas and other harbors are already being used by fish (occasionally even beaver), particularly the deeper ones. That is evident by the people that can be seen fishing in them when allowed. Making them generally deeper would make them more conducive to fish use.

Another advantage is that isolated deep water holes for fish would rapidly fill with silt, because it is over such deep spots that silt literally tumbles out of the water and converts any deep places to shallow depressions. But the depths of marinas and other harbors are constantly maintained. And harbors that are now maintained 3 to 5 feet deep, would instead be maintained at 5 to 7-foot depths to meet lower water levels of annual drawdowns and keep their customers. All the better for fish.

Another plus is that recreational marinas are only active 6 or 7 months a year in the northern half of the country. Therefore, for half the year, and the entire winter season, they are empty, still, and quiet when fish are somnolent. A haven when they most need it.

Many marinas and harbors, dug into the sides of rivers as they are, have springs or just cleaner ground water feeding into them, still another benefit to fish. Also, boat docks provide shade, and boats must travel at crawl speeds in harbors, safe for man and fish.

The greater bonanza for fish, though, is that the drawdowns and jungles of vegetation that result would hugely benefit rivers ecologically for hundreds of miles, and affect the entire length of rivers, not just a postage stamp area. They provide a summer "crop" of vegetation and bottom organisms, a smorgasbord for waterfowl and fish throughout the ensuing year. The vegetation is also a "forest" of refuge for smaller fish, spring spawning areas for larger ones, brood areas and feeding grounds for waterfowl, and feeding grounds for fish in their travels between any shoreline harbors and the much deeper barge channels. The vegetation succors life both during its green, growing period and after it has produced seeds, tubers and roots utilized by aquatic life, as are the decomposing leaves and stalks.

Since it is the finer "topsoil" silt that is generally carried and deposited in riverside harbors, their dredgings are of economic value for landscaping purposes, from homes and shopping centers to roadside cuts -- and is even now being so used.

At present harbors are maintained in relation to normal pool levels of rivers. However, with annual drawdowns of, probably, 18 inches, that lower level would become the new level that river users would have to adjust to. But this would certainly be less of an adjustment than to the hugely higher river levels established by dams built on major rivers in the 1930s.

It would be a significant change for the Corps of Engineers, too. They legally must maintain a 9-foot deep barge channel, and titularly they do. Actually, they maintain a much deeper river channel -- which is why river drawdowns are so feasible. For instance, only

flood flushes of silt and sediment, which are regularly dredged, keep the Illinois River from a constant lineal depth of over 13 feet deep for its lower 250 miles and probably more. In the river's 18-mile long Peoria Lake, the barge channel averages 15 feet deep and 500 feet wide, *and* is getting deeper due to scouring of barge propellers.

A vital change that probably would be brought about by annual 18-inch drawdowns of dam controlled rivers is that, in effect, there would be a new parameter for the so-called "9-foot channel." It would likely become 1.5 feet deeper. That is, the pool levels from which the "9-foot" channel would be measured would be from a 1.5-foot lower elevation than now, in other words, measured from the "drawdown level."

No, that wouldn't be difficult for the Corps to meet in most river stretches, particularly in soft bottom areas.

And it would likely make a welcome, perhaps big difference in boating in many locales. With 18-inch drawdowns barge propellers would be churning closer to river bottoms, scouring them even deeper. The adjacent river bottoms would then slide into a new lower equilibrium with the deeper channels, thus broadening the water surface areas over which pleasure boaters could range for all but the month or two of drawdowns in the years they are done.

Of course, as drawdowns bring a bonanza for waterfowl, so, too, for duck hunters. Also, even wading birds, as herons and egrets, prospered during the record Illinois drought of 1988 when a number of Illinois River backwaters dried up for the first time since its dams were built in 1939. How fish and mussels ever survived, they did, *back in force* the very next year. Also, fish poured that year (1989) into the long barren, newly vegetated lakes to spawn.

