

RECLAMATION

Managing Water in the West

Intake Diversion Dam Modification, Lower Yellowstone Project, Montana, Environmental Impact Statement Scoping Meeting



U.S. Department of the Interior
Bureau of Reclamation



**US Army Corps
of Engineers®**

What Are We Proposing to Do?

- The U.S. Department of Interior, Bureau of Reclamation and U.S. Army Corps of Engineers propose to modify Intake Diversion Dam and canal headworks, features of Reclamation's Lower Yellowstone Project.

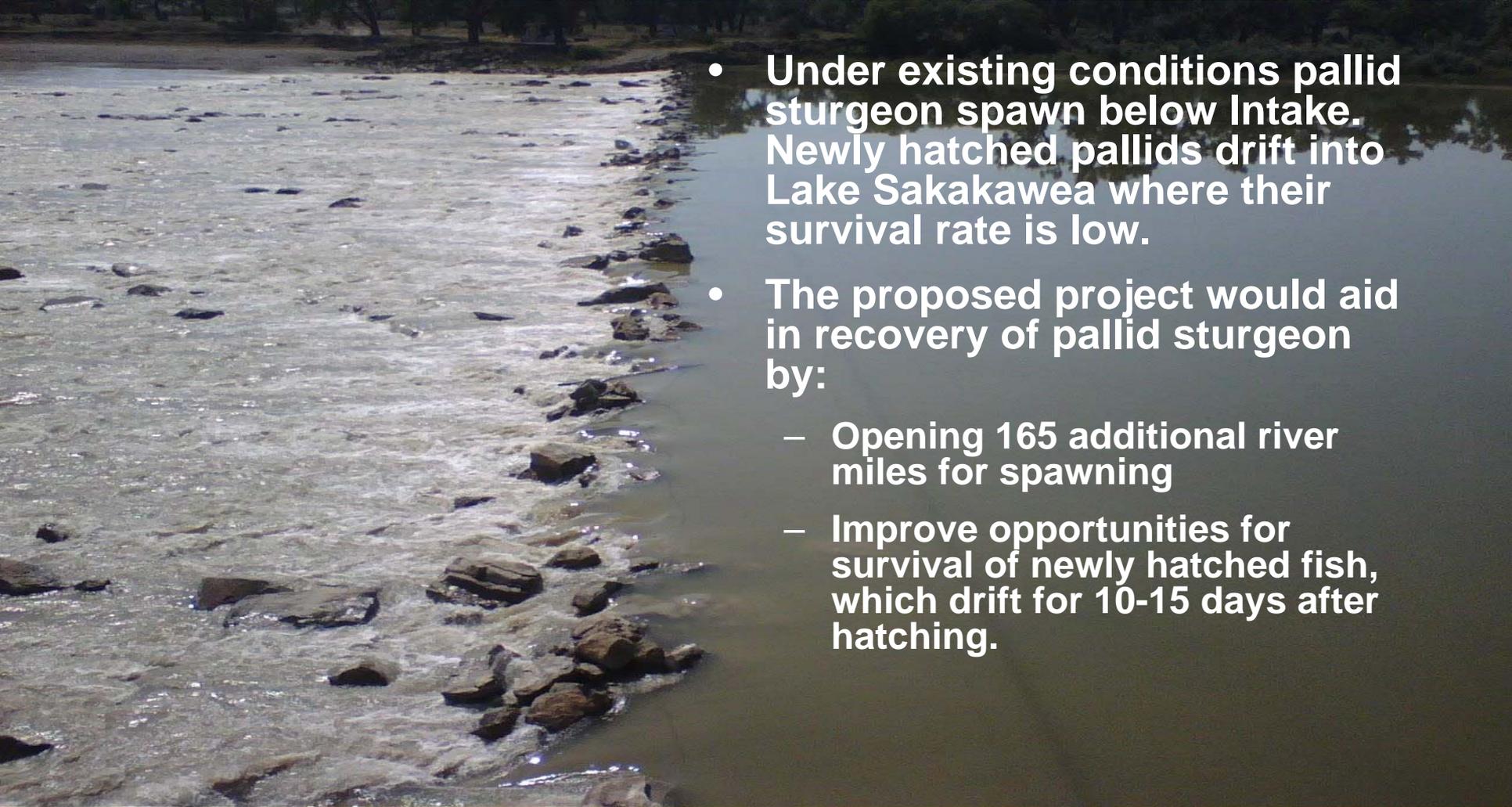


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Purpose and Need

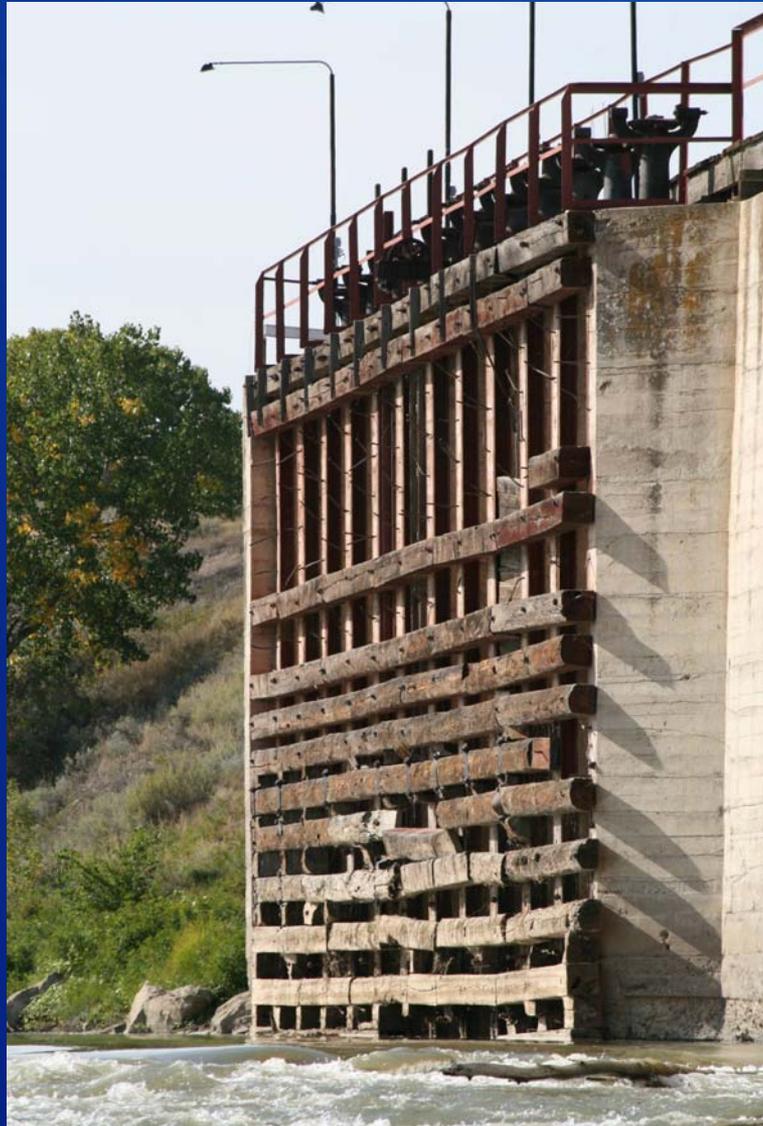
- The purpose of the proposed action is to correct unsatisfactory passage conditions and reduce entrapment (entrainment) of endangered pallid sturgeon and other native fish in the lower Yellowstone River.
- The proposed action is needed to:
 - improve upstream and downstream fish passage for pallid sturgeon and other native fish in the lower Yellowstone River,
 - minimize entrainment of pallid sturgeon and other native fish into the main canal,
 - continue effective operation of the Lower Yellowstone Project and comply with the Endangered Species Act,
 - and contribute to restoration of the lower Yellowstone River ecosystem.

Need: Improve Fish Passage



- Under existing conditions pallid sturgeon spawn below Intake. Newly hatched pallids drift into Lake Sakakawea where their survival rate is low.
- The proposed project would aid in recovery of pallid sturgeon by:
 - Opening 165 additional river miles for spawning
 - Improve opportunities for survival of newly hatched fish, which drift for 10-15 days after hatching.

Need: Minimize Entrainment



- Research conducted by Reclamation and others indicates that thousands of native fish are being unintentionally trapped and lost to the main irrigation canal.

