Peoria Riverfront Development, IL (Ecosystem Restoration) Upper Mid-Sized Island Critical Restoration Project

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Rock Island District
November 9, 2011

Project Background

- Project authorized by Section 519: Illinois River Basin Restoration Program
- Project cost shared with State of Illinois: 65% Federal, 35% Non-Federal
- Completed feasibility study in 2003

Feasibility Study

- 1996 - United States House of Representatives Resolution 2500 of the Committee on Transportation and Infrastructure requests a feasibility study of the Peoria Lake area.

- 1997 – A Section 905(b) Reconnaissance Report is completed which recommends a feasibility study to assess measures to reduce existing sedimentation in Peoria Lake to create and restore aquatic habitats and reduce future sediment deposition in the Farm Creek Delta.

- May 2000 – A study newsletter notifying residents of the study's initiation and upcoming open house was mailed to nearly 700 addresses.

Feasibility Study

- June 2000 – A public open house was held in Peoria to execute the Feasibility Cost Sharing Agreement between the IL DNR and the District. The IL DNR and the District provided Study information to the 70 members of the public who attended the open house.

- November 2000 - A study newsletter was mailed to over 700 addresses providing study background, purpose, a study update, a summary of the June open house, and an invitation to a November 29, 2000 Open House. The November Open House was held in Peoria with information regarding the study made available to 72 attendees

Feasibility Study

- June 2002 - A study newsletter was mailed to over 800 addresses announcing a public meeting to present the study results to the public. The public meeting was held in Peoria with 77 people attending.

- December 2002 – Statement of Findings and Findings of No Significant Impact signed.

- July 2003 – The Report of the Chief of Engineers is signed.

- April 25, 2006 – A Project Cooperation Agreement between the IL DNR and the Corps, Rock Island District for construction of the Upper Mid-sized Island Critical Restoration Project was executed.

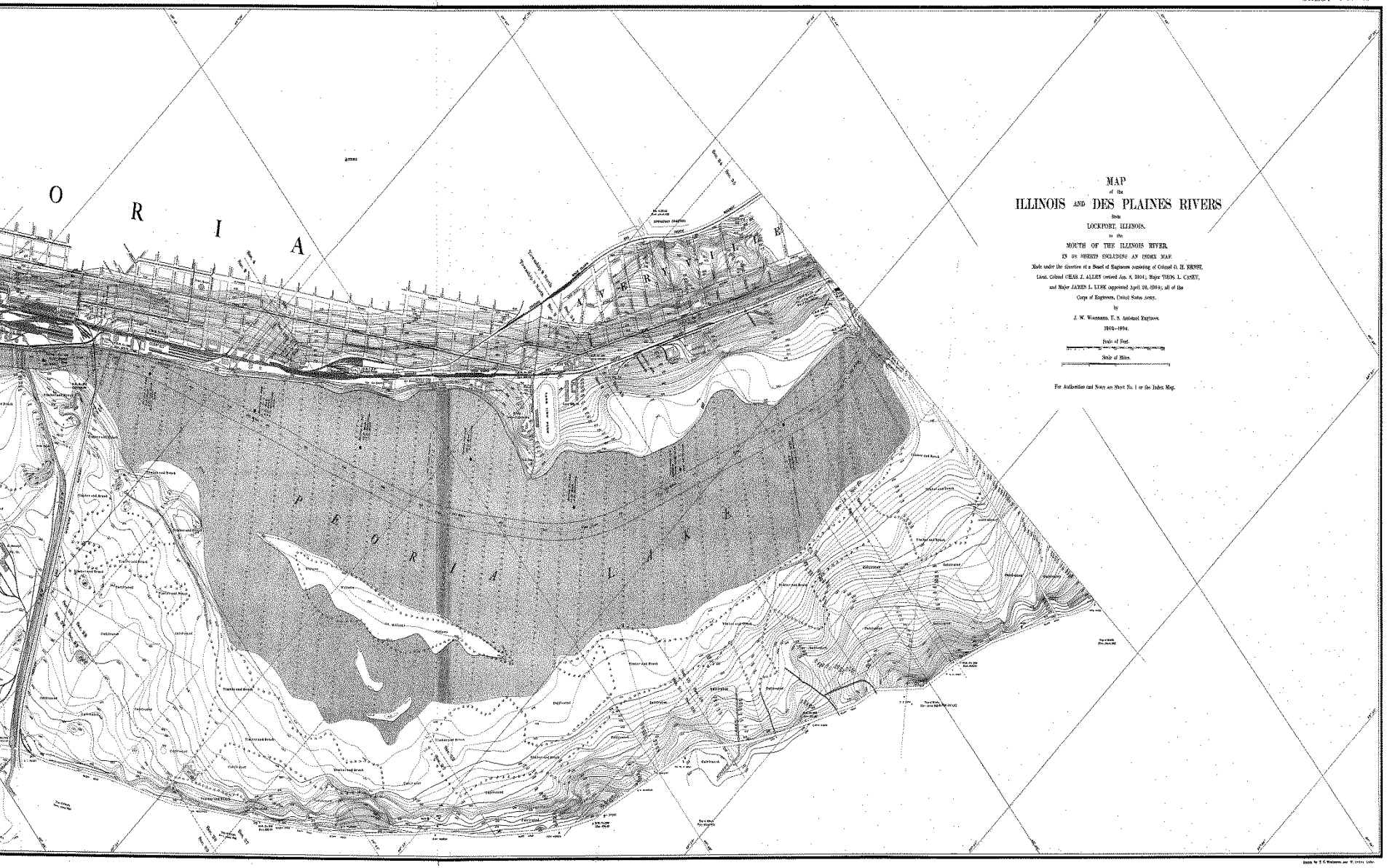
Feasibility Study

- April 24, 2009 - The public was invited to attend a ceremony held at the Peoria Park District Gateway Building to commemorate the initiation of construction and the contract award

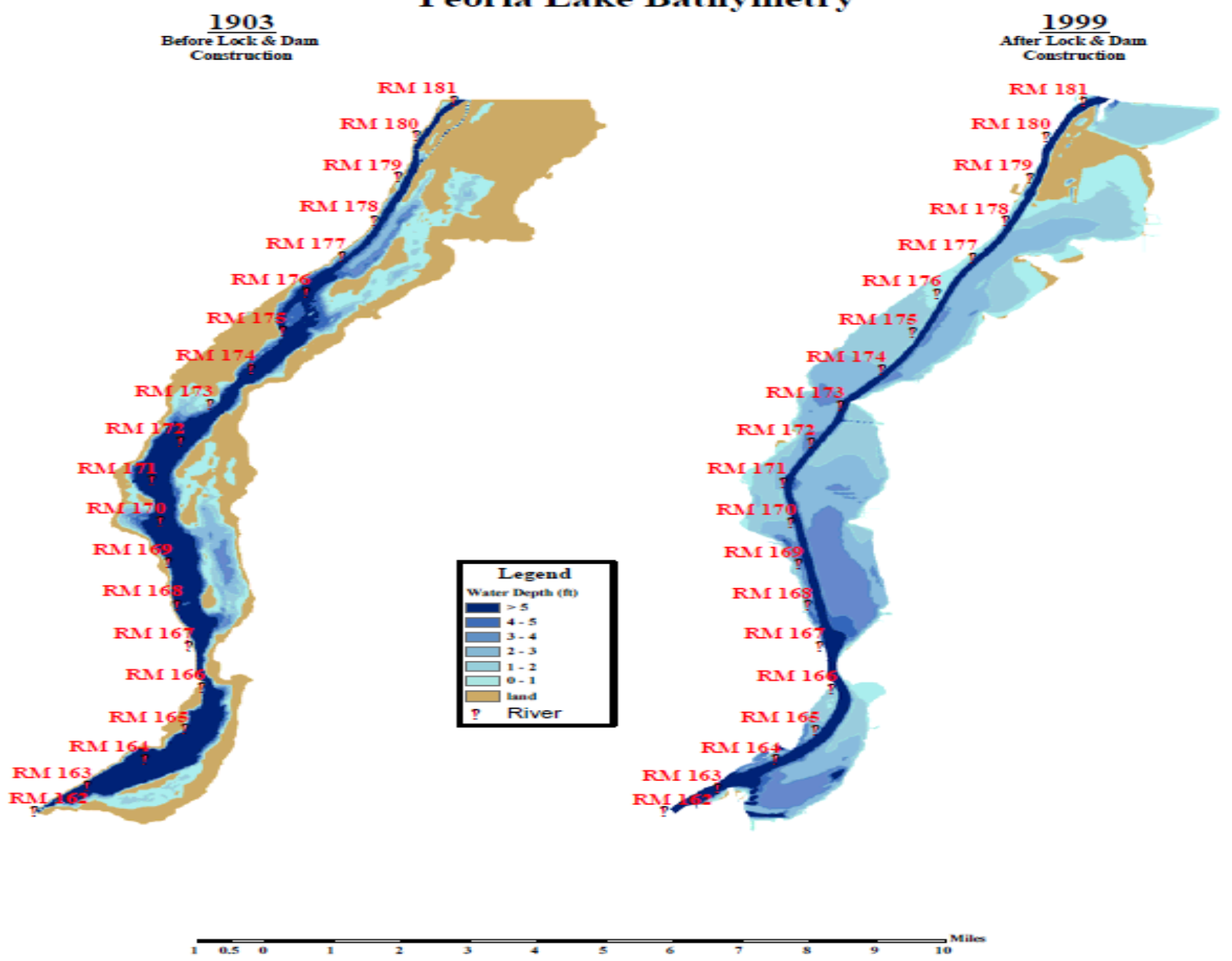
Why are we building this project?