Drawdowns clear the way, as well, for providing a great many more sidechannel deep water "ports" for fish or waterfowl. A football field sized area could be excavated 6-feet deep (about 12,000 cubic yards) from a dry lake, and the silt and soil hauled a quarter to a half mile by conventional earth moving equipment for about \$52,000, according to what is currently being paid by the Illinois Highway Department for earth moving. So for \$10 million over 200 such sidechannel deep water habitats could be dug, and 2.2 million cubic yards of silt removed. Also, such deepened areas would serve to "trap" and remove future suspended silt from the water, and in locations where it can easily be re-excavated.

An initial reaction of the Corps to helping marina owners, costwise, to deepen their harbors and inlets might be, "We can't help private enterprise." Of course, it is certainly helping the barge industry. Regardless, Congress has given the Corps an environmental mandate to help improve rivers ecologically, and that certainly intertwines with private use of the river. Helping qualified marinas to become harbors that help sustain fish populations and species, and to assist the ecological miracles produced by drawdowns to take place, is certainly within the Corps' mandate -- and a major environmental action for our nation.

To Whom It May Concern

Col. Wm Bayler

2702 N. Peoria Ave.

Peoria, IL 61603

681-9069

July 11, '02

Re: June 24 Forum letter about proposed island project:

That the dredging of the proposed Lower Peoria Lake island project will "open up large...areas" of the lake "for recreational boating" is an illusion that needs correcting. As the Army Corps' map clearly shows, only 6 per cent (200 acres in the northeast corner of the lake) is to be dredged deeper, and less than 50% of that is liable to be available or desirable for boating. Much of the dredged areas, the bulk of which will be close to shore, will likely be unreachable by boat because of surrounding stretches of shallow water. And two-thirds of the dredged areas will be in horseshoe shaped enclosures; boats that go in will have to turn around and go back out.

Moreover, the effective boatable depth of the dredged areas, which will be 6 feet at the outset (4 feet deeper than now), will quickly diminish because siltation rates greatly increase where the water is deeper, especially in the river's backwaters. Once deep Rice Lake, for instance, is a mile inland from the river, has no tributary streams, and is only occasionally reached by river floods. Nevertheless, the river has filled it with silt.

Also, though the Corps hasn't mentioned it, the islands, besides replacing 75 more acres of water with land, will reduce flood storage capacity by 1.2 billion gallons, not at all "insignificant" for a lake that already has had huge amounts of its original flood capacity filled. The precedent the Corps would set for continued filling would be much more significant at a time when the nation is vitally trying to save flood storage space.

Yes, Illinois River drawdowns, now being pushed for the Mississippi and Missouri Rivers, would affect local marinas. But private-public cost sharing to deepen them would be a major boon to fish, which already seek out the deeper marina harbors. And it is a complete myth that silt in backwater lake bottoms does not dry and coalesce into a permanently firm lake bottom capable of supporting earthmoving equipment when exposed to 6 or 7 weeks of summer sun. I have a slide show illustrating that.

As to stone riprap around the islands for fish habitat, all of the ^{4-mile} Peoria shore between the bridges is already riprapped, and half or more of the East Peoria shore. Is that helping fish? Silt covers riprap, too. And a pre-settlement marshy cove in the far northeast corner of the lake, one of two left on the lower lake and a mecca for all waterfowl, would be one of the areas to be dredged for deeper water for fish. "Over-winter habitat for fish" is given as the primary "objective" for this \$18 million "Riverfront Ecosystem Restoration Project."

It is healthy to bring out matters like this, and seek the truth. In this matter we need to do better, for the fish and everything else.

Tom L. Edwards

Tom Edwards

Col. William Bayles
Rock Island District
Corps of Engineers



2702 N. Peoria Av.
Peoria, IL 61603
June 27, 2002

MARINAS: WINTER REFUGES FOR FISH

(Or, would river drawdown affect many marinas?)

Yes, lowering the Illinois River level 1 to 2 feet for 5 to 8 weeks in summer could at first affect the operation of various marinas. But that is virtually the only problem to having such drawdowns -- and it has a solution that makes the problem an opportunity.

