



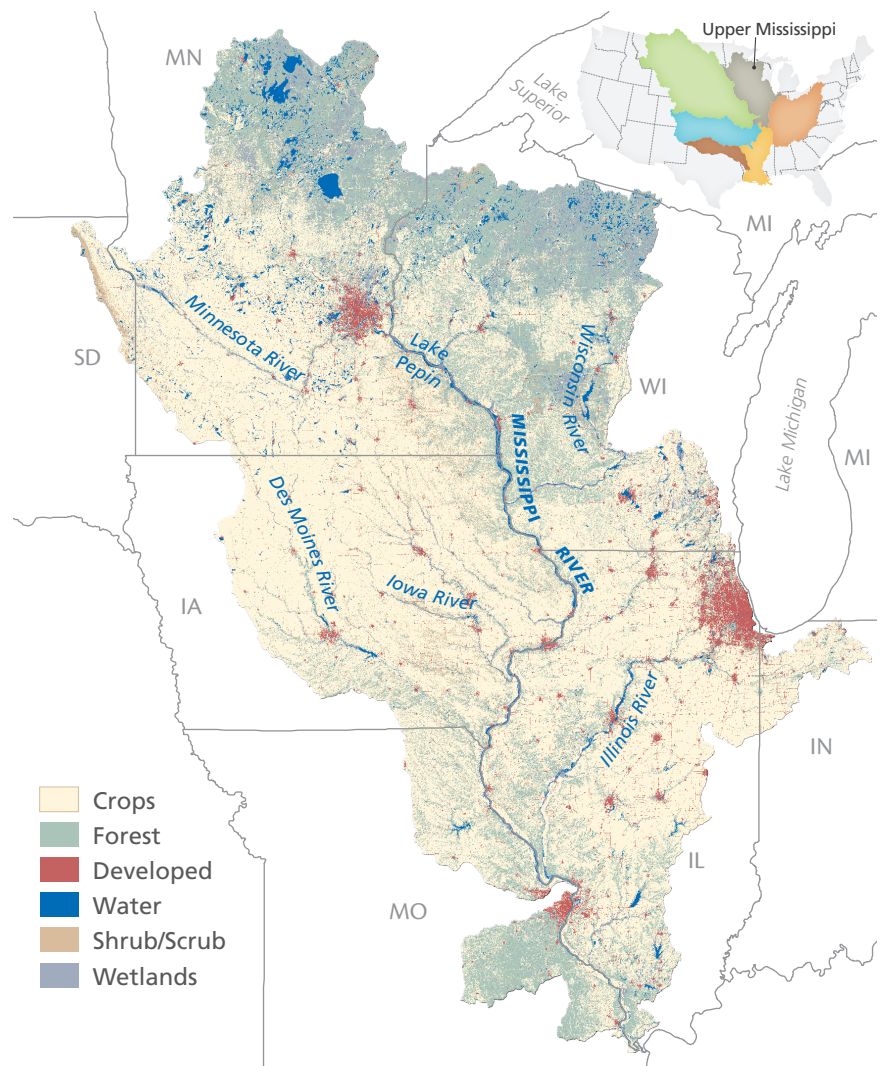
## Report card workshop

# Upper Mississippi River Sub-Basin

America's Watershed Initiative is a collaboration of organizations, businesses, and agencies which will bring a basin-wide perspective to the Mississippi River Basin's greatest challenges. Developing a comprehensive watershed report card is an important component of the Initiative. It will summarize and communicate the status and trends in achieving objectives for six broad management goals. The report card results will encourage people and organizations to engage in issues affecting the watershed.



The America's Watershed Initiative Report Card project began with a regional workshop for the Upper Mississippi River Sub-Basin, held in Moline, Illinois on September 11–12, 2013. At the workshop, stakeholders and experts from social, economic, and environmental sectors identified easily understood and transparent ways to measure status and trends for the Upper Mississippi River Sub-Basin in relation to six broad goals. Similar workshops will be convened in each of the five remaining sub-basins and results will be integrated into a report card for the entire Mississippi River Basin.



Participants at the regional workshop discuss Upper Mississippi Sub-Basin threats and indicators. Image courtesy of USACE.