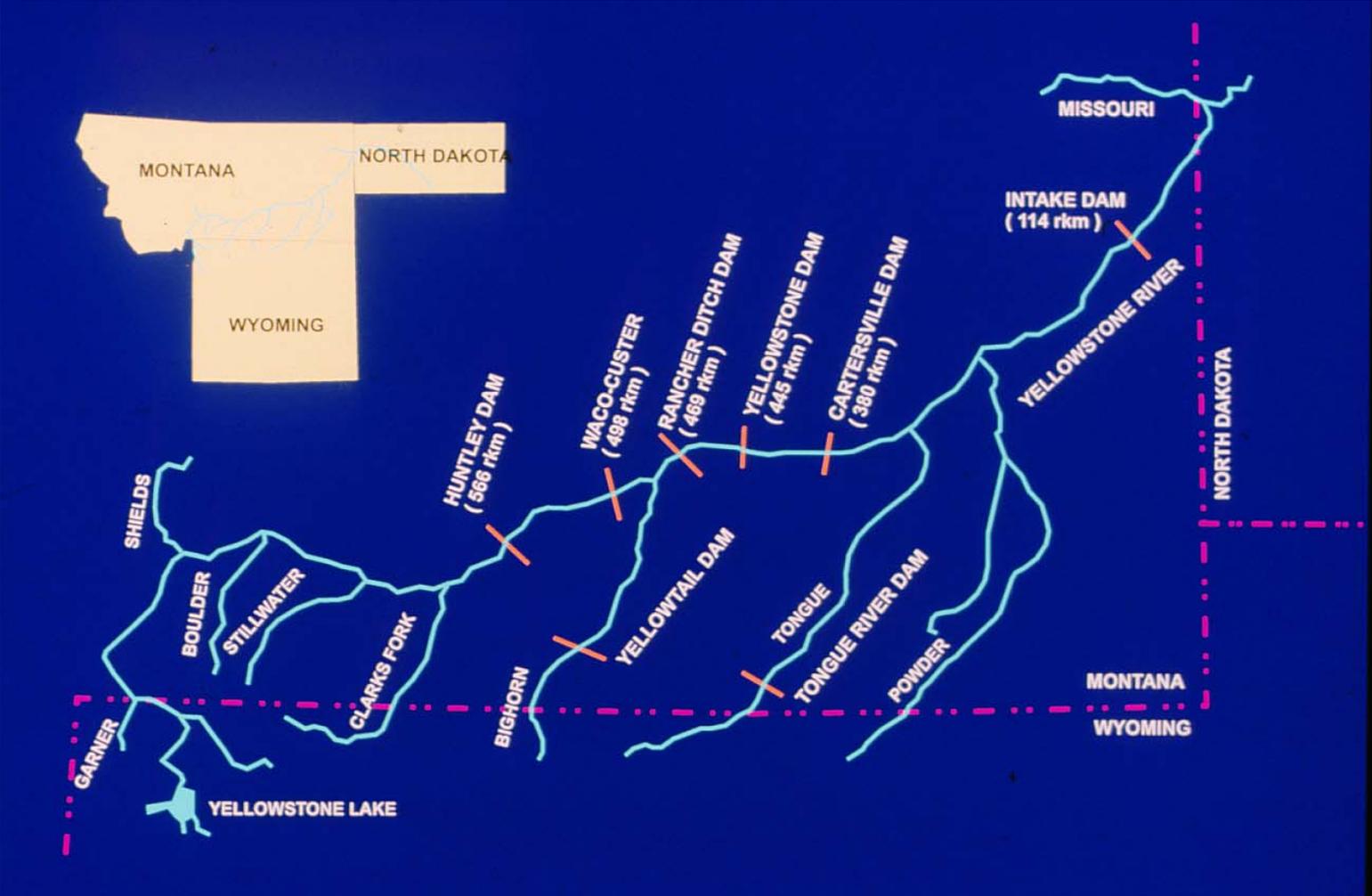
Need: Continue Operation of Lower Yellowstone Project

- Reclamation constructed the irrigation project in the early 1900s. The Lower Yellowstone Project delivers water to about 500 farms in Montana and North Dakota. Annual gross crop values are about \$25-30 million.



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Need: Contribute to Ecosystem Restoration



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Environmental Impact Statement

- The Bureau of Reclamation and the U.S. Army Corps of Engineers are jointly preparing an environmental impact statement (EIS) to evaluate the effects of the proposed project on the environment.
- The first step in preparing an EIS is public scoping.
- Scoping involves the public in evaluating the environmental impacts of a proposed federal project, identifies significant issues and information, and shapes the environmental analyses.
- We want to hear your ideas about the scope of the EIS.



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Alternatives – Solutions to Meet the Needs

- Many alternatives have been considered since 2000.
- State and federal agencies and the Nature Conservancy have been working together to find an acceptable solution.
- To be considered, an alternative must meet the purpose and need of the project.
- A team of engineers and biologists narrowed a list of 110 alternatives down to 10 in 2005.
- After more study, five ways of modifying the dam (alternatives) and two different fish screens are being considered in the EIS.
- Are there other solutions?

