

Lower Yellowstone Intake Diversion Dam Fish Passage Project, Montana Environmental Impact Statement Scoping Summary Report

FINAL

June 2016



Prepared by Joint Lead Agencies:



U.S. Department of the Interior
Bureau of Reclamation
Billings, Montana



U.S. Army Corps of Engineers
Omaha District
Omaha, Nebraska

June 2016

This page was intentionally left blank to facilitate 2-sided copies.

**LOWER YELLOWSTONE INTAKE DIVERSION DAM FISH PASSAGE
PROJECT, ENVIRONMENTAL IMPACT STATEMENT
SCOPING SUMMARY REPORT**

FINAL

June 2016

Table of Contents

1. Introduction 1
1.1 Purpose of Report 1
1.2 Project Background..... 1
1.3 Project Purpose..... 3
1.4 Study Area 3
1.5 Project Alternatives..... 3
1.6 NEPA Requirements For Scoping 3
1.7 Public Involvement Process 4
1.8 Notice Of Intent..... 4
1.9 Public Scoping Meeting 4
1.10 Next Steps..... 5
2. Public Scoping Comments 6
2.1 Summary of Comment Statistics 6
2.2 Comment Topics 7
2.3 Summary of Scoping Comments 7
3. References 52

Tables

Table 1. Comments by Category 7
Table 2. Summary of Key Scoping Comments 8

Figures

Figure 1-1 Lower Yellowstone Irrigation District Vicinity Map..... 2

Appendices

- Appendix A: NEPA Notice of Intent
Appendix B: Scoping Announcement Postcard
Appendix C: Scoping Press Release
Appendix D: Scoping Meeting Display Boards
Appendix E: Scoping Meeting Handouts
Appendix F Scoping Sign-in Sheets
Appendix G: Written Scoping Comments

Acronyms

Corps	U.S. Army Corps of Engineers
EA	Environmental Assessment
ESA	Endangered Species Act
EIS	Environmental Impact Statement
FONSI	Finding of No Significant Impact
LYP	Lower Yellowstone Project
MOU	memorandum of understanding
NEPA	National Environmental Policy Act
NTP	Notice to Proceed
NOI	Notice of Intent
Reclamation	U. S. Bureau of Reclamation
Service	U. S. Fish and Wildlife Service

1. INTRODUCTION

1.1 PURPOSE OF REPORT

The U.S. Army Corps of Engineers (Corps) and the Bureau of Reclamation (Reclamation) are preparing an Environmental Impact Statement (EIS) for a proposed fish passage project on the lower Yellowstone River in eastern Montana. A Notice of Intent (NOI) was issued on January 4, 2016 (81 Federal Register 1) beginning a formal 45-day scoping comment period ending on February 18, 2016. This Technical Memorandum describes the project background, project alternatives, scoping process, scoping materials, and a summary of comments received during the scoping period. All scoping comments are included as an Appendix to this memorandum.

1.2 PROJECT BACKGROUND

The Lower Yellowstone Project (LYP) 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 submerged rock-filled timber crib diversion dam that spans the Yellowstone River and diverts water into a canal (the Main Canal) for irrigation (See Figure 1). The LYP 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 District and 2,200 acres in the Savage Irrigation District. The average annual volume of water diverted for these projects is 327,046 acre-feet.

The U.S. Fish and Wildlife Service (Service) listed the pallid sturgeon as endangered under the Endangered Species Act (ESA) in 1990. The best available science suggests Intake Diversion Dam impedes upstream migration of pallid sturgeon and their access to spawning and larval drift habitats. The lower Yellowstone River is considered by the Service to provide one of the best opportunities for recovery of pallid sturgeon. Both Reclamation and the Corps have general responsibility under section 7(a)(1) of the ESA to use their authorities to conserve and recover federally listed species and ecosystems upon which they depend. In addition, both agencies need to avoid jeopardizing the pallid sturgeon in funding or carrying out any agency action per 7(a)(2) of the ESA.

Reclamation initiated a collaborative effort with the Service, the Corps, Montana Fish, Wildlife and Parks, and The Nature Conservancy through a Memorandum of Understanding (MOU) signed on July 8, 2005. Reclamation coordinated a value planning study in August 2005 with representatives from parties signatory to the MOU and the LYIP Irrigation Districts to explore and evaluate a broad range of alternatives for fish passage and entrainment reduction.

In 2010, Reclamation and the Corps authorized the construction of a rock ramp and new screened headworks with the completion of an Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) (Corps and Reclamation, 2015a and 2015b). The construction of the new headworks is complete and began operation during the 2012 irrigation season. During the final design of the rock ramp, following the release of the 2010 EA and FONSI, important new information on the design, constructability, and sustainability of the proposed rock ramp

surfaced along with new information regarding pallid sturgeon movement which led to a reevaluation of fish passage options.

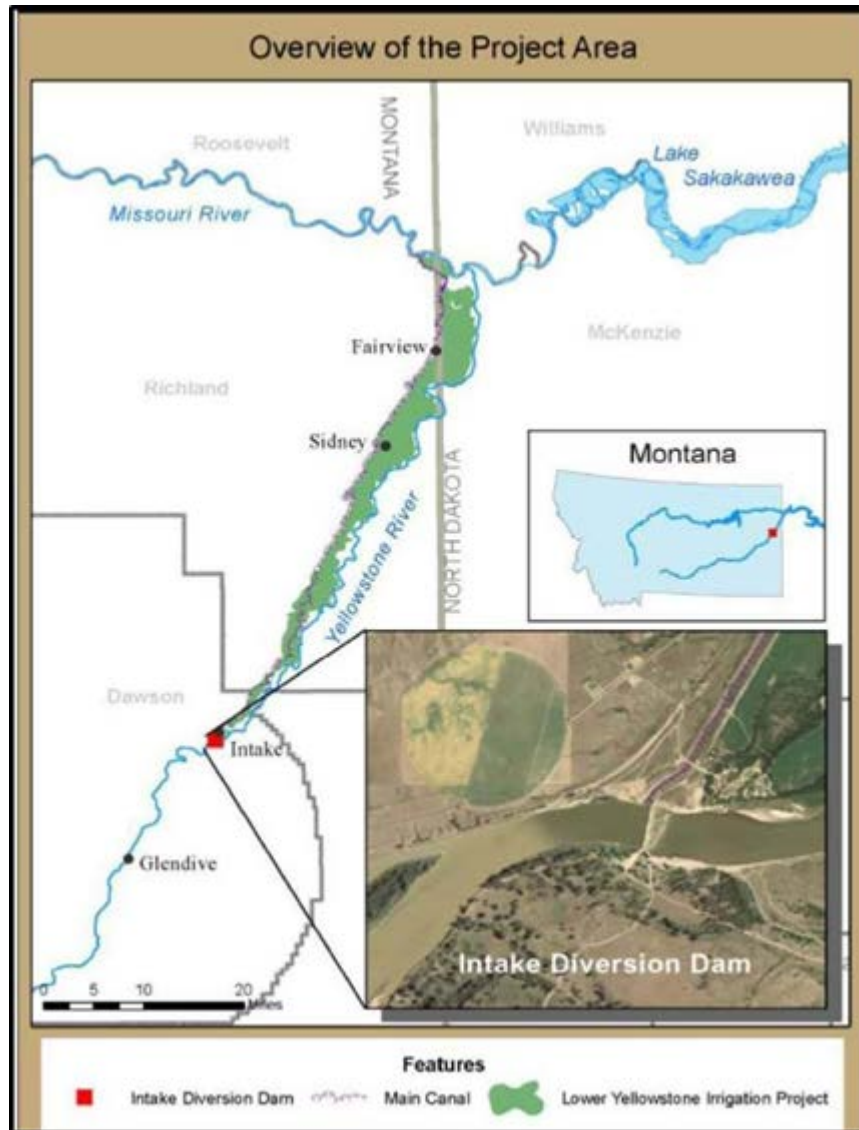


Figure 1-1 Lower Yellowstone Irrigation District Vicinity Map

In 2013, the Corps and Reclamation conducted a planning effort to examine new and previously considered alternatives. Following this effort, the Corps and Reclamation identified the bypass channel for detailed analysis. A Supplemental EA and FONSI selecting the bypass channel were completed in 2015.

The Corps and Reclamation signed the FONSI on April 1, 2015, selecting the Bypass Channel Alternative for implementation and finding that an EIS was not warranted. In February 2015, the

Defenders of Wildlife and the Natural Resources Defense Council (Plaintiffs) filed a lawsuit challenging the agency's process.

1.3 PROJECT PURPOSE

The purpose of the proposed action is to improve passage of the endangered pallid sturgeon and other native fish at Intake Diversion Dam in the lower Yellowstone River while continuing a viable and effective operation of the Lower Yellowstone Project.

1.4 STUDY AREA

Reclamation's Lower Yellowstone Project is located in eastern Montana and western North Dakota. The Intake Diversion Dam is located approximately 70 miles upstream of the confluence of the Yellowstone and Missouri rivers near Glendive, Montana. The action area for the EIS is defined as the reach of the lower Yellowstone River and its tributaries from the Cartersville Diversion Dam at river mile 237 downstream to its confluence with the Missouri River, the Missouri River downstream to Lake Sakakawea in North Dakota, and lands serviced by the irrigation districts. District lands are located in Montana (Dawson, Wibaux, and Richland counties) and in North Dakota (McKenzie and Williams counties).

1.5 PROJECT ALTERNATIVES

Three alternatives considered in a 2015 Supplemental Environmental Assessment (EA) will be analyzed in detail in the EIS process as well. These are the No Action Alternative [required by the National Environmental Policy Act (NEPA)], a Rock Ramp Alternative (replace the existing weir with a new concrete weir and a shallow sloped, un-grouted boulder and cobble rock ramp) and a Bypass Channel Alternative (construct a bypass channel around the existing weir to divert approximately 15% of total river flow). In addition, several other alternatives are under consideration and were included in the scoping meeting and scoping materials for agency and public review and input. These new alternatives could include a high flow channel (existing side channel around the existing weir modified to meet fish passage criteria) or various pumping options [includes either pumping stations (surface water) or Ranney® wells (infiltration galleries) to divert water into the existing irrigation canal]. In addition, a non-weir alternative may be included with possible features involving pumping, alternative energy sources, and conservation measures.

1.6 NEPA REQUIREMENTS FOR SCOPING

The Corps and Reclamation are undertaking the preparation of an EIS under the requirements of NEPA (42 U.S.C. 4321 et seq.; 43 CFR 1500-1508; 43 CFR 46). The implementation regulations of NEPA and the lead agencies require a formal scoping process when initiating an EIS process. The lead agencies use scoping to involve other federal agencies, state, local and tribal governments, stakeholders, and the public in a) providing input on the purpose and need for the project, b) identifying issues of concern, and c) providing input on the range of alternatives to be analyzed in the EIS.

1.7 PUBLIC INVOLVEMENT PROCESS

The Corps and Reclamation have undertaken a robust outreach effort as part of scoping to engage the public in the EIS process. The outreach components of scoping included:

- A federal Notice of Intent (NOI) and Scoping Notice was published in the Federal Register on January 4, 2016 (see Appendix A).
- A postcard announcing the scoping process and scoping meeting was mailed to the entire stakeholder list (see Appendix B).
- The Corps drafted a news release and distributed it to local and regional media (see Appendix C). (Note that the close of the public scoping is incorrect in the press release. Public scoping comments were to be postmarked or received by February 18, 2016.) The news release was also posted on the Corps and Reclamation websites.
- A scoping meeting was held on January 21, 2016 at the Dawson County High School, Glendive, Montana. Corps and Reclamation staff was in attendance to answer questions posed by the public.
- Scoping poster boards were prepared and used at the scoping meeting to provide information on the project's purpose, alternatives under consideration, and the NEPA process (see Appendix D).
- Handouts discussing the process and alternatives were handed out at the scoping meeting (see Appendix E).
- A project website, established by Reclamation, was updated to include the Notice of Intent, the Press Release, the posters used at the scoping meeting, the handout on alternatives, a NEPA handout, and a public comment form. The website is found at: <http://www.usbr.gov/gp/mtao/loweryellowstone/>.

1.8 NOTICE OF INTENT

The NEPA process begins with scoping and the issuance of a NOI to Prepare a Draft Environmental Impact Statement. For the Lower Yellowstone Intake Diversion Dam Fish Passage Project, the NOI was published in the Federal Register on Monday, January 4, 2016 (see Appendix A). The NOI discussed the project's purpose, project location, regulatory background, and environmental process to date, and provides information on the scoping comment period and public meeting.

1.9 PUBLIC SCOPING MEETING

The Corps and Reclamation held a public scoping meeting and invited agencies, tribes, non-governmental organizations, and the public to participate in an open exchange of information and to provide comments on the proposed scope of the EIS. The public scoping meeting was held in Glendive, Montana on January 21, 2016 at the Dawson County High School Auditorium to provide information to the public as to the alternatives being considered and issues to be addressed in the EIS and to answer questions. The meeting ran from 4 p.m. to 6 p.m. and was attended by 65 people plus representatives of the two lead agencies and the consultant team (sign-in sheets can be found in Appendix F).

A meeting with interested agencies was held earlier that day at the Dawson County Chamber of Commerce and Agriculture in Glendive. The public and affected agencies were given the opportunity to provide written comments during the scoping period (January 4 through February 18, 2016) to identify issues and effects that should be addressed in the EIS, as well as reasonable alternatives to improve fish passage at the Intake Diversion Dam.

1.10 NEXT STEPS

The Corps and Reclamation reviewed all of the scoping comments. The inclusion of new or varied alternatives, analysis of alternatives, and potential impacts reflect pertinent scoping comments. The Draft EIS was issued for agency, tribal, and public review for a period of 45 days beginning June 3, and ending July 28, 2016. EIS public meetings will be held in Glendive (June 29), Sidney (June 28), and Billings (June 30), Montana, to receive input. In addition, written comments in the form of letters and emails can be submitted to the Corps during the comment period.

At the end of the comment period, all comment letters will be reviewed by Reclamation and the Corps and, as appropriate, responded to in the Final EIS, anticipated to be issued in the fall of 2016. The Final EIS will also reflect any changes, modifications, or updates as a result of substantive comments. Assuming no additional significant adverse effects are identified as a result of the Draft EIS comments, the lead agencies may issue a Record of Decision (ROD) no sooner than 30 days after the date that the Environmental Protection Agency notice of the Final EIS filing is published in the *Federal Register*. The ROD would provide a concise description of the agency's decision, describe all alternatives considered (including identification of the environmentally preferable alternative), and any committed mitigation measures and related monitoring. Notice of availability of the Final EIS and the ROD will be sent to all agencies, tribes, and individuals who submitted comments on the Draft EIS.