The primary justification, actually, for the proposed \$18-\$19 million island project in the northeast corner of Lower Peoria Lake is to provide sidechannel water up to 6 feet deep for winter habitat for fish. However, the many marinas that dot the 151 miles of the riverway from Starved Rock to Beardstown are used only during the 6 or 7 warm months, are empty the rest of the year, and certainly usable by fish. Moreover, because of their close proximity to the fish, they are far more likely to be reached and used in winter by fish as opposed to finding a single distant spot, or to staying, biologists think, in the Illinois' deep navigation channel itself, which in 18-mile long Peoria Lake averages 15 feet deep and is 400 to 600 feet wide.

If deepening the marina harbors will make them better lodges for wintering fish, then that is where this dredging needs to be done. Most marina operators have to deepen their harbors and inlets from time to time as part of maintenance. They would love to have the help of the Army Corps of Engineers and/or the state to dredge them even deeper. And that would clear the way for drawdowns, which wildlife biologists would love to have -- and would return the river to a semblance of its once bountiful natural cycle.

Without exaggeration, an 18-inch river drawdown would provide more than 1,000 times the benefit to riverine life alone than projected for the costly island project, and takes only pushing a button at the dams. It would bare 6,000 acres in Peoria Lake, and hugely more up and down river. And within two weeks the bared river bottom mud devoid of plant life would begin converting into a verdant sea of "moist soil" vegetation that, when the water is returned, will be a cornucopia of food for fish and waterfowl, and wildlife in general. This has happened elsewhere (Pekin Lake for one), and it does coalesce the soupy silt into a permanently firm bottom that will support earthmoving equipment that can be employed easily and economically to deepen areas of the lakebeds while dry. And the coalescence itself deepens the river to a significant degree. The deep navigation channel would remain fully usable by both boaters and barges during drawdowns.

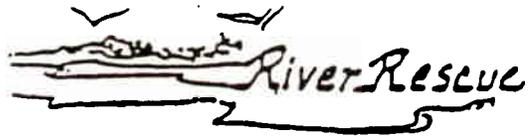
The island project as proposed would be in what is already one of the better wildlife areas of Peoria Lake, containing a marsh and small island used by wading birds and waterfowl, and surrounded by a sizable woodland. To be remembered is that, except during an occasional high flood, much of what we now view as Peoria Lake was crop and pasture land or woods-- including the proposed island site. Diversion of the Chicago River to the Illinois in 1900 and its later damming permanently raised the Illinois six feet to its present normal level. But extensive areas of the expanded lake area have always been very shallow, even wadeable. Below their veneer of silt is ancient, firm soil.

-- Tom L. Edwards

Tom Edwards

Bay -

I will follow with the source of all these statistics. They are bonafide



2702 N. Peoria Ave.
Peoria, IL 61603
309-681-9069

June 18, 2001

Col. William Bayles
U.S. Army Corps of Engineers

Dear Col. Bayles,

We can create a beautiful example of river restoration for the world via the Illinois River as addressed in the two enclosed letters. I trust we will be able to discuss this with you soon. We want to help.

Sincerely,

Tom L. Edwards

A handwritten signature in cursive script that reads "Tom Edwards".

To: Col. Wm. Bayles,
 Copies to: USACE
 Gary Loss
 Ken Shoemaker



June 14, 2002

THE ILLINOIS RIVER DESERVES FAR BETTER

The U.S. Army Corps of Engineers is proposing to spend \$20 million to dredge the Illinois River bottom to build three elongated islands totaling 78 acres in the far northeast corner of the river's 3,000-acre Lower Peoria Lake, one above McCluggage Bridge and two side by side below. The stated purpose is to improve wildlife habitat of this lower part of the 14,000-acre, 18-mile long Peoria Lake. The corps will hold a public meeting on this at the Peoria Gateway Center on Wednesday, June 19.

