

# NRC Water Science and Technology Board (WSTB)

- Conducts studies on a wide range of water sciences, technology, and legal and policy issues.
- Aims to improve scientific and technological bases of important policy decisions and issues associated with the full range of water management uses. Decisions and issues sometimes entail differences of scientific opinions, and/or socio-economic preferences, regarding water use.
- Key sponsors: U.S. Army Corps of Engineers; U.S. Department of the Interior (esp. U.S. Geological Survey); Environmental Protection Agency; Federal Emergency Management Agency

# Water Science and Technology Board

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# WSTB Project Portfolio

**Water Supplies and Drinking Water Quality**

**Civil Works Infrastructure and Operations**

**Groundwater Contamination and Remediation**

**Hydrologic Extremes of Flood and Drought**

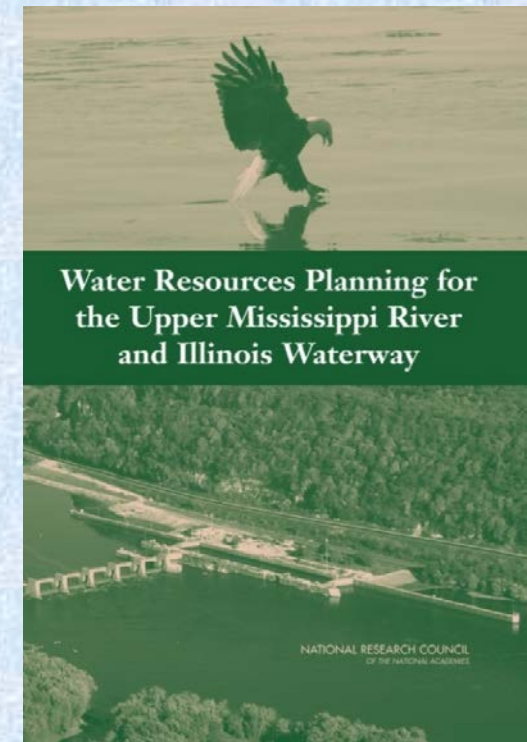
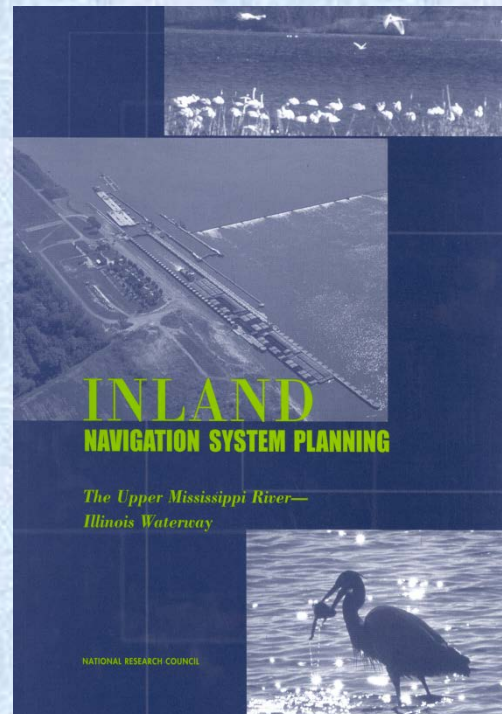
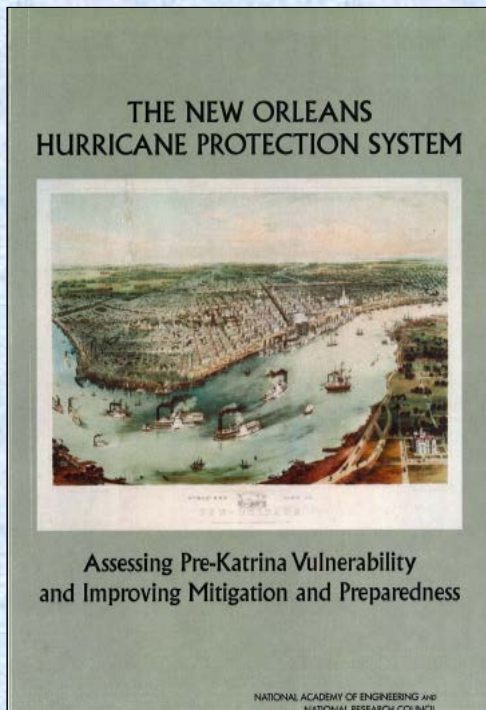
**River Systems and Water Quality**

