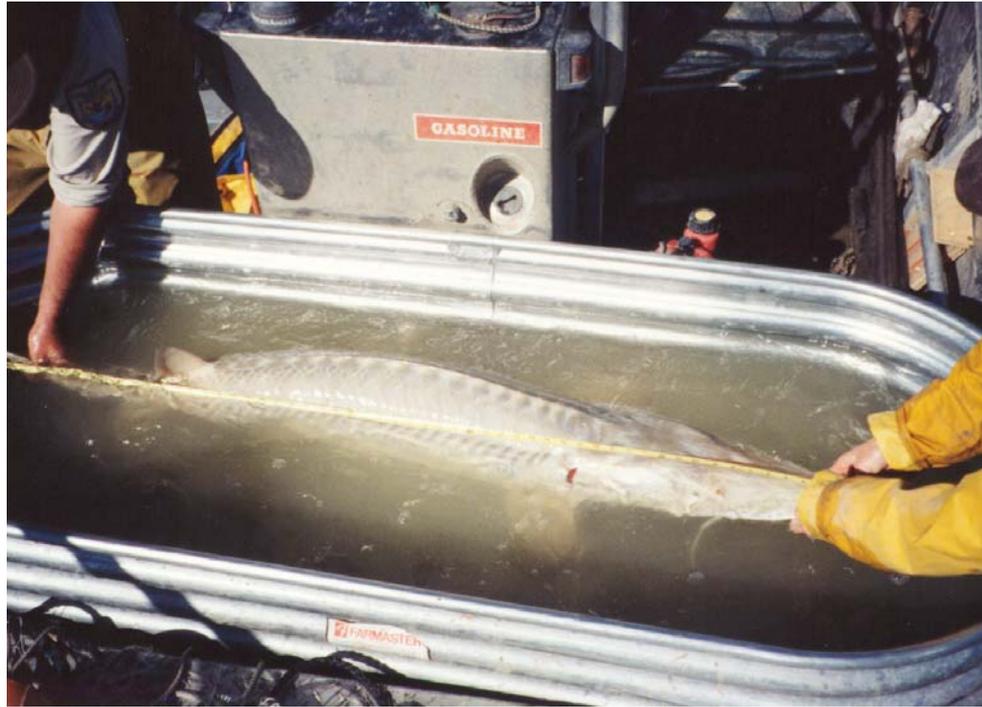


Pallid Sturgeon Recovery: Ongoing efforts to conserve, protect and restore pallid sturgeon