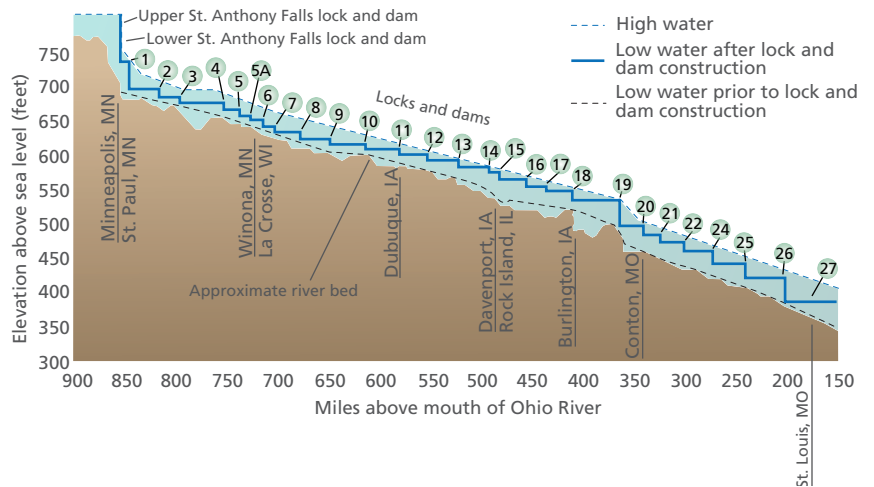


The map (top) shows the Upper Mississippi River Sub-Basin land use types. It is dominated by agricultural row crops and has several large urban centers. However, there are sections of the river that still remain unaltered (photo). Image courtesy of USACE.

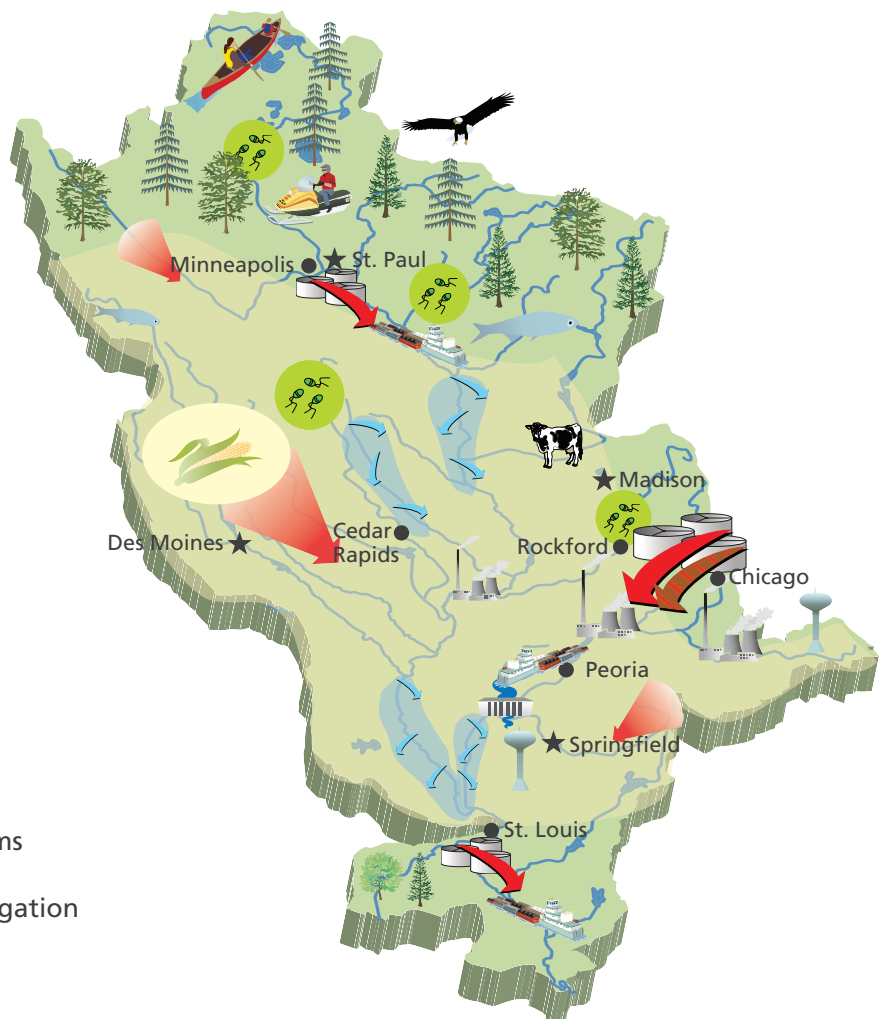
# A dynamic, working landscape








The Upper Mississippi River Sub-Basin is a large and diverse watershed, supporting a variety of uses and natural resources. These include a population of about 30 million people, with nearly 80% of this in urban areas such as Minneapolis–St. Paul, MN; St. Louis, MO; and Chicago, IL; over 100 million tons of commodities transported annually on the 1,200 navigable miles of the Upper Mississippi and Illinois River systems, where navigation is supported by a series of locks and dams (Mississippi River system locks, figure at right); over 60% of basin land engaged in agriculture (cropland or pasture); a variety of industries relying both directly and indirectly on water supplies; drinking water supplied for millions of residents; wildlife habitats, fisheries, and flyways; and a recreation hub drawing millions of visitors per year.

