Restoring America’s Greatest River: Collaborative Efforts Along The Lower Mississippi

Angeline J. Rodgers, USFWS/LMRCC
K. Jack Killgore, USACE/ERDC
Paul Hartfield, USFWS

CEER July 31, 2014
Mississippi River

Length
- 2300 miles (3700km) from Lake Itasca to Head of Passes

Drainage Area
- 1,245,000 mi² (3,220,000 km²)

Drainage Extent
- 41% of United States
- 31 States; 2 Canadian Provinces

Divisions
- Upper, Middle, Lower
1927 Flood

- 246+ Deaths
- 325,000 Refugees
- 162,000 Homes Inundated
- 16.6 Million Acres Flooded

Flood Control Act of 1928
24 Million Acres
(9.4 Million Hectares)

3 Million Acres
(1.2 Million Hectares)
Lower Mississippi River Ecosystem - 2.8M acres

Florida Everglades Ecosystem - 2.9M acres
Mississippi River & Tributaries (MR&T)

- Levees
- Channel Stabilization
- Tributary Basin Improvements
- Floodways
Further Alteration of LMR Habitat

• 1929-1960 – Cutoffs shortened river by >150 miles (Winkley 1977)

• Since 1960, loss of secondary channels and associated habitats (Williams & Clouse 2003)
The Mississippi River and Secondary Channels

Comprehensive dike program began in 1960s. As of 2012, there are 774 dikes on the LMR.

Dikes direct low flows into the navigation channel to maintain depth.
Formed in 1994
Restoring America’s Greatest River
LOOSAHATCHIE BAR
AQUATIC HABITAT REHABILITATION

11 NOTCHES - 8 DIKES
<table>
<thead>
<tr>
<th>Project</th>
<th>River Miles</th>
<th>State</th>
<th>COE District</th>
<th>Year Built</th>
<th>Miles of Side Channel</th>
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</thead>
<tbody>
<tr>
<td>Island 63</td>
<td>640.5 - 637.3</td>
<td>MS</td>
<td>MVM</td>
<td>2006</td>
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<tr>
<td>Loosahatchie Bar</td>
<td>741.5 - 737.0</td>
<td>AR-TN</td>
<td>MVM</td>
<td>2008</td>
<td>11.25</td>
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<td>Kangaroo Point</td>
<td>649.5 - 645.3</td>
<td>AR</td>
<td>MVM</td>
<td>2008</td>
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<td>Below Ludlow</td>
<td>624 - 621</td>
<td>AR</td>
<td>MVM</td>
<td>2008</td>
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<tr>
<td>Island 70</td>
<td>610 - 605.7</td>
<td>MS</td>
<td>MVK</td>
<td>2011</td>
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<tr>
<td>Island 15</td>
<td>853.7 - 849</td>
<td>MO</td>
<td>MVM</td>
<td>2010/2012</td>
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<tr>
<td>Caruthersville-Linwood</td>
<td>846 - 839</td>
<td>MO</td>
<td>MVM</td>
<td>2012</td>
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<tr>
<td>Island 18 Towhead</td>
<td>838.5 - 834</td>
<td>TN</td>
<td>MVM</td>
<td>2012</td>
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<td>Island 20</td>
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<td>MVM</td>
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<td>Kentucky Point</td>
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<td>KY</td>
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<td>Ashport - Golddust</td>
<td>796 - 792</td>
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<tr>
<td>Below Prentiss</td>
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<td>MS</td>
<td>MVK</td>
<td>2013</td>
<td>4</td>
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<td>570</td>
<td>MS</td>
<td>MVK</td>
<td>2013</td>
<td>4</td>
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~56.75 Miles
Species Composition in the LMR

- >100 Species of Fish
- Invertebrates
- Amphibians/Reptiles
Research and Monitoring
Pallid Sturgeon

1990 Listed as Endangered
11 historical records from the LMR;
~600 from Missouri R.

Currently >1,100 records from LMR
>2,000 detections of sonic tagged PS
Notched vs Un-Notched

Sturgeon CPUE by channel type

- Juvenile (Trawl)
- Pallid (Trotline, Gillnet)
- Shovelnose (Trotline, Gillnet)
INTERIOR LEAST TERN
(Endangered, 1985)

Distribution When Listed

<2,000 birds range-wide, 18% in LMR.

LMR now supports ~ 65% of nesting birds (~12,000 annual)

17,859 (2005)
MANAGEMENT STRATEGY

Monitoring; avoidance of disturbance; habitat needs addressed during normal maintenance and construction actions

Interior Least Tern Surveys
Lower Mississippi River (LMR)

Survey Years 1985 - 2011
Fat Pocketbook Mussel

LMR Listing Baseline – 0

Current LMR Baseline:
Site occurrences in >300 RM
Endangered Species Act
Section 7(A)(1)

• All Federal agencies have a duty to conserve
• ‘utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened species listed’
  – As budgets allow, can include Conservation Plan(s)
Conservation Plan for the Interior Least Tern, Pallid Sturgeon, and Fat Pocketbook Mussel in the Lower Mississippi River (Endangered Species Act, Section 7(a)(1))

July 23, 2013
USFWS Biological Opinion

...it is the Service’s biological opinion that the CIP is not likely to jeopardize the continued existence of the ILT, PS, and FPM.

• BMPs/SOPs incorporated
  – e.g. construction windows; round point/chevrons as alternatives to dikes

• Conservation measures included
  – e.g. monitoring protocols; restore connectivity
Restoring the Lower Mississippi River Batture
PROJECT STATUS

TOTAL ACRES *

<table>
<thead>
<tr>
<th>Status</th>
<th>Acres</th>
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<tr>
<td>IN APPLICATION</td>
<td>14,152</td>
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<tr>
<td>CLOSED</td>
<td>2,798</td>
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<tr>
<td>PENDING CLOSURE</td>
<td>10,507</td>
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*As of July 1, 2014
Lower Mississippi River Resource Assessment

-Authorization-

Section 402 of WRDA 2000:
The Secretary, in cooperation with the Secretary of the Interior and the States of Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri, and Tennessee, shall undertake for the Lower Mississippi River system:

(1) an assessment of information needed for river-related management;

(2) an assessment of natural resource habitat needs;

(3) an assessment of the need for river-related recreation and access.
Thank You!

Angeline Rodgers
angeline_rodgers@fws.gov
601-629-6621