**Aquatic Ecosystem Restoration**

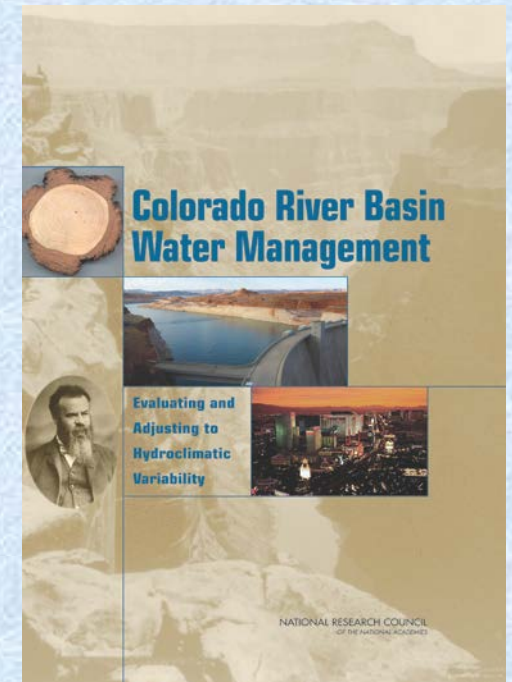
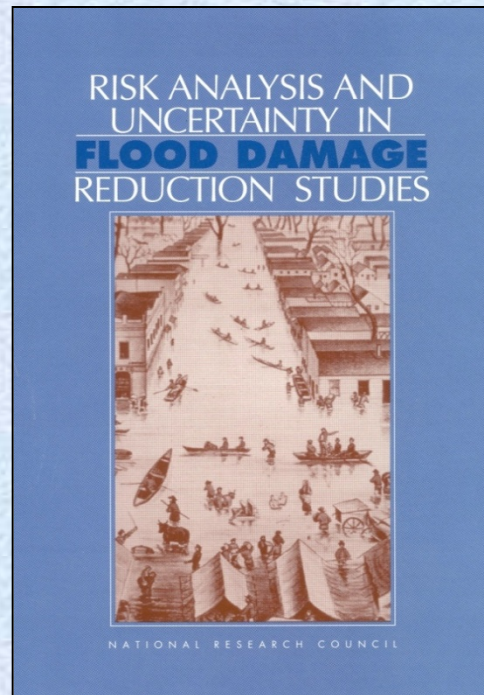
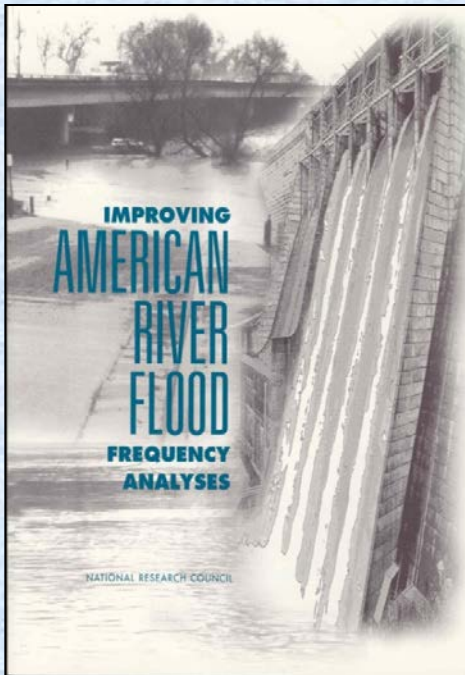
**Hydrologic Sciences**



# Civil Works Infrastructure and Operations

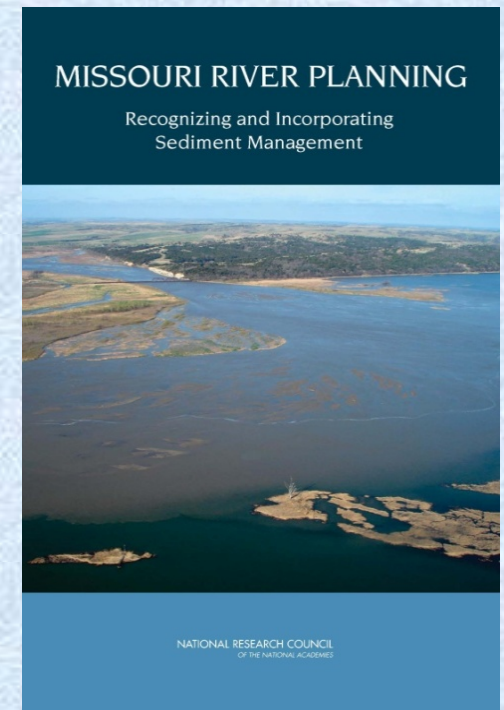
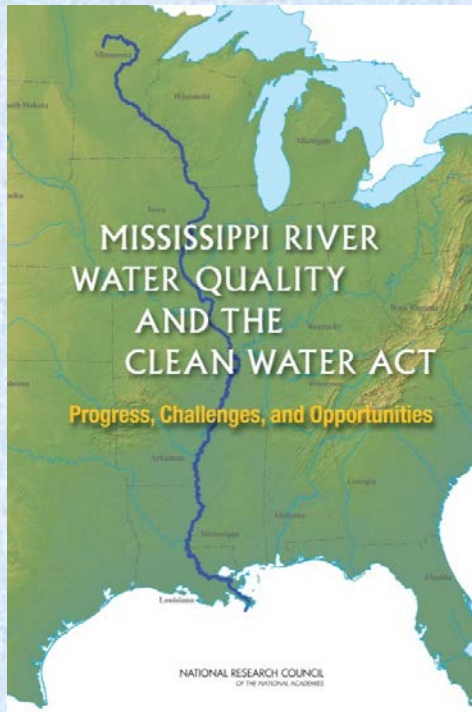