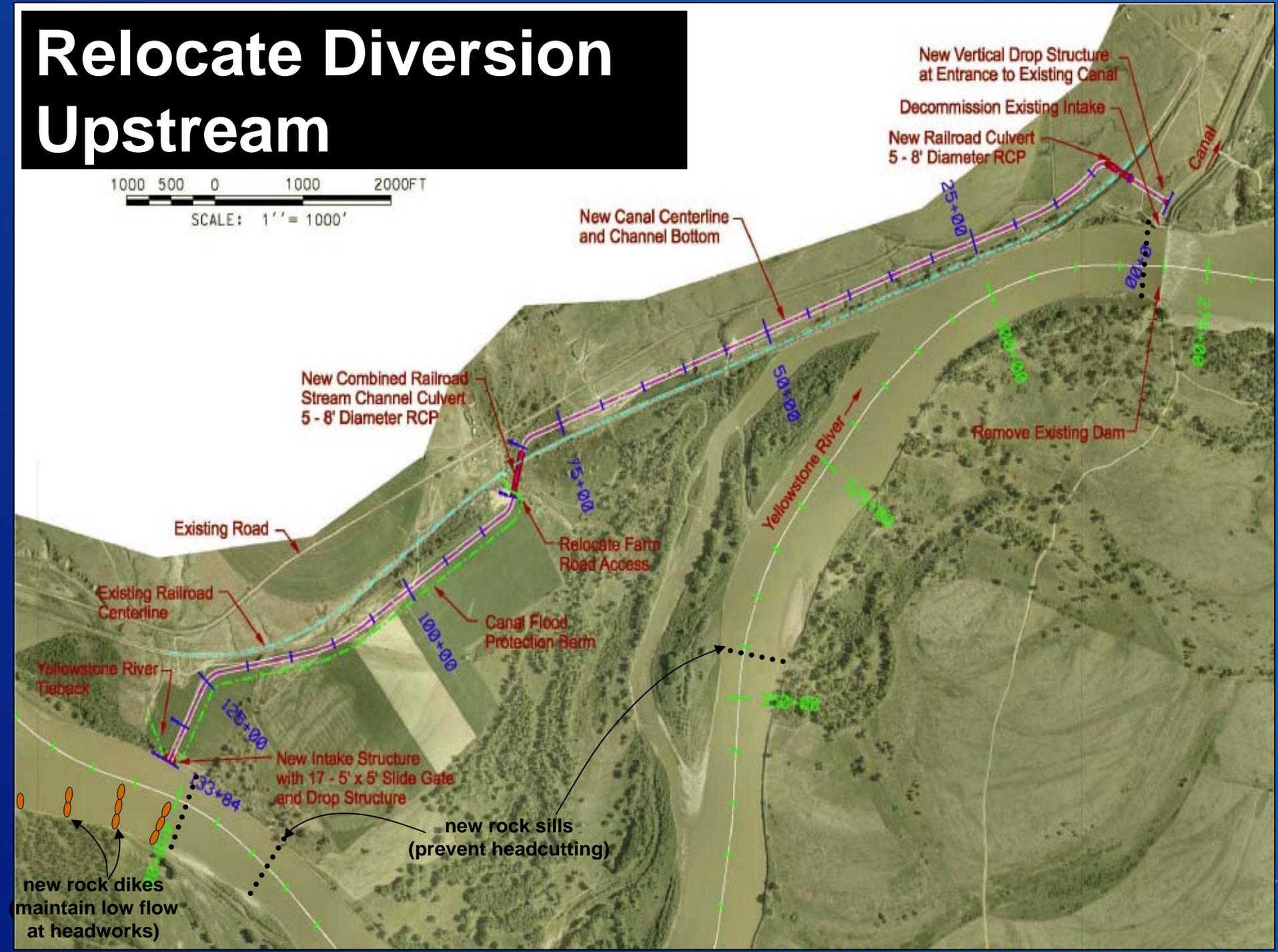
No Action Alternative

- **No Action is the future operation of the Lower Yellowstone irrigation project without implementation of any of the proposed fish passage alternatives or a fish screen.**
- **No Action for this EIS means maintaining the diversion dam and continuing to divert water for irrigation as authorized.**
- **Reclamation would be obligated by Section 7 of the Endangered Species Act to continue consultation with the U.S. Fish and Wildlife Service on the effects of continued operation of the irrigation project may have on federally-listed species.**