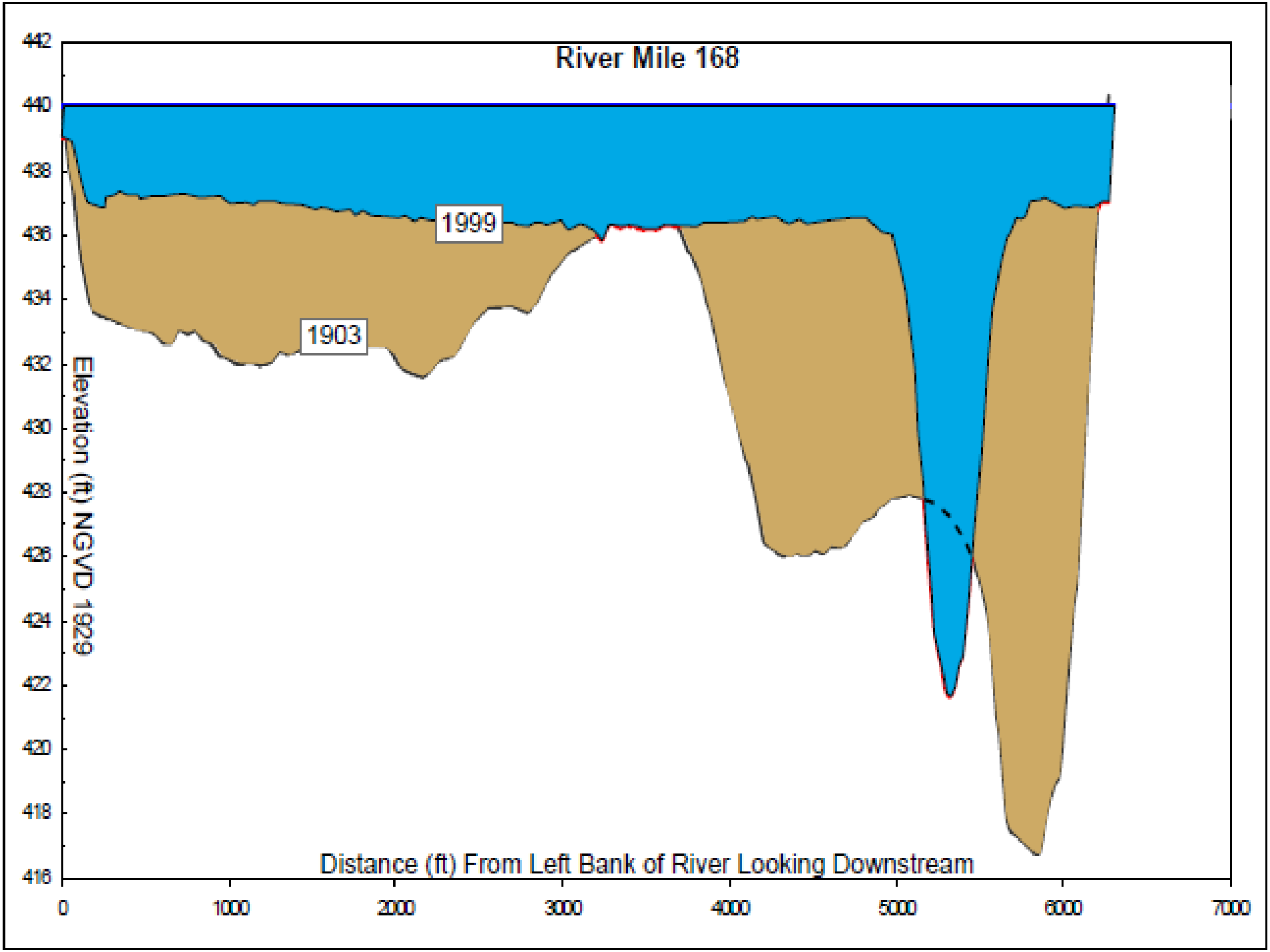
- Restore deep water fisheries habitat that has been lost in Lower Peoria Lake due to sedimentation
- The main benefit is the deep water from dredging- the island is a beneficial place to put the material because it creates additional habitat and improves sustainability of the dredged areas.