Presented by:
George Jordan
USFWS, Pallid Sturgeon Recovery Coordinator

Water Resources
Development Act of 2007

2003 Biological Opinion

MRRIC

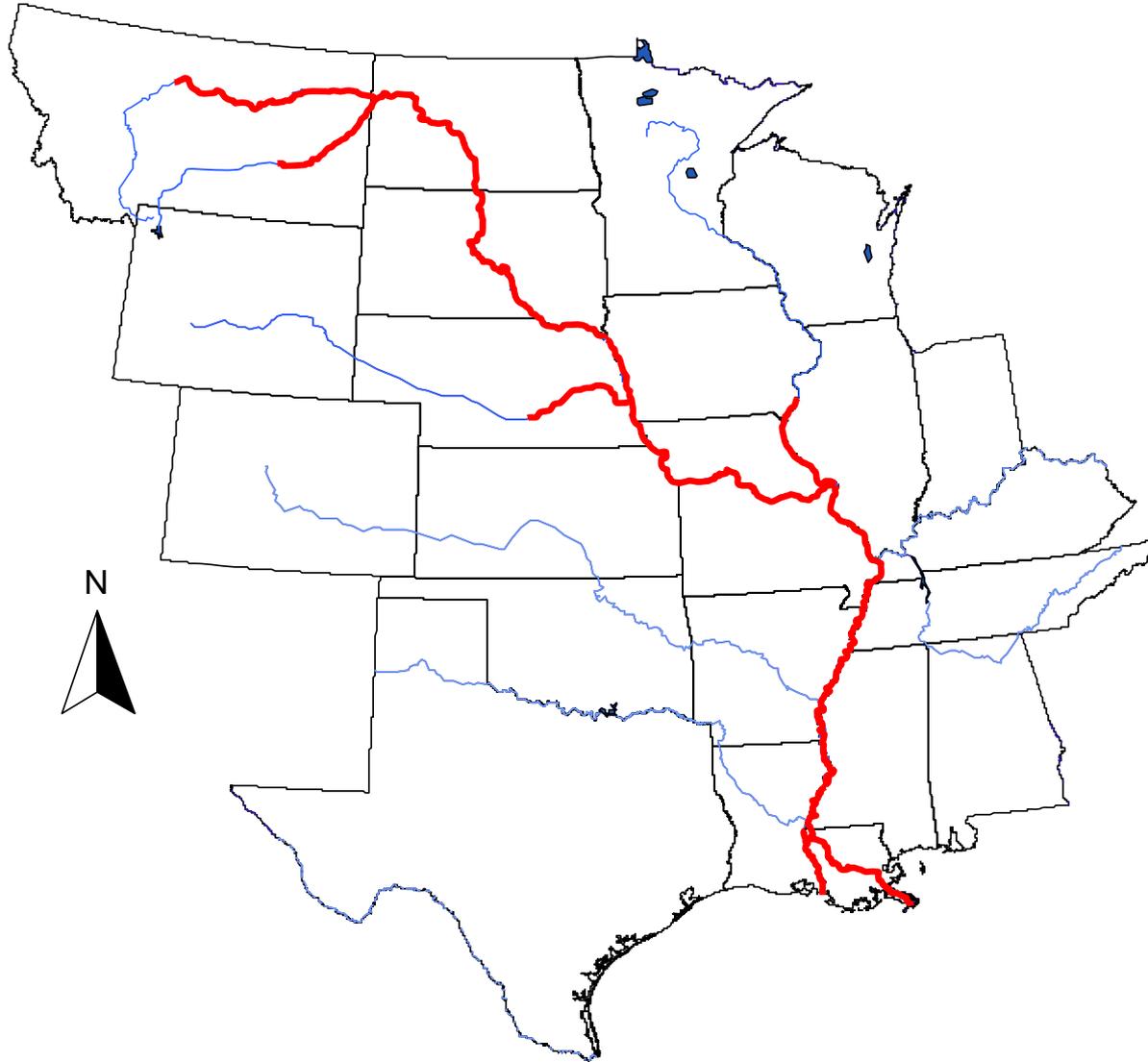
Provide Recommendations

The Corps' Study of
the Missouri River and
its Tributaries

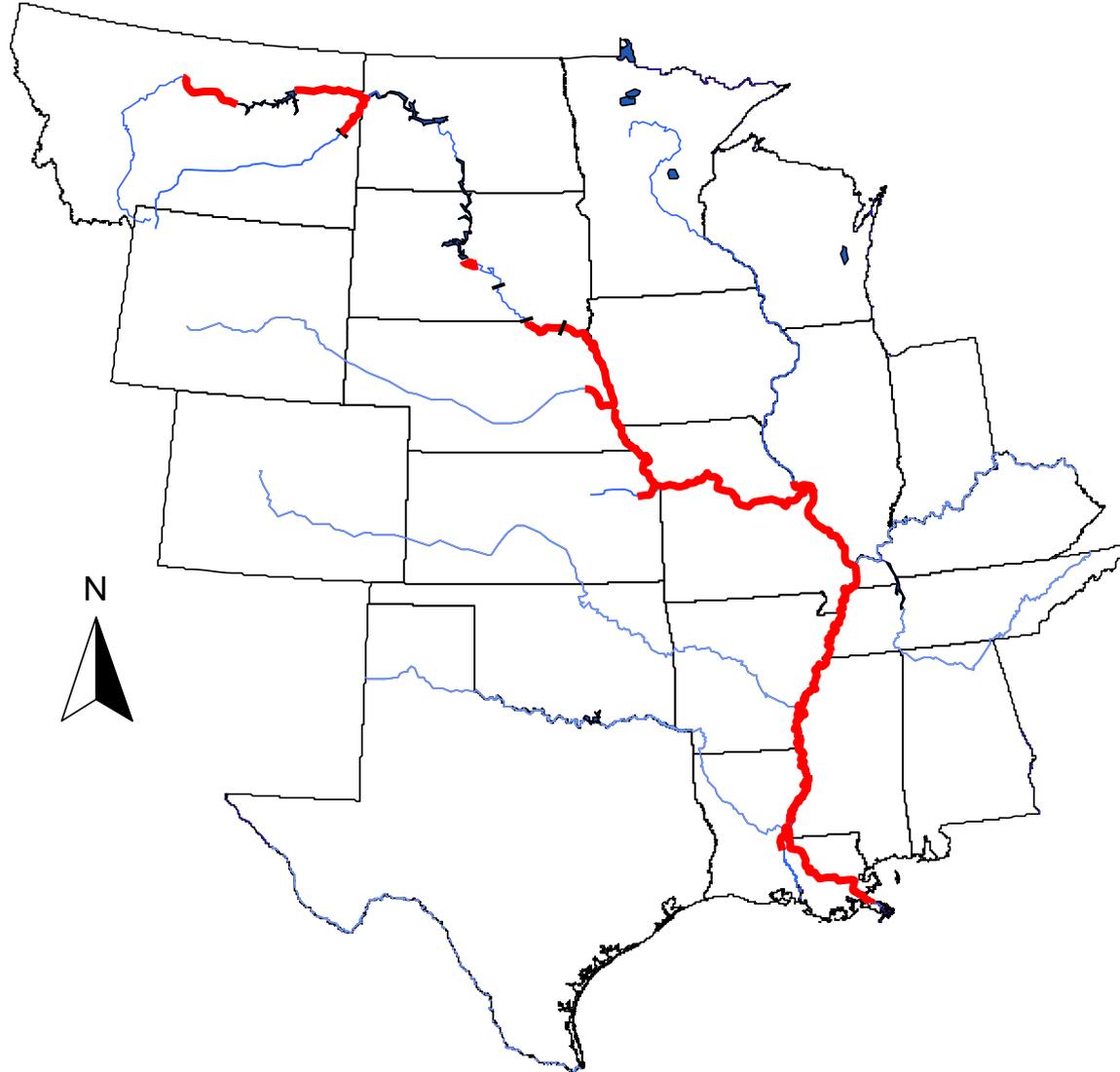
The Corps' Current
Missouri River
Mitigation and
Recovery Plan