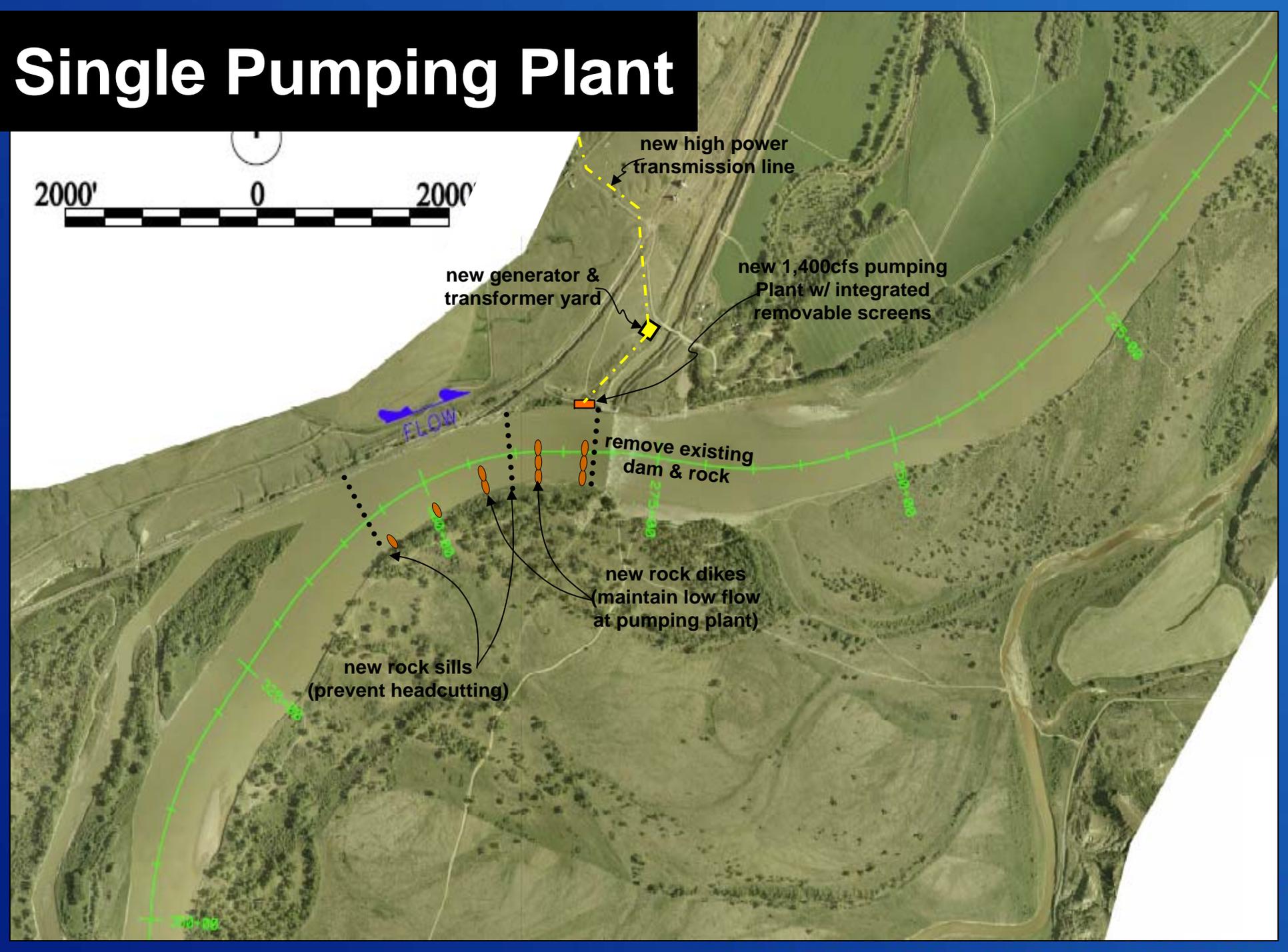
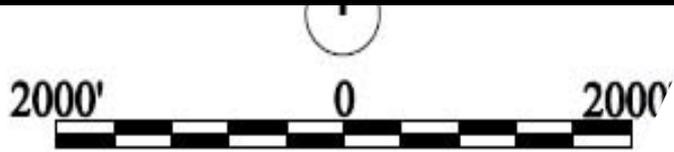
Relocate Diversion Upstream

1000 500 0 1000 2000FT

SCALE: 1" = 1000'



Single Pumping Plant



new high power transmission line

new generator & transformer yard

new 1,400cfs pumping Plant w/ integrated removable screens

remove existing dam & rock

new rock dikes (maintain low flow at pumping plant)

new rock sills (prevent headcutting)