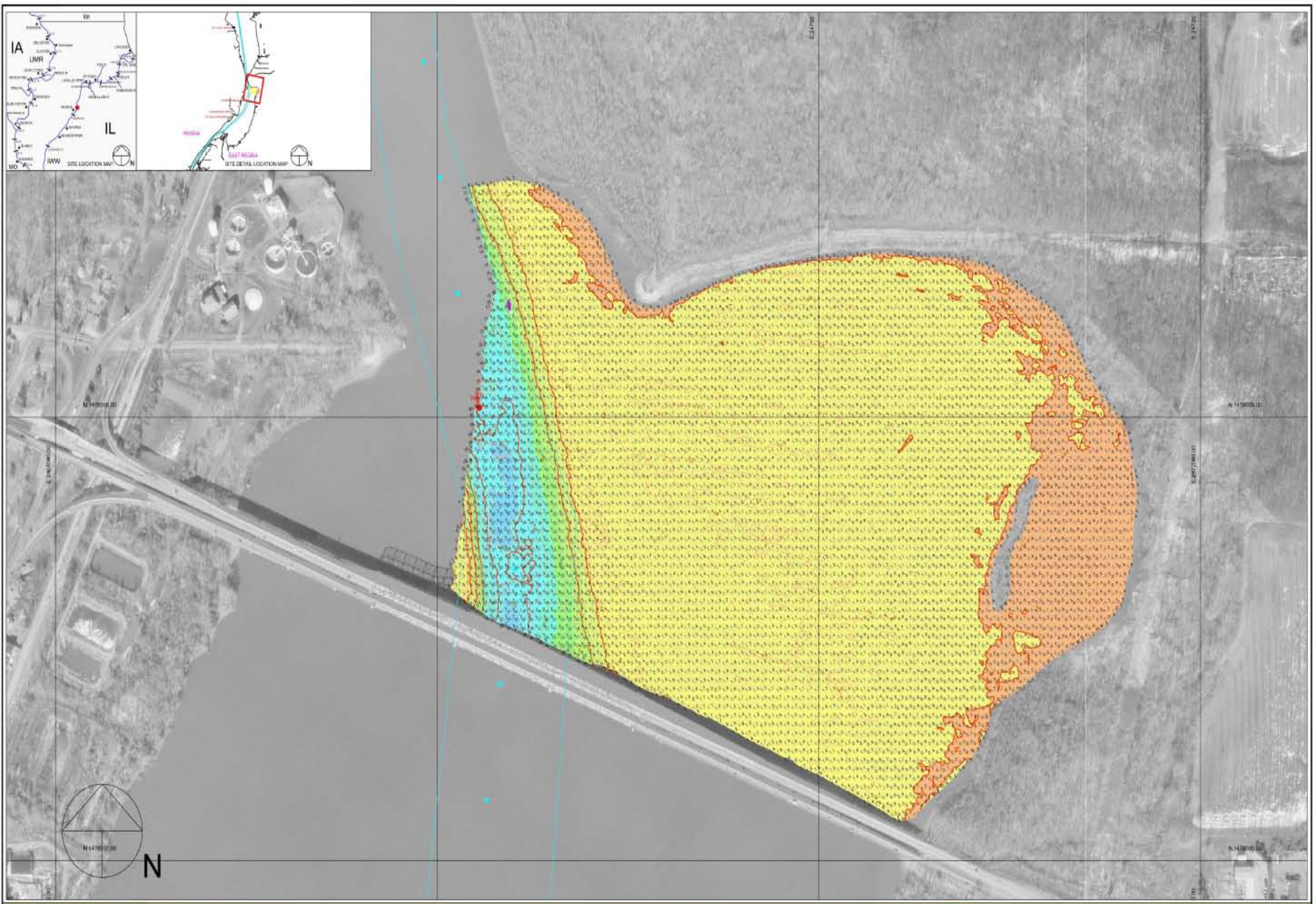
SHEET NO. 39


MAP
of the
ILLINOIS AND DES PLAINES RIVERS
from
LOCKPORT, ILLINOIS,
to the
MOUTH OF THE ILLINOIS RIVER,
IN 68 SHEETS INCLUDING AN INDEX MAP.
Made under the direction of a Board of Engineers consisting of Colonel G. H. ERNST,
Lieut. Colonel CHAS J. ALLEN (retired Jan. 8, 1904), Major THOS. L. CASEY,
and Major JAMES L. LUSK (appointed April 20, 1904), all of the
Corps of Engineers, United States Army,
by
J. W. Wiessmann, U. S. Assistant Engineer,
1903–1904.
Scale of Feet.
Scale of Miles.
For Authorities and Notes see Sheet No. 1 or the Index Map.
O R I A
P E O R I A L A K E

Peoria Lake Bathymetry




River Mile 168
1999
1903
Elevation (ft) NGVD 1929
Distance (ft) From Left Bank of River Looking Downstream
442
440
438
436
434
432
430
428
426
424
422
420
418
416
0
1000
2000
3000
4000
5000
6000
7000



Hydrographic Survey of the Illinois Waterway Ortho photography flown 1995

Horizontal Projection: State Plane, NAD1983, Illinois West - 1202 U.S. Survey Feet
Vertical Datum: NGVD 1929 U.S. Survey Feet. All soundings adjusted to Flat Pool: 440.0
Water Surface at time of survey: 446.3 / Water Stage: +6.3 Feet

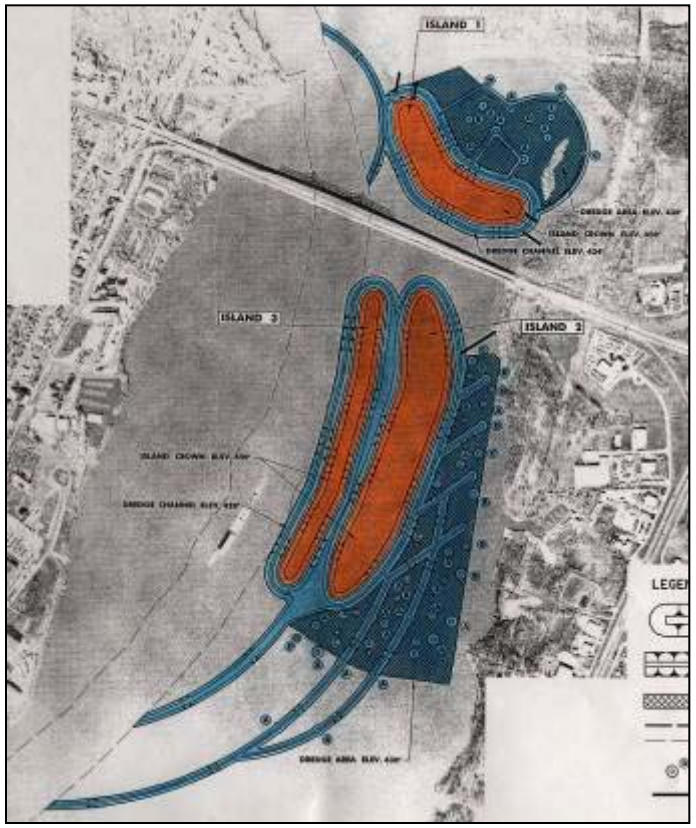
Survey Vessel: MV Holling
Conducted by: Jim Clark and Lee Schweiger
Processed in Autodesk LDDT by: Bob Adams on 28 Apr 2008
File Name: IWW_PE_1657-1662_08A.dwg

US ARMY CORPS OF ENGINEERS
MVR-ROCK ISLAND DISTRICT
OPERATIONS DIVISION - TECH SUPPORT BRANCH

Narrows w/ LDB Peoria Lake

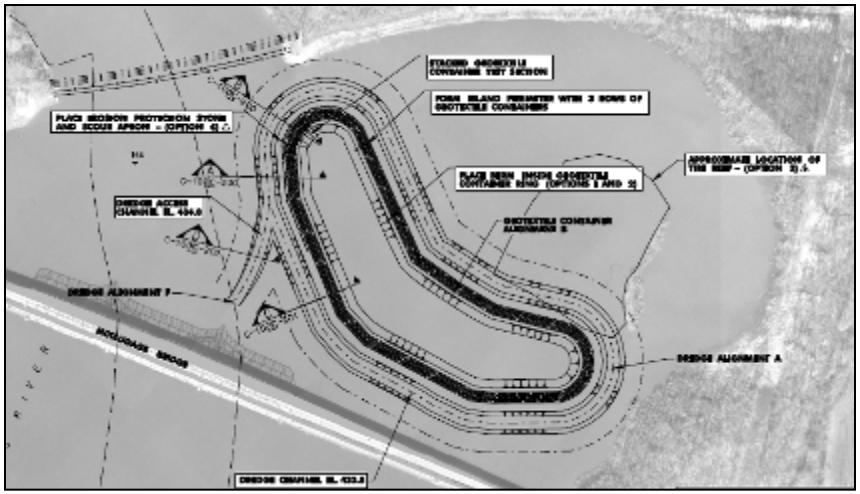
Survey Date: 15 Apr 2008
IWW / Peoria Pool - Reach River Miles: 165.7 - 166.2