Missouri River species
recovery work by
USFWS and basin
agencies

Historical Distribution



Current Distribution

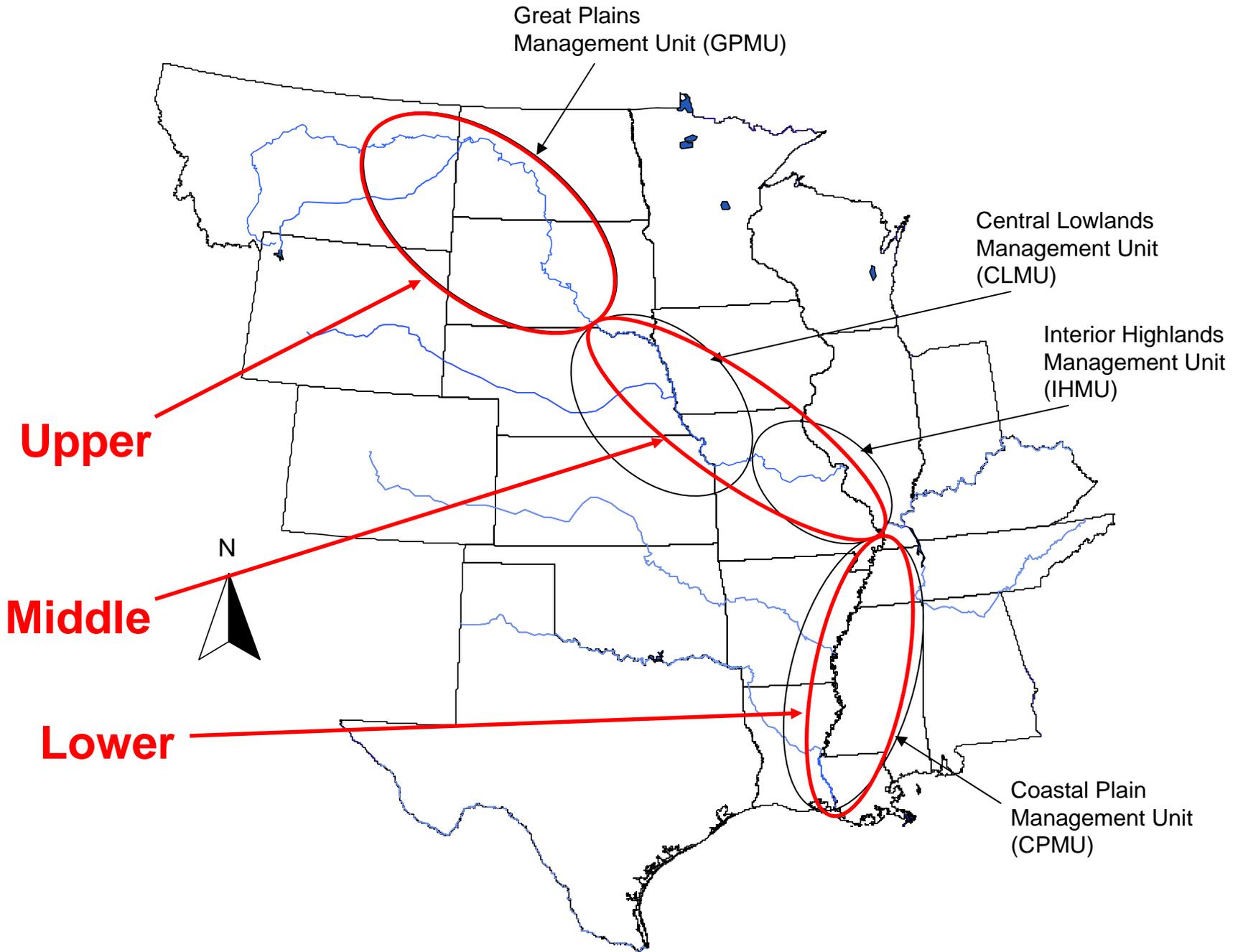


Pallid Sturgeon



Recovery Team





USFWS

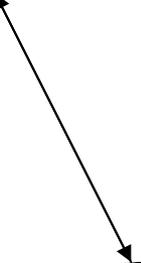
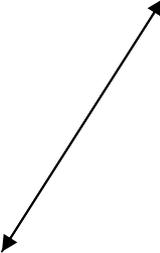


Pallid Sturgeon Recovery Team



**Genetic
Advisory
Group**

**Other
Advisory
Groups**



Stocking Committee

Tagging Committee

Habitat Committee

Propagation Committee

**Upper Basin
Workgroup**

**Middle Basin
Workgroup**

**Lower Basin
Workgroup**

Artificial augmentation

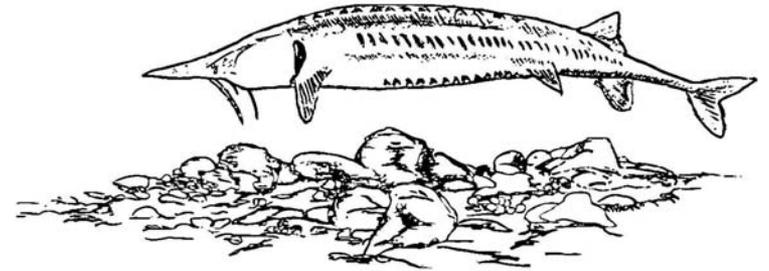
STOCKING CONDUCTED IN ACCORDANCE WITH STOCKING PLAN

- GENTIC CONCERNS
- ANNUAL STOCKING TARGETS
- STOCKING LOCATIONS
- PLAN IS ADAPTIVELY MANAGED

PALLID STURGEON

(Scaphirhynchus albus)

Range-Wide Stocking and Augmentation Plan



27 MAY 2008

Collect wild fish for spawning



Adults transported to hatcheries



Production facilities

Garrison Dam NFH and Miles City SFH

Primary producers of hatchery reared pallid sturgeon for the Upper Basin.

Gavins Point NFH

Produces of hatchery reared pallid sturgeon for the Upper and Middle Basins and maintains the only future brood program.

Neosho NFH and Blind Pony SFH

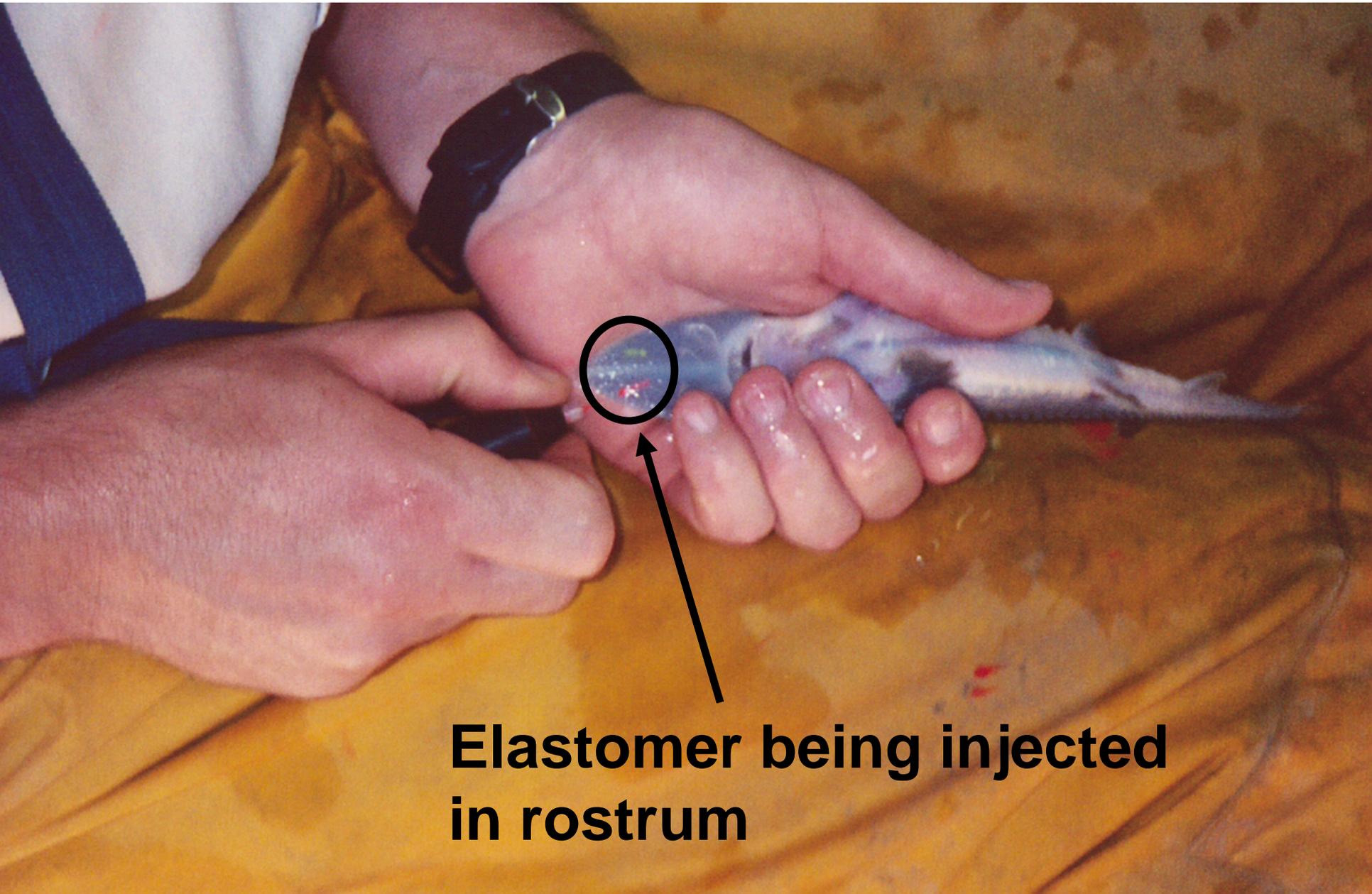
Primary producers of hatchery reared pallid sturgeon for the Middle Basin.