FLOW

270+000

2750+000

2720+000

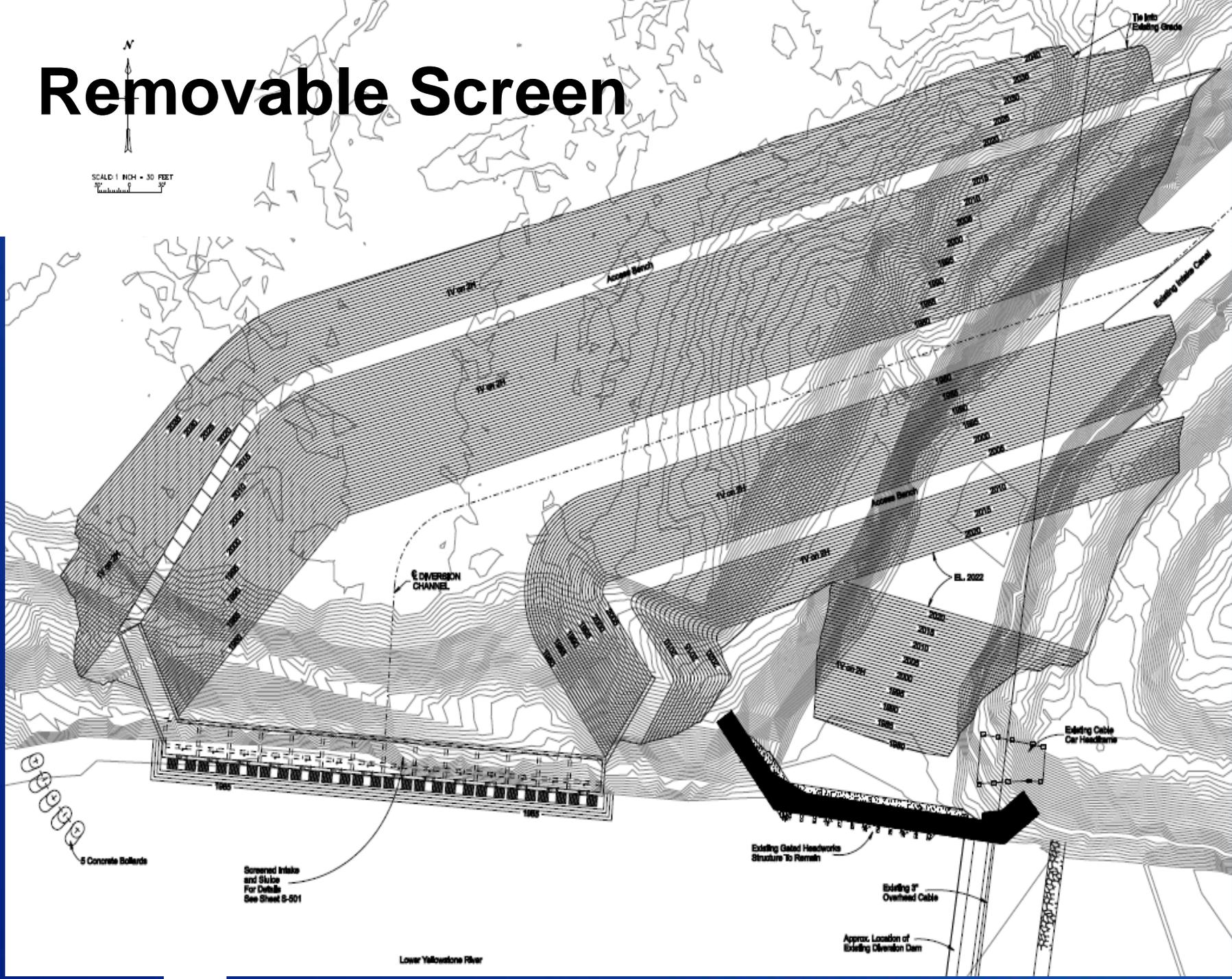
2750+000

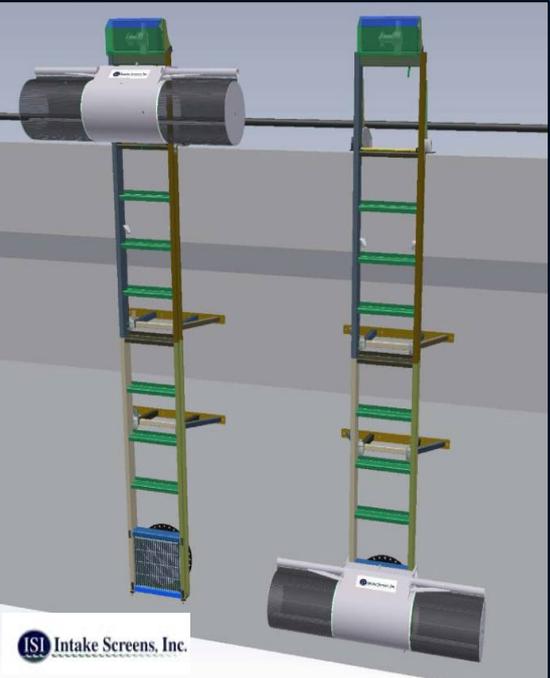
2800+000

Removable Screen



SCALE: 1 INCH = 30 FEET