Feasibility Study Recommended Plan

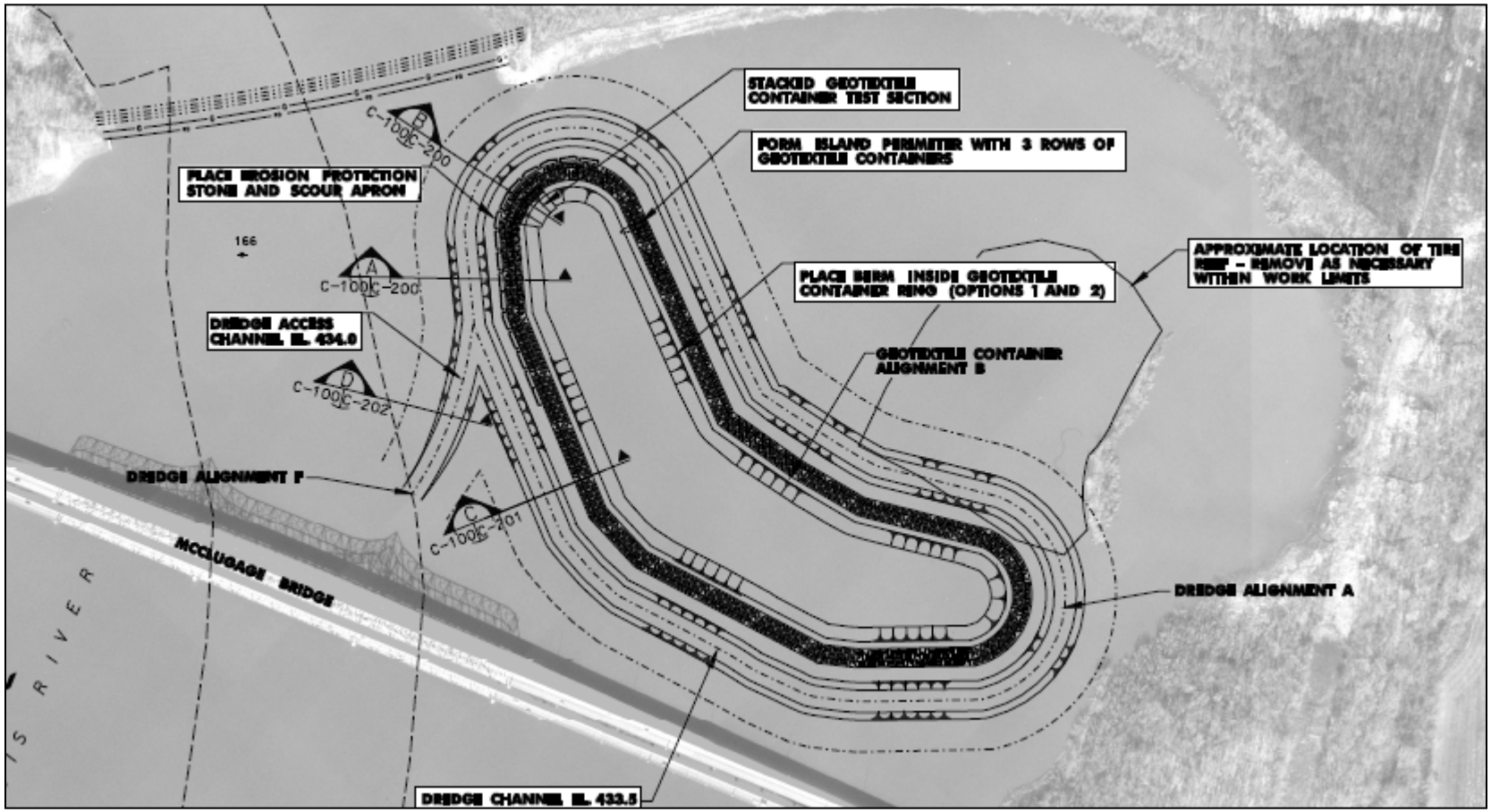


- Mid Size Island Above the Bridge & Island Pair Below the Bridge
- Total Project
  - 200 acres of dredging
  - 75 acres of island

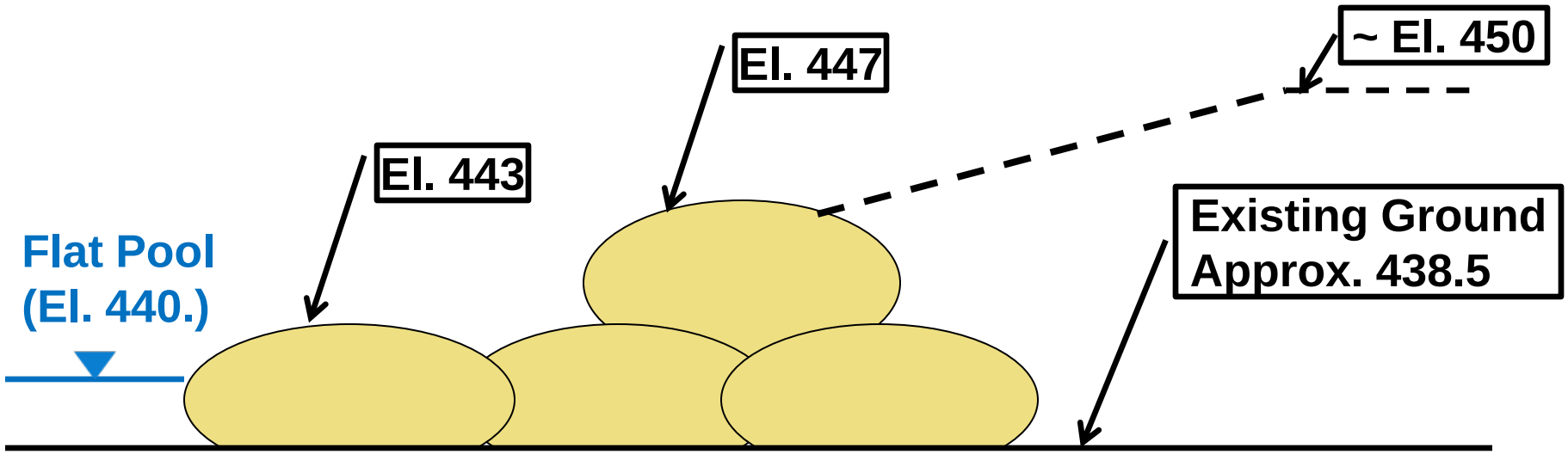
Upper Mid-Sized Island, Stage I



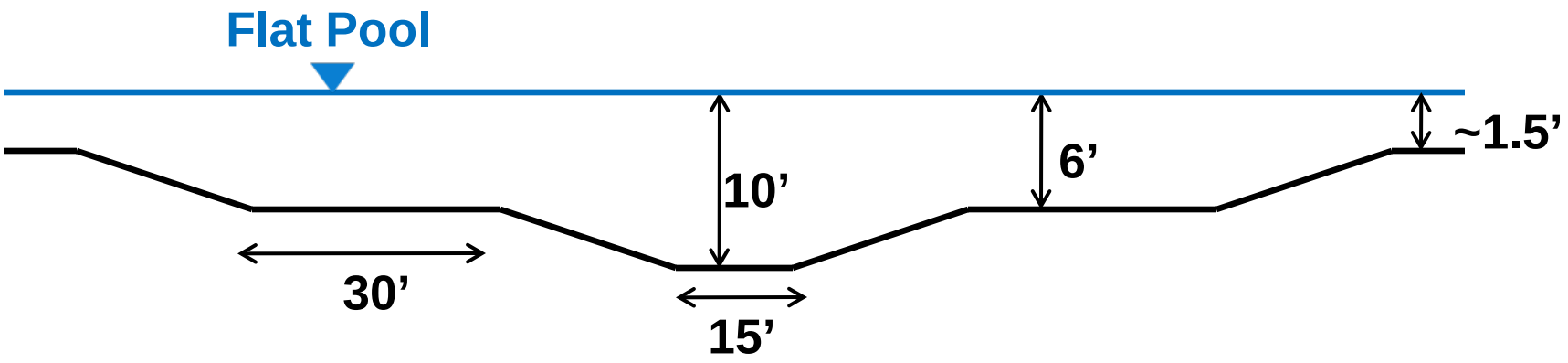
- Stage I constructs a confined placement area for future dredging into the island
- Dredge 5700’ of channel 5.5’ deep
- Fill 3 rows of geotextile containers to 6’ height to form island perimeter that is 4800’ long


STACKED GEOTEXTILE CONTAINER TEST SECTION
FORM ISLAND PERIMETER WITH 3 ROWS OF GEOTEXTILE CONTAINERS
PLACE EROSION PROTECTION STONE AND SCOUR APRON
C-100C-200
166
C-100C-200
PLACE BERM INSIDE GEOTEXTILE CONTAINER RING (OPTIONS 1 AND 2)
APPROXIMATE LOCATION OF TIRE REEF - REMOVE AS NECESSARY WITHIN WORK LIMITS
DREDGE ACCESS CHANNEL EL. 434.0
GEOTEXTILE CONTAINER ALIGNMENT B
C-100C-202
DREDGE ALIGNMENT F
C-100C-201
MCCLUGAGE BRIDGE
DREDGE ALIGNMENT A
DREDGE CHANNEL EL. 433.5