2. PUBLIC SCOPING COMMENTS

2.1 SUMMARY OF COMMENT STATISTICS

A total of 89 individuals, 14 agencies/organizations, and six elected officials submitted scoping comments on the Lower Yellowstone Intake Diversion Dam Fish Passage Project. All comments were submitted in writing, either at the Scoping Meeting, via e-mail, or via regular mail.

The agencies and organizations that submitted comments were:

- United States Environmental Protection Agency
- Izaak Walton League of America
- Upper Basin Pallid Sturgeon Workgroup
- American Fisheries Society, Montana Chapter
- Our Montana, Inc.
- Defenders of Wildlife & National Resources Defense Council
- Lower Yellowstone Irrigation Project (by WWC Engineering)
- Sidney Water Users Irrigation District
- North Dakota State University, Williston Research Extension Center
- Montana Trout Unlimited
- American Rivers
- Lower Yellowstone Irrigation Project District 1
- Missouri River Grassroots Network – Sierra Club

Elected officials submitting comments were:

- Steve Daines, U.S. Senator, Montana
- Jon Tester, U.S. Senator, Montana
- Shane Gorder, Richland County Commissioner
- Loren Young, Richland County Commissioner
- Duane Mitchell, Richland County Commissioner
- Scott Buxbaum, Yellowstone Township Supervisor

2.2 COMMENT TOPICS

Comments received during the scoping period were sorted into one of 22 different topic areas. If a comment letter addressed more than one topic, each individual topic was noted. Table 1 shows the comment categories and the number of comments that addressed each topic.

Table 1. Comments by Category

Category	Number of Comments
Alternatives	130
Aquatic Communities	5
Climate	2
Cumulative Effects	2
Economics	38
Energy	3
Threatened and Endangered Species	41
General	6
Geomorphology	8
Hazardous Materials	1
Lands and Vegetation	2
Mitigation	11
Project Cost	12
Project Process	16
Purpose and Need	7
Recreation	4
Transportation	1
Utilities	2
Visual Resources	2
Water Quality	7
Water Rights	11
Wildlife	8

2.3 SUMMARY OF SCOPING COMMENTS

Table 2 provides a summary of major comments from each of the commenters. The intent is not to include each and every comment received, but to highlight the major themes presented in the comment letters, comment forms, and e-mails received during the scoping comment period. Each comment letter, form, or e-mail is included in Appendix G to this Scoping Summary Report.

Table 2. Summary of Key Scoping Comments

Letter #	Comment	Commenter	Topic	Comment
1	1	Steve Arnold	Economics	It would (be) a shame to put a lot of people out of work including farmers from Trenton ND to Miles City MT. We need to keep intake the way it is now, to provide irrigation for the products grown in the valley.
2	2	Jannis Conselyea	Alternatives	Remove the existing weir ... in order that the pallid sturgeon and other species will be able to pass unobstructed. There are a variety of water conservation measures which can be implemented e.g. gravity diversions. The existing canal head gates can be used when river flows are sufficient and pumps and Ranney wells (if possible) can be used to provide only the amount of water necessary for crops when the river flows are low, powering the system from renewable energy sources.
3	3	Loren Ebner	Alternatives	1. Combine using the current irrigation headgate with gravity flow when the river discharge is high, and then switch to pumps in or next to the river during lower flows. 2. Invest in water conservation measures to reduce leakage in canals and ditches, thereby reducing pumping needs. 3. Produce power to run the pumps using a wind generator, low-head hydro in the main canal, or, establish a trust fund that can be tapped to purchase power for running pumps.
4	4	Michael Enk	Alternatives	Supports Trout Unlimited Plan (see comment #240). Use best available science to arrive at your decision. A larger dam and diversion channel is not the answer that will work for fish or irrigators.
5	5	Matthew Erickson	Alternatives	Similar to #4
6	6	Gary Fee	Alternatives	Similar to #3
7	7	Collyn Ferris	Economics	The income from this fish (sturgeon) is under rated and should be given more consideration. The fishing industry has not been allowed to weigh in how this has affected them since 1907 when the dam was built. Only the farmers are included.

Letter #	Comment	Commenter	Topic	Comment
8	8	James Fitzpatrick	Alternatives	Complete dam removal would be my first option; the river and its inhabitants are worth it! In-river pumps can move enormous amounts of water without dams, and are much more efficient than ditch irrigation practices. These pumps can operate on solar/wind/hydro power, or at the least support the electrical grid through these means offsetting the costs of powering the pumps.
	9		Alternatives	If the dam must stay in place, altering irrigation practices could help save the sturgeon. When the river drops to low levels where the dam becomes impassable, regulation of ditch outflows could help keep enough water in stream to benefit the fish and aid their survival.
9	10	Tyler George	Alternatives	Removal of the dam would be a much better option than a side channel.
	11		Economics	A \$59 million price tag seems absurd, when a dam removal would be much cheaper and offer a more natural habitat for native fish.
10	12	John Haller	Alternatives	Similar to #3
11	13	Rita Hoch	Economics	It would be an awful loss to the farmers, towns, Sidney Sugars and entire communities if the Intake Dam were removed or affordable irrigation was lost.
	14		Alternatives	Please allow the work on the new weir to be completed for the benefit of both the fish and the people. It is not necessary to kill the dam to save the fish.
12	15	Paul Lepisto (Izaak Walton League of America)	Alternatives	Encourages the Corps to seriously consider the proposed non-weir alternative.
	16		Threatened/ Endangered Species	Great concerns about the proposed concrete weir and bypass project. We feel it may create an additional threat to the survival of the pallid sturgeon and many other native fish species. Larval drift is crucial to pallid reproduction. We fear that pallids hatched above Intake would not survive the created turbulence from the concrete dam or be unable to pass the obstacle created by the weir.

Letter #	Comment	Commenter	Topic	Comment
	17		Alternatives	We also request the Corps thoroughly scrutinize any modification or new structure at Intake to assure it's constructed to withstand the massive ice flows on the Yellowstone each spring.
	18		Mitigation	The League strongly believes comprehensive monitoring, conducted by trained research teams from the USFWS, and state fisheries biologists must be implemented following any steps taken.
	19		Process	There have been few public meetings and little opportunity for public input or guidance from the Missouri River Recovery Implementation committee. We encourage you to allow more public input and ask that you engage in an independent scientific review of all aspects of any proposed modifications.
	20		Economics	We are very concerned about how a limited number of irrigators, who will benefit from the diversion, will be able to pay for the needed maintenance and monitoring of the project. The League fears a lack of money to provide yearly annual maintenance and or needed repairs could lead to failure of the project in the future.
13	21	Heather Johnson	Alternatives	Urge you NOT to remove the Intake Diversion Dam.
	22		Economics	It is vital to the agriculture which sustains the communities of Sidney, Fairview, Savage, Glendive, and those in between.
14	23	David and Lanette Jorgensen	Alternatives	We are in favor of the bypass channel that will allow the pallid sturgeon to pass the dame and allow the water rights for the farmers to be fulfilled.
	24		Economics	The cost to pump and keep them running is too costly.
15	25	Kate Knels	Economics	Similar to comment #22
	26		General	Most farmers and ranchers in this area are already good stewards of our lands and waters and take good care with their use of water. No one wants to see a fish species become extinct. BUT...if it has to be a fish or humans there should be no choice as to which one's survival should be more important!!

Letter #	Comment	Commenter	Topic	Comment
16	27	Stacy Kober	Economics	Don't think you are aware of the impact on the economy on Dawson and Richland counties, as well as the areas where all of the commodities are sold to. Which will effect pricing on those also.
17	28	Curtis Kruer	Alternatives	Similar to comment #2
	29		General	As a holder and user of senior water rights in Montana I can testify to the tremendous waste and over allocation of irrigation water inherent in systems such as that depend on the Intake diversion.
	30		Mitigation	I request that the Corps plan, fund, and implement mitigation measures that could include but not be limited to wetland, riparian, and stream habitat restoration along the lower Yellowstone, purchase of conservation or channel migration easements, and funding of research and management to aid the threatened and endangered species found in the Yellowstone River system.
18	31	David Lunde	Wildlife	The benefits of the diversion dam are immense. It helps the wildlife as the whitetail deer and bird populations are abundant.
	32		Alternatives	The fish bypass would seem the best possible answer.
19	33	Dennis Lorenz	Alternatives	I am in favor of doing whatever it take(s) to keep the diversion dam in place and keeping the Lower Yellowstone Irrigation Project in operation
	34		Economics	The farmers in the valley do not need the added cost to pump water, their operating costs are already high enough.
20	35	Philip Naro	Threatened/ Endangered Species	Much of (pallid sturgeon) decline can be pinned on dams and large reservoirs that have sliced off important habitats, especially for spawning and rearing.
	36		Alternatives	Similar to comment #3
21	37	Dan and Jeanne Olson	Alternatives	Similar to comment #3

Letter #	Comment	Commenter	Topic	Comment
22	38	Duane Peters (Sidney Sugars Inc.)	Project Cost	I find it difficult to decide which options would be more beneficial when all facts such as cost of project were not available.
	39		Alternatives	The current proposed project appears to be the best option for all parties.
	40		Process	Sidney, MT and Fairview, MT is where I would suggest the meeting(s) are held in the future.
23	41	Clarence Sanders	Threatened/ Endangered Species	As the Corps of Engineers is aware ecological stress on the Yellowstone riverine aquatic environment is reaching critically dangerous proportions, and the threatened extinction of the pallid sturgeon is one consequence, among others, of that ecological stress.
	42		Alternatives	Similar to comment #3
24	43	B.B. Shepard	Process	I am formally requesting that documentation for the rationale used by the FWS, Corps, and BoR for accepting or rejecting the BRT recommendations be provided as part of the public record for the upcoming environmental analysis. I am also requesting that the following document be made available for public review. Biological Review Team. 2006. Summary of the Biological Review Team's comments on Lower Yellowstone River Intake Dam Fish Passage and Screening Preliminary Design Report. US Fish and Wildlife Service. Billings, Montana.
	44		Process	(I)t is my understanding that the Corps is preparing a "Science and Adaptive Management Plan" for the Missouri River system. In my personal and scientific opinion this plan should be completed prior to spending additional public funds on specific projects such as Intake Diversion Dam project.
	45		Alternatives	(T)he best course of action would be to provide irrigation water by pumping it using sustainable energy sources such as wind or solar power, modifying the existing irrigation system to make it as water efficient as feasible, and abandoning the existing diversion structure in the Yellowstone River. ... I personally do not care whether the entire existing diversion structure is removed as part of the project. Rather, I think one could remove rock from several slots across the structure to provide fish and water passage now, and then let nature take its course to remove the remaining structure.

Letter #	Comment	Commenter	Topic	Comment
	46		Economics	I support agricultural use of the land, but question whether we can subsidize these private farmers to produce sugar beets in this arid environment. My understanding is that irrigators on this project pay much less for their water than any other irrigators in this area. While I believe that these irrigators have a right to water and have an early water right that should be honored, I do not condone using public resources to supply this water when it harms public resources, such as native fish and the Yellowstone River ecosystem.
	47		Water Rights	I suggest that water saved by increasing irrigation efficiency be transferred from irrigators and re-allocated to the federal government. ... This “saved” water could be used to augment instream (in river) flows to support ecosystem function, fish, and commercial barge traffic that operates in the lower Missouri and Mississippi rivers.
	48		Utilities	I noted that the water pumping alternative using wind and solar power was considered, but rejected as too expensive. However, part of the expense was due to the irrigators saying it was unacceptable to have any interruption of power to the pumps. Consequently, a series of huge propane or gas generators were included in the project. ... I find it hard to believe that the irrigators’ crops would fail with the type of power interruptions typically encountered with a wind-solar power system as that which was originally proposed.
	49		Alternatives	(I)rrigation water conservation measures were not considered in the original EIS supplement. I am not sure why irrigation efficiency was not considered. I believe this lack of consideration for water delivery efficiency indicated that the scope of analysis in the original EIS supplement was too narrow. I think that if the funding that was earmarked for the dam was instead used to make the irrigation system more efficient, such as reducing water loss by using pipes and impervious liners in canals, it would be feasible to use pumps to supply the water.

Letter #	Comment	Commenter	Topic	Comment
	50		Threatened/ Endangered Species	There is really no good way to reduce risk to drifting larval Pallid Sturgeon to an acceptable level with the current system, or any system that diverts water in a surface diversion. Screening will not work to protect these small drifting larval fish or prevent them from being lost into the diversion canal. While some larval Sturgeon might be lost to pumps, I believe the technology to reduce impacts at pump stations is much better developed and pumps are less likely to impact drifting larval Sturgeon. I also believe that all other native fish species in the Yellowstone River, like Sauger and Blue Suckers, will benefit from removal of the dam and open canal structure.
	51		Mitigation	Similar to comment #18
	52		Threatened/ Endangered Species	I found it difficult to follow the rationale used by the FWS for how they will recover Pallid Sturgeon in the upper Missouri River system (including the Yellowstone River). ... My questions are: 1. What kind of scientific review was conducted to assure that changes in the 2003 BiOp allowed by the FWS through these 2008 to 2015 letters will aid in the recovery of Pallid Sturgeon?
	53		Threatened/ Endangered Species	2. What constitutes “reasonable and prudent” measures and alternatives for recovery of Pallid Sturgeon by the FWS, how is that decision balanced with the “best science available”, and what level of peer-review and economic analysis is considered reasonable for decision-support in this project?
	54		Threatened/ Endangered Species	3. What level of biological and economic statistical certainty is used to measure tradeoffs between financial costs versus recovery risk for a species?
	55		Threatened/ Endangered Species	4. How will the FWS, Corps, and BoR evaluate the entire Pallid Sturgeon population segment that inhabits the Missouri-Yellowstone river system from North Dakota upriver and the effects that this Intake Diversion Dam has directly on that population, along with all implications if the FWS allows the Corps’ involvement in this Intake project to satisfy their BiOp obligations for their Fort Peck Dam operations?

