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Missouri River Recovery Program: Using the Best Available Science: Monitoring Program

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MISSOURI RIVER



US Army Corps
of Engineers



R E C O V E R Y P R O G R A M

USING THE BEST AVAILABLE SCIENCE: MONITORING PROGRAM



WHAT IS THE MONITORING PROGRAM?

There is a growing body of information surrounding the manner in which a healthy river system, such as the Missouri River, functions naturally. As we work towards mitigation, recovery and ultimately restoration, an extensive science program has been implemented so that our actions can be assessed and adjusted as we move towards meeting Missouri River Recovery Program (MRRP) goals.

An important component of the science program is monitoring. Three general types of monitoring that are conducted include:

1. Determining baseline conditions prior to a construction project or management action being undertaken;
2. Assessing project performance during its life cycle; and
3. Evaluating current status and trends of important ecological, physical and social attributes.

Monitoring helps us learn how the management of the river and its habitats is influencing the Missouri River ecosystem by assessing the change over time of important ecological, physical and social attributes. This information helps ensure that MRRP decisions can utilize the most current science available when determining what actions will promote recovery of the river ecosystem, including the populations of the endangered pallid sturgeon and least tern and the threatened piping plover.

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Monitoring and research activities on the Missouri River are being implemented by many groups in many topic areas. Several monitoring efforts have been undertaken to assess species habitats and their population trends. These continued efforts will inform existing and future science efforts as well as guide the focus of future actions for management of the Missouri River basin.

Pallid Sturgeon Population Assessment

The Pallid Sturgeon Population Assessment Project has been developed by a team comprised of representatives of state and federal agencies and academia. The objective of this project is to evaluate the following characteristics of the pallid sturgeon throughout the Missouri River system:

- Pallid sturgeon abundance
- Age, weight, genetic makeup and change in these factors over time
- Geographic distribution
- Habitat use

Shallow Water Habitat Assessment and Monitoring

The Habitat Assessment and Monitoring Program was developed to assess the physical and biological responses to shallow water habitat creation actions and assimilate information collected from monitoring efforts to inform habitat creation managers as to the effectiveness of habitat creation efforts.

Least Tern and Piping Plover Population Monitoring

The Corps monitors production of young birds and conducts an annual adult census of least terns and piping plovers on the Missouri River. The productivity monitoring includes locating nest sites, determining nest and chick success and recording chick and adult mortalities. The adult census is a comprehensive count of adult least terns and piping plovers conducted every year during the third week in June along the Missouri River.

Emergent Sandbar Habitat Assessment

The Emergent Sandbar Habitat Assessment Program was developed to monitor and evaluate the effectiveness of constructed sandbar habitat. The goal of this project is to determine if sandbar habitat created by the Corps is providing suitable habitat features for nesting and foraging least terns and piping plovers, while avoiding negative impacts to other ecosystem functions or social values.

Water Quality Monitoring

The Water Quality Program was developed to monitor the status and trends of ambient water quality parameters (i.e., temperature, nutrients, turbidity) throughout the basin. The data will be used to assess pallid sturgeon recovery, shallow water habitat development, and ultimately ecosystem recovery.