Maintaining the viability and vitality of the basin will mean addressing difficult current and future challenges including aging infrastructure in the navigation, water supply, and wastewater sectors; increasing variability in weather patterns and water flows; continuing demands on water supplies from growing populations; impacts to water quality from non-point sources of pollution; invading exotic species; preserving ecosystem functions and recreation opportunities; minimizing flood damages; and maintaining economic competitiveness.



Top: The Upper Mississippi River is used extensively for navigation. For this reason, a series of lock and dams has been built along the main stem and Illinois River. Bottom: A conceptual diagram illustrates the main threats and key features of the Upper Mississippi River Sub-Basin.



-  Harmful algal blooms
-  Nutrients
-  Wildlife habitat
-  Aquatic habitat
-  Power plants
-  Stormwater
-  Urban centers

-  Flooding
-  Water supply
-  Locks and dams
-  Shipping/navigation
-  Corn and soy belt

# How to measure status

America's Watershed Report Card is designed to report on the status of achieving six broad goals developed at the America's Watershed Summit in September 2012. The goals were developed to reflect the things that people value in the watershed. In multiple venues and contexts, including the 2012 Summit, stakeholders were asked to identify things of specific value within each of the goal areas. These values could then guide the appropriate measures needed to design an assessment and reporting framework. These value statements were summarized for each goal. Potential indicators were determined at the Upper Mississippi River Sub-Basin workshop. The final list of indicators will be determined by several factors, including data availability and how well they represent the goals.

## Goals, values, and potential indicators for the Upper Mississippi River Sub-Basin



### Water supply

People value clean surface and ground water for multiple uses, including human consumption, agricultural and industrial water supplies, recreation, and ecosystem health.

#### Potential indicators

- Environmental flow needs met
- Water scarcity index
- Drinking water standards met
- Percent river miles attaining designated uses



### Flood control and risk reduction

People value protection of life and property through well-maintained flood protection and risk management infrastructure and the thoughtful integration of natural features that historically tempered flood risk.

#### Potential indicators

- Percent miles of levee inspected and certified
- Number, intensity of flood events
- Number of people living in mapped hazard areas
- Number of flood disasters declared
- Critical infrastructure at risk



### Economy

People value high agricultural, industrial, and energy productivity.

#### Potential indicators

- Employment by sector
- Unemployment rates
- Income
- Productivity by sector



### Ecosystems

People value the natural ecosystems of the Mississippi River watershed and the abundant and diverse fish and wildlife resources they support.

#### Potential indicators

- Percent natural cover
- Percent floodplain connected
- Indicator species
- Ratio of native to non-native species
- Benthic and Fish Indices of Biotic Integrity



### Recreation

People value access to diverse recreational opportunities including hiking, boating, fishing, etc. People also value the economic benefits of a vibrant tourist economy.

#### Potential indicators

- Number of fishing licenses issued
- Number of hunting licenses issued
- Number of camping permits issued
- Number of participants in Christmas bird count



### Transportation

People value safe, secure, well-maintained, and future-oriented inland navigational infrastructure that is integrated with rail and highway transport to support cost-effective movement of goods and materials.

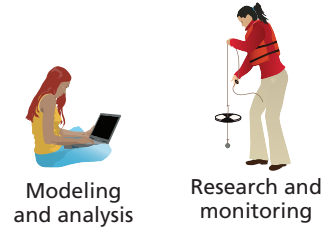
#### Potential indicators

- Condition rating
- Stoppages
- Wait times at locks
- Tonnage/capacity

This list of potential indicators is not intended to be comprehensive, but provide examples from what was generated at the workshop.

# The report card process

Generating a report card requires participation from managers, scientists, researchers, subject experts, and other stakeholders knowledgeable about resources and available data. The process requires broad representation across sectors and geographic areas throughout each sub-basin. These experts provide input on goals, values, desired conditions, and indicators of watershed health in each of the sub-basins. The workshop process brings different groups together to create a product and promotes broad perspectives, dialogue, and collaboration among different sectors and participants. Information and feedback from other sources unable to attend the workshops will be sought to strengthen the report card. The Mississippi River watershed includes parts of 31 states and two Canadian provinces. The watershed includes six sub-basins, which will each have their own indicators, scores, and report card results. Stakeholders from all sectors will participate in workshops in each sub-basin. A report card for the whole watershed will be developed using the information from all of the sub-basins.



Modeling and analysis

Research and monitoring



Commerce

Tourism



A shared vision by all stakeholders is needed



Civil engineering



Farmers



Resource management



Local, state, and federal government



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