Letter #	Comment	Commenter	Topic	Comment
	56		Economics	5. What amount of government funds will be spent to subsidize delivery of irrigation water to the private irrigators and how will the level of expenditure be evaluated as to whether demands made by irrigators are “reasonable and prudent”? In my opinion, expenditure of no government funds on this project might solve the fish passage issue. I don’t think fish passage would be an issue if public funds were not spent on this project because the irrigators would use a cheap, and porous, rock diversion as they did in the past. The analysis needs to make it clear that this is an irrigation subsidy project, not a fish passage subsidy project.
25	57	Craig Wagner	Alternatives	Preferred alternative for me is pumping. ... No dam = no impacts to fisheries.
	58		Economics	You should be able to get electricity cost down to approx. \$3/acre.
26	59	Harold Schlothauer	Alternatives	Fish bypass looks like a reasonable way to protect the fish.
	60		Energy	Pumping would be insane when they can get the water without wasting energy.
27	61	Heather Herrman	Alternatives	I believe the Bypass Channel Alternative is the only way to go to help the fish get around the dam and can spawn up river and still provides the water that the farmers need to continue to grow their crops and have their livelihood for years to come.
28	62	Troy Conradsen	Alternatives	Similar to comment #61
29	63	Henry Mischel	Alternatives	The rock ramp alternative would meet the purpose and need of the proposed action and would improve fish passage.
	64		Recreation	Recreational resources would be less affected than with the other action alternatives because river would stay beside the camp ground and day use area, and access would be improved to Joe's Island.
	65		Project Cost	The cost of the Rock Ramp Alternative will cost less than other alternatives, especially since the head gate.... Is already completed; and local rock can be used, saving on transportation cost. ... The rock ramp will have lower annual O&M costs; and less time to build.

Letter #	Comment	Commenter	Topic	Comment
	66		Alternatives	The concern that ice jams would shear off the rocks is a false concern. First ice floats on top of the water; thus would flow over the top of the rocks. Second in the ramp design is a gradual slope, and that does not present a barricade or resistance to ice, like a tree.
	67		Geomorphology	The By Pass Channel could very easily cause the river to change its course; w(h)ere the channel will become the main river channel. I have personally witnessed this when a couple of trees restricted the flow, more water started taking a side channel, within a month the main channel was now in the previous smaller side channel.
110	313	William Gardner	Alternatives	I believe a more thorough consideration should be given to dam removal... The need for pallid sturgeon passage should not be limited to just spawning and larval drift requirements but should also include pallid sturgeon feeding migrations and general distribution and recolonization to up-river pallid habitats as far upstream as Forsyth... Therefore, pallids require passage through the Intake area year-round. The best way this can be provided is removal of Intake Dam which would give pallids, and several other migratory fish species, up and downstream access 100% of the time.
30	68	Casey Schlothauer	Alternatives	Similar to comment #61
31	69	Jim Gentry	Project Cost	I know this will be an expensive undertaking, but I just don't know why local rock within 1/2 mile of construction site wouldn't do a sufficient job for the lifespan of this undertaking.
32	70	Conrad and Linda Conradsen	Threatened/ Endangered Species	This fish is NOT native to the Yellowstone River.
	71		Alternatives	Support the Bypass Channel Alternative with Concrete Weir. This was a compromise (last time). Now they want more studies.
	72		General	We are farmers and we have always been stewards of the land and the water we use. ... All who work in this valley depend on each other to work together.

Letter #	Comment	Commenter	Topic	Comment
33	73	Mike Carlson	Project Cost	Any alternative must continue to provide irrigation water for the Lower Yellowstone Irrigation Project. ... Any action to force the use of pumps instead of direct diversion would be a huge cost to the irrigated farmers and will not work. As the past manager for the Buffalo Rapids Irrigation Project we had to pump our water. The huge costs of the pumps, yearly and frequent repair and electric costs are very high.
	74		Economics	The importance of the yearly paddle fishing at Intake and the number of visitors and fishermen to our community and its economy must be strongly considered. Also the Caviar Project and the paddlefish grant program are important to this region.
	75		Alternatives	I support the rock ramp. The best alternative is #4 and that is to return part of the river to the "Slough" or the eastern old side channel the river used to run in all the time.
	76		Transportation	The Corps has promised Dawson County government that they would repave and repair the Intake road from Highway 16 to the intake FAS. This paved road was ruined by heavy equipment and trucks when the expansive fish screen project was done there.
	77		Visual Resources	The contractors left a huge unsightly pile of dirt at a historic site when excavating the new intake water channel and head works. This dirt needs to be moved away.
	78		General	There has been no information put forth on the success or problems of the multimillion dollar fish screens and headworks installed there five year ago.
34	79	Dennis LeDoux	Alternatives	Just have the Fish and Game relocate all the sturgeon that they catch below the dam to above the dam each year during their annual survey. Do a ten year study to see if the numbers increase or decrease. If the number of caught sturgeon increases it would mean the sturgeon are spawning and coming downstream. If the number of caught sturgeon decreases it would mean the sturgeon are going upstream and staying there.
35	80	Matt Stoecker	Alternatives	I urge you to remove the Intake Diversion Dam and request that you study and then replace this dam with a damless diversion alternative. The Bureau and USFWS have completed such damless diversion projects elsewhere, including at the Buffalo Rapids Irrigation District's Shirley Pump Plant near Miles City and on the Yellowstone River.

Letter #	Comment	Commenter	Topic	Comment
36	81	Shane Gorder (Richland County Commissioner)	Alternatives	Bypass Channel Alternative: This alternative would construct a bypass channel around the existing weir to direct approximately 15% of total river flow.
37	82	Rebecca Spring	Alternatives	Please consider fish friendly alternatives to installing a low head or diversion at Intake.
38	83	Donnette Thayer	Threatened/ Endangered Species	Pallid sturgeon have survived, albeit in diminishing numbers, an onslaught of anthropogenic change. Reduced and regulated river flows, degenerated water quality, introduction of agriculture, industrial and municipal contaminants, backwater riverine area reduction via channelization and stream desiccation, habitat loss due to reservoir creation, and removal of spawning grounds to further urban development are among the challenges to this species.
	84		Threatened/ Endangered Species	If the objective of providing water to farms can be accomplished in accordance with the legal, Federally-mandated protection of this species, it is incumbent upon you to comply.
39	85	Steve Tralles	Alternatives	In lieu of the dam and bypass channel I suggest that the agencies consider the feasibility of other alternatives that could guarantee fish passage and provide viable supply of water to irrigators.
	86		Alternatives	Similar to comment #3.
40	87	Zachary R. Shattuck (Upper Basin Pallid Sturgeon Workgroup)	Alternatives	We believe the most beneficial alternative for Pallid Sturgeon would involve removing the barrier to provide full-river passage and investing in more contemporary methods of water delivery. Improved efficiencies and updated technologies in irrigation practices would serve an agreeable compromise between socio-economic viability and ecological integrity.
	88		Alternatives	(T)he project's primary goal should remain as fish passage with water delivery aspects considered in that context.

Letter #	Comment	Commenter	Topic	Comment
	89		Mitigation	(T)he alternative that is ultimately selected ... needs to be accompanied with explicit monitoring objectives whose criteria are rooted in the biology of the Pallid Sturgeon and the lower Yellowstone aquatic community.
	90		Threatened/ Endangered Species	The Workgroup remains opposed to the use of Shovelnose Sturgeon as a surrogate for Pallid Sturgeon in the determination of success, particularly in the assessment of evaluating free embryo fate in downstream drift at Intake. Though closely related, these two species fail to overlap in many behavioral and ecological aspects and their use in implying success may yield inaccuracies.
	91		Alternatives	The Yellowstone and Missouri rivers are two components of one system and the Workgroup remains opposed to the idea that modifications at Intake should serve as a suitable substitute for operational changes at Fort Peck Dam.
41	92	David Volkman III	Alternatives	Similar to comment #3
42	93	Tim Whaling	Alternatives	Similar to comment #4
43	94	Mike Yinger	Alternatives	Similar to comment #3
44	95	Loren Young (Richland County Commission er)	Alternatives	I am in support of the Bypass Channel Alternative. A concrete weir should be built at Intake, Montana, A bypass should be constructed around the new weir to divert the river flow. The bypass is needed to enable the livelihood of Dawson and Richland County irrigated farms.
45	96	Hugh Zackheim	Purpose and Need	Don't use the concept of "providing fish passage" as a smokescreen to engineer the Yellowstone River to serve agricultural water withdrawals at the expense of the pallid sturgeon. You've already tried that route unsuccessfully and have been instructed that it is both illegal and wasteful of public resources to come to the table with an option that is seriously compromised by agency prejudice.

Letter #	Comment	Commenter	Topic	Comment
	97		Threatened/ Endangered Species	Do study and apply the findings of outside technical experts who have the sturgeon's interests in mind and who are developing hybrid solutions that will truly meet the multiple objectives of agriculture and environment.
	98		Alternatives	Do incorporate a project component that includes investment in local water conservation measures, including leak repair and lining of ditches and canals. These measures represent a cost-effective approach that will lessen the stress on this water-short system. Similarly, using pumps powered by renewable energy sources and backed up by dedicated funding, will save money in the long run and ensure proper project operation.
	99		Threatened/ Endangered Species	Do remember that this project may dictate the future -- or the absence of any future -- for the pallid sturgeon, as well as for other components of the Yellowstone River ecosystem.
46	100	Eldean Flynn	Alternatives	I am for the High Flow Channel.
	101		Threatened/ Endangered Species	Why hasn't a study been done on the other fish feasting the Pallid Sturgeon eggs and fingerlings? The Walleye has been planted many times in the Missouri drainage systems by Fish and Game. The Walleye are aggressive. The Northern Pike is a very aggressive fish. There is never been a study, to say maybe these are a problem in the river. Maybe they should be eliminated from the rivers.
	102		Threatened/ Endangered Species	You can visually see the Sturgeon jumping the old Dam in high water, so they are getting up and over the Dam.
47	103	Jim Foley	Alternatives	Similar to comment #3
48	104	Arthur Gehnert	Geomorphology	If the project is designed as constructed without protection from ice events to the one hundred year level, it will be destroyed and require extensive funding to maintain and operate. High summer flows cause extreme bank erosion, channel migration is recorded and occurs continually, work done in the flood plain should have a maintenance protection plan with associated costs considered.

Letter #	Comment	Commenter	Topic	Comment
	105		Alternatives	The recovery of the endangered pallid sturgeon may be possible on the Yellowstone River if the project is constructed using the best available science.
	106		Threatened/ Endangered Species	I understand if and when the proposed concrete weir and the fish bypass are constructed, the USACE will not be responsible for the endangered pallid sturgeon recovery. The possibility of some recovery on the Missouri river should not be negated.
	107		Economics	Funding of proposed structure maintenance if given to the irrigation district may cause loss of their water due to high operational costs. Funding of species recovery efforts should not become the responsibility of the local residents upstream or downstream of the project.
	108		Alternatives	A water delivery canal with inlet and outlet gates, constructed parallel to the BNSF RR grade, could provide flood control to the 100 year flood level for the railway and screen structures.
	109		Alternatives	Removal of the present rock timber weir would provide a natural river for the pallid sturgeon upstream migration, the removed rocks could be utilized as stream bank protection on the proposed delivery canal.
49	110	Bonnie Gestring	Alternatives	Similar to comment #3.
50	111	Mike Penfold (Our Montana, Inc.)	Recreation	We expect to see growing participation of multiday floating trips along this River and much interest in fish and wildlife. Intake currently is a significant hazard to floaters. We believe that all EIS options should consider floater safety.

Letter #	Comment	Commenter	Topic	Comment
	112		Alternatives	We have talked to fisheries Biologists who voice private concern whether the concrete dam / bypass channel option will serve the intended use of freeing Pallid Sturgeon to access upstream habitat. We would like to see careful analysis of all options including new technologies to acquire irrigation water from the river and assure more natural main channel bypass of Pallid Sturgeon. Inflatable weirs and Ranney wells would be options to consider.
	113		Alternatives	Alternatives should assess the potential of modernizing the entire irrigation system to reduce water volume needs. The options we favor will open the natural channel for Pallid Sturgeon passage and achieve water conservation for irrigators.
	114		Purpose and Need	The legal goal of your project should be ecological restoration of the Yellowstone River with Pallid Sturgeon as a main object. We will want to see careful analysis of all alternatives including those rejected.
51	115	Shawn Higley (on behalf of Lower Yellowstone Irrigation Project)	Alternatives	Increased rock placement will be required for this alternative to maintain the shape and function of the rock ramp. Placement of the rock would have to be done during low flow periods and would be difficult, time consuming and expensive. An entire new system for rock placement would need to be constructed to allow the LYIP to be able to place rock in the correct positions. It is anticipated that the permits and/or methods required to perform this work would be unobtainable or prohibitive.
	116		Geomorphology	Similar to comment #104
	117		Geomorphology	Similar to comment #67. Applies to both the Bypass Channel Alternative and the High Flow Channel Alternative.
	118		Project Cost	It is anticipated that continued use of the Bypass Channel (and the High Flow Channel Alternative) would result in the deposition of sediments within the channel that would need to be removed on a semi-frequent basis to facilitate fish passage. It is our understanding that the removal of sediments in the bypass channel would be the responsibility of the LYIP, adding additional O&M expense for dredging. The LYIP also has concerns over permit requirements for dredging, and the associated environmental impacts and regulatory liability from this type of maintenance.

Letter #	Comment	Commenter	Topic	Comment
	119		Geomorphology	New pump stations along the Yellowstone River (Pump Alternative, Non-weir Alternative) will be subject to the Yellowstone River channel migration, and the proposed stations may become inoperable if the Yellowstone River changes course.
	120		Economics	The implementation of multiple points of diversion (Pump Alternative, Non-weir Alternative) only increases this probability and provides additional O&M requirements for LYIP.
	121		Land Use	The new discharge lines from the pump stations (Pump Alternative, Non-weir Alternative) will require easements and/or purchased right-of-way from the river to the main canal. This will impact private property rights to owners who might refuse to sell, thus prompting potential eminent domain concerns that will impact the entire community.
	122		Wildlife	The new discharge lines (Pump Alternative, Non-weir Alternative) may also be within identified Sage Grouse habitat areas.
	123		Utilities	Pump stations will require redundant pumps and generators to ensure reliable water delivery. Power outages can cause significant damage to the water delivery system through sudden drops in water levels that result in canal instability, failure of siphon tubes and damage to pumps.
	124		Economics	The LYIP is concerned that the implementation of new pumping stations will require significant annual maintenance to service the pumps and motors. The O&M of these new pump stations will be borne solely by the LYIP.

