

Inland Waterways Infrastructure and Projects

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Rock Island District

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US Army Corps of Engineers
BUILDING STRONG®

Mel-Price Locks and Dam, Mississippi River, Constructed in 1994



Locks and Dam 53, Ohio River, Constructed in 1929 and 1979





Olmsted Locks, Ohio River, Constructed in 2002



LaGrange Lock, IWW, Constructed in 1938



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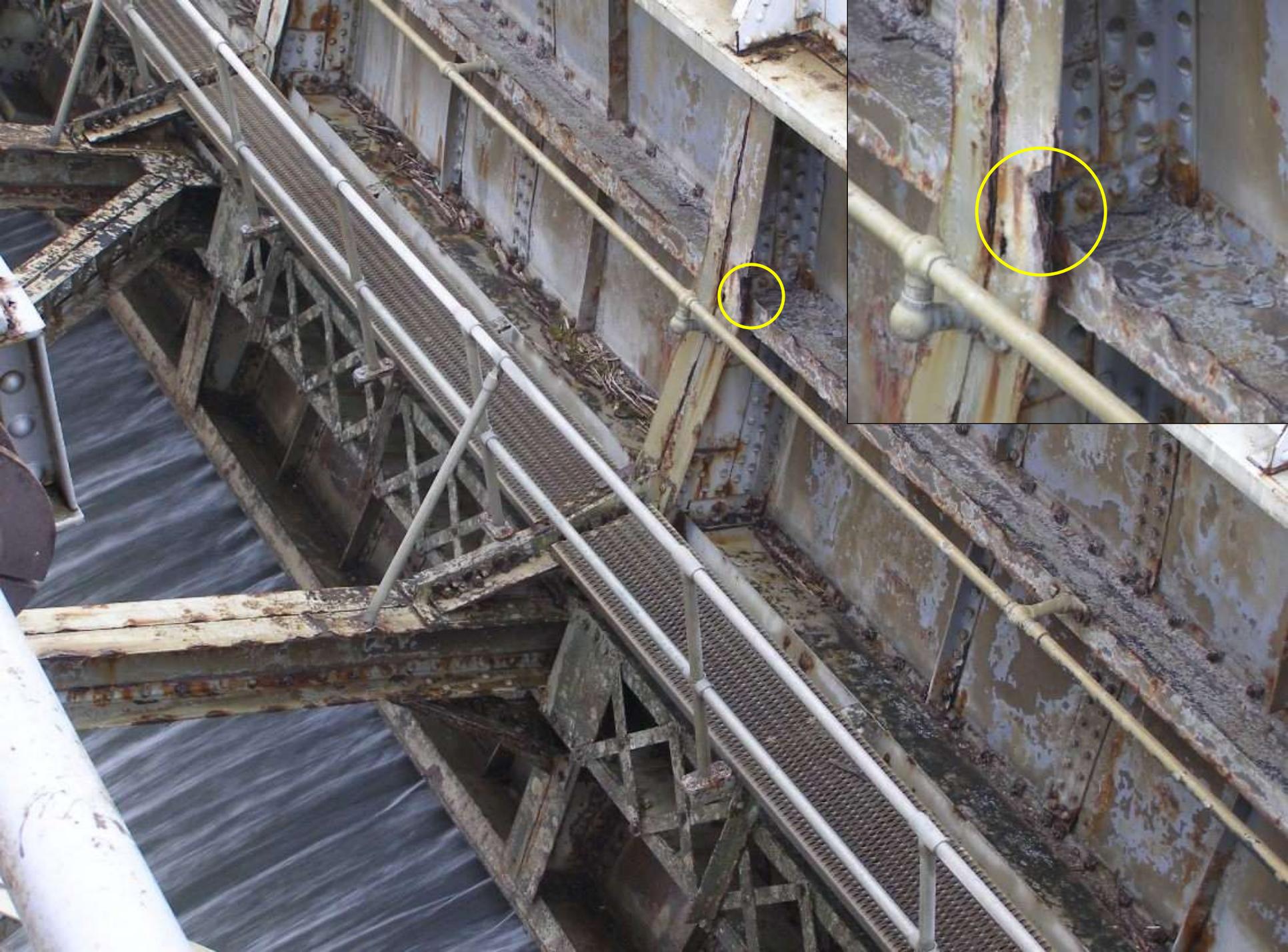