Bozeman Fish Technology Center

Limited production for Upper Missouri River. Emphasis on reproductive research to improve spawning, rearing, and diets.



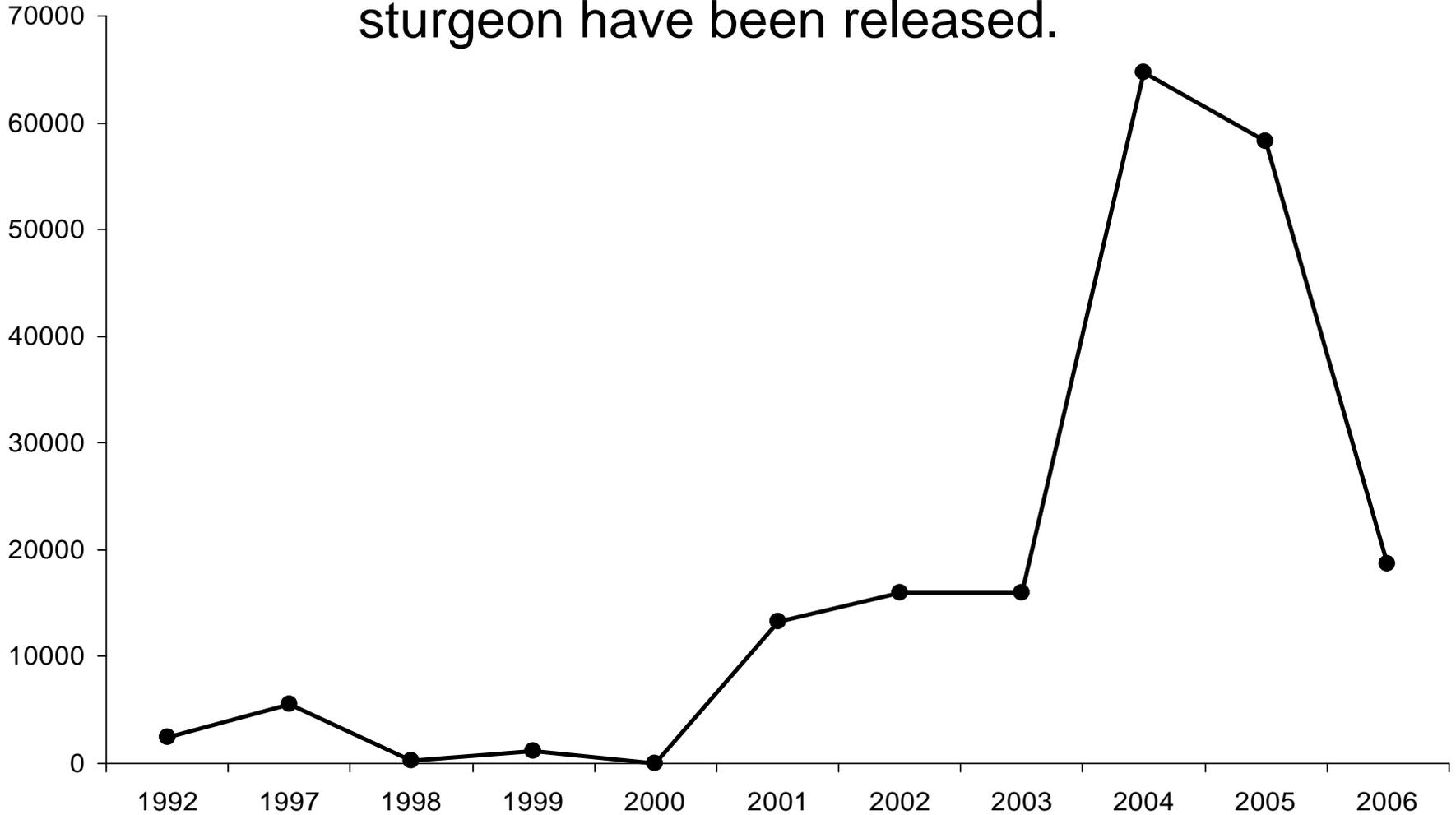
Hatchery fish are tagged prior to release



**Elastomer being injected
in rostrum**

Since 1992

Over 200,000 fingerling or larger hatchery reared pallid sturgeon have been released.



Would not be possible without support from:

- State fish and game agencies,
- Federal agencies: USACE, USFWS, USBOR, USGS,
- Volunteers,
- Private organizations,
- NGOs, and
- Universities



Population Assessment Program

- Standardized monitoring program on the Missouri River.
 - Designed to detect trend changes in pallid sturgeon population and other native species.
 - Implement in a few reaches circa 2004.
 - Fully implemented circa 2006.



Hatchery Success

- Data from the population assessment program and other monitoring efforts indicates that:
 - Hatchery fish from all year classes stocked have been documented.
 - Data will be used to develop better survival estimates to feed back into stocking plan.

Concerns about harvest effects on recovery efforts:

Stocking and augmentation of pallid populations is occurring and older hatchery fish are now reaching sizes and maturity levels that could make them susceptible to intentional or unintentional harvest.