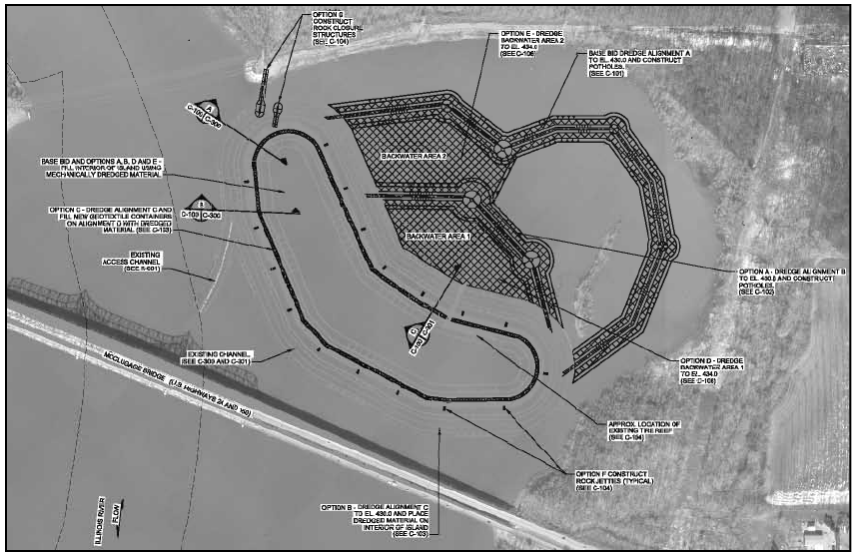
Island Cross-Section



Channel Cross-Section Stage II- Alignments A and B

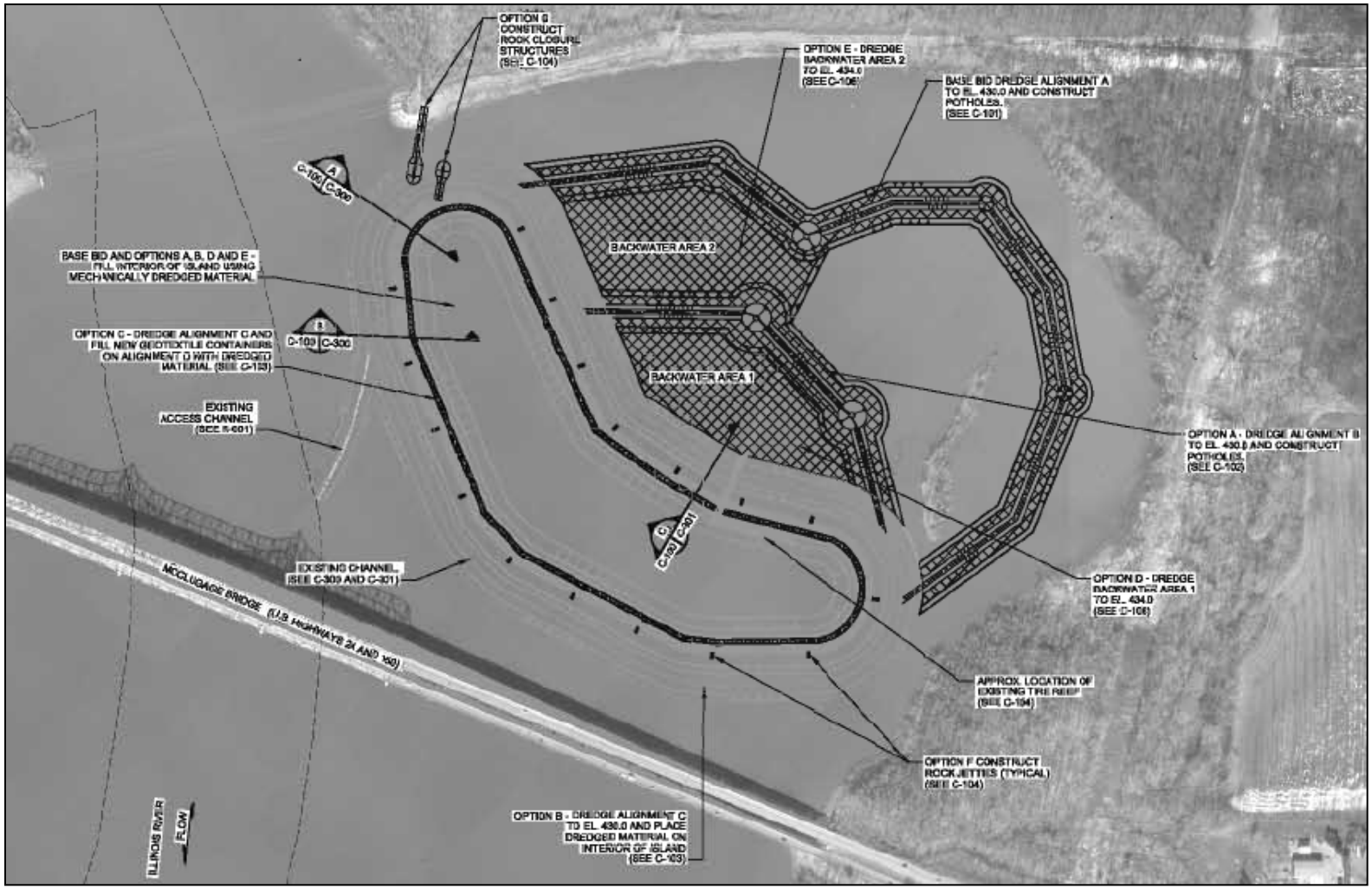


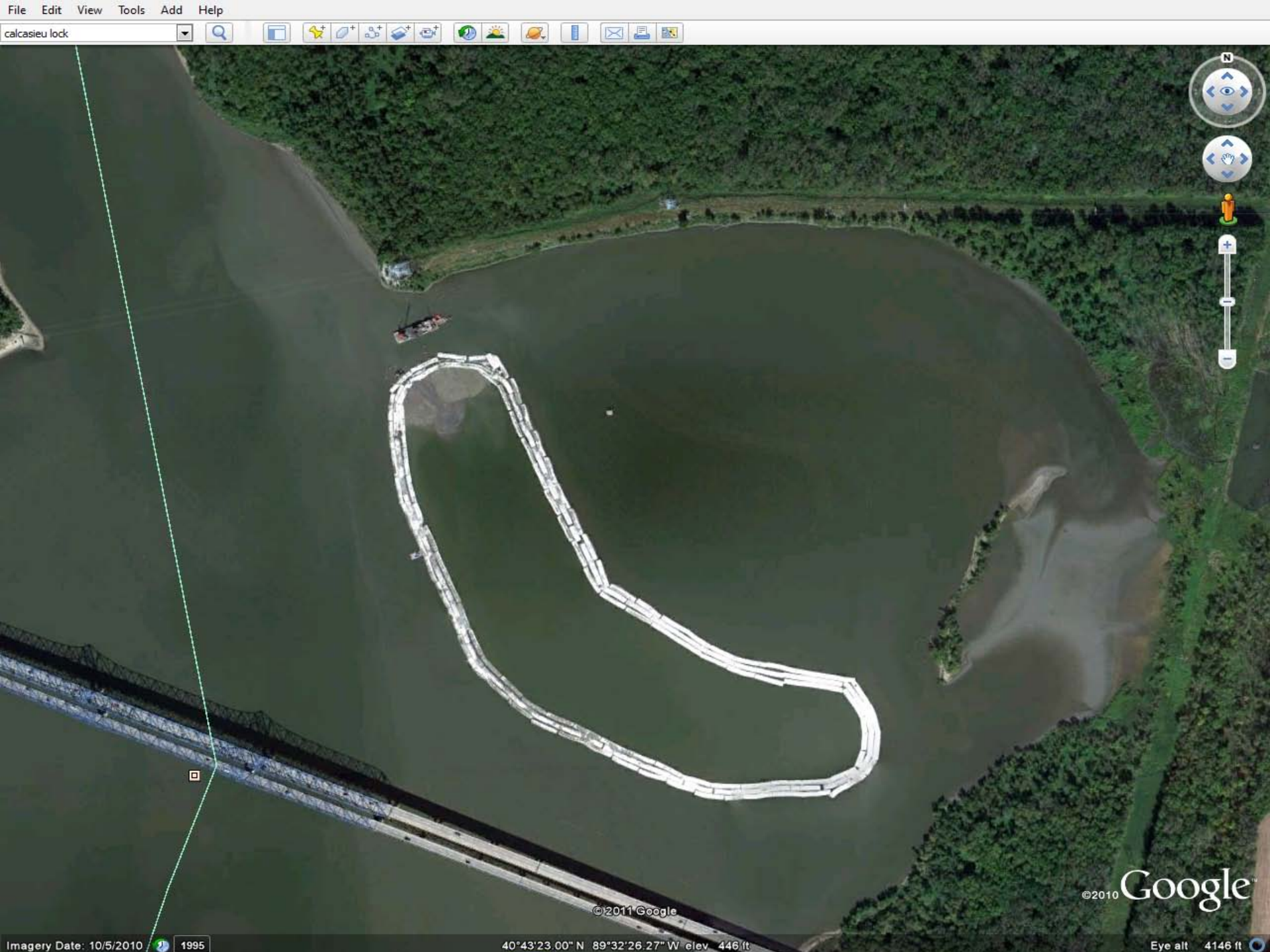
Upper Mid-Sized Island, Stage II

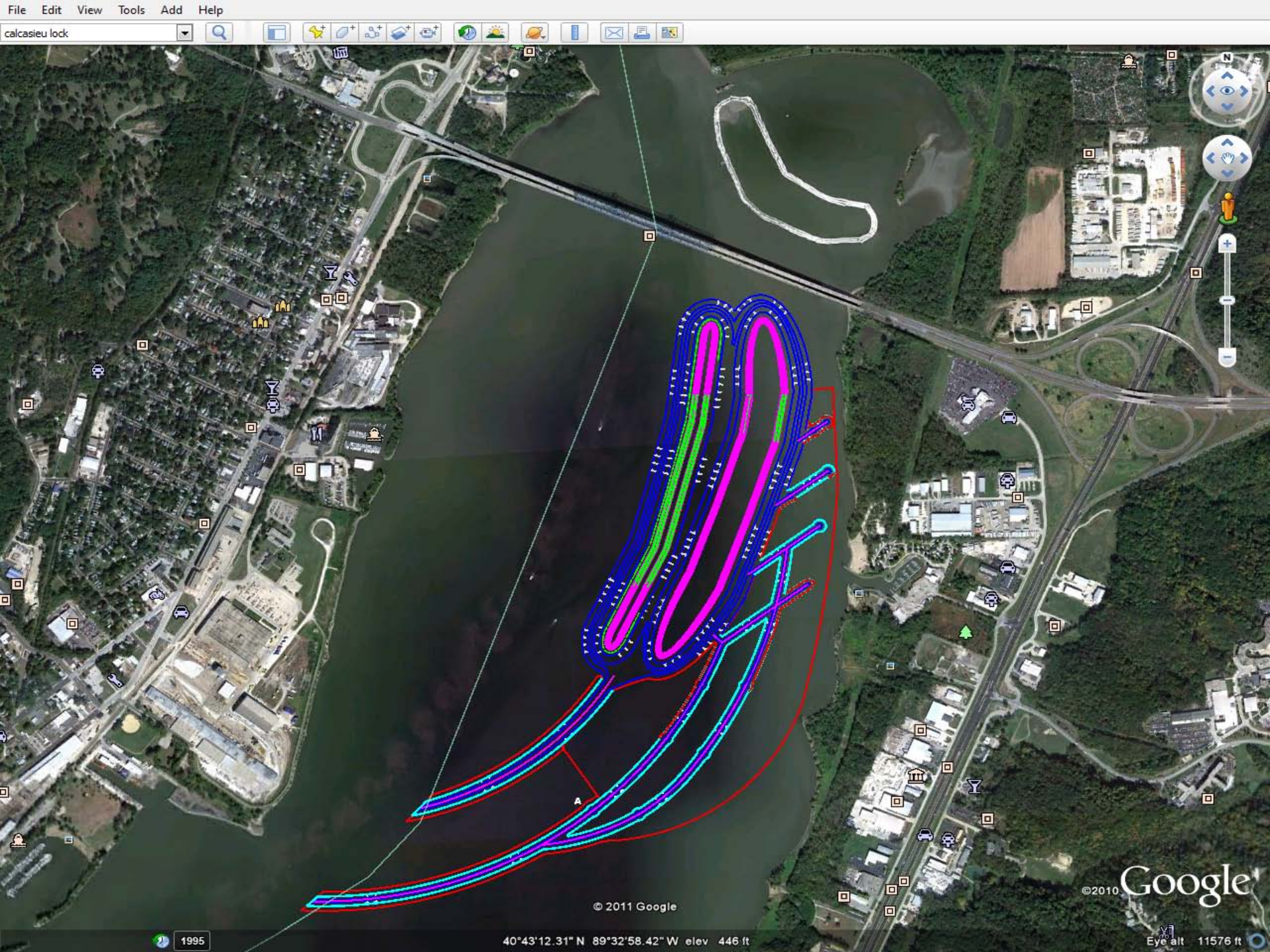


- Construct rock jetties and closure structures
- Dredge backwater areas to 6’ deep

- Stage II will result in dredging a total of 44 acres and 397,000 CY
- Place 1 row of containers on top of existing containers
- Dredge 2 channels 6’ to 10’ deep with deep potholes


OPTION G CONSTRUCT ROCK CLOSURE STRUCTURES (SEE C-104)
OPTION E - DREDGE BACKWATER AREA 2 TO EL. 434.0 (SEE C-106)
BASE BID DREDGE ALIGNMENT A TO EL. 430.0 AND CONSTRUCT POTHOLES. (SEE C-101)
A C-105 C-300