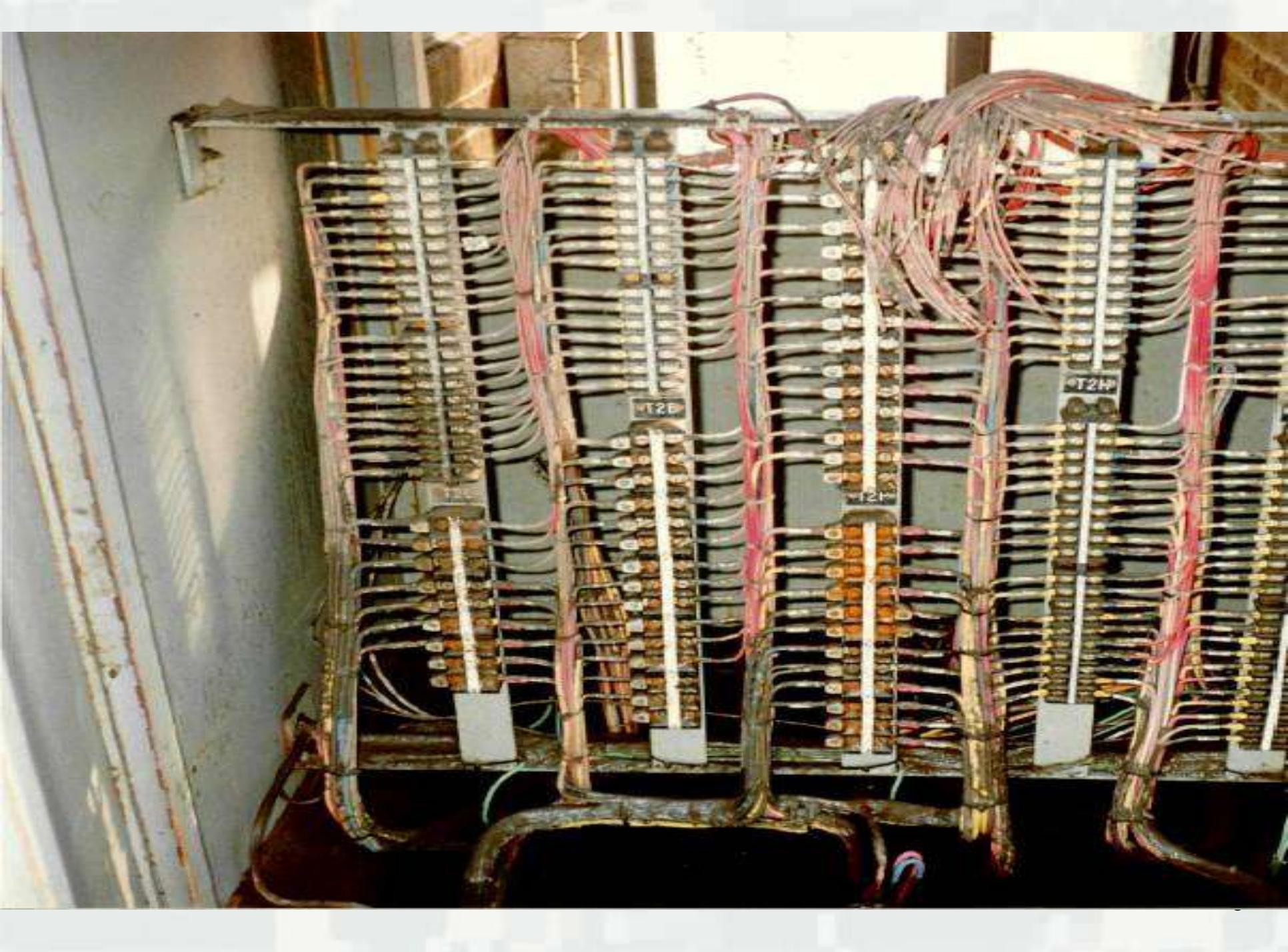


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Operations and Maintenance

Development and revising SOP for O&M

Development of an emergency response plan

Coordination efforts with users

Coordination efforts with other nearby or similar sites

Weekly safety meetings and status reports

Ongoing inspection during regular O&M

Annual site inspections

Maintaining, revising and updating maintenance records

Periodic Inspections

Development of a long term maintenance plan

Developing and revising prioritized maintenance list



Backlog Prioritization

Measurement Criteria:

Criticality –

- Risk of failure

- Duration and severity of failure

Impacts –

- Consequences of not doing repairs

- Benefits of completing repairs





Task # MVR017: Lockport Channel Concrete Wall (Major Rehabilitation)

Location: Chicago Sanitary & Shipping Canal

Description/Condition : The walls between river mile RM 291.1 to RM 294.1 were built by the metropolitan sanitary district of greater Chicago (MSDGC) in the 1890's and 1900s. The last rehabilitation of these walls was in 1924. These walls are critical to the maintenance of the navigation pool and the condition index is 36-44.

Criticality, Navigation, Environmental, Safety Impacts: Very high criticality to navigation and safety. Since there are many areas of the wall that are leaking and sink holes have developed, this maintenance is necessary to preclude imminent failure. Significant navigation and safety benefits that preserves vital navigation capability, valuable infrastructure, and lives.







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Challenges to Inland Waterway Navigation

191 lock sites with 237 lock chambers

15% of these are 1,000-1,200 feet long

50% of total are over 50 years old

Annual capital funding risen from \$200 to \$650 million
(much due to ARRA)

IMTS funding shortfall

Learn more from IWR:
www.CorpsResults.us



Flood Risk Management

Since 1936, the Corps:

- Completed over 400 major lake and reservoir projects;

- Emplaced over 8,500 miles of levees and dikes;

- Implemented hundreds of smaller local FRM projects.

These projects prevented approx. \$706 billion in damages, most of that within the last 25 years.



Flood Risk Management

MVR maintains 82 federal and 21 non-federal projects in the MVR PL 84-99 program

Includes over 800 miles of levee.

Dam Safety Program: Federal Guidelines for Dam Safety – 1979; WRDA 1996.

Emergency Action Plans.

Interim Risk Reduction Measures.

Developed Backlog Maintenance list in 2008

Levee Safety Program:

Created in 2006 – mission to assess integrity of levees

Ensure systems do not present unacceptable risk to public.

Periodic Inspections to develop assessments of levees



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SEARCH

★ HOME ★ REPORT CARDS ★ STATES ★ CATEGORIES ★ SOLUTIONS ★ TAKE ACTION ★ NEWSROOM ★



8:39



2009 Grades

| | |
|-----------------------------|----|
| Aviation | D |
| Bridges | C |
| Dams | D |
| Drinking Water | D- |
| Energy | D+ |
| Hazardous Waste | D |
| Inland Waterways | D- |
| Levees | D- |
| Public Parks and Recreation | C- |
| Rail | C- |
| Roads | D- |
| Schools | D |
| Solid Waste | C+ |
| Transit | D |
| Wastewater | D- |

America's Infrastructure GPA: **D**

Estimated 5 Year Investment

Need: **\$2.2 Trillion**

Ongoing Initiatives

ASCE – study to identify financial impacts of infrastructure to individuals; reports to be completed by Mar 2012

NRC – contracted by Corps to examine infrastructure and Corps' long term plans

DOT – Formed National Advisory Council on Maritime issues

Corps – expanding regional plans to national level using Asset Management (AM) Program

- expanding AM into all Business Lines
- recommending actuarial study for PRIP



Asset Management Program

Mission:

Managing the life-cycle of infrastructure assets with innovative and adaptive strategies to ensure those assets continue to provide value to the Nation and meet expected levels of service while mitigating risk

Simply stated:

Inventory (what you own)

Condition (what is the condition of what you own)

Investment Strategy (driven by risk-informed decision-making)

Program started in 2008

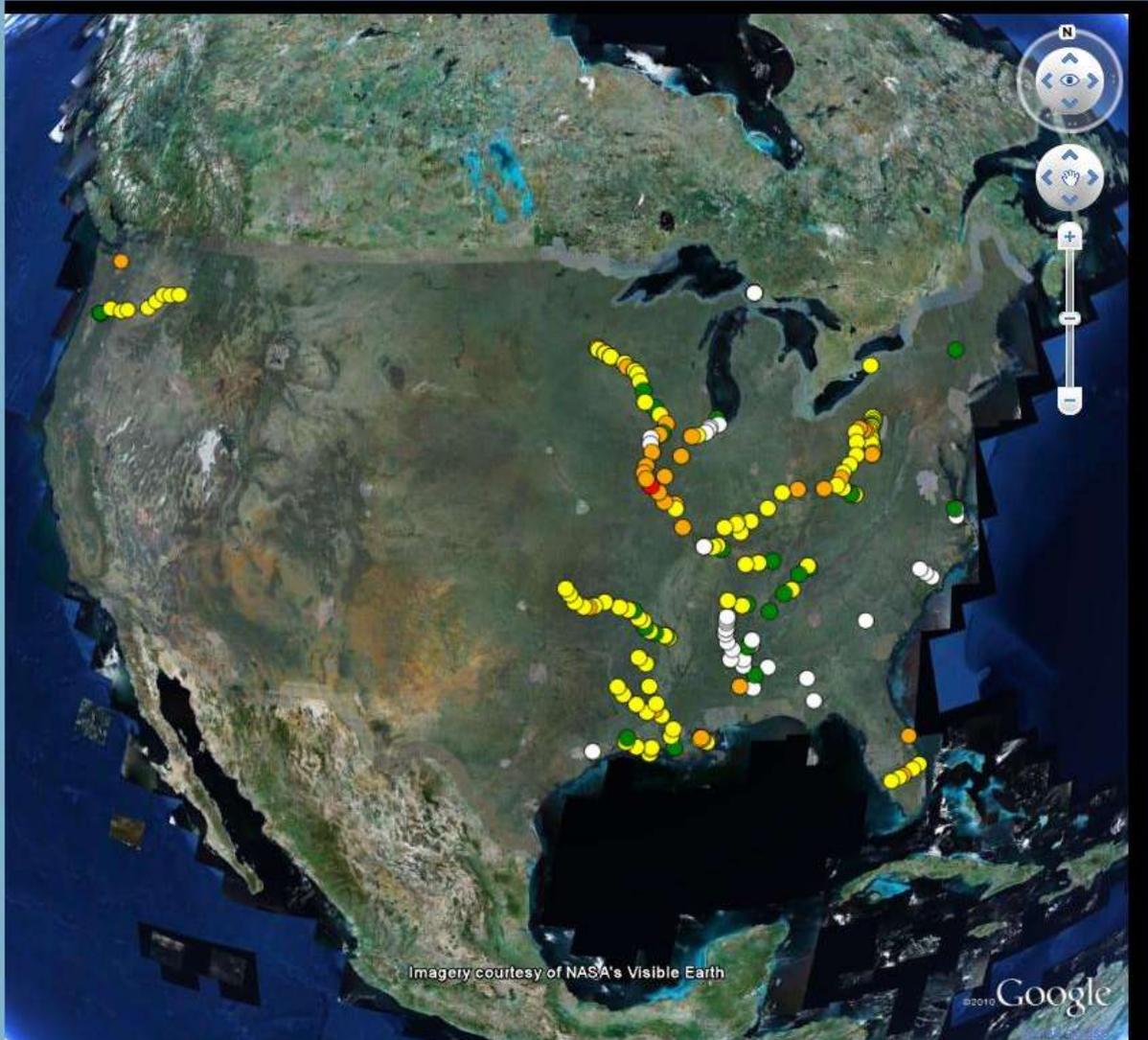


Color Reference

- Excellent
- Good
- Poor
- Inadequate
- Fail/Failing
- Completely Failed
- No Data