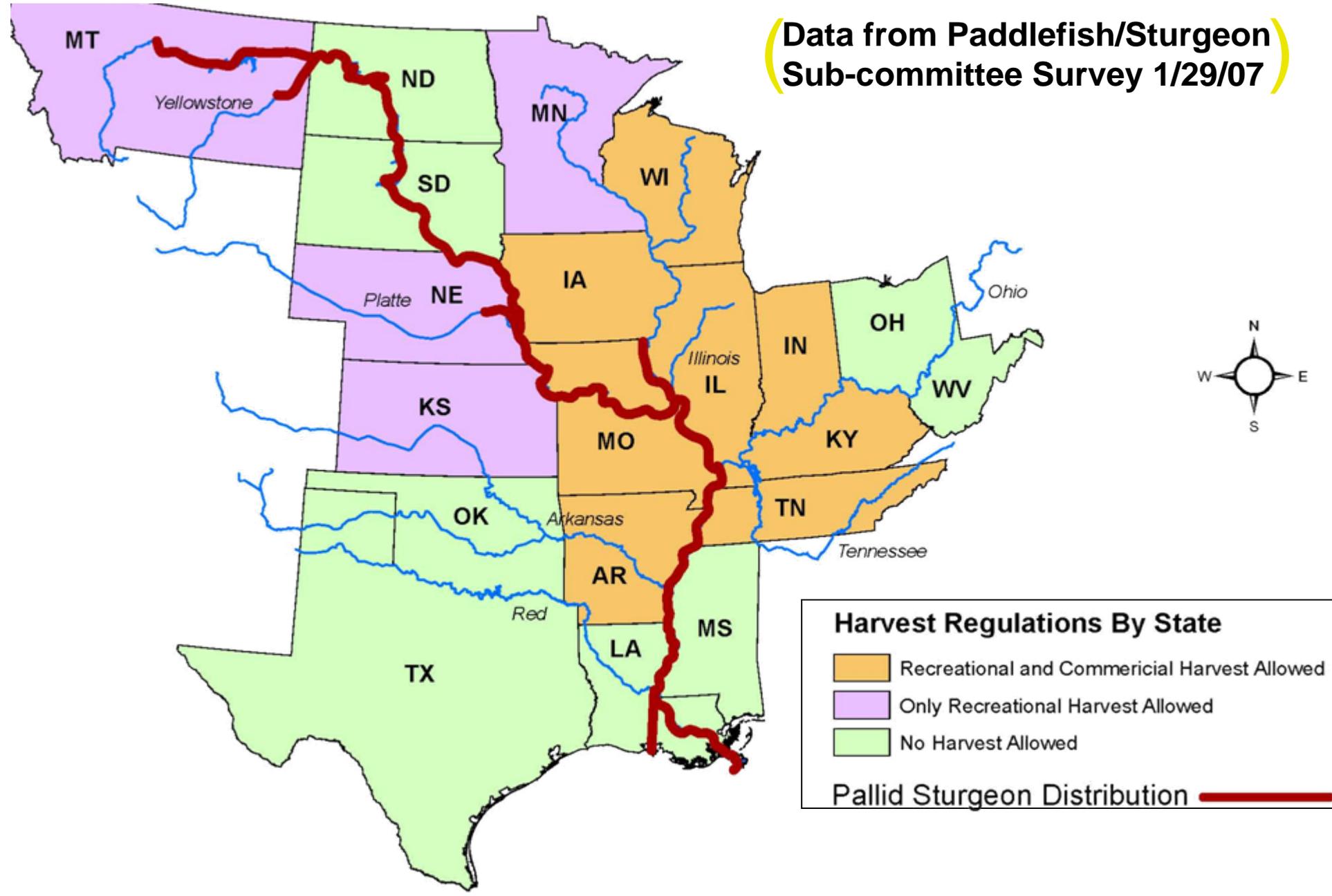
1992 or 94 YC Blind Pony fish 684 – 913 mm FL

Illegal Take of Endangered Pallid Sturgeon In the Commercial Shovelnose Fishery



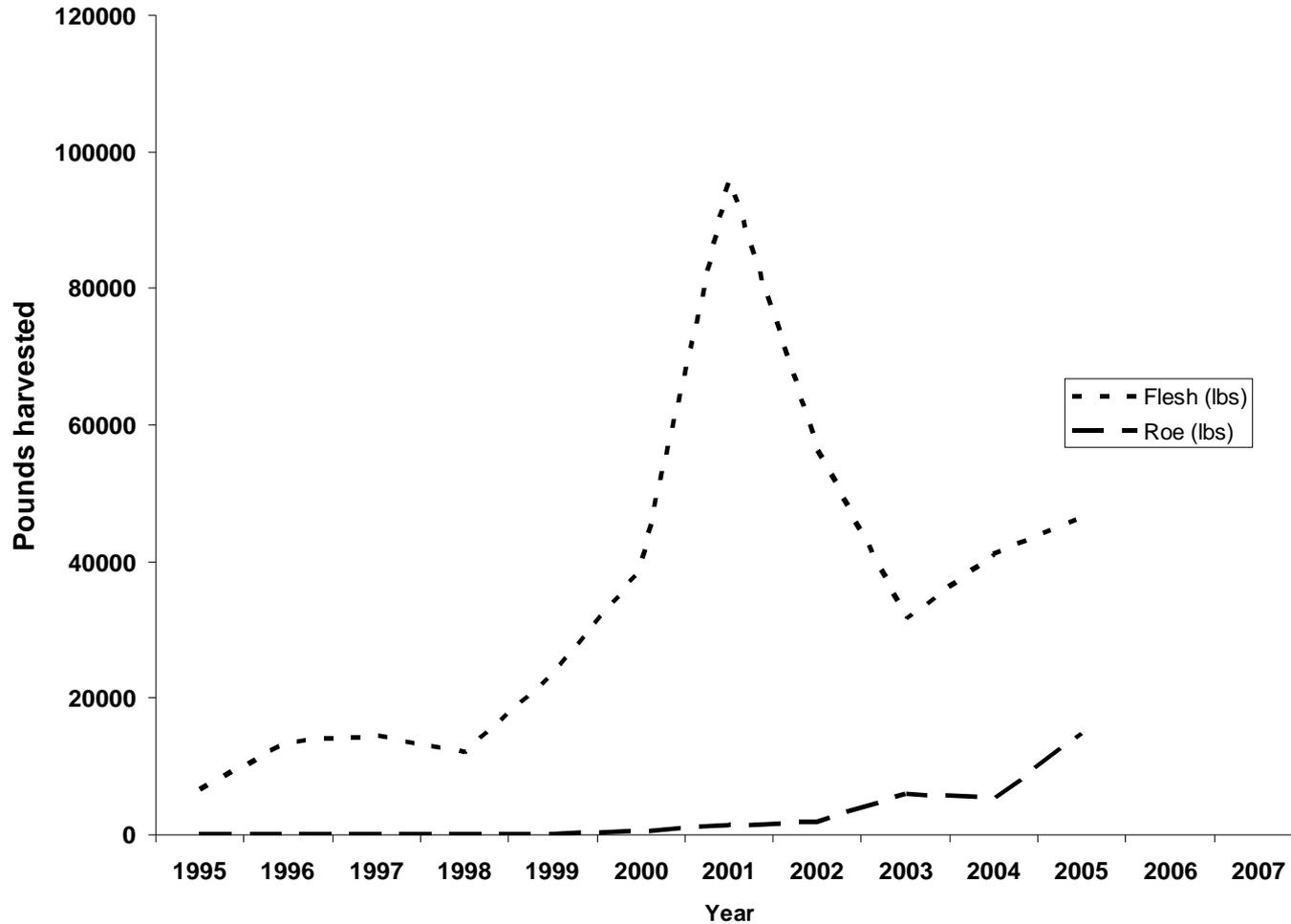
Current Shovelnose Sturgeon Harvest Regulations