However well designed, it is a project the corps realizes will be of only fleeting, minuscule aid to aquatic life, and of negligible "ancillary" value for boating. The islands will do nothing to solve the soil erosion-siltation that is filling the river's backwaters, or the chemical pollution that wiped out and prevents any aquatic vegetation from growing in its waters -- the problems that need an undivided effort. And as countless examples on the Illinois demonstrate, the dredged area will rapidly silt in again, probably within five years. Is it not an illusion to think we gain from simply moving silt from one place in the river to another, which this project does? The islands will also take away another 1.2 billion gallons from the lake's already greatly diminished flood storage capacity. Moreover, there is already a maze of 112 forested river islands, some hundreds of acres and growing in size from siltation, and as many peninsulas, beginning immediately both above and below Peoria Lake.

We deserve far better, and the corps certainly has the talent to do so. In fact, for half or less of the islands' cost we could be doing a project that would now and far into the future inject waves of new life into the entire 151 miles of the river from Starved Rock to below Beardstown, which would also help the river downstream. This would be to conduct regular drawdowns of one or two feet of river levels for a month or two in the summer, something that is already being done along stretches of the Mississippi River at St. Louis, MO, and LaCrosse, WI, where it is described as "exciting". People along the Missouri River are clamoring for the same. There it is being referred to as restoring the "natural pulse" of the river.

On the Illinois especially such a drawdown would bare the mud bottoms of up to 30,000 acres of backwaters to the healing sun and drying air. The result is a jungle of "moist soil" vegetation that springs up where there had been no vegetation before. It provides a longlasting, copious larder of food for all aquatic life when the water returns. And the knee-deep, soupy silt coalesces and hardens into a permanently firm bottom on which all earthmoving equipment can function to dig holes and channels -- and take the silt out of the lake. Moreover, the stalks of this annual vegetation, which stand for two years, break the force of the wind and hold the water still and clear. And the air's oxidation of the silt purifies it.

For \$10 million earthmovers could scoop out over 2.2 million cubic yards of such silt (2,200 football fields dug 6 feet deep) from the temporarily dried backwater areas, which would leave many deep water sites along the river for aquatic life -- or even sizable new lakes.

The corps' Peoria office had the silt tested that it has to dredge every 3 to 5 years from its river harbor. It was declared safe for topsoil use -- and contractors vied to obtain it. They took it all.

Because the 400-foot wide river barge channel averages 45-50% deeper than the corps is required by law to maintain, such a drawdown would have no overall impact on barge traffic and minor inconvenience to recreational boating, which would be more than made up by a deeper and improved river.

This project would begin an ongoing transformation of the river back to its glory days, and provide a beautiful example of restoration to the world.

--Tom L. Edwards 2702 N. Peoria Ave.
 309-691-9069 Peoria, IL 61603

Voice of the people

A new rescue plan for the Illinois

PEORIA—Regarding ideas for new types of dredges for removing more of the Illinois River's silt from selected areas of its backwater lakes (Sports, July 13): It's dubious whether this approach would be economical. It also has been amply demonstrated that just deepening the waterway does nothing to improve morbid ecological conditions, apparently caused by farm and urban chemical contamination rather than the silt.

There is a far more economical way not only to deal with the silt, but also to take a huge step toward restoring the Illinois' once lush biology.

That is to periodically lower the Illinois River 2 to 3 feet below its dam-held pool stage for a summer month or two, every three to five years. A 2-foot drop would bare most of the mud bottoms of the remaining 70,000 acres of backwater lakes to the healing air and sun.

The result would be a miraculous biological explosion. First, the soupy, knee-deep silt that is filling the backwaters would dry and coalesce into what remains a permanently firm lake bottom after the water is returned. The lake would be deeper because of the shrinkage of the silt.

Second, within a month these initial "mud flats" will have become a jungle of verdant moist-soil vegetation teeming with invertebrate life and micro-organisms, which provide a cornucopia of food for fish upon return of the water.