- USACE Divisions
- USACE Districts
- States

- ▶ Great Lakes and Ohio River
- ▶ Mississippi Valley
- ▶ North Atlantic
- ▶ Northwestern
- ▶ South Atlantic
- ▶ Southwestern



Imagery courtesy of NASA's Visible Earth

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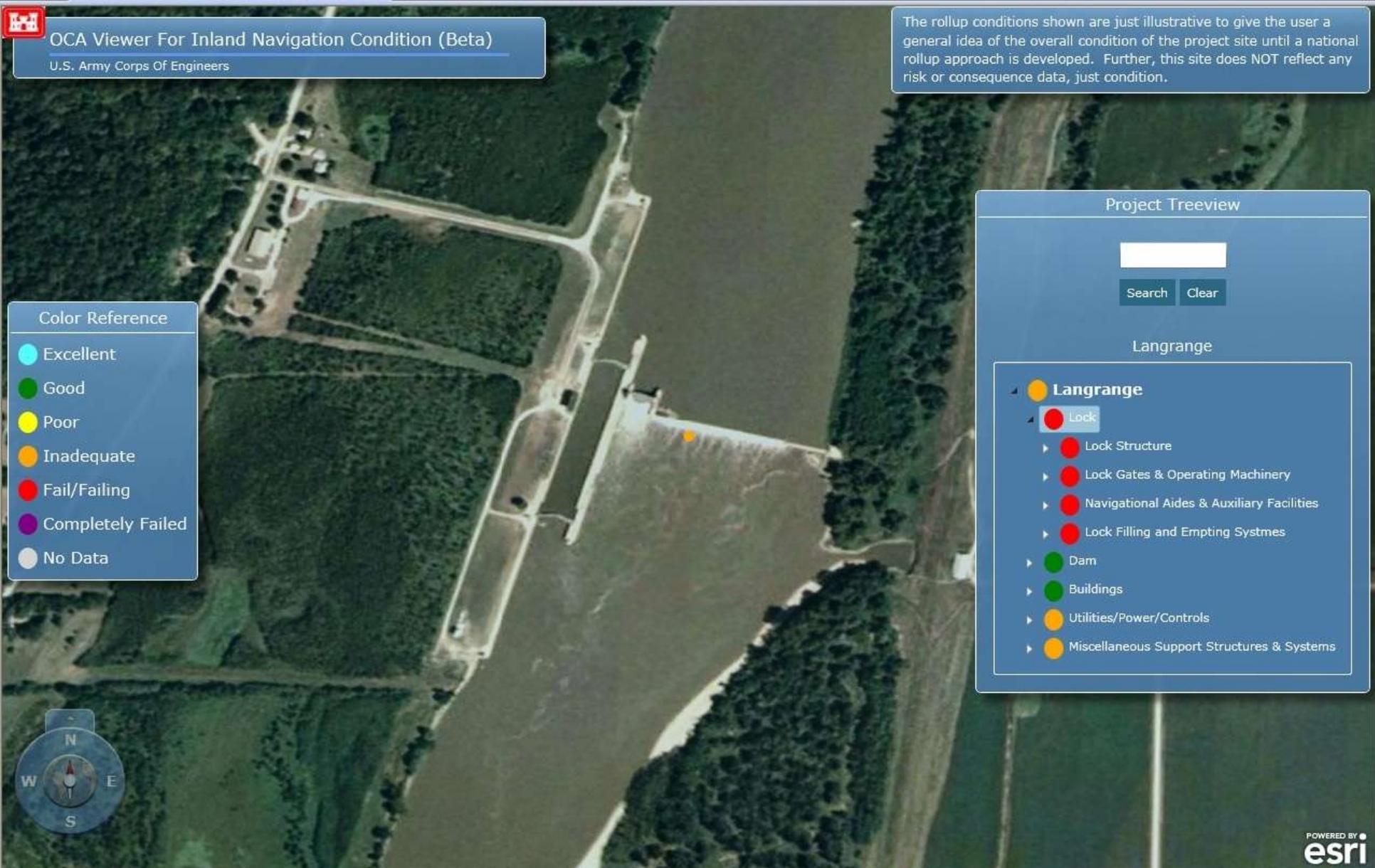
Project Treeview