(Data from Paddlefish/Sturgeon Sub-committee Survey 1/29/07)



Increasing trend in shovelnose harvest

Total reported shovelnose sturgeon flesh and roe harvest (Mississippi & Missouri River)



Accidental, incidental, or intentional take of pallid sturgeon occurs.

- **Pallid sturgeon remains discovered in fish market (Sheehan *et al.* 1997).**

Commercial fisherman in possession of pallid sturgeon

(USFWS press release 2006)

Three Southeast Missouri men were each sentenced to 90 days home confinement, three years probation and a combined fine of more than \$18,000 for illegal commercial fishing and taking an endangered species.

Summary of data for, and impact of, take on pallid sturgeon associated with commercial fishing

Take of pallid sturgeon by commercial harvest has been documented on multiple occasions. Minimum estimate of 1.8% of shovelnose harvest in Tennessee.

Take of pallid sturgeon in “ghost nets” lost by roe harvesters has been documented in the Mississippi River.

Higher maximum age without commercial harvest

15 years with commercial harvest

21 years without commercial harvest

Pallid sturgeon with egg check wounds and scars have been observed by researchers.



Pallid Sturgeon with egg check mark



Photo courtesy of Phil Bettoli

Option: Do nothing

- Illegal, accidental, or intentional harvest of pallid sturgeon continues at a minimum of 1.8%.
 - This mortality will continue to reduce efficacy of recovery efforts.



Sturgeon and other species found wasted in a dumpster near Chain of Rocks.

Photo: Tom Keevin, USACE.

Option: States allowing commercial harvest of shovelnose sturgeon close this fishery where the two species overlap.

- Currently Illinois, Missouri, Kentucky, and Tennessee allow commercial fishing in the Mississippi and Missouri rivers.
- The Service has been working to resolve this issue with the Mississippi Interstate Cooperative Resource Association (MICRA).
- MICRA is conducting additional studies to evaluate pallid sturgeon take.

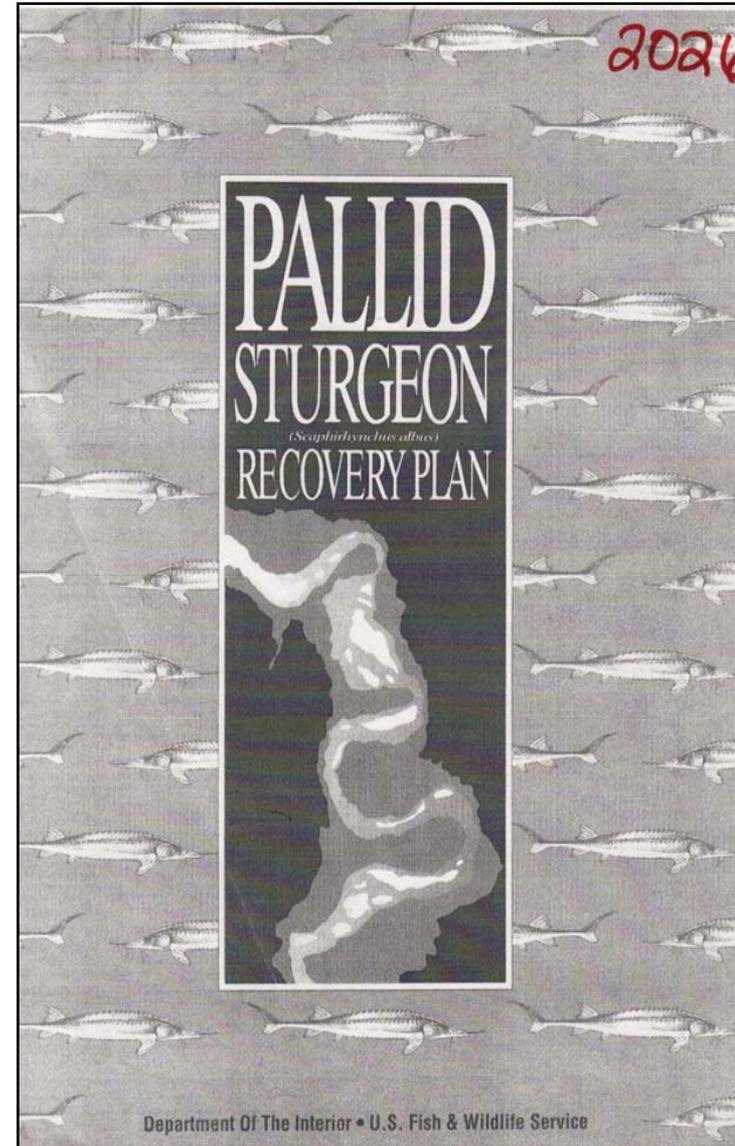
Option: List the Shovelnose under the Endangered Species Act, Section 4(e), Similarity of Appearance to Pallid Sturgeon

- A species may be listed under the ESA due to Similarity of Appearance (SOA) to a species currently protected under the ESA if:
 - enforcement personnel would have substantial difficulty differentiating between the protected and unlisted species;
 - this difficulty results in an increase in threat to the protected species; and
 - listing the species due to SOA will substantially facilitate enforcement of the ESA and conservation of the protected species.

Other Recovery items of Interest

Pallid Sturgeon Recovery Plan is undergoing revision by the Recovery Team

- Current plan was approved in 1993.
 - Revision being developed to capture new information per 5-year review recommendation (completed in 2007).
 - Draft will be provided to the USFWS.
 - USFWS will announce via the Federal Register once draft is complete.
 - USFWS will seek comment from MRRIC and others.



Habitat Restoration

- Identified in the Recovery Plan as important.
- Many efforts currently underway.
- One project gaining lots of attention is Intake Dam on the lower Yellowstone River.