Songbirds also would flock to it. This is exactly what happened when a few backwaters dried up during the record drought of 1988, with the vegetation reaching 10-foot heights. When another backwater was drained several years later to facilitate levee building, tens of thousands of migrating ducks congregated there to feed on the

moist-soil vegetation that cropped up.

Third, the air's oxygen and the flurry of microbial activity would begin breaking down the accumulation of organic matter and chemical contaminants that would otherwise remain in an anaerobic limbo for centuries.

All this, in turn, would leave the river better able to cleanse itself of pollutants. None of the above is accomplished by wet dredging.

But what about removing silt? While the backwaters are dry, any and all forms of earthmoving equipment used on dry land can be put into action to scoop out silt.

For the \$1.5 million in government aid being sought just to build an experimental dredging machine for the Illinois River's Peoria Lake, a million tons, at least, of silt could be removed by the approach described above, resulting in all the other ancillary ecological benefits.

All of the above was proposed in a booklet, "River Rescue," that I wrote and published in 1988. It was initially ignored, even called "crazy" by some. One objection was that it would adversely impact commercial barge traffic.

But three years ago it was realized that though the river backwaters are getting shallower, nevertheless the 300- to 400-foot-wide river barge channels have been getting deeper due to the scouring of the great propellers of the barge towboats.

Thus, 2- to 3-foot drawdowns would not significantly affect the barge traffic on the Illinois, or for that matter, the entire Upper Mississippi River.

Tom L. Edwards

River Rescue, 2702 N. Peoria Ave.
Peoria, IL 61603
309-681-9069



REPLY TO
ATTENTION OF

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

December 3, 2002

Planning, Programs, and
Project Management Division

Mr. Tom Edwards
River Rescue
2702 North Peoria Avenue
Peoria, Illinois 61603

Dear Mr. Edwards:

Thank you for your interest and concern regarding the Illinois River and Peoria Lake. This letter is in response to your correspondence concerning the Peoria Riverfront Development (Ecosystem Restoration) Study. Your letters (June 18, 2001; June 18, 2002; July 11, 2002; July 15, 2002; August 24, 2002; and September 14, 2002) raise a variety of issues that the study team has been investigating and are of critical importance to the project. The issues you raised are addressed in Enclosure 1, with the findings developed through the study process.

The Study Team hopes the information summarized in Enclosure 1 and in the public review draft of the report answers your questions. If you have further questions or comments, please feel free to contact Mr. Brad Thompson of our Project Management Branch for further information. Mr. Thompson can be reached by telephone at 309/794-5256 or by e-mail at the following address: Bradlev.E.Thompson@usace.army.mil.

Sincerely,

ORIGINAL SIGNED BY

William J. Bayles
Colonel, U.S. Army
District Engineer

Enclosure

Peoria Riverfront Development (Ecosystem Restoration Study)

Issues Raised and Study Findings:

1. **Flood Storage Impacts.** Every proposed floodplain project is required to evaluate the potential impacts on flood heights. An analysis was conducted to measure impacts of islands on flood heights for the 50-percent, 20-percent, and 1-percent exceedance flood events (Appendix D-4 Peoria Lake Island Flood Height Impact Analysis). The results of this analysis indicated that no significant increase in flood heights would result from the island construction. This analysis has been submitted to the Illinois Department of Natural Resources, Office of Water Resources, for review and compliance with State of Illinois floodplain regulations.
2. **Underestimated Siltation Rates.** River Rescue is concerned that the sedimentation rates developed for the study are too low. Sedimentation is a major issue on the Illinois River and was of primary importance to the study. The rates of siltation expected for the 25-year project life were estimated based on historical average sedimentation rates in the proposed project area over the past 100 years and evaluations of the filling of some deeper areas. Different areas of the lake have experienced differing rates of sedimentation over time. On average the lake has experienced 1.5 inches of sedimentation per year. Experience with similar projects indicates that newly deepened areas initially will experience higher rates of sedimentation. However, as these newly deepened areas fill, a lower long-term rate emerges. An analysis of the filling of deeper areas revealed a maximum of 4.3 inches of sedimentation over a several year period (1965-1976). The Study team utilized 2.5 inches per year as the average applied to the whole project site throughout the 25-year project life. The project is designed to maintain benefits assuming this rate of sedimentation.