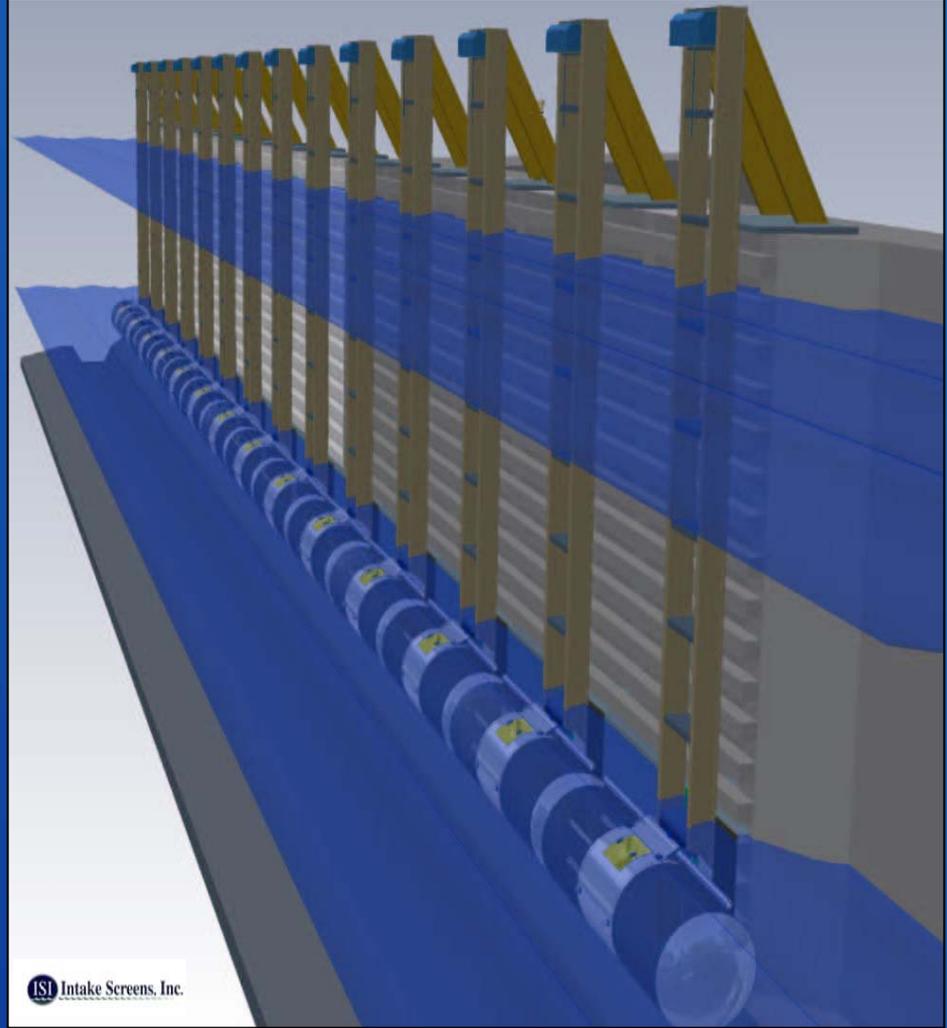




ISI Intake Screens, Inc.



Priest Rapids Dam
Intake Screens, Inc.



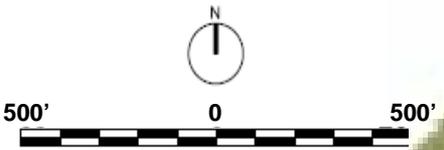
ISI Intake Screens, Inc.



Priest Rapids Dam
Intake Screens, Inc.