Letter #	Comment	Commenter	Topic	Comment
	125		Alternatives	Removal of the existing rock diversion dam will drop water surface elevations significantly in the river, resulting in lower water levels in the canal. Many turnouts within the main canal, especially in the upper end of the system, are set high in order to irrigate the highest part of the field given the water right, and also because of a lack of elevation difference between the beginning and end of laterals to achieve better flow. Additional check structures will be required in the main canal to meet these elevation requirements. Additional check structures will reduce velocity in the canal, increase seepage and sediment deposition, and impede the flow of water to the lower end of the system. If pumping systems are implemented, the entire system would require a substantial if not complete reconfiguration to provide functional reliability to the system users.
	126		Alternatives	Ranney wells tend to plug and deteriorate when river systems contain fine particles. The LYIP is concerned that implementation of Ranney wells to provide a reliable source of water will be subject to plugging from the significant amounts of sediment generated from the Yellowstone River system. In addition, several sources indicate that seasonal patterns of riverbed permeability exist and can impact flow to Ranney well systems, resulting in an inconsistent source of water for the system.
	127		Water Quality	Water conservation on a mass scale within the LYIP will have negative effects on the underlying groundwater aquifer. Many landowners within the area depend on groundwater as a source for both drinking water and irrigation. The City of Sidney's water wells are supplied by an alluvial aquifer that is fed by LYIP losses. Mass scale water conservation efforts within the LYIP system will significantly reduce recharge of this groundwater system, and provide a hardship to many of the landowners and the City of Sidney who utilize this water for domestic, irrigation and other uses.
	128		Wildlife	Waste spills from the LYIP system support wildlife, wetlands and an entire ecosystem. This system has been ongoing for 107 years supporting this well-established ecosystem, and mass scale water conservation efforts will eliminate the water that supports this ecosystem.

Letter #	Comment	Commenter	Topic	Comment
	129		Water Quality	The Non-Weir Alternative conservation measures are based on overstated losses. LYIP 2000 & 2012 flow records show minimal loss during periods of high demand and significant use (nearly 1,100 cfs delivered with a 1,300 cfs diversion) during peak periods. Additionally, the records show losses in the main canal system are as low as 6% during the peak demand periods.
	130		Alternatives	To our knowledge there has not been 7 miles of canal or laterals identified that exhibit severe seepage. Although seepage throughout the LYIP system appears to be somewhat inconsistent, losses of this magnitude have not been identified.
	131		Water Quality	The Non-Weir Alternative suggests that the LYIP could get by with less than the legal rate of diversion of 1,374 cfs. However, when the lands irrigated by the LYIP are evaluated based on their peak daily consumptive use requirements as calculated using the NRCS methodology with local data and the 2013 LYIP Crop Census information, the amount of water required to satisfy the peak crop water requirement is very close to the legal rate of diversion of 1,374 cfs, assuming a 100% efficient delivery system to each field (not realistic), and a moderately efficient on-farm irrigation efficiency of 60% to account for a mix of center pivot, wheel-line, flood irrigation and other methods being utilized or that could be utilized. Therefore, a reduction in the rate of diversion and delivery to the LYIP system would cause significant harm to existing producers.
	132		Water Quality	Water rationing occurs during the peak demand period within the LYIP on an annual basis.
	133		Water Rights	The LYIP has a legal right to divert 1,374 cfs through their water rights. The proposed (non-weir) alternative calls for a reduction in the physical capacity of the existing system, which does not allow them to utilize their full water rights. If the LYIP can no longer utilize their full water rights, this alternative would cause the water users to permanently lose part of their water right against their will (forced abandonment).

Letter #	Comment	Commenter	Topic	Comment
	134		Project Cost	Wind turbines are highly dependent on constant wind speed to provide a reliable source of energy. The upkeep and maintenance of wind turbines is costly, and the knowledge and training requirements are significant. It is anticipated that the cost of maintaining the wind turbines will be more than the LYIP can afford to pay, and the low life expectancy of wind turbines will create a substantial O&M capital cost to rebuild or replace these structures in the future.
	135		Visual Resources, Wildlife, Hazardous Materials	The LYIP is also concerned with the significant dangers to birds, visual resources impacts, impacts from transmission mains to and from the wind turbines to the project, and other environmental factors that are associated with wind turbines such as the disposal of potentially hazardous materials that are utilized in the manufacture of wind turbines.
52	136	Dave Moser (Montana Chapter of the American Fisheries Society)	Purpose and Need	MT AFS requests that any alternative considered in this EIS prioritize successful fish passage as a test of the alternative's reasonableness. ... At a minimum, MT AFS expects that the ACOE review and summarize passage efficiencies in similar systems for the species they are targeting (Pallid Sturgeon and all natives). The goal of improved passage dictates that the project quantifies the level of passage occurring pre- and post-project implementation, and determine whether passage and associated recruitment has actually improved.
	137		Process	We further put forward that the timeline stipulated in the court documents is likely to be insufficient to collect and analyze pre-project data, review recent literature on Pallid Sturgeon, or evaluate the alternatives in appropriate detail.
	138		Alternatives	MT AFS is of the opinion that the recent proposal to remove the Upper Missouri from consideration in Pallid Sturgeon recovery goals is unsubstantiated and premature given the uncertainty in the outcome at the Intake project.
	139		Alternatives	Consider and assess multiple options for supplying irrigation water to the irrigators
	140		Cumulative Impacts	Define the cumulative impacts area to include the Upper Missouri River Basin
	141		Mitigation	Include mitigation monitoring

Letter #	Comment	Commenter	Topic	Comment
	142		Alternatives	Rigorously consider a dam removal alternative
	143		Threatened/ Endangered Species	Assess the likelihood of passage success biologically. The EIS must assess each alternative using best available science and in-situ data whenever possible. It is critical that the proposed bypass channel alternative accommodate prescribed flows to allow successful passage. It is our understanding that the preliminary engineering models (one and two-dimensional) suggests that the current plan may not meet this goal. Given the absence of swimming ability studies for these fish, it is imperative that in-situ monitoring be used to assess how the fish respond to the engineered channel, and whether the flow model achieves viable passage paths for the fish. Although Pallid Sturgeon is the focal species in this project, increased passage and hydrograph naturalization will benefit multiple native species. Benefits to these species may prevent future listings, specifically for six species of special concern listed in Montana (Sauger, Sturgeon Chub, Sicklefin Chub, Paddlefish, Blue Sucker, and Shortnose Gar).
53	145	McCrystie Adams (on behalf of Defenders of Wildlife and National Resources Defense Council)	Alternatives	(T)he Agencies must fully analyze the consequences of foregoing restoration of the Missouri River for pallid sturgeon recovery in this EIS process.
	146		Alternatives	We also urge the Agencies to reject the dam reconstruction/bypass channel alternative that they selected in their April 2015 Final Supplement to the 2010 Final Environmental Assessment (EA) (“2015 Final EA”). This alternative is inconsistent with the best available science and likely ensures the extinction of the wild pallid sturgeon population in Montana.
	147		Alternatives	To comply with the Court’s direction, as expressed in its preliminary injunction order, the Agencies must evaluate how the alternatives proposed in the EIS affect pallid sturgeon survival and recovery.

Letter #	Comment	Commenter	Topic	Comment
	148		Purpose and Need	The underlying purpose for initiating the Intake Project EIS – and the reason the Agencies have been considering fish passage ideas for more than a decade – is to remedy ongoing ESA violations at Intake Dam (Reclamation) and Fort Peck Dam (Corps) and facilitate the recovery of the pallid sturgeon in the upper Missouri River basin.
	149		Purpose and Need	The Agencies have stated an additional purpose and need for the Intake Project: “improving [fish] passage while continuing a viable and effective operation of the Lower Yellowstone Project.” ... (T)his purpose is compatible with restoring the pallid sturgeon Yellowstone River habitat so that they may successfully spawn and recruit.” If Agencies choose an alternative that meets this additional purpose without meeting the fundamental purpose of facilitating the recovery of the pallid sturgeon, the Corps would have no authority to fund the Project and both Agencies would be out of compliance with ESA.
	150		Threatened/ Endangered Species	...(T)he operations of Fort Peck Dam and Intake Dam make it impossible for sturgeon to spawn anywhere with sufficient drift distance. Instead, to the extent spawning occurs, the larvae are likely killed in Lake Sakakawea.
	151		Threatened/ Endangered Species	The Corps’ operation of Fort Peck Dam in a manner that precludes successful pallid sturgeon spawning and recruitment violates sections 7 and 9 of the ESA.
	152		Threatened/ Endangered Species	The Corps has not implemented the RPA for pallid sturgeon at Fort Peck Dam. Among other things, the Corps is required to test and implement flow enhancements. ... The Corps has not taken action to implement a temperature control device of any kind and comply with the RPA.
	153		Threatened/ Endangered Species	Accordingly, the best available science indicates that the remaining wild both the Yellowstone and Missouri Rivers and that both rivers contain habitat essential to this population’s survival. More importantly, this science confirms the premise of the 2003 BiOp – that the Missouri River below the Fort Peck Dam could be restored to allow successful pallid sturgeon spawning and recruitment if the Corps implemented flow modifications like those contemplated in the 2003 BiOp.

Letter #	Comment	Commenter	Topic	Comment
	154		Threatened/ Endangered Species	A small proportion of the pallid sturgeon in the Montana population – roughly one-quarter, or 32 fish, according to FWS – migrate up the Yellowstone River to Intake Dam to spawn. ... However, these fish are almost universally blocked by Intake Dam.
	155		Threatened/ Endangered Species	Regardless of the precise number that have used the natural side channel over the years, there has been no documented recruitment in this population.
	156		Threatened/ Endangered Species	If Intake Dam was removed, pallid sturgeon would have access to approximately 165 miles of river habitat upstream of the dam and access to two large tributaries, the Tongue and Powder Rivers.
	157		Threatened/ Endangered Species	To date, however, Reclamation has approved the continued operation of Intake Dam in a manner that precludes survival, let alone recovery, of the pallid sturgeon, in violation of sections 7 and 9 of the ESA. ... Reclamation must remedy its ongoing ESA violations at Intake by adopting a plan that facilitates survival and recovery of the species and ends its illegal take of the species.
	158		Threatened/ Endangered Species	(I)n adopting a preferred alternative at Intake, the Agencies must evaluate ESA, including: (1) Whether and how the proposed action will restore spawning and nursery habitat such that the pallid sturgeon can successfully spawn and recruit in the Yellowstone River and Reclamation will avoid jeopardizing the species; and (2) Whether and how the proposed action can serve as a substitute for the required modifications at Fort Peck Dam, such that Fort Peck Dam operations no longer cause jeopardy to the pallid sturgeon. Reclamation is required to implement an alternative that meets the requirements of #1, regardless of the Corps' involvement and funding. The Corps may only assume that this alternative serves as a substitute for operational modifications at Fort Peck Dam if it also fulfills #2.
	159		Alternatives	The best available science demonstrates that dam removal provides the best opportunity for pallid sturgeon spawning and recruitment in the Yellowstone River.

Letter #	Comment	Commenter	Topic	Comment
	160		Alternatives	Because removal of the dam will most fully and reliably fulfill Reclamation’s mandate to comply with the ESA with respect to Intake Dam and thereby be most likely to meet the purpose of the Project, the Agencies must consider at least one such alternative as part of the EIS in order to comply with NEPA.
	161a		Alternatives	Even though there is no scientific dispute that a dam removal alternative would best fulfill the fundamental purpose of the Intake Project – complying with ESA – the Agencies have repeatedly rejected these alternatives from detailed consideration based on an economic, rather than biological, rationale. This rationale was and remains arbitrary and cannot serve as the basis for failing to complete a detailed consideration of such an alternative.
	161b		Project Cost	... so long as the Corps envisions this Project as a means of abandoning required modifications at Fort Peck Dam, the scale of construction costs, whatever they may be, must be measured against the “saved” costs of abandoning the Fort Peck operational modifications. These “savings” must be fully explained in the NEPA analysis as well. Regardless, construction costs have no effect on the Agencies’ additional purpose and need and cannot serve as a basis to eliminate a dam removal alternative from detailed consideration.
	162		Alternatives	(T)he Agencies must evaluate a no-dam alternative in detail in this EIS to fully understand both the costs and the benefits. If the Agencies consider alternatives that do not comply with the ESA – such as the 2015 decision to adopt the dam/bypass channel – they are not viable alternatives and cannot be adopted in compliance with federal law, regardless of their cost.
	163		Project Cost	The EIS should examine alternative funding mechanisms for both agencies to pay for at least a portion of the Intake Project, while minimizing impacts on irrigators.

Letter #	Comment	Commenter	Topic	Comment
	164		Alternatives	<p>Defenders and NRDC submitted a draft conceptual dam removal alternative that would provide for pallid sturgeon spawning and recruitment on the Yellowstone River. The alternative has several essential components: Implementation of water conservation measures and an alternative water source that would reduce the amount of water needed to be diverted by approximately 766 cfs; Delivery of needed irrigation water via a pumping system; Gravity diversions through the existing headworks when the river is high enough to reduce the amount of pumping electricity needed; Use of free wind energy to eliminate pumping electricity costs for the irrigation districts.</p>
	165		Alternatives	<p>One critical aspect of this alternative that has not been considered in detail by the Agencies in their prior NEPA processes is the implementation of a suite of conservation measures. The LYP diverts far more water than it actually delivers. Approximately 66% of the water that is diverted is wasted through seepage, evaporation, spillage, or some other means. ... In addition, conversion of fields to sprinkler systems would significantly reduce the amount of water needed on-farm. Implementing water conservation measures would reduce these inefficiencies and reduce the amount of water that needs to be diverted. As a result, the capital costs and electricity needs for pumps would be reduced significantly.</p>
	166		Alternatives	<p>The Corps and Reclamation have co-extensive authority to fund and implement water conservation measures, at least where they involve the “off-farm” irrigation infrastructure. ... there is no impediment to planning and implementing the design and funding of water conservation measures. Such measures would reduce the costs to the federal government of a dam removal alternative, help provide for the restoration of the Yellowstone River for the pallid sturgeon and benefit the irrigation districts.</p>
	167		Alternatives	<p>Even if some of the water conservation measures proposed in Defenders’ and NRDC’s conceptual alternative would require other agencies’ participation and funding, the Agencies must still evaluate them as part of the dam removal alternative.</p>

Letter #	Comment	Commenter	Topic	Comment
	168		Process	For each alternative in the EIS, NEPA requires the Agencies to carefully and thoroughly describe the environmental consequences of that action, including its direct and indirect effects. ... Such an analysis would address whether and how each alternative will move the pallid sturgeon closer to achieving the 2014 Recovery Plan’s goal of a self-sustaining population of 5,000 adult fish in the upper Missouri River basin, including what percentage of the adult sturgeon are expected to migrate upstream under a new plan; their likelihood of successfully spawning and in what numbers; the likelihood of their larvae surviving the downstream drift and in what numbers, whether and why the Yellowstone River alone would be enough to re-establish a viable, self-sustaining population, and any other relevant factors. The EIS must take a “hard look” at the consequences of every alternative to the status of the species under every alternative, in light of ESA standards.
	169		Alternatives	The agencies must fairly evaluate the No-Action Alternative and disclose that current operations are illegal and past operations will not continue. ... Instead, if the Agencies chose not to modify the Dam through an action alternative, that decision would precipitate a series of predictable, and legally required, actions by others. The predictable results would be that the rocking would be prohibited because it is illegal and the dam would eventually naturally erode away, or Reclamation would finally comply with the law and actively remove the barrier.
	170		Alternatives	Defenders and NRDC urge the Agencies to abandon their prior decision to adopt extinction in Montana, permanently foreclose recovery of this ancient species in the Yellowstone River, and involve the construction of a concrete dam that will permanently block the migrations of many other native fish species along with the pallid sturgeon. This alternative is not supported by the best available science and has no precedent for success. Indeed, we are not aware of any examples of a successful artificial bypass channel for pallid sturgeon in the Missouri or Mississippi River systems. ...