Search Clear

Select an Assessed Project



The rollup conditions shown are just illustrative to give the user a general idea of the overall condition of the project site until a national rollup approach is developed. Further, this site does NOT reflect any risk or consequence data, just condition.



Color Reference

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Project Treeview

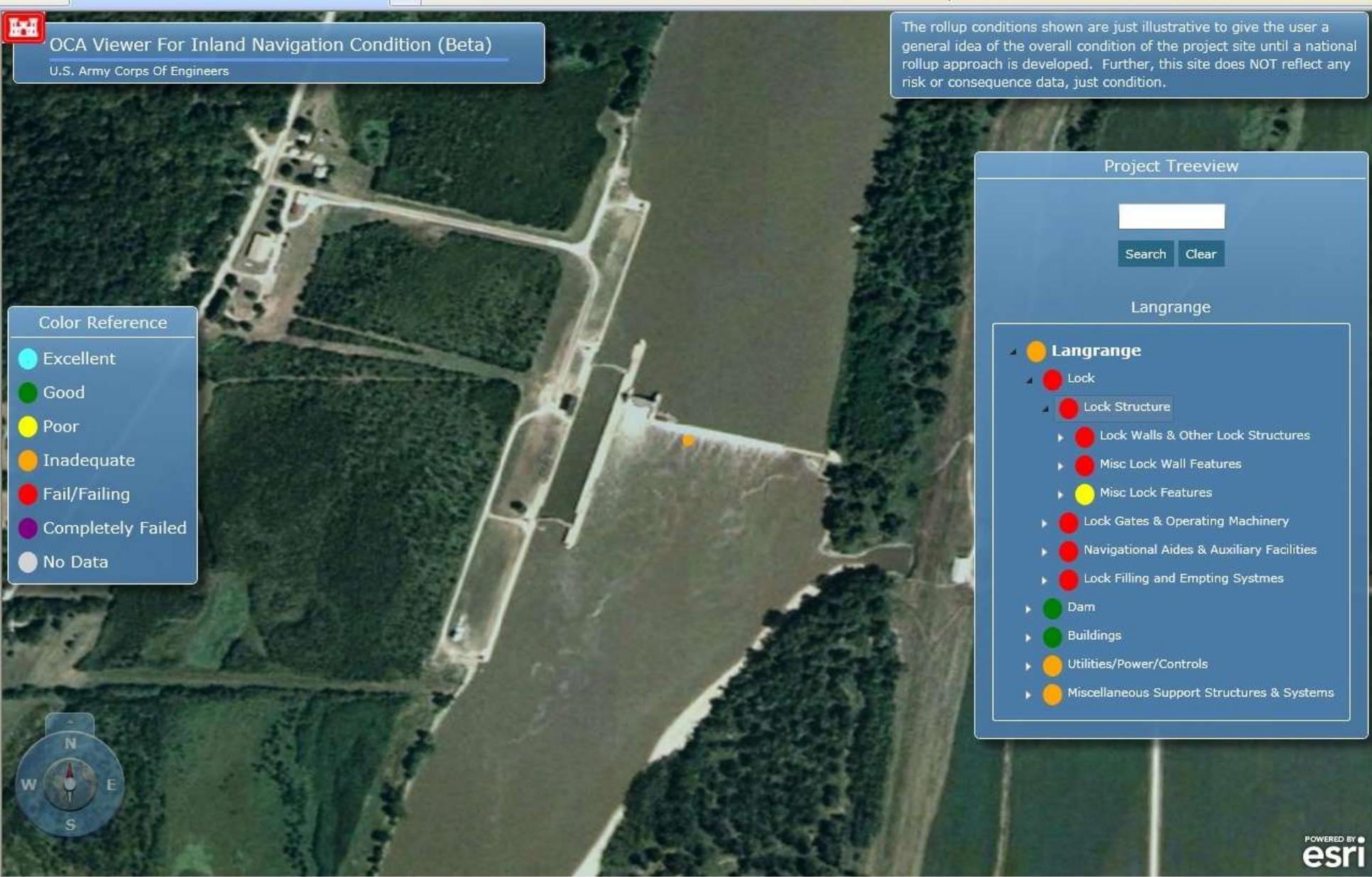
Search Clear

Langrange

- Langrange
 - Lock
 - Lock Structure
 - Lock Gates & Operating Machinery
 - Navigational Aides & Auxiliary Facilities
 - Lock Filling and Emptying Systems
 - Dam
 - Buildings
 - Utilities/Power/Controls
 - Miscellaneous Support Structures & Systems



The rollup conditions shown are just illustrative to give the user a general idea of the overall condition of the project site until a national rollup approach is developed. Further, this site does NOT reflect any risk or consequence data, just condition.



Color Reference

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- Inadequate
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- Completely Failed
- No Data



Project Treeview

Search Clear

Langrange

- Langrange
 - Lock
 - Lock Structure
 - Lock Walls & Other Lock Structures
 - Misc Lock Wall Features
 - Misc Lock Features
 - Lock Gates & Operating Machinery
 - Navigational Aides & Auxiliary Facilities
 - Lock Filling and Emptying Systems
 - Dam
 - Buildings
 - Utilities/Power/Controls