Further, the designs of the project features were developed to directly address sedimentation. The upper layers of silt present in Peoria Lake are generally unconsolidated and often resuspend through wind-wave action or boat prop wash. This material is potentially a major contributor to the large initial jump in sedimentation rates for newly deepened areas. As part of the proposed project, this material will be removed adjacent to deep-water areas and therefore will be unavailable for transport into the deeper areas. Also, the islands have been designed and configured to diminish sedimentation. This includes two strategies. In some areas, flows are limited through rock closing structures to reduce the delivery of sediment-laden waters and in other areas (between the two larger islands) flows are concentrated, increasing the likelihood of maintaining water depths. Neither of these measures will affect overall Illinois River sediment inflows into the project area. However, they are designed to maximize the sustainability of the project through its 25-year life.

3. **Shoreline Dredging of Marsh Habitat.** The proposed project will not dredge into shoreline areas. The areas to be dredged that are parallel to the shoreline are currently shallow water areas. No marsh areas will be affected by the dredging in this area. In a few areas, approximately 4 feet of unconsolidated silt will be removed to provide better aquatic habitat and improve water quality.

4. **Silt Transfer Downstream.** The proposed project is not anticipated to affect the sediment delivery rates to areas downstream of the project area.
5. **Creation of Terrestrial Habitat.** The primary goal of the project is to create aquatic habitats. However, additional areas of terrestrial habitat will be created through construction of the islands. The terrestrial habitat on the islands is an ancillary benefit to the project, will increase habitat diversity in the project area, and will not negatively affect the environment.
6. **Island Riprap.** River Rescue expressed a concern that the quantity of riprap needed was excessive in light of little or no shoreline erosion along the existing bankline of Lower Peoria Lake. The proposed islands are designed and located to reduce the effects of wind-generated waves and resuspension of sediments on the shallow and deep-water areas created as part of this project. The waves will strike the islands and erode the banklines. The island slopes will be constructed at a 6:1 (horizontal-vertical) angle to minimize the potential for erosion. Initially, riprap will be placed at areas most susceptible to erosion. The islands will be monitored, and additional quantities of riprap up to the total amount indicated in the report will be placed on problem areas if they develop.
7. **Drawdowns.** This issue has been identified as having great potential ecological benefits and has been included in the related Illinois Ecosystem Restoration Study, initiated in October 2000. We are currently conducting an analysis on the feasibility of pool drawdowns as part of the Illinois River Ecosystem Restoration Feasibility Study. This work is scheduled to be completed in calendar year 2003. The results will become available to the public upon completion. The conclusions reached by this effort will be incorporated into the Illinois River Basin Restoration Program as appropriate.
8. **Recreational Benefits.** River Rescue expressed a concern that the recreational benefits of this project are overstated, since the project area is small relative to the whole area of Lower Peoria Lake. The Federal interest and purpose of the project is to create sustainable aquatic habitat. The potential benefits of the project for recreation are purely ancillary in nature and were not a factor in determining the project justification.
9. **Cost.** The current uninflated working cost estimate for design and construction of the project is \$15,181,192 (April 2002 price levels). This number is significantly lower than the one referenced in the River Rescue letters. This results from two factors. The Farm Creek wetland restoration project has been eliminated due to Hazardous, Toxic and Radioactive Waste concerns. Further, the Corps of Engineers utilizes a Value Engineering process to assist in reducing costs and generating greater efficiencies in project delivery. This process resulted in several changes in technique for constructing the islands which resulted in reduced costs. The proposed project cost is consistent with similar mainstem Illinois River projects implemented through the Environmental Management Program (EMP) for habitat restoration.