Letter #	Comment	Commenter	Topic	Comment
	171		Threatened/ Endangered Species	Thus, even if some sturgeon use the artificial bypass, it will be a small fraction of the potential breeding population. The inevitable result will be further genetic degradation and high probability of reproductive failure simply due to stochastic effects on small populations, made smaller by the process of limiting access to the breeding reaches of the river to a handful of individuals. ... (T)he EA must analyze what factors have precluded the pallid sturgeon from successfully reproducing so far, even though a handful of sturgeon swam past Intake in 2014 and 2015 and may have done so for years prior to the monitoring being in place.
	172		Wildlife	The Intake EIS must also evaluate the impacts of every alternative on the migrations and ecological needs of the many other native fish species in the Yellowstone. The Yellowstone River is a high value public resource that provides substantial fish and wildlife habitat, recreational, historic, and aesthetic values. ... At least seven imperiled fish species besides the pallid sturgeon inhabit the lower Yellowstone River and its tributaries, as well as Montana fish species of concern and sportfish sauger, paddlefish, burbot, trout-perch, channel catfish, and shortnose gar. The Intake EIS must address the impacts of all of the potential alternatives on the Yellowstone River fish community.
	173		Recreation	The alternative chosen could also alter the public's ability to use and appreciate the Yellowstone River. For instance, diversion dams along the Yellowstone currently pose a threat to recreational boaters. Any decision to place a permanent structure across the river could have safety implications for public use, while removing the existing structure would likely improve the safety and experience for recreational boaters.
	174		Climate Change	(T)he Agencies should take into account any potential impacts of climate change. ... the Agencies failed to evaluate the resilience of the potential alternatives to changes in climate in the prior NEPA processes. In the upper Missouri River basin, climate change will likely result in changes in precipitation. Flows in the upper Missouri River basin have already been declining in part to decreased snowpack.

Letter #	Comment	Commenter	Topic	Comment
	175		Geomorphology / Project Costs	The EIS must also address the resilience of each potential alternative given the fact that the Yellowstone is a highly dynamic, changeable river prone to ice flows, floods, and other natural processes that will undoubtedly alter any engineered structures in the river. The costs of repairing such engineered structures must also be considered as part of the O&M costs associated with each alternative.
	176		Process	In addition to the ESA and NEPA, the Agencies must also comply with section 404 of the Clean Water Act prior to making a final decision on the Intake Project. ... (A)lthough a NEPA analysis may be used to inform the 404 permitting decision, the CWA differs significantly from NEPA in that has substantive standards and section 404 prohibits activities that violate those standards. ... the analysis relevant to determining whether the plan will comply with the CWA should be the same as the analysis under NEPA because both statutes require an analysis of all of the relevant impacts of potential alternatives. ... To ensure these mandatory CWA requirements are satisfied, the Corps must fully evaluate the direct, secondary, and cumulative impacts of the activity, including impacts to endangered species, the aquatic environment, fish and wildlife, and human impacts.
	177		Process	Reclamation and the Corps are currently violating their procedural and substantive duties under section 7 of ESA. The only way for the Agencies to comply with the ESA with respect to the Yellowstone is to remove the dam and restore the Yellowstone as a free-flowing river. Whether restoration of the Yellowstone alone is enough to remove the jeopardy caused by Fort Peck Dam must be thoroughly evaluated in the NEPA documents and consulted upon by the Corps and FWS prior to making the CWA's section 404 findings.

Letter #	Comment	Commenter	Topic	Comment
	178		Project Cost	(A)ll costs must be incorporated into the analysis. For example, if an alternative is chosen that will not recover the species, there will be additional costs associated with (1) the costs of evaluating and implementing a new alternative to comply with the ESA if the initial plan fails to provide for recovery of the species; (2) the adaptive management activities required to tear down any construction and implement a new solution; and (3) the maintenance, in perpetuity, of a hatchery program for pallid sturgeon if the species continues to be unable to be self-sustaining. In addition, there are likely significant costs associated with any engineering alternative, stemming from the removal of the accumulation of rock and other fill from the existing rockpile that have collected downstream in the Yellowstone River, ongoing maintenance of any new construction in what is a floodplain and subject to significant ice and floods in any year.
	179		Process	(A)ny highly engineered alternative, such as the dam/bypass channel, that continues to block any native fish from migrating throughout the Yellowstone River, and that requires significant river modification, will significantly alter and degrade the Yellowstone River's fishery and riparian habitat. In contrast, removing the dam will start the process of reversing the degradation caused by the more than a century of dam building and river modifications that have destroyed the habitat for pallid sturgeon and other sensitive species. These impacts must be thoroughly evaluated in the EIS
54	180	Defenders of Wildlife and National Resources Defense Council	Alternatives	[The two organizations submitted a 15-page "Conceptual Dam Removal Alternative Proposed for Evaluation in the Forthcoming EIS on the Intake Diversion Dam Fish Passage Project." The alternative consists of ten components: 1. Water conservation check structures; 2. Water conservation flow measuring devices; 3. Convert laterals from ditches to pipes; 4. Convert fields from flood irrigation to sprinklers; 5. Line open canals; 6. Control overchecking; 7. Water pumping from a source other than the Yellowstone River; 8. Direct delivery of water to the LYP system; 9. Use of existing headworks; 10. Renewable energy resources.]

Letter #	Comment	Commenter	Topic	Comment
	181		Project Cost	Using all available data to date, we believe that the water conservation measures in our proposal would cost \$55.12 million, excluding the O&M cost of groundwater pumping in extreme circumstances and capital and O&M costs of pumping diverted Yellowstone River water, which we were unable to estimate. The information provided by the Layne Company [suppliers of Ranney wells] provides a preliminary estimated cost for Yellowstone River diversions, but may represent an over-estimate due to their unfamiliarity with the site. The cost of a single modern windmill to power a pumping system - a proposal to reduce the electricity costs for the LYID - is estimated to be \$1 million.
55	182	Philip Strobel (US Environmental Protection Agency)	Alternatives	We were pleased that the range of alternatives to be considered in the DEIS includes pumping and non-weir alternatives, which are both alternatives that EPA has requested to be considered in prior EA and Supplemental EA.
	183		Aquatic	The EPA recommends that the DEIS analyze the alternative for their impacts on other aquatic species in addition to pallid sturgeon. There are other native aquatic species, including recreational species such as native paddlefish, which may be impacted by various alternatives.
	184		Aquatic	The EPA reiterates from previous comments on this project that the CWA Section 404(b)(1) Guidelines ... and Mitigation Rule ... require consideration of impacts to aquatic resources. The direct and indirect adverse effects associated with loss of natural stream channel mitigation and river floodplain access, as well as wetlands impacts and other potential aquatic impacts, should be addressed in the DEIS.

Letter #	Comment	Commenter	Topic	Comment
	185		Cumulative Impacts	(W)e recommend considering the effects of reasonably foreseeable agricultural growth in the area and its effects on the need for irrigation water from the Intake Diversion Dam. The EA looked at population growth and agricultural use, but did not provide a reasonable estimate for what the future agricultural water needs will be, especially considering climate change. This is important because projecting and understanding the expected flows in the Lower Yellowstone and the changing anthropogenic demands on water resources have potential effects on the viability of alternatives such as the bypass channel.
	186		Mitigation	The EPA recommends that the adaptive management monitoring strategy be established for a greater period of time than the proposed eight years. We have previously recommended that the project be monitored for no less than 15-20 years in order to adequately evaluate the long-term recruitment success of the pallid sturgeon.
	187		Climate Change	(W)e suggest the DEIS take into consideration the impacts of climate change on the alternatives. (C)limate change influences on the project may translate into modified design and operational assumptions for determining resource supplies, system demands, system performance requirements, and operational constraints. This could assist with estimating the number of days in a year when alternatives such as the fish bypass will be available to aquatic species.
56	188	Linda Hardey	Alternatives	We approve the construction of the proposed concrete weir and fish bi-pass.
	189		Economics	We have proved our dedication to conserving water by spending many thousands of dollars to go from gravity flow irrigation to sprinkler systems for water delivery. We continue to make payments to our lender for those systems. We cannot add any additional debt to our farming operating. We like many other farmers in our country are experiencing very low prices for whatever product that we produce.
57	190	Ray Hansen	Economics	I purchase hay from many irrigated farms there for my ranch in Wibaux County. There would never be enough hay on dryland farms.

Letter #	Comment	Commenter	Topic	Comment
	191		Alternatives	It's a very sensible plan to allow the Intake diversion dam that serves irrigated farmers on a 55,000 (acre) area in both northeastern Montana and northwestern North Dakota while helping to save the pallid sturgeon.
58	192	Lola Hansen	Economics	I am very concerned that adverse decisions will be made to lose the irrigation farms along with Sidney Sugars from Sidney's economy. ... I've operated businesses here since 1965. ... These could never have continued without the stable agriculture provided by irrigated crops.
	193		Alternatives	Similar to comment #188
59	194	Arnold Hansen	Economics	I have an irrigated farm south of Sidney that I put a pivot on last year for my alfalfa crop for hay to feed my cattle. The pivot was terribly costly. I am quite dismayed at the expensive electrical cost for my pivot already and the projections for alternative plans for this dam would totally make it prohibitive to irrigate because of electrical expense.
	195		Alternatives	Similar to comment #188
60	196	Brandi Wevley	Alternatives	Save the pallid sturgeon and any other endangered fish with this excellent fish friendly ramp and concrete weir at the Lower Yellowstone Intake.
	197		Economics	I live on an irrigated farm which probably won't even exist if good sense doesn't prevail and the economy of eastern Montana protected as well as the fish.
61	198	Stephanie Schlothauer	Alternatives	I support the continued use of water from the Yellowstone River coming through the Intake Dam - which for 100 years has irrigated the Yellowstone Valley and is the major support of thousands of people.
	199		Economics	The Yellowstone Valley Irrigation Project allows the production of crops that are used for food as well as forage crops that feed the large cattle industry.
	200		Threatened/ Endangered Species	The pallid sturgeon is not a food fish. This fish has proven to be successfully raised in captivity, thus keeping it from becoming extinct. ... We need to find a solution that is acceptable to the continued success of the amazing engineering accomplishments of the Yellowstone Valley Irrigation Project as well as a satisfactory environment for a fish than can be raised in captivity and transplanted to friendly waters!

Letter #	Comment	Commenter	Topic	Comment
62	201	Jim Hardy Jr	Alternatives	Similar to comment #188
	202		Economics	Similar to comment #189
63	203	Barbara Schwartzenberger	Alternatives	Similar to comment #198
	204		Alternatives	Eliminate any of the dam and installing pumps would be a hardship the farmers would be unable to pay for and we would all lose. Replacing an existing weir and a shallow sloped ramp or bypass channel would be a plan better suited to help the sturgeon. Losing our precious irrigation system is not an option in favor of fish and losing the beauty of our lush green growing irrigated crops our Yellowstone Valley is known for.
64	205	Sandy Simpson	Alternatives	Please keep the Yellowstone River in its free flowing state. ... Please examine the alternatives to a dam. The save the pallid sturgeon, please provide it with full river access.
65	206	John Helvey	Alternatives	Let the fish have the river and put the water in a pipe to the irrigators. Fish first in this.
66	207	Patricia Helvey	Threatened/ Endangered Species	Do we understand the biology of this primitive fish? What do the pallid sturgeon need to function through their ancient genetic development as regards life cycle of this important species?
67	208	Curtis Helvey	Threatened/ Endangered Species	Just follow the science on this.
68	209	Mary Hardy	Alternatives	Similar to comment #188
	210		Economics	Similar to comment #189
69	211	Jim Hardy	Alternatives	Similar to comment #188
	212		Economics	Similar to comment #189
70	213	Greg Breuer	Alternatives	This diversion has been (in) use long before the endangered species act, and should be approved to complete.

Letter #	Comment	Commenter	Topic	Comment
71	214	Ken Schlothauer	Threatened/ Endangered Species	The fish has survived over 100 years. This alone should prove its ability to adapt.
72	215	Ken Brose	Alternatives	I suggest putting a bypass just south of the existing diversion dam. 100' wide +- about 2000' long with various flow restrictions for sturgeon res areas as natural flows. The elevation in a 2000' run is not any more than some areas of the Yellowstone River as it now exists in some areas where the sturgeon now navigate.
73	216	George and Jenny Rice	Alternatives	Leave the dam and fish alone!!!
74	217	Joe Steinbeisser	Alternatives	Similar to comment #188
	218		Threatened/ Endangered Species	I would like to see more proof of this fish being endangered. There are a lot of them being caught by local fishermen.
75	219	Sheridan Martin	Threatened/ Endangered Species	Can't fish be capable of handling themselves? Teach the fish where to go to spawn, just as they can be taught where predators are. Fish are capable of remembering locations and figuring out their place; and it would be passed down generation to generation.
76	220	Matt Rosendale	Energy	I have major reservations about removing the diversion and converting the canal to a pump supply. The additional energy that is necessary to run these pumps is not available. We have problems now with the supply of energy to the YIP pumps which are much smaller.
77	221	Byron Sunwall	Economics	Since I live in Savage I have to pay taxes for LYRI and I don't use any irrigation waters. So to me this is taxation without utilization.