 - Miscellaneous Support Structures & Systems

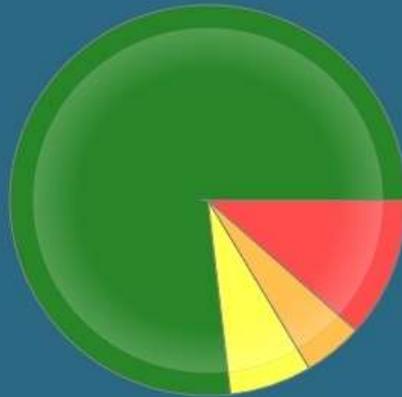


Component Condition Rating

Click on a section of the chart to view only Components of that Condition or click a level of the Project tree on the right to view Components of that level

View Reports

Component Break-Down



Legend

- 0% Excellent
- 76.8% Good
- 6.7% Poor
- 4.9% Inadequate
- 11.6% Failed or Failing
- 0% Completely Failed

Langrange

- ▶ Lock
- ▶ Dam
- ▶ Buildings
- ▶ Utilities/Power/Controls
- ▶ Miscellaneous Support Structures & Systems

Grouped by: Feature System SubSystem

| Photos | Component | SubComponent | Rating |
|------------------------------------|-----------|------------------------|---------------------|
| Lock | | | |
| Lock Structure | | | |
| Lock Walls & Other Lock Structures | | | |
| + | 0 | Landside Wall Primary | STABILITY B |
| + | 0 | Landside Wall Primary | STRUCTURAL B |
| + | 0 | Landside Wall Primary | DETERIORATION D |
| + | 0 | Landside Wall Primary | Foundation System B |
| + | 0 | Riverside Wall Primary | STABILITY B |
| + | 0 | Riverside Wall Primary | STRUCTURAL C- |
| + | 0 | Riverside Wall Primary | DETERIORATION F |
| + | 0 | Riverside Wall Primary | Foundation System B |













PAMBA Farmdale Festival 2011
Peoria Area Mountain Bike Association Annual Races
Farm Creek Reservoir Project, East Peoria, IL

Summary

Infrastructure - O&M

Sustainability

Asset Management

Regionalization

Sharing of Information

Projects