10. Delivery of Sediment from Upland Areas. This feasibility study examined several opportunities for addressing sediment delivery from upland areas. Several tributaries to Lower and Upper Peoria Lake, including Ten Mile and Farm Creeks, were examined for projects that would address sediment delivery and habitat needs. However, the ability of the sponsor to acquire the necessary lands in the watersheds was limited. Further, the Caterpillar Proving Grounds already provides a watershed scale facility to trap sediment on Ten Mile Creek. In the Farm Creek Basin, several alternatives were investigated along Farm, Fondulac, and Ackerman Creeks. Some were habitat orientated, for others sediment delivery was the focus. After preliminary site investigations, one feasible site was chosen that went forward through the study. The City of Washington site was an opportunity to improve ecosystem function in a degraded portion of the watershed. The proposed project did not significantly address Illinois River sediment delivery issues; however, it was consistent with the broader study goals of improved habitat and ecosystem function. It is generally agreed that sediment delivery to the Illinois River from local tributaries needs to be addressed in the Study area. The ongoing Illinois River Basin Restoration and Illinois River Ecosystem studies are investigating the potential for reducing sediment delivery to the Illinois River, and future projects on local tributaries are anticipated.



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276

RENEE CIPRIANO, DIRECTOR

217/782-3362

December 9, 2002

Mr. Torkild Brunso
Lieutenant Colonel, Acting District Engineer
Rock Island District
Corps of Engineers
Post Office Box 2004
Clock Tower Building
Rock Island, IL 61204-2004

Re: U. S. Army Corps of Engineers Rock Island District (Tazewell County)
Peoria Riverfront Development (Ecosystem Restoration) Study - Illinois River
Log # C-0734-02

Dear Gentlemen:

The Illinois Environmental Protection Agency (Illinois EPA) received your letter dated June 14, 2002 asking for comments from the Illinois EPA regarding the Public Review Draft (Main Report and Technical Appendices) entitled Peoria Riverfront Development (Ecosystem Restoration) Study, Illinois, Feasibility Report with Integrated Environment Assessment dated May 2002, near Peoria in Tazewell County. The Watershed Management Section staff has reviewed the submitted documents concerning the above referenced project, and based on the information provided, the following items are offered for your consideration and appropriate action.

The Illinois EPA concurs with the continued development of the proposed project plans and specifications with the goal of Section 401 water quality certification of the project and eventual project completion. The project will be reviewed by the Illinois EPA for a water quality certification under Section 401, in accordance with the State of Illinois' certification and water quality regulations, after receipt and review of final plans and specifications.

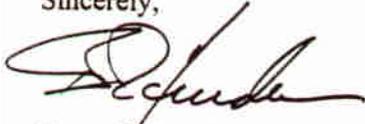
The Illinois EPA recommends that any future submittals for the Section 401 certification address the below listed items. Please be advised that the below listed items are areas that the Illinois EPA has determined will need to be addressed based upon the preliminary information submitted to date. Please also be advised that the inclusion of the below listed items with any future submittals may not provide all of the information necessary to satisfy the Section 401 application review process. The Illinois EPA will complete its review of the certification request after receipt of the final feasibility report and environmental assessment.

- Details of the turbidity control measures employed during the proposed project should be submitted. Turbidity control measures should be provided for the side-casting of any unsuitable material for test island construction and for the construction of the three larger islands.
- Sediment analysis should be provided in accordance with the enclosed Material Analysis For Dredge And Fill Activities procedure for any borrow material that will be obtained from the Ten Mile Creek delta.

GEORGE H. RYAN, GOVERNOR

If you have any questions or comments concerning the contents of this letter, please contact David Ginder at the address and telephone number shown above.

Sincerely,



Bruce J. Yurdin
Manager, Watershed Management Section
Bureau of Water

BJY:DPG:0374-02preapp.doc

Enclosure

cc: Records Unit
CoE, Rock Island District
IDNR, OWR, DWRM, Springfield
~~Mr. Randy Kracium, CoE, Rock Island District~~