Letter #	Comment	Commenter	Topic	Comment
78	222	Honorable Steve Daines and Jon Tester, U.S. Senators	Process	We urge ACE and BOR to address the concerns of the Court and conduct the necessary analyses in a timely manner to ensure this essential source of water for farmers, ranchers, and communities throughout much of northeastern Montana and northwestern North Dakota is not unduly disrupted.
	223		Process	If the agencies have not already done so, we urge ACE and BOR to develop and implement an interim plan to manage the existing intake dam should the project continue to be enjoined and the lawsuit moves through the judicial process.
	224		Process	Additionally, we encourage ACE and BOR to provide assurances to Congress and stakeholders that funding currently allocated for this project will not be transferred or reduced while ACE and BOR conduct further analyses.
	225		Process	As ACE and BOR move forward in addressing the issues detailed by the Court in granting the injunction we request ACE and BOR act in an expeditious a manner as possible.
79	226	Stacey Brower	Alternatives	I believe upgrading the existing weir is the best solution economically and environmentally.
80	227	Mike Otterstetter	Alternatives	By doing what you propose to do will ultimately devastate our way of life and people for years to come.
81	228	Jay Reidle	Economics	Ag is the life blood of this valley. Without irrigation this valley will die along with loss of thousands of jobs. Please keep the dam.
82	229	Duane Mitchell (Richland County Commissioner)	Alternatives	I support the Bypass Channel Alternative which would construct a bypass channel around the existing weir to divert approximately 15% of total river flow. I understand there are these types of operations in Michigan that have been working just fine for years.

Letter #	Comment	Commenter	Topic	Comment
83	230	David Allen	Alternatives	I support the removal of the Yellowstone River Dam. It appears that both the agricultural needs and the prevention of the extinction of the pallid sturgeon can be achieved with this action.
84	231	Rob Schlothauer	Economics and Threatened/ Endangered Species	This is a thinly veiled land grab attempt. Devaluation of valuable irrigation land under the guise of saving a fish. A fish that can be spawned in captivity. A fish that is most likely going to become extinct no matter that is done to the river due to ever-changing climate and diversity.
85	232	Raymond Bell (Sidney Water Users Irrigation District)	Economics	SWUID is a 100% pumping irrigation district just on the east side of the river from LYIP serving 4600 acres. With the expenses we have in our pumps and motors alone I don't see pumping even being an option for LYIP with all of their acres. The increased taxes would put the farmers out of production, not to mention the environmental issues with burning electricity or fuel.
86	233	Harold and Elaine Emly	General	The warm river water is better than cold water from a ground well for the garden. Farmers in this area need this irrigation water from the Yellowstone River for the crops. This is more important than the survival of the pallid sturgeon. Please consider a workable solution to this project.
87	234	Kenny Vannatta SR	Economics	The farmers, the Sugar factory and businesses would suffer and more than likely close not to mention thousands of jobs lost. Don't you think the people and this economy is more important than saving a fish that has and still are doing just fine right now.
88	235	Dr. Jarald Bergman (NDSU, Williston Research Extension Center)	Alternatives	Similar to comment #71

Letter #	Comment	Commenter	Topic	Comment
	236		Economics	The LYIP and its water system supports thousands of irrigated acres of farms in eastern Montana and western North Dakota and the production of high value/value added crops not possible under non-irrigated conditions due to our low growing seasonal rainfall in the MonDak region.
	237		Economics	The loss of a reliable irrigation water system will likely result in the loss of the Sidney Sugarbeet Processing Facilities ... and over 30,000 acres of irrigation sugarbeet production and the Busch Ag Malt Barley Storage Handling facility in Sidney MT that handles and markets over 3 million bushels of irrigated barley from the Lower Yellowstone Valley region.
	238		Wildlife	Irrigated production also provides feed for the livestock industries but also often helps provide feed and habitat for wildlife during years of drought and/or harsh winters with heavy snows and deep snow depth on the non-irrigated lands and rangelands.
89	239	Bruce Farling (Montana Trout Unlimited)	Alternatives	Development of an alternative that requires removal of the existing weir to allow unimpeded volitional upstream passage of pallid sturgeon and other native and important sport fish species.
	240		Alternatives	Development of an alternative that allows for removal of the existing weir, does not required a replacement structure, and which accommodates traditional agricultural water use by 1) using gravity flow into the existing headworks when river stage allows ... 2) Uses pumps, either in the river or in the alluvium, during period of low flows. 3) Reducing diversion volumes by investing in conservation measures in the canal, at turnouts, and in laterals (lining, piping, possibly sprinkler conversation, improving headgate efficiency, etc.); 4) Employing groundwater pumps in appropriate locations within the irrigation project area, as a backup as necessary. 5) Providing power for pumps using a wind generator, or, if feasible low-head hydro in the main canals. 6) If power cannot be produced on site, establish a trust fund dedicated to purchasing power, and possibly fund O and M for pump system.

Letter #	Comment	Commenter	Topic	Comment
	241		Economics and Mitigation	Economic analysis for alternatives requiring a weir or dam and a bypass should include the long-term annual estimated cost of maintenance of all structures and the bypass channel. ... The DEIS should identify the mechanism that will ensure that maintenance is covered, who will be responsible for it, and who will pay for monitoring to demonstrate the alternative is successful at adequately passing sturgeon and other species upstream.
	242		Mitigation	Criteria used for determining upstream passage is successful should be biological, and perhaps include telemetry data and monitoring that measures recruitment. The DEIS should be clear that the Corps is responsible for funding biological monitoring if a weir and bypass is the selected alternative.
	243		Mitigation	The DEIS should identify next steps, and commitments, from the Corps should the selected alternative not demonstrate upstream passage is biologically successful. This including adaptive management, a time-frame for determining success and the next range of alternatives that will be considered.
	244		Process	The DEIS should be clear in ensuring that biological criteria will be the primary determinant for success for all alternatives. Modeled hydraulic criteria simply do not guarantee upstream passage will be successful nor does in comport, we believe, with the incidental take and recovery goals of ESA.
	245		Alternatives	The DEIS should not include any alternative that relieves the Corps of its larger obligation under ESA and previous biological opinions to recover pallid sturgeon elsewhere in the upper Missouri River basin.
90	246	Hugo Asbeck, LYIP District #1	Water Quality	Pivot saves no water; evaporation becomes as great as seepage.

Letter #	Comment	Commenter	Topic	Comment
91	247	Scott Bosse, American Rivers	Alternatives	DEIS should analyze the following four alternatives at a minimum: 1. No-action alternative 2. Construction of a new dam and fish bypass channel 3. Construction of a rock ramp in place of the existing diversion dam 4. Removal of the existing Intake Diversion Dam
	248		Threatened/ Endangers Species	Does the alternative comply with the federal Endangered Species Act by meeting the goal of recovering pallid sturgeon to the point that there is a self-sustaining, genetically diverse population of 5,000 adult fish in each recovery unit (Missouri River above Fort Peck Dam; and Missouri River below Fort Peck Dam and the Lower Yellowstone River)?
	249		Aquatic Communities	Does the alternative provide improved fish passage for other extant native fish species, including the six species of special concern that reside in the lower Yellowstone River (blue sucker, paddlefish, sauger, shortnose gar, sicklefin chub, sturgeon chub)?
	250		Mitigation/ Economics	Does the alternative include long-term funding to monitor impacts on fish passage? What are the long-term operation and maintenance (O & M) costs? What assurances are there that funding would be available to repair or rebuild the project if it is seriously damaged by a major flood or ice jam event?
	251		Geomorphology	What is the likelihood that the alternative will be able to withstand major flood and ice jam events, both of which are common on the lower Yellowstone River?
	252		General	Does the alternative ensure that the Lower Yellowstone Project remains viable?
	253		Recreation	How does the alternative impact recreational navigation on the lower Yellowstone River?
	254		Alternatives	The most biologically certain and cost-effective alternative is to remove the existing diversion dam from the river and install pumps to ensure that sufficient amounts of water can be delivered to the Lower Yellowstone Project.
	255		Water Rights	Can the water supply needs of the Lower Yellowstone Project be met through a combination of pumping from the river and groundwater pumping in lieu of diverting flows from the river with a diversion dam?
	256		Water Rights	For how many months during each irrigation season would pumping from the river and groundwater pumping be required, and at what cost?

Letter #	Comment	Commenter	Topic	Comment
	257		Energy	Could the pumps be powered by renewable energy such as on or off-site wind generation or micro-hydro installed in the main irrigation canal, and if so, at what cost? Could any electricity that is produced by wind turbines outside of the pumping season be sold to help offset the costs of the project?
	258		Water Rights	Can the water supply needs of the Lower Yellowstone Project be significantly reduced by implementing practical efficiency measures (e.g., lining canals, moving water through pipes instead of ditches, converting from flood irrigation to sprinklers), thereby minimizing the need to pump water from the river?
92	259	Scott Buxbaum	Alternatives	Favors the concrete weir and fish bypass. Pumps would add far too many costs to the farms to absorb.
93	260	Terry Cayko	Alternatives	Favors the fish bypass alternative. Concerned that dam removal would affect natural side channels and that pumps would cause water pollution.
	261		Economics	Farmers in irrigated valley will not survive with taking dam out and putting in pumps that farmers cannot afford.
94	262	David Garland, Sidney Sugars	Alternatives	Believes the original concrete weir and fish by-pass would be the most economical, environmental friendly, best for the pallid sturgeon, and best for the agricultural community.
95	263	Rob Gregoire	Alternatives	Favors using pumps to fill the irrigation ditches instead of diverting water with the diversion dam. Higher probability of success in restoring fish passage.
96	264	Lou Hanebury	Purpose and Need	Supports the stated purpose and need to improve fish passage at Intake Diversion Dam.
	265		Alternatives	States that Rock Ramp and Bypass Channel Alternatives do not meet the ecosystem restoration requirements of WRDA not agency obligations under ESA and should not be considered.
	266		Alternatives	States that Realigned Bypass Alternative and Island with Extended Canal Alternative in earlier studies do not meet the ecosystem restoration requirement of WRDA. While bypass channel may allow for some fish passage, it's not a restoration action.

Letter #	Comment	Commenter	Topic	Comment
	267		Alternatives	Open Channel with Multiple Ranney Wells is only alternative (from the EA) that would functionally restore natural passage of pallid sturgeon and other fish species.
	268		Threatened and Endangered Species	Reclamation and Corps have an ESA obligation to conserve and recover the pallid sturgeon and no jeopardize the pallid sturgeon. USFWS has determined that a free-flowing lower Yellowstone River is necessary to achieve recovery of the pallid sturgeon.
	269		Alternatives	Modifications of the Open Channel with Ranney Wells should be considered including floating pumps, a short concrete or inflatable weir, retractable or inflatable gates.
97	270	Travis Heater	Alternatives	The best course of action for both irrigators and the fishery is to combine using the current irrigation headgate with gravity flow when the river discharge is high, and then switch to using pumps during lower flows. It would also be economical to invest in water conservation measures to reduce leakage in canals and ditches, thereby reducing pumping needs and costs.
98	271	Mark Iverson, LYIP District 1	Lands and Vegetation	Concerning the pump alternative: the new discharge lines from the pump stations will require easements, and/or purchased right-of-way from the river to the main canal. This will impact private property rights to owners who will refuse to sell, thus prompting potential eminent domain concerns that will impact the entire community.
	272		Wildlife	The new discharge lines may also be within identified Sage Grouse habitat area.
	273		Water Rights	Peak Evap Transpiration for our 55,000 plus acres of crop requires 1,350 cfs delivered directly to the farms.
	274		Water Quality	Water conservation on a mass scale within the Lower Yellowstone Irrigation Project will have negative effects on the underlying groundwater aquifer. Many landowners within the area depend on groundwater as a source for both drinking water and irrigation.
	275		Water Quality	Waste spills from the LYIP system support wildlife, wetlands and an entire ecosystem. This system has been ongoing for 107 years supporting this ecosystem, and mass scale water conservation efforts will eliminate the water that supports this ecosystem.
99	276	Ray Johnson	Alternatives	Supports the replacement of the intake diversion dam with the weir and fish bypass. Will meet the needs of the community while ensuring future of the pallid sturgeon.

Letter #	Comment	Commenter	Topic	Comment
100	277	Justin Kucera	Alternatives	Eliminate all alternative that impact Joe's Island side channel. It provides seasonal connectivity for native and non-native fish in the river including the pallid sturgeon; seasonal wetland values existing throughout the Slough. The side channel and the resources provided should be protected and not destroyed.
	278		Alternatives	There are several studies supporting the value of Yellowstone River side channels including work done by the USGS, Montana State University, Idaho State University, and many others.
	279		Alternatives	Consider supplementing the natural flows of the Yellowstone and to the Slough by supplementing flows with storage seemingly available in the Bighorn Reservoir.
	280		Project Process	One public meeting for an EIS is inadequate for the Yellowstone River.
101	281	Christopher Lish	Alternatives	Supports development of one or more dam-free open river alternatives to guarantee pallid sturgeon and other fish passage on the lower Yellowstone River.
	282		Water Quality	Current diversion dam and irrigation infrastructure wastes tremendous amount of water that never reaches intended crops.
102	283	John Mercer	Alternatives	Supports the bypass channel.
	284		Economics	Past experience with pumping water from the Yellowstone has proven to be extremely challenging, extremely expensive, and prone to extremely high O&M costs.
	285		Alternatives. Economics	Consider logistics, cost, and O&M of locating dozens of pumping structures along river's edge; disruption caused by miles of pipelines; millions of yards of silt turned loose by removal of the diversion dam; cost and environmental damage of proposed wind farm, including O&M.
103	286	<i>Name withheld by request</i>	Alternatives	Remove the outdated dam and replace it with a more modern and efficient water delivery system.
104	287	Robert Mitzner	Alternatives	Remove the outdated dam and replace it with a more modern and efficient water delivery system. Current dam and irrigation structures waste tremendous amounts of water.