BACKWATER AREA 2
BASE BID AND OPTIONS A, B, D AND E - FILL INTERIOR OF ISLAND USING MECHANICALLY DREDGED MATERIAL
B C-103 C-300
OPTION C - DREDGE ALIGNMENT C AND FILL NEW GEOTEXTILE CONTAINERS ON ALIGNMENT D WITH DREDGED MATERIAL (SEE C-103)
BACKWATER AREA 1
EXISTING ACCESS CHANNEL (SEE C-101)
OPTION A - DREDGE ALIGNMENT B TO EL. 430.0 AND CONSTRUCT POTHOLES. (SEE C-102)
C C-102 C-301
EXISTING CHANNEL (SEE C-300 AND C-301)
OPTION D - DREDGE BACKWATER AREA 1 TO EL. 434.0 (SEE C-106)
MCCLUGAGE BRIDGE (U.S. HIGHWAYS 2A AND 150)
APPROX. LOCATION OF EXISTING TRE REEF (SEE C-104)
OPTION F CONSTRUCT ROCK JETTIES (TYPICAL) (SEE C-104)
OPTION B - DREDGE ALIGNMENT C TO EL. 430.0 AND PLACE DREDGED MATERIAL ON INTERIOR OF ISLAND (SEE C-103)
ILLINOIS RIVER
FLOW