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V-Shaped Fish Screen



new v-shape flat panel screen w/ brush cleaner



48-in fish bypass pipe

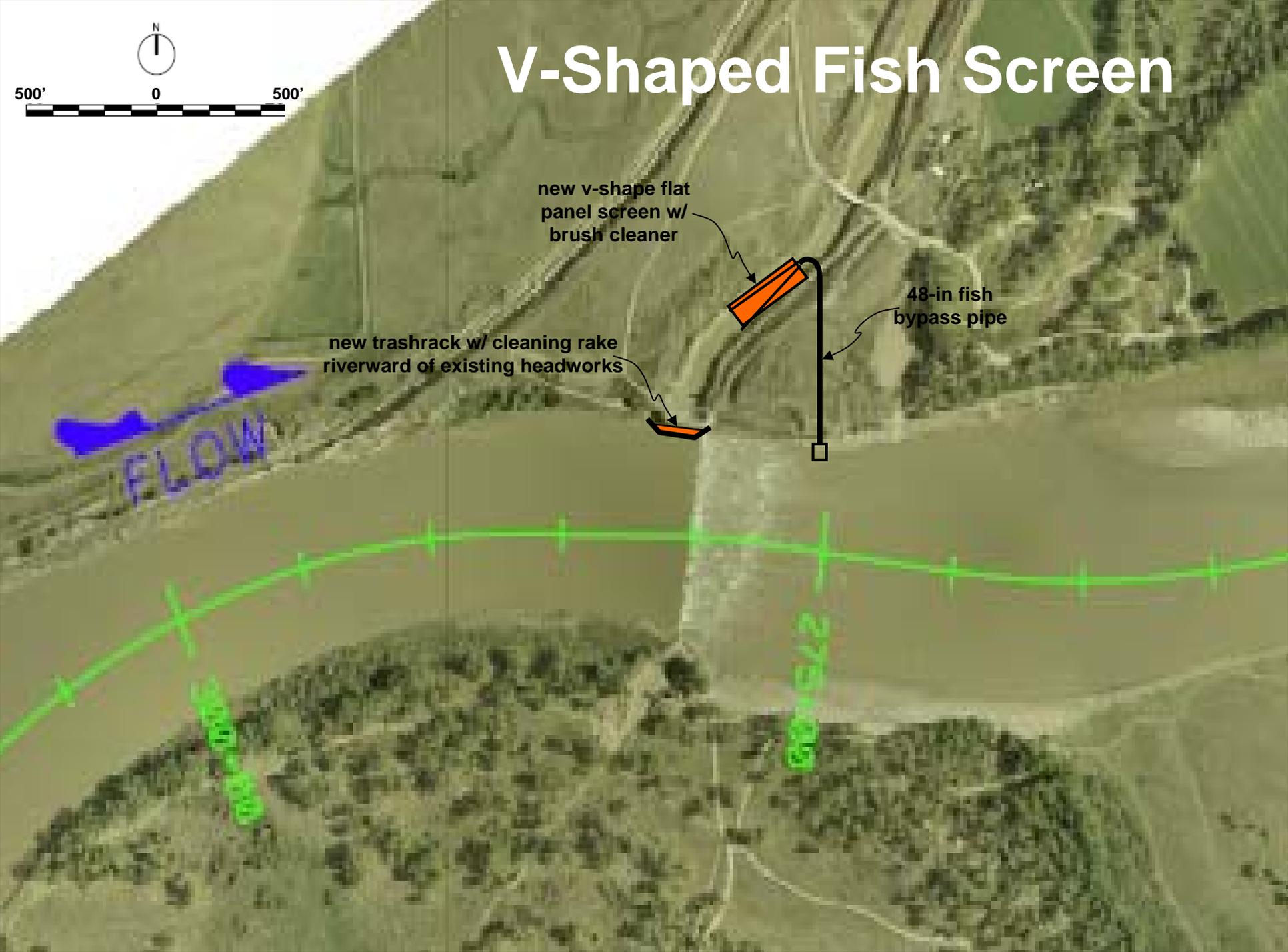


new trashrack w/ cleaning rake riverward of existing headworks



200-5/2

200-5/2





Issues and Concerns

- Improving fish passage would reopen 165 miles of the Yellowstone River and tributaries to pallid sturgeon and other native fish. This is the first time it has been attempted for pallid sturgeon, but many fish passage projects have been successfully implemented elsewhere for other species.
- Delivering water to the irrigation district and maintaining irrigated agriculture
- Fishing and impacts to other recreation (snagging paddlefish, caviar industry, fishing access, etc.)
- Operating and maintaining the modified irrigation structures – socio-economic issues
- Changing water quality – short term and long term

Issues and Concerns (cont.)

- Impacts to wetlands and riparian habitat
- Impacts to floodplain and floodway boundaries and property
- Changes in water quantity from operation of the irrigation project and global climate change
- Cumulative environmental impacts from past, present, and reasonably foreseeable future actions
- Adverse effects to cultural resources
- Environmental justice – adverse effects to minority and low income populations
- Compliance with laws, regulations, permits, Executive Orders, etc.
- Are there other issues or concerns?

What Comes Next?

- **Public comments on the scope of the EIS should be submitted by November 14, 2008, to be fully considered. Agency and public feedback will be carefully considered and summarized in a scoping document.**
- **Draft EIS will be prepared and distributed for public comment for 45 days.**
- **Public hearing(s) on the draft EIS will be held.**
- **All substantive comments on the draft EIS will be carefully considered by Reclamation and the Corps.**
- **Final EIS is prepared and released to the public.**
- **A Record of Decision will be completed no earlier than 30 days after publication of the final EIS.**

How Do I Get Involved?

- **Participate in the discussions today, turn in a comment form, e-mail a comment, and/or comment online**
- **Provide a substantive comment – be specific, identify an issue, new information, new alternative, or change to an alternative**
- **Develop a consensus-based alternative**
- **Sign up to receive a copy of the EIS and newsletters**
- **Participate in a public hearing after reading the draft EIS**
- **Periodically check the EIS website for updates**

Current Information – www.usbr.gov/gp/mtao/loweryellowstone

The screenshot shows a Microsoft Internet Explorer browser window displaying the website for the Lower Yellowstone Project. The browser's address bar shows the URL: <http://www.usbr.gov/gp/mtao/loweryellowstone/index.html>. The website header includes the U.S. Department of the Interior logo and the text "RECLAMATION Great Plains Region Managing Water in the West". Navigation links include "Reclamation Home", "Regional Offices", "Newsroom", "Library", and "Dataweb".

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Lower Yellowstone Project

Bureau of Reclamation's [Lower Yellowstone Project](#) is located in eastern Montana and western North Dakota. Intake Diversion Dam is located approximately 70 miles upstream of the confluence of the Yellowstone and Missouri rivers near Glendive, Montana. The Lower Yellowstone Project was authorized by the Secretary of the Interior on May 10, 1904. Construction of the Lower Yellowstone Project began in 1905 and included Intake Diversion Dam (also known as Yellowstone River Diversion Dam) - a 12-foot high wood and stone diversion dam that spans the Yellowstone River and diverts water into the Main Canal for irrigation. The Lower Yellowstone Project was authorized to provide a dependable water supply sufficient to irrigate approximately 52,000 acres of land on the benches above the west bank of the Yellowstone River. Water is also supplied to irrigate approximately 830 acres in the Intake Irrigation Project and 2,200 acres in the Savage Unit. Both of the smaller irrigation projects pump water from the Main Canal. The average annual volume of water diverted for these projects is 327,046 acre-feet.



(Above) Yellowstone Intake Diversion Dam at low flow.

Reclamation and the U.S. Army, Corps of Engineers propose to jointly prepare an Environmental Impact Statement that analyzes and discloses effects associated with potential 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 and continue the effective operation of the Lower Yellowstone Project.

For more information, please [contact Paula Holwegner](#), MTAO's Public Involvement Specialist



Lower Yellowstone Crop Irrigation

Public Involvement - National Environmental Policy Act (NEPA) Process:

NEPA Documents (Site plan)

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