Letter #	Comment	Commenter	Topic	Comment
105	288	Kim Nollmeyer	Alternatives	Supports the concrete weir and fish bypass.
106	289	Thomas Ball, Missouri River Grass Roots Network – Sierra Club	Threatened and Endangered Species	New science data (not considered in the previous EA) gathers support for the hypotheses that anoxic zones in Lake Sakakawea and insufficient pallid larval drift distance are the dominant threat limiting recruitment of larval pallid sturgeon into juvenile classes.
	290		Threatened and Endangered Species	If pallid sturgeon avoided or did not use the new 15% flow channel, then the existing rock weir impediment remained. There were no research from existing data or field experiment conducted to insure that upward and downward migrating pallid sturgeon would use the fish passage channel.
	291		Alternatives	The only, unqualified, most “attractive” alternatives for fish passage are those that feature complete and 100% removal of the existing rock weir dam, without replacement.
	292		Alternatives	The Rock Ramp proposal suggested in this iteration of the EIS does not remove the rock weir but adds a new concrete weir on top of the old one.
	293		Purpose and Need	The issues of fish passage and irrigation water supply right are separable. The Irrigation Districts’ water rights should be fulfilled in a timely manner, as they are now. However, there is a biological imperative for needed fish passage.
	294		Project Process	Dam removal should begin as quickly as federal regulatory agencies can act.
	295		Threatened and Endangered Species	USGS has now published “Jacobson, R.B., Parsley, M.J., Annis, M.L., Colvin, M.E., Welker, T.L., and James, D.A., 2015, Science information to support Missouri River Scaphirhynchus albus (pallid sturgeon) effects analysis: U.S. Geological Survey Open-File Report 2015–1226.
	296		Aquatic Communities	Fish exclusion screens and headworks have now been in operation for a few years, with construction completed in 2012. We would like to see a Before- After, Control-Impact (BACI) study analysis detailing the effectiveness of the exclusion screens in reducing or eliminating unintentional “take” of the various species of fish.

Letter #	Comment	Commenter	Topic	Comment
	297		Alternatives	Consider inexpensive, simple, and durable “Hydraulic Ram Pumps” that require very low hydraulic head pressure, no expensive electrical supply, and minimal maintenance on the part of irrigators. They require 0 (zero) electrical energy for pump operation, utilizing head within a suction supply pipe, and a transmission of compressive volumes for pumping action. Their invention and use predate the electrification of farms.
	298		Project Cost	Concerned that previous studies of pumping alternatives began with assumptions of high corollary, construction, electrical, and maintenance expenses. New Ranney pump alternative, previously eliminated on an economic comparative basis, required a change in economic equations or is a straw man.
	299		Alternatives	If Hydraulic pumps are ruled out after consideration in a structured decision system, an alternative with renewable energy sources should be reconsidered.
	300		Water Rights	Concerned that quantified irrigation need has crept up over time. What is the quantified, apportioned water right? Water rights should be both quantified and qualified. Irrigators likely do not need drinking water quality specifications.
	301		Water Rights	Users of the water have a responsibility to see that it is not wasted, or polluted by contaminants which then flow to the river and contribute to the very anoxic conditions sited as the dominant threat to the fish.
	302		Water Rights and Aquatic Communities	What proportion or apportion of Yellowstone River water is reserved as a right for the fish and other endemic species who have had prior use for millions of years?
	303		Water Rights	If a protracted, multi-year, Mega-drought were to occur, what percentage of low river flows will not be demanded by irrigators but reserved for use by fish and wildlife?
	304		Mitigation	What water quality monitoring and measurement of irrigation outfalls or returns to the Yellowstone River will be required by Reclamation and the irrigation districts for this EIS?
	305		Alternatives	Consideration should be included in the conservation alternative for the creation of wetland buffer mitigation acreages to lie between agricultural or residential use and the Yellowstone River outfalls

Letter #	Comment	Commenter	Topic	Comment
	306		Project Process	The draft EIS text should make clear what and which agency policies determined constraint of the scale and scope of the project.
	307		Threatened and Endangered Species	US Fish and Wildlife should be consulted for possible amendments to existing biological opinions, and to evaluate alternatives for threat to the species prior to a Record of Decision.
107	308	Gordon Wind, Wind Engineering	Geomorphology	Heavy ice flows and ice jams lead to uncertainty as to whether or not the river channel and banks will remain constant and stable for pumping plant options.
	309		Water Rights	During peak crop water use periods, the LYIP project facilities are not efficient enough to deliver the full water amount needed at the grower's farm turnouts to meet crop irrigation needs. Conservation measures are needed to providing more of the existing water right supply.
	310		Alternatives	A constructed weir or similar permanent feature that maintains a continuous water level elevation for gravity flow diversion of water through the newly constructed fish screen intake structure is necessary to preserve the LYIP's ability to divert their full irrigation water right for irrigation needs.
108	311	Kris King	Alternatives	Strongly encourages stopping the dam planned for the Yellowstone River. Being the longest undammed River in the lower 48 is a huge part of the tourist economy in Livingston. The end of pallid sturgeon is also a great concern.
109	312	Scott Buxbaum, Yellowstone Township	Alternatives	The township is all irrigated land, which is supplied with water by the Lower Yellowstone Irrigation Project. The township is in favor of the alternative for the concrete weir and fish bypass.

3. REFERENCES

Corps and Reclamation

2015a: Intake Diversion Dam Modification Lower Yellowstone Project, Montana Final Supplement to the 2010 Final Environmental Assessment.

2015b: Finding of No Significant Impact, Intake Diversion Dam Modification, Lower Yellowstone Project.

APPENDIX A: NEPA NOTICE OF INTENT

action under Section 305(c) of the Magnuson-Stevens Fishery Conservation and Management Act, provided the public has been notified of the GEMPAC's and GEMTAC's intent to take final action to address the emergency.

Special Accommodations

The public listening station is physically accessible to people with disabilities. Requests for sign language interpretation or other auxiliary aids should be directed to Mr. Kris Kleinschmidt (503) 820-2280 at least 5 days prior to the meeting date.

Dated: December 29, 2015.

Jeffrey N. Lonergan,

Acting Deputy Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2015-33046 Filed 12-31-15; 8:45 am]

BILLING CODE 3510-22-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648-XE378

Mid-Atlantic Fishery Management Council (MAFMC); Public Meeting

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; public meeting.

SUMMARY: The Mid-Atlantic Fishery Management Council's (MAFMC) Ecosystem and Ocean Planning Committee will hold a public meeting.

DATES: The meeting will be held on Friday, January 22, 2016, from 9:30 a.m. to 4:30 p.m. For agenda details, see **SUPPLEMENTARY INFORMATION.**

ADDRESSES: The meeting will be held at the Double Tree by Hilton Baltimore-BWI Airport, 890 Elkridge Landing Road, Linthicum, Maryland, 21090; telephone: (410) 859-8400.

Council address: Mid-Atlantic Fishery Management Council, 800 N. State Street, Suite 201, Dover, DE 19901; telephone: (302) 674-2331; Web site: www.mafmc.org.

FOR FURTHER INFORMATION CONTACT: Christopher M. Moore, Ph.D., Executive Director, Mid-Atlantic Fishery Management Council, telephone: (302) 526-5255.

SUPPLEMENTARY INFORMATION: The MAFMC's Ecosystem and Ocean Planning Committee will meet to discuss the Council's Unmanaged Forage Omnibus Amendment. The Committee will develop

recommendations for the full Council to consider at their February 2016 meeting. This amendment will prohibit the development of new, or expansion of existing, directed fisheries on unmanaged forage species in Mid-Atlantic Federal waters until adequate scientific information is available to promote ecosystem sustainability. The Committee will consider advice from the Unmanaged Forage Fishery Management Action Team and recommendations from the Ecosystem and Ocean Planning Advisory Panel before developing recommendations for a draft list of unmanaged forage species to include in the amendment. The Committee will also discuss and may develop recommendations for a draft range of alternatives for analysis, a draft purpose and need statement as required by the National Environmental Policy Act, and other aspects of the amendment. A detailed agenda will be posted to www.mamfc.org.

Special Accommodations

The meeting is physically accessible to people with disabilities. Requests for sign language interpretation or other auxiliary aid should be directed to M. Jan Saunders, (302) 526-5251, at least 5 days prior to the meeting date.

Dated: December 29, 2015.

Jeffrey N. Lonergan,

Acting Deputy Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2015-33045 Filed 12-31-15; 8:45 am]

BILLING CODE 3510-22-P

DEPARTMENT OF DEFENSE

Department of the Army, Corps of Engineers

Notice of Intent to Prepare a Joint Environmental Impact Statement/ Environmental Impact Report and Conduct Scoping Meeting for the Corte Madera Creek Flood Control Project General Reevaluation Report and Integrated EIS/EIR, County of Marin, CA

AGENCY: Department of the Army, U.S. Army Corps of Engineers, DoD.

ACTION: Notice; change in public meeting date and extension of comment period.

SUMMARY: The comment period for the Notice of Intent to prepare a joint EIS/EIR and conduct a scoping meeting for the Corte Madera Creek Flood Control Project published in the **Federal Register** on Friday, December 18, 2015 (80 FR 79034) and required comments by February 1, 2016. The comment

period has been extended to February 16, 2016.

DATES: A public scoping meeting was originally scheduled for January 14, 2016, but will now be held on January 28, 2016 from 6:00 to 8:00 p.m. (PST).

ADDRESSES: The scoping meeting location is: The Marin Arts and Garden Center, 30 Sir Francis Drake Boulevard, Ross, CA 94957-9601.

FOR FURTHER INFORMATION CONTACT: Stephen M. Willis, U.S. Army Corps of Engineers, San Francisco District, Planning Branch, 1455 Market Street, San Francisco CA 94103-1398, (415) 503-6861, stephen.m.willis2@usace.army.mil.

SUPPLEMENTARY INFORMATION: None.

James S. Boyette,

Major, US Army, Deputy District Engineer.

[FR Doc. 2015-33065 Filed 12-31-15; 8:45 am]

BILLING CODE 3720-58-P

DEPARTMENT OF DEFENSE

Department of the Army, U.S. Army Corps of Engineers

DEPARTMENT OF THE INTERIOR

Bureau of Reclamation

Notice of Intent To Prepare a Draft Environmental Impact Statement for the Intake Diversion Dam Fish Passage Project, Dawson County, Montana

AGENCIES: Department of the Army, U.S. Army Corps of Engineers, DoD; Department of the Interior, U.S. Bureau of Reclamation.

ACTION: Notice.

SUMMARY: The U.S. Army Corps of Engineers (Corps) and the U.S. Bureau of Reclamation (Reclamation) propose to jointly prepare an environmental impact statement (EIS) that analyzes and discloses effects associated with actions to provide fish passage at the Intake Diversion Dam. The proposed Federal action is to improve passage for endangered pallid sturgeon and other native fish at Intake Diversion Dam in the lower Yellowstone River.

The Corps and Reclamation will serve as joint lead Federal agencies in the preparation of the Intake Diversion Dam Fish Passage EIS. The Corps will serve as administrative lead for National Environmental Policy Act compliance activities during preparation of the EIS. The EIS will include consideration of a range of reasonable alternatives to the proposed Federal action that meet the purpose and need of improving passage while continuing a viable and effective

operation of the Lower Yellowstone Project. The Corps and Reclamation will each consider and approve a Record of Decision regarding actions and decisions for which the respective agencies are responsible.

DATES: Submit written comments on the scope of the issues and alternatives to be considered in the EIS on or before February 18, 2016.

A public scoping meeting will be held on January 21, 2016, 6:00 p.m. to 8:00 p.m., in Glendive, MT.

ADDRESSES: Send written scoping comments, requests to be added to the mailing list, or requests for sign language interpretation for the hearing impaired or other special assistance needs to U.S. Army Corps of Engineers Omaha District, ATTN: CENWO-PM-AA, 1616 Capitol Ave., Omaha, NE 68102; or email to cenwo-planning@usace.army.mil.

The scoping meeting will be located at Dawson County High School Auditorium, 900 N. Merrill Avenue, Glendive, MT 59330.

FOR FURTHER INFORMATION CONTACT: Ms. Tiffany Vanosdall, U.S. Army Corps of Engineers, 1616 Capitol Ave, Omaha, NE 68102, or tiffany.k.vanosdall@usace.army.mil.

SUPPLEMENTARY INFORMATION: The Corps and Reclamation are issuing this notice pursuant to section 102(2)(c) of the National Environmental Policy Act of 1969, as amended (NEPA), 42 U.S.C. 4321 *et seq.*; the Council on Environmental Quality's (CEQ) regulations for implementing the procedural provisions of NEPA, 43 CFR parts 1500 through 1508; the Department of the Interior's NEPA regulations, 43 CFR part 46.

Background Information

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.

The U.S. Fish and Wildlife Service (Service) listed the pallid sturgeon as endangered under the Endangered Species Act (ESA) in 1990. The best available science suggests Intake Diversion Dam impedes upstream migration of pallid sturgeon and their access to spawning and larval drift habitats. The lower Yellowstone River is considered by the Service to provide one of the best opportunities for recovery of pallid sturgeon.

Section 7(a)(2) requires each Federal agency to consult on any action authorized, funded, or carried out by the agency to ensure it does not jeopardize the continued existence of any endangered or threatened species. Reclamation has been in formal consultation with the Service to identify potential conservation measures to minimize adverse effects to pallid sturgeon associated with continued operation of the Lower Yellowstone Project. The Pallid Sturgeon Recovery Plan specifically identifies providing passage at Intake Diversion Dam to protect and restore pallid sturgeon populations. By providing passage at Intake Diversion Dam, approximately 165 river miles of spawning and larval drift habitat would become accessible in the Yellowstone River.

Section 3109 of the 2007 Water Resources Development Act authorizes the Corps to use funding from the Missouri River Recovery and Mitigation Program to assist Reclamation in the design and construction of Reclamation's Lower Yellowstone Project at Intake, Montana for the purpose of ecosystem restoration. Planning and construction of the Intake Project is a Reasonable and Prudent Alternative (RPA) for the Corps in the 2003 Missouri River Amended Biological Opinion (BiOp) as amended by letter exchange in 2009, 2010, and 2013. The Reclamation Act/Newlands Act of 1902 (Pub. L. 161) authorizes Reclamation to construct and maintain the facilities associated with the Lower Yellowstone Project, which includes actions or modifications necessary to comply with Federal law such as the ESA.

Reclamation initiated a collaborative effort with the Service; Corps; Montana Fish, Wildlife and Parks; and The Nature Conservancy through a Memorandum of Understanding (MOU)

signed on July 8, 2005. Reclamation coordinated a value planning study in August 2005 with representatives from parties signatory to the MOU and the Lower Yellowstone Project Irrigation Districts to explore and evaluate a broad range of alternatives for fish passage and entrainment reduction.

In 2010, Reclamation and the Corps authorized the construction of a rock ramp and new screened headworks with the completion of an Environmental Assessment and Finding of No Significant Impact. The construction of the new headworks is complete and began operation during the 2012 irrigation season. During the final design of the rock ramp, following the release of the 2010 Environmental Assessment and Finding of No Significant Impact, important new information on the design, constructability, and sustainability of the proposed rock ramp surfaced along with new information regarding pallid sturgeon movement which led to a reevaluation of fish passage options.