Intake Dam

**Pallid sturgeon
recognized as a species
(Forbes and Richardson 1905)**

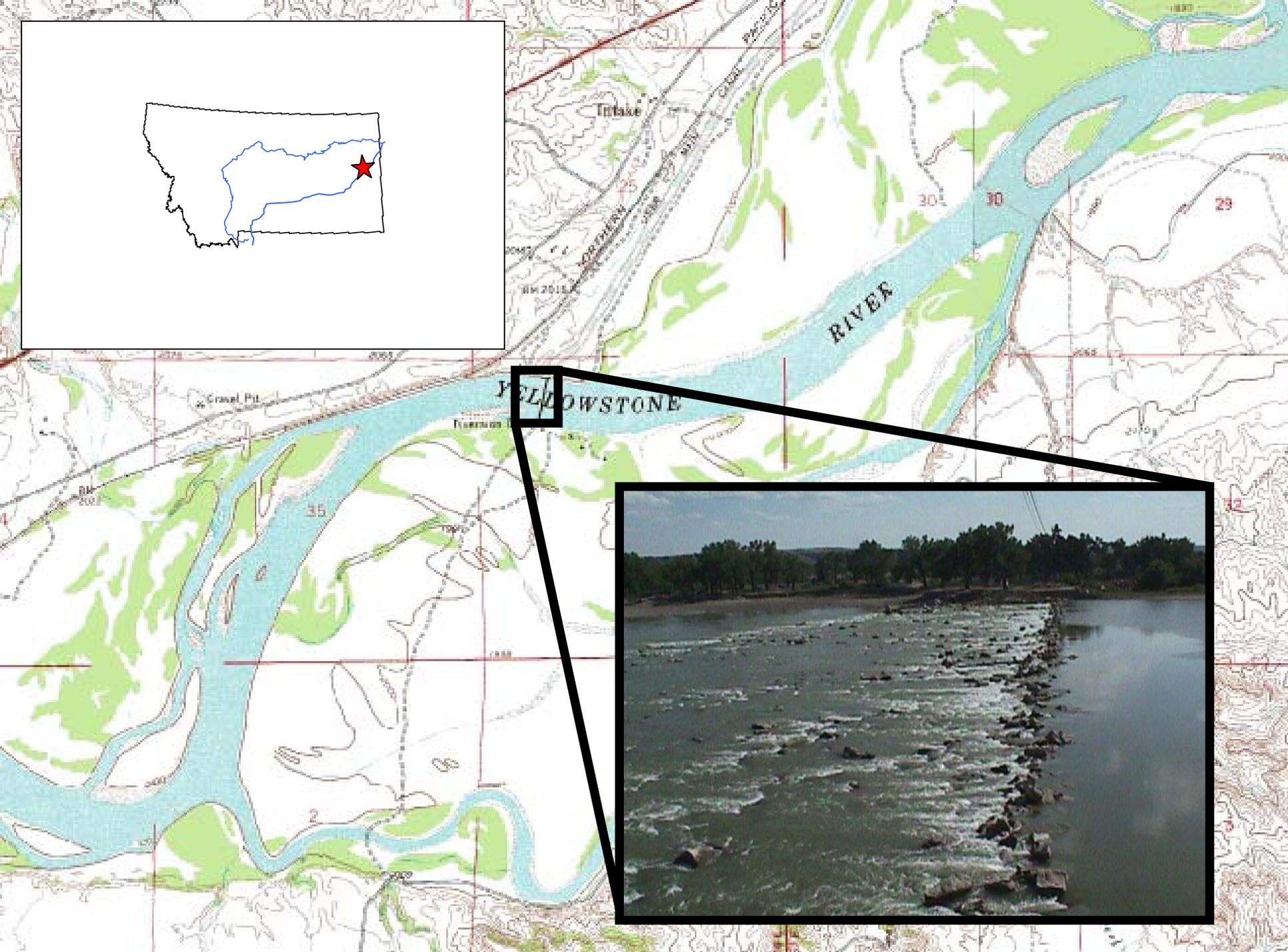
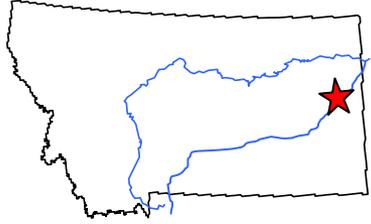
- Authorized in 1904
- Construction began in 1905
- Water was available for irrigation in 1909
 - Irrigates approximately 52,000 acres.
- Studies conducted by USBOR suggest that as many as 800,000 fish representing 34 species are entrained annually.
- Other research has documented pallid sturgeon entrainment and their inability to move upstream of the dam.

Intake Dam

WRDA 2007

SEC. 3109. LOWER YELLOWSTONE PROJECT, MONTANA.

The Secretary may use funds appropriated to carry out the Missouri River recovery and mitigation program to assist the Bureau of Reclamation in the design and construction of the Lower Yellowstone project of the Bureau, Intake, Montana, for the purpose of ecosystem restoration.



**A collaborative effort involving USBOR
USACE, USFWS, The Nature Conservancy,
the Irrigation District,
Montana Fish Wildlife and Parks
and others, to find suitable
alternatives to address passage and entrainment**

**Goal: Find workable solutions that meets
the needs of the irrigators and fish.**



Lower Yellowstone River
Intake Dam Fish Passage and Screening
Preliminary Design Report

July 2006

FINAL REPORT




US Army Corps
of Engineers
Colorado District

Summary of the Biological Review Team's comments on
Lower Yellowstone River Intake Dam Fish Passage and
Screening Preliminary Design Report.

5 September 2006

Report prepared by:

George Jordan
US Fish and Wildlife Service
Pallid Sturgeon Recovery Coordinator
2900 44 Ave, North, Room 301
Billings, MT 59101

Approved for release by:

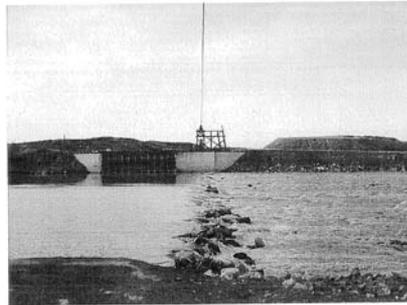
Biological Review Team 01 September 2006

RECLAMATION
Managing Water in the West

Intake Diversion Dam

Trashrack Appraisal Study for Intake Headworks

Lower Yellowstone Project – Montana – North Dakota



U.S. Department of the Interior
Bureau of Reclamation

Value
Engineering

Final Report

Intake Diversion Dam Fish Protection and Passage
Concept Design, Lower Yellowstone Project