File Edit View Tools Add Help
calcasieu lock
©2011 Google
©2010 Google
Imagery Date: 10/5/2010
1995
40°43'23.00" N 89°32'26.27" W elev 446 ft
Eye alt 4146 ft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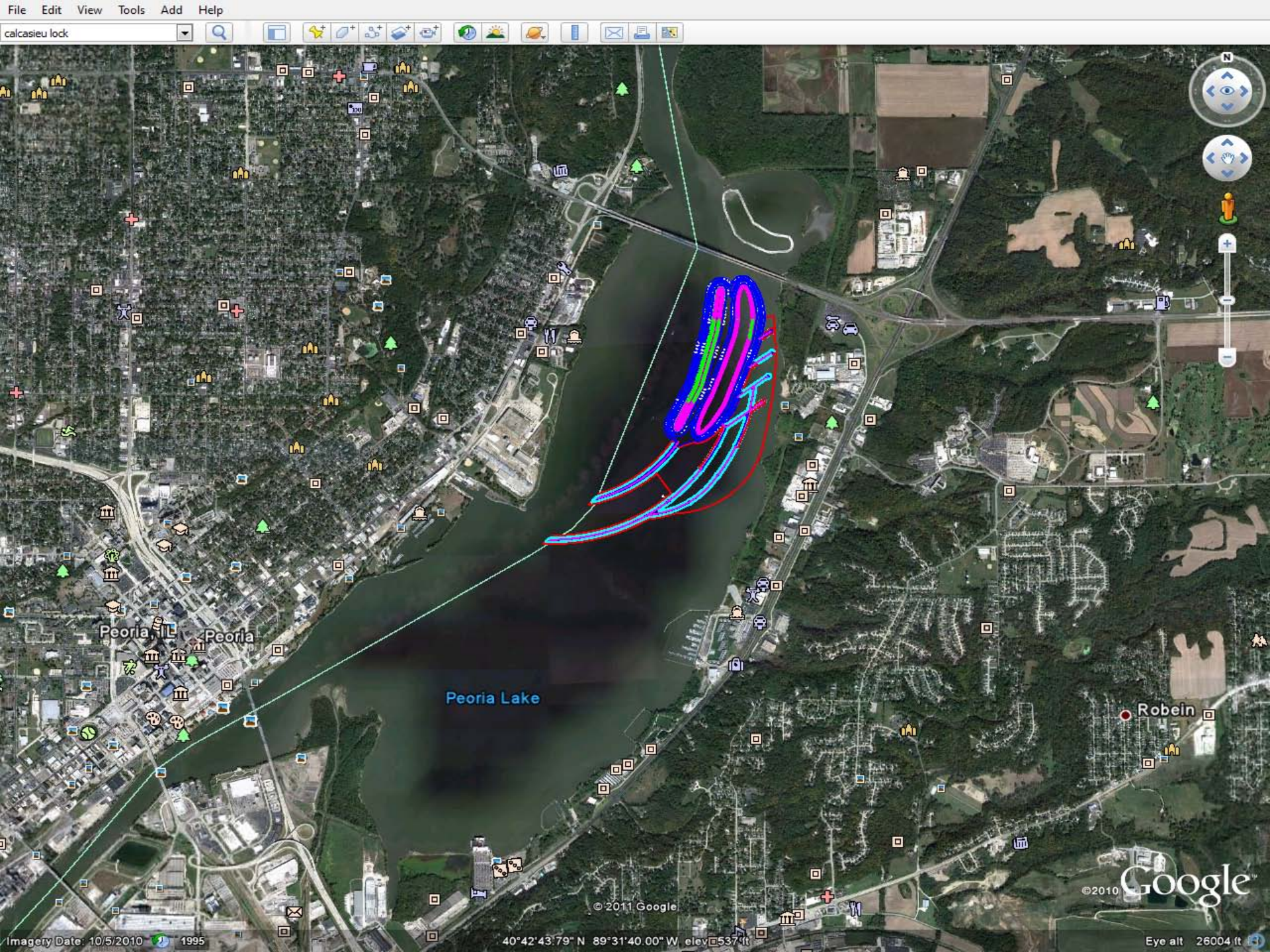
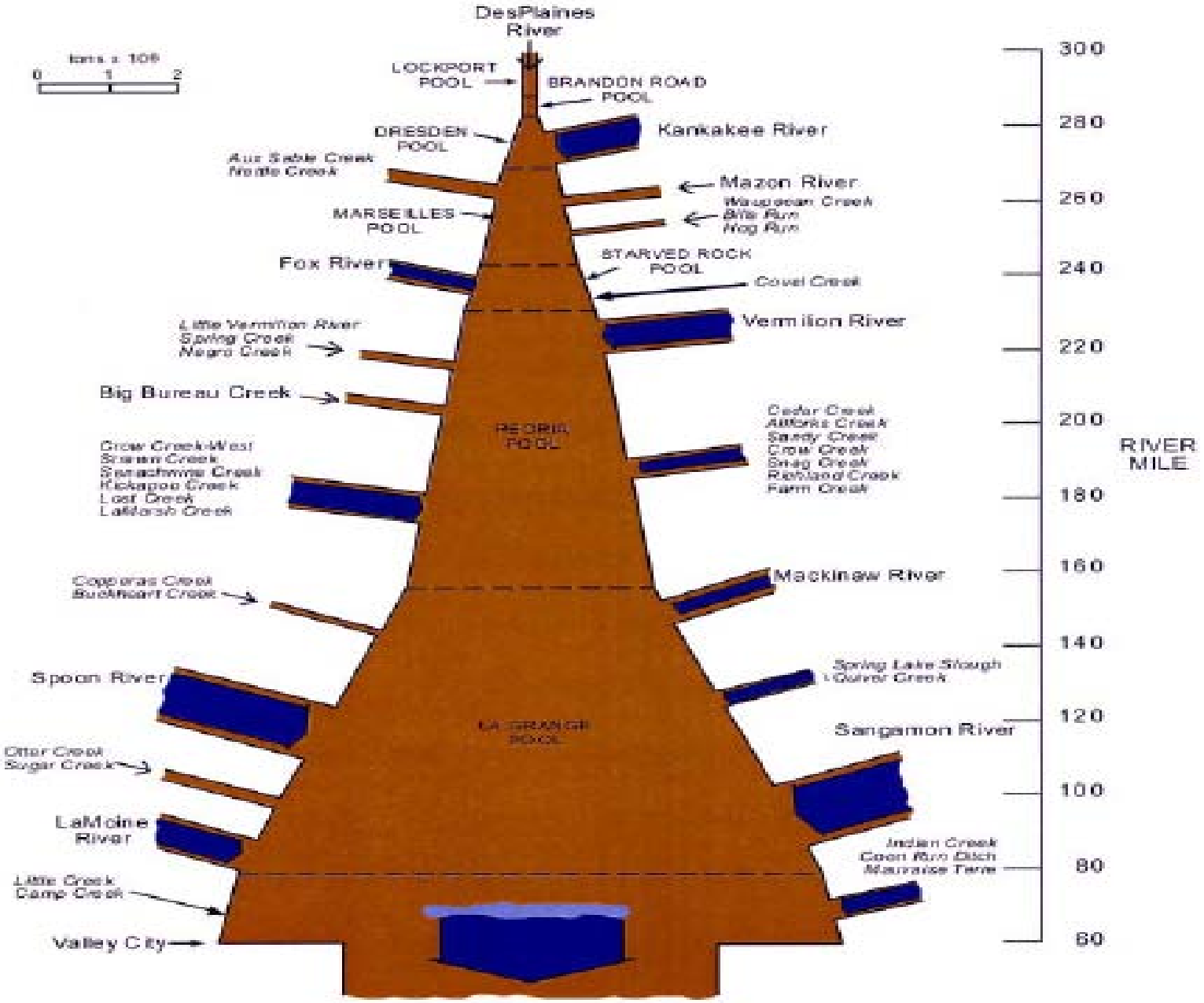
© 2011 Google
©2010 Google
1995
40°43'12.31" N 89°32'58.42" W elev 446 ft
Eye alt 11576 ft