# Hydrologic Extremes of Flood and Drought

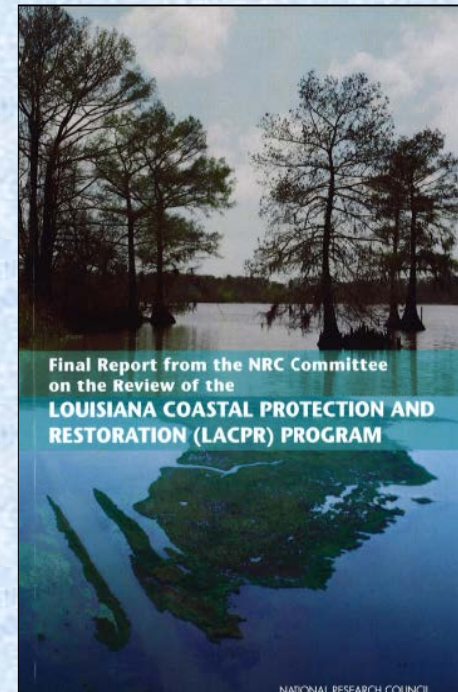
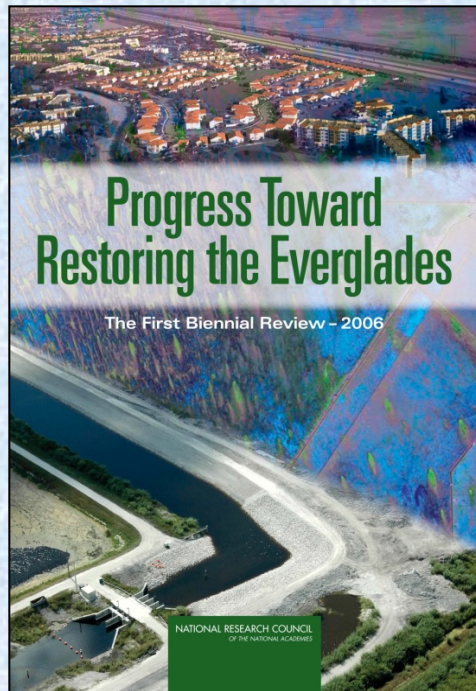




# River Systems and Water Quality



# Aquatic Ecosystem Restoration





# U.S. Army Corps of Engineers Water Resources Infrastructure: Deterioration, Investment, or Divestment?

# Statement of Task

“...identify alternatives and opportunities for improved decision making and prioritization in regard to maintenance, upgrades, and modernization of the navigation, flood management, hydropower, and related ecosystem infrastructure managed by the Corps.”

# Corps Water Infrastructure and Mission Areas

- Navigation
  - Inland and deep draft
- Flood Risk Management
- Hydropower Generation

Report does not consider ecosystem assets and resources as Corps 'hard' infrastructure



# Corps Water Infrastructure and Mission Areas

## NAVIGATION

*Inland navigation* – federal infrastructure showing widespread signs of deterioration; heavily dependent on general revenue from U.S. Treasury; users pay an Inland Waterways Fuel Tax (\$.20/gallon); proposals for ‘lockage fees’ are strongly resisted

*Ports and harbors* – little federally-owned infrastructure; Corps’ roles focused on maintaining navigable channel and docking depths; allows for more opportunities for partnerships with private sector.

# Flood Risk Management Infrastructure

- Financial OMR responsibilities are very different than in the Corps' navigation mission area.
- Corps-constructed levees that are locally maintained are eligible for fed. maintenance in emergency situations under Public Law 84-99. P.L. 84-99 is not meant to cover routine levee maintenance.
- ***Corps role in levee OMR across the nation generally is one of technical support.***

# Corps Water Infrastructure Options

## 1) **Business as Usual**

This entails increased frequency of infrastructure failure and negative social, economic, and public safety consequences. The potential extent of these negative consequences is not well understood.

## 2) **Increase Federal Funding for OMR**

There has been a long-term declining trend in funding for Corps infrastructure OMR. The future viability of this option is unclear.

## 3) **Divest or Decommission**

This would reduce OMR obligations, but would require action by Congress or the administration.



# Corps Water Infrastructure Options (cont.)

## 4) Increase revenues from Corps project operations

Opportunities exist to expand revenue capture from some projects, esp. inland navigation and hydropower. Legal barriers currently inhibit greater revenue capture from these sources.

## 5) Expand partnerships with states, communities, and private sector

Many partnership arrangements offer opportunities for more efficient OMR activities. Greater private sector participation in Corps OMR activities will not be desirable in all circumstances.

***The Congress and/or administration should commission a study of the opportunities for more extensive partnerships for the OMR of Corps water infrastructure.***

# Federal Leadership and Action

More specific direction from the Congress regarding OMR priorities will be essential to sustaining the Corps' highest priority and most valuable infrastructure.

The executive branch also could play a more aggressive role in promoting dialogue between the Corps and Congress on infrastructure OMR needs and priorities.