In 2013, the Corps and Reclamation conducted a planning effort to examine new and previously considered alternatives. Following this effort, the Corps and Reclamation identified the bypass channel for detailed analysis which included a constraint related to Reclamation's obligation to deliver water necessary to continue a viable and effective operation of the Lower Yellowstone Project. A Supplemental Environmental Assessment and Finding of No Significant Impact selecting the bypass channel were completed in 2015. In response to concerns about the selected Bypass Channel Alternative, the Corps and Reclamation are proposing to prepare this EIS.

The Corps and Reclamation will use the scoping period to fully identify the range of potentially significant issues, actions, alternatives, and impacts to be considered in the EIS. This scoping period will ensure the public has sufficient opportunity to review and comment on the proposed Federal action and reasonable alternatives for fish passage at Intake Diversion Dam. Public comments are invited and encouraged to assist agencies in identifying the scope of potentially significant environmental, social, and economic issues relevant to the proposed Federal action and determining reasonable alternatives to be considered in the EIS. Current and past project information and analyses can be accessed at: <http://www.usbr.gov/gp/mtao/loweryellowstone>.

The Corps and Reclamation will host a public scoping meeting and are inviting agencies, tribes, non-

governmental organizations, and the public to participate in an open exchange of information and to provide comments on the proposed scope of the EIS.

As required by CEQ's implementing regulations, the EIS will include consideration of a range of reasonable alternatives to the proposed Federal action that meet the purpose and need of improving pallid sturgeon passage while continuing a viable and effective operation of the Lower Yellowstone Project. The EIS will analyze and disclose environmental impacts associated with the proposed Federal action and alternatives together with engineering, operations and maintenance, social, and economic considerations. The public is invited and encouraged to identify issues and effects that should be addressed in the EIS, as well as reasonable alternatives to improve fish passage at the Intake Diversion Dam.

The public scoping meeting date or location may change based on inclement weather or exceptional circumstances. If the meeting date or location is changed, the Corps and Reclamation will issue a press release and post it on the web at <http://www.usbr.gov/gp/mtao/loweryellowstone> and <http://www.nwo.usace.army.mil> to announce the updated meeting details.

Special Assistance for Public Scoping Meeting

The meeting facility is physically accessible to people with disabilities. People needing special assistance to attend and/or participate in the open house should contact: U.S. Army Corps of Engineers Omaha District, ATTN: CENWO-PM-AA, 1616 Capitol Ave, Omaha, NE 68102; or email cenwo-planning@usace.army.mil. To allow sufficient time to process special requests, please contact no later than one week before the public scoping meeting.

Public Disclosure Statement

The Corps and Reclamation believe it is important to inform the public of the environmental review process. To assist the Corps and Reclamation in identifying and considering issues related to the proposed Federal action, comments made during formal scoping and later on the draft EIS should be as specific as possible. Reviewers must structure their participation in the environmental review of the proposal so that it is meaningful and alerts the Corps and Reclamation to the reviewer's position and contentions. It is very important that those interested in this proposed Federal action participate by

the close of the scoping period so that substantive comments and objections are made available to the Corps and Reclamation at a time when they can meaningfully consider and respond to them.

If you wish to comment, you may mail or email your comments as indicated under the **ADDRESSES** section. Before including your address, phone number, email address, or any other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made available to the public at any time. While you can request in your comment for us to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

John W. Henderson,

Colonel, Corps of Engineers, District Commander.

John F. Soucy,

Deputy Regional Director, Great Plains Region, Bureau of Reclamation.

[FR Doc. 2015-33066 Filed 12-31-15; 8:45 am]

BILLING CODE 3720-58-P

DEPARTMENT OF EDUCATION

Credit Enhancement for Charter School Facilities Program

AGENCY: Office of Innovation and Improvement, Department of Education.

ACTION: Notice.

Catalog of Federal Domestic Assistance Number: 84.354A.

SUMMARY: The Secretary intends to use the existing slate of applicants developed for the Credit Enhancement for Charter School Facilities Program in Fiscal Year (FY) 2014 to make new grant awards in FY 2016. The Secretary takes this action because a number of high-quality applications remain on the grant slate and available funding for the program in FY 2016 can support only a limited number of new awards.

FOR FURTHER INFORMATION CONTACT:

Clifton Jones, U.S. Department of Education, 400 Maryland Ave. SW., Room 4W244, Washington, DC 20202. Telephone: 202-205-2205 or by email: clifton.jones@ed.gov.

If you use a telecommunications device for the deaf (TDD) or a text telephone (TTY), you may call the Federal Relay Service (FRS), toll free, at 1-800-877-8339.

SUPPLEMENTARY INFORMATION:

Background: On January 15, 2014, we published in the **Federal Register** (79

FR 2640) a notice inviting applications (NIA) for new awards for FY 2014 under the Credit Enhancement for Charter School Facilities Program. In this NIA, we indicated that, contingent upon the availability of funds and the quality of applications, we may make additional awards later in FY 2014 and FY 2015 from the list of unfunded applicants from the FY 2014 competition.

We received a number of applications for grants under the Credit Enhancement for Charter School Facilities Program in FY 2014, many of which received very high scores. We made two initial awards in FY 2014 and two additional awards in FY 2015. Because we received a large number of high-quality applications and had limited funds available for awards, many high scoring applications did not receive funding in FY 2014 or FY 2015.

Based on historical data, we believe that the funding available for this program in FY 2016¹ could support approximately two new awards. We do not believe that conducting a new competition in FY 2016, for so few awards, is warranted; and therefore, we intend to select FY 2016 grantees from the unfunded high-quality applications in the existing slate of applicants.

Program Authority: 20 U.S.C. 223-7223j.

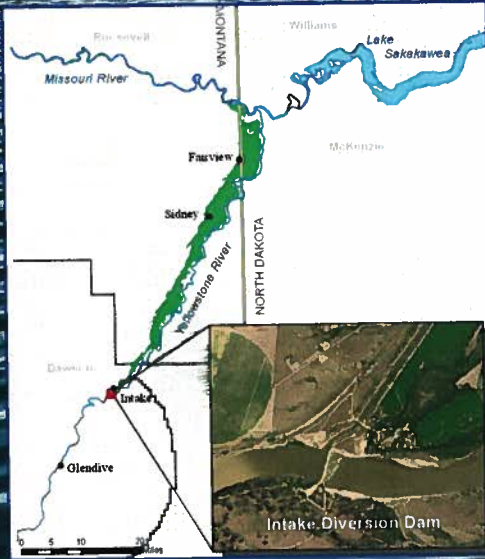
Accessible Format: Individuals with disabilities can obtain this document in an accessible format (e.g., braille, large print, audiotape, or compact disc) on request to the contact person listed under **FOR FURTHER INFORMATION CONTACT**.

Electronic Access to This Document: The official version of this document is the document published in the **Federal Register**. Free Internet access to the official edition of the **Federal Register** and the Code of Federal Regulations is available via the Federal Digital System at: www.gpo.gov/fdsys. At this site you can view this document, as well as all other documents of this Department published in the **Federal Register**, in text or Adobe Portable Document Format (PDF). To use PDF you must have Adobe Acrobat Reader, which is available free at the site.

You may also access documents of the Department published in the **Federal Register** by using the article search feature at: www.federalregister.gov.

¹ The Consolidated Appropriations Act, 2016 requires the Secretary to use not less than \$16 million of the funds available for part B of title V of the Elementary and Secondary Education Act for the Credit Enhancement for Charter School Facilities Program (subpart 2 of part B). We intend to use \$16 million of such funds for awards under the program in FY16, consistent with the appropriations act requirement.

APPENDIX B: SCOPING ANNOUNCEMENT POSTCARD



Intake Diversion Dam Fish Passage Project: Public Scoping Open House

The U.S. Army Corps of Engineers and Bureau of Reclamation will hold an informal public scoping open house. It will have information about the options to improve fish passage at the Intake Diversion Dam and identify impacts to the environment. The public is encouraged to provide comments and define issues and alternatives that should be considered in the Environmental Impact Statement.

Thursday, January 21, 2016 • 6:00pm – 8:00pm

**Dawson County High School Auditorium
900 N. Merrill Avenue, Glendive, Montana**



**US Army Corps
of Engineers**
Omaha District



U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

**Intake Diversion Dam
Fish Passage Project:
Public Scoping Open House**

When: Thursday, January 21, 2016 ■ 6:00pm – 8:00pm

Where: Dawson County High School Auditorium
900 N. Merrill Avenue, Glendive, Montana

What: Informal open house with information stations. There will be no formal presentation. Written comments following the meeting must be postmarked or received by February 17, 2016 and submitted to the address or email below.

Mail: U.S. Army Corps of Engineers Omaha District
Attn: CENWO-PM-AA
1616 Capitol Avenue, Omaha NE 68102

Email: cenwo-planning@usace.army.mil

Special Assistance: The meeting facility is accessible for people with disabilities. If additional assistance is needed such as translation, interpretation, or special visual aids please contact the U.S. Army Corps of Engineers at least one week in advance by mail or email.

Inclement Weather: Please check either of the following websites for meeting changes or cancellation due to weather or exceptional circumstances:
<http://www.usbr.gov/gp/mtaa/loweryellowstone> or
<http://www.mwa.usace.army.mil>

For information about the project visit <http://www.usbr.gov/gp/mtaa/loweryellowstone>

U.S. Army Corps of Engineers
Omaha District
Attn: CENWO-PM-AA
1616 Capitol Avenue
Omaha NE 68102

PRSRT STD
U.S. POSTAGE
PAID
OMAHA, NE
PERMIT NO. 196

*****MIXED AADC 500

5 5

SCOTT ESTERGARD
TETRA TECH
3030 N 3RD ST STE 200
PHOENIX AZ 85012-3044



APPENDIX C: SCOPING PRESS RELEASE



US Army Corps of Engineers
BUILDING STRONG®

Public scoping meeting scheduled for Intake
Diversion Dam fish passage project in Montana

Photos

Posted 1/7/2016

Release no. 20160107-001

Contact

Tiffany Vanosdall 402-995-2695
tiffany.k.vanosdall@usace.army.mil

Tom O'Hara 402-995-2695
thomas.a.ohara@usace.army.mil

OMAHA, NE - The U.S. Army Corps of Engineers and Bureau of Reclamation will hold a public meeting on Thursday, January 21, 2016 from 6-8 p.m. at the Dawson County High School Auditorium, 900 N. Merrill Avenue, Glendive, Mont. to gather input on the development of an Environmental Impact Statement (EIS) for the Intake Diversion Dam fish passage project.



Headworks structure from the irrigation canal at Intake, Mont. The headworks structure was completed in early 2012. (Photo by U.S. Army Corps of Engineers)

The meeting, which will be an open house format with no formal presentation, will provide the public with information about possible options to improve fish passage at the Intake Diversion Dam and identify impacts to the environment. Staff from the Corps and Reclamation will be available to discuss options being considered for further analyses.

The public is encouraged to provide comments on the scope of the issues and alternatives to be considered in the EIS. Comments may be submitted by mail to: U.S. Army Corps of Engineers Omaha District; Attn: CENWO-PM-AA; 1616 Capitol Avenue, Omaha, Nebraska 68102 or emailed to cenwo-planning@usace.army.mil. Comments must be postmarked or received by February 17, 2016.

The meeting facility is accessible to people with disabilities. People needing special assistance to attend or participate should contact the U.S. Army Corps of Engineers at the address or email provided above. To allow sufficient time to process special requests, please contact Tiffany Vanosdall no later than one week before the public scoping open house.

The public scoping meeting date or location may change based on inclement weather or exceptional circumstances. If the meeting date or location is changed, the Corps and Reclamation will issue a press release and post it on the web at www.usbr.gov/gp/mtao/loweryellowstone and www.nwo.usace.army.mil to announce the updated meeting details.

For more information about the project, visit <http://www.usbr.gov/gp/mtao/loweryellowstone>.

APPENDIX D: SCOPING MEETING DISPLAY BOARDS



Welcome!

Intake Diversion Dam Fish Passage

This is an informal Public Scoping Open House.
There will not be a formal presentation.

Nine information stations are available including:

- Lower Yellowstone Project Background
- A Living Fossil – The Endangered Pallid Sturgeon
- Proposed Action, Purpose and Need, Resources to be Considered
- Rock Ramp Alternative
- Bypass Channel Alternative
- High Flow Channel Alternative
- Pumping Alternative
- Non-weir Alternative
- What Comes Next?

We encourage your comments. Comment sheets are available tonight or can be completed and postmarked or received by February 18, 2016 to:

Mail: U.S. Army Corps of Engineers
Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102

Email: cenwo-planning@usace.army.mil



U.S. Department of the Interior
Bureau of Reclamation

Intake Diversion Dam Fish Passage Project
Lower Yellowstone Project



US Army Corps
of Engineers
Omaha District

Lower Yellowstone Project



Construction of the Lower Yellowstone Diversion Dam began in 1905. Water for irrigation was first diverted in 1909. The Project provides a dependable supply of irrigation water for 54,000 acres of lands along the west bank of the Yellowstone River in the Project irrigation districts. It has been operating since the early part of the 20th Century without major changes to its form or function. Approximately two-thirds of the irrigated lands are in Montana with the remaining located in North Dakota.



The Project diverts approximately 327,000 acre feet of water annually from the Yellowstone River into the Main Canal at the Diversion Dam near Intake, Montana, about 18 miles downstream of Glendive. Water flows by gravity through 71 miles of the Main Canal and a 225-mile lateral system toward the confluence of the Yellowstone and Missouri rivers to service most of the irrigated lands.

The Diversion Dam was originally constructed as a rock-filled timber crib weir about 12 feet high and containing about 23,000 cubic yard of material. Two-thirds of the timber was replaced in the early 1970s.

On an as-needed basis, 300-1200 cubic yards of large quarried rock are placed across the crest of the Diversion Dam to replace rock displaced by high flows and/or ice. The rock is transported over the river via an overhead cable system and dropped on the crest of the dam.



A new headworks structure was constructed in 2011 and was used for the first time in the 2012 irrigation season. The new headworks has 12 rotating drum screens that has reduced entrainment of fish into the main canal.

Approximately 398 farms served by the Lower Yellowstone Project produce diverse crops, including sugar beets, small grains, hay and corn. Annual gross crop values are currently about \$25-\$30 million. The Project irrigation districts are responsible for