(A10-1409-MTTT-001-00-0-1(B); 6B318)

July 29, 2002

Conducted in Cooperation with the Lower Yellowstone Irrigation Project Board of Control,
Fisheries Department University of Idaho, United States Fish and Wildlife Service
Bureau of Reclamation, Great Plains Region and Montana Area Office

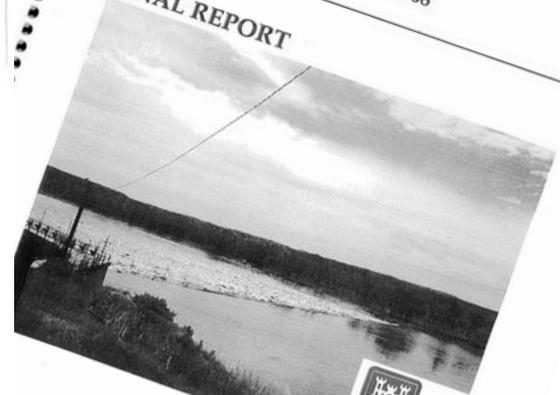


Reclamation, Technic

Lower Yellowstone Project
Fish Screening and Sediment Sluicing
Preliminary Design Report

February 2008

FINAL REPORT




US Army Corps
of Engineers
Omaha District

February 2008

Incremental adaptive management approach should be compared to one another, and the better of these two options should be pursued.

2.2 Project Types.
Commercial Navigation & Hydropower. For commercial navigation and hydropower features, the plan with the highest net economic return (benefit cost ratio of at least 1.5) to the Nation for each increment of such work, consistent with protecting the environment, will be considered minimally acceptable. Plans that address the most critical needs and have an increasingly higher benefit cost ratio should be more heavily weighted in the selection process.

Flood and Storm Damage Reduction. Flood and storm damage reduction measures could include structural and non-structural components. As both monetary and non-monetary values are likely to be part of the decision process, when non-structural components are included, a comparative approach as identified in the Multi-Criterion Evaluation, Consistency & Transparency section will provide the clarity in these situations for decision making. Where benefits are measured in monetary values only, the plan with high net economic return (benefit cost ratio of at least 1.5) to the Nation for each increment of such work, consistent with protecting the environment, will be considered minimally acceptable. Plans that address the most critical needs and have an increasingly higher benefit cost ratio should be more heavily weighted in the selection process.

Generally, when structural and non-structural components provide viable options when considering all evaluation criteria, including benefits, costs and adverse effects, preference should be given to non-structural components so long as monetary benefits are at least parity. If the non-monetary benefits represent a majority of the total benefits and are of National significance, then consideration can be given to selecting a plan with monetary benefits less than parity.

Aquatic Ecosystem Restoration. For aquatic ecosystem restoration features, the plan that is cost-effective, sustainable, and is the alternative plan that best reflects an appropriate level of investment for that ecosystem from a national perspective, after considering the national or regional significance and the need for protecting or restoring that

effectiveness should be more heavily weighted in the selection process.

Multiple Objectives. For multiple objective projects with features and increments of work whose benefits and costs are jointly distributed among more than one objective, each such feature or increment of work should yield a net overall return to the Nation after considering its cost, effectiveness, and other beneficial and adverse effects. Where the benefits are measured in monetary values only; those with high net economic return (benefit cost ratio of at least 1.5) to the Nation for each increment of such work, consistent with protecting the environment, will be considered minimally acceptable. Plans that address the most critical needs and have an increasingly higher benefit cost ratio should be more heavily weighted in the selection process. Where plans have both monetary and non-monetary values, a comparative approach as identified in the Multi-Criterion Evaluation, Consistency & Transparency section is to be used to inform a decision. The monetary benefits of a multi-criteria plan must at least be parity. If the non-monetary benefits represent a majority of the total benefits and are of national significance, then consideration can be given to selecting a plan with monetary benefits less than parity.

9.3 Agency Exception. The Secretary will ordinarily consider exceptions to the selection criteria under the following circumstances: where there are overriding reasons for doing so, including safety and other Federal, State, local, Tribal, and international concerns. The reasons for an exception are to be given in a request from the Chief of Engineers and must be appropriately documented. The full planning process carried forth through the study must be documented, completed and submitted along with the documented exception in order to uphold the ideal of a transparent process.

Brenda S. Bowen,

Army Federal Register Liaison Officer.

[FR Doc. E8-21294 Filed 9-11-08; 8:45 am]

BILLING CODE 3710-92-P

DEPARTMENT OF THE INTERIOR

Bureau of Reclamation

DEPARTMENT OF DEFENSE

Department of the Army; Corps of Engineers

Notice of Intent To Prepare an Environmental Impact Statement (EIS) for the Intake Diversion Dam Modification, Lower Yellowstone Project, Montana

AGENCIES: Bureau of Reclamation, Interior, and Corps of Engineers, Army.

ACTION: Notice of intent to prepare an environmental impact statement (EIS) for the Intake Diversion Dam Modification, Lower Yellowstone Project, Montana.

SUMMARY: Pursuant to section 102(2)(C) of the National Environmental Policy Act (NEPA) of 1969, as amended, and the Council on Environmental Quality's (CEQ) regulations for implementing the procedural provisions of NEPA, the Bureau of Reclamation (Reclamation) and the U.S. Army, Corps of Engineers (Corps) propose to jointly prepare an EIS that analyzes and discloses effects associated with modifications to Intake Diversion Dam. The proposed Federal action is to modify Intake Diversion Dam and canal headworks, features of Reclamation's Lower Yellowstone Project, to improve passage and reduce entrainment for endangered pallid sturgeon and other native fish in the lower Yellowstone River.

Reclamation and the Corps will serve as joint lead Federal agencies in the preparation of the Intake Diversion Dam Modification EIS. Reclamation will act as administrative lead for NEPA compliance activities during preparation of the EIS. Reclamation and the Corps will each consider and approve a Record of Decision regarding actions and decisions for which the respective agencies are responsible.

DATES: Public scoping meetings will be held in October 2008. See the **SUPPLEMENTARY INFORMATION** section for dates and locations of these meetings. Written or e-mailed comments on the scope of issues and alternatives to be considered in the Draft EIS will be accepted through November 14, 2008.

ADDRESSES: Written comments and requests to be added to the mailing list

Several options have been discussed and USBOR and USACE have released a notice of intent to prepare an EIS.

- Public meetings scheduled in October

<http://www.usbr.gov/gp/mtao/loweryellowstone/index.html>



Questions?