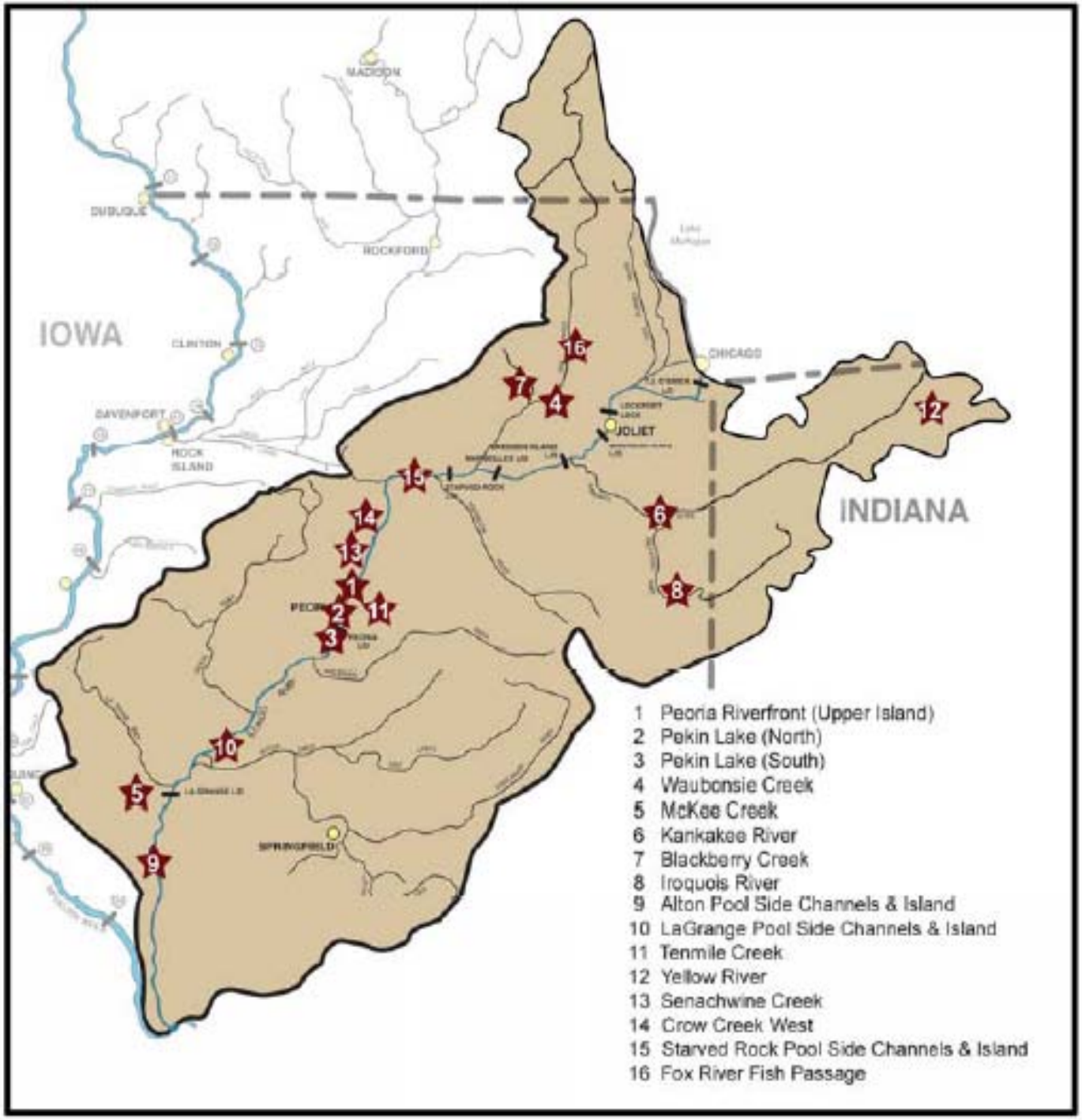

File
Edit
View
Tools
Add
Help
calcasieu lock
Peoria, IL
Peoria
Peoria Lake
Robein
©2011 Google
©2010 Google
Imagery Date: 10/5/2010 1995
40°42'43.79" N 89°31'40.00" W elev 537 ft
Eye alt 26004 ft

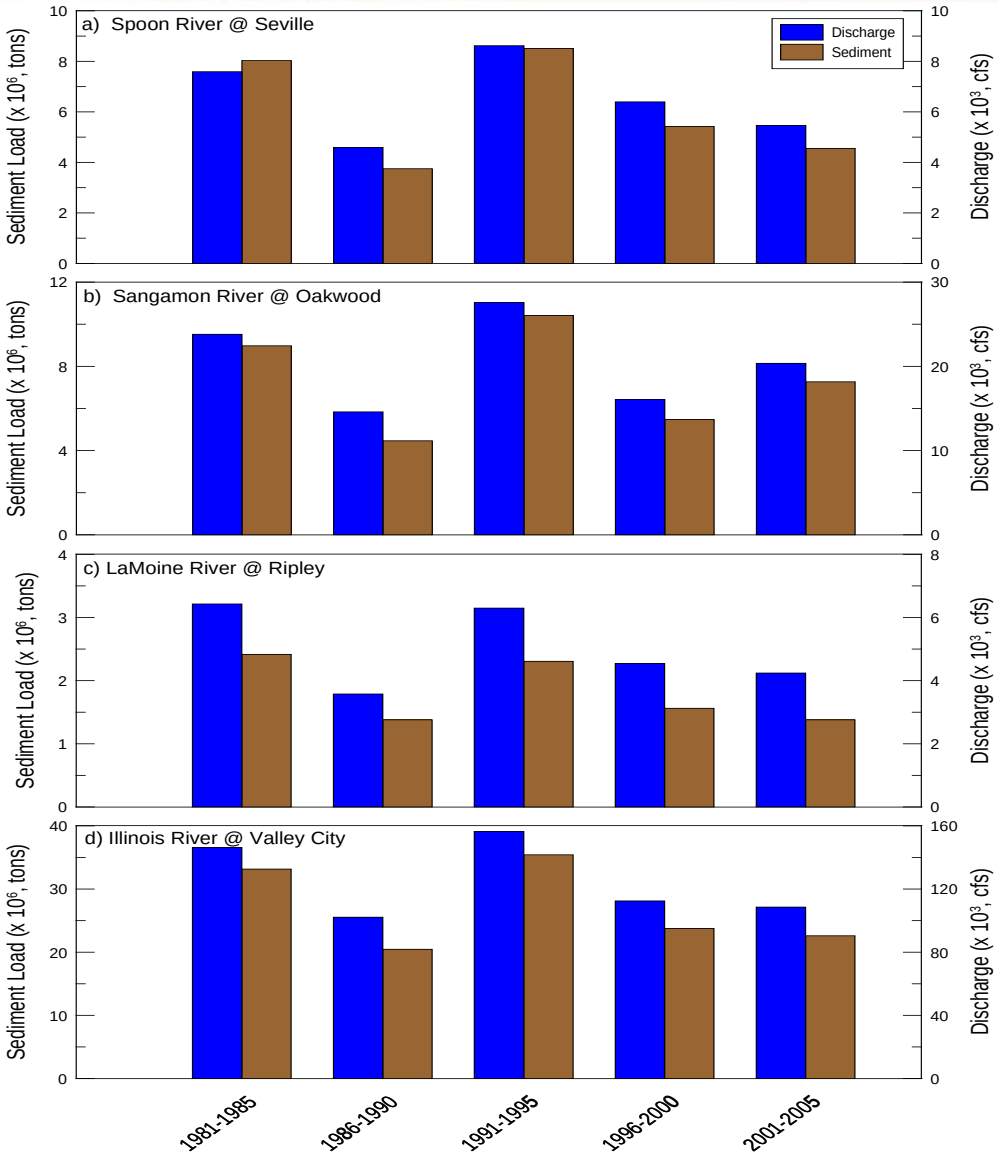
Why Not Stop The Sediment From Getting in the River?

ILLINOIS RIVER BASIN RESTORATION
COMPREHENSIVE PLAN
WITH INTEGRATED ENVIRONMENTAL
ASSESSMENT
WISCONSIN
IOWA
ILLINOIS
INDIANA
MISSOURI
US Army Corps
of Engineers
Rock Island District
St. Louis District
Chicago District
Detroit District
MAIN REPORT • FINAL DRAFT
MARCH 2007
ILLINOIS
DEPARTMENT OF
NATURAL
RESOURCES



Average Annual Sediment Budget of the Illinois River


IOWA
INDIANA
MADISON
DUBUQUE
ROCKFORD
CLINTON
DAVENPORT
ROCK ISLAND
CHICAGO
JOLIET
PEORIA
SPRINGFIELD
1 Peoria Riverfront (Upper Island)
2 Pekin Lake (North)
3 Pekin Lake (South)
4 Waubonsie Creek
5 McKee Creek
6 Kankakee River
7 Blackberry Creek
8 Iroquois River
9 Alton Pool Side Channels & Island
10 LaGrange Pool Side Channels & Island
11 Tenmile Creek
12 Yellow River
13 Senachwine Creek
14 Crow Creek West
15 Starved Rock Pool Side Channels & Island
16 Fox River Fish Passage


a) Spoon River @ Seville
b) Sangamon River @ Oakwood
c) LaMoine River @ Ripley
d) Illinois River @ Valley City
Discharge
Sediment
Sediment Load (x 10^6; tons)
Discharge (x 10^3; cfs)
1981-1985
1986-1990
1991-1995
1996-2000
2001-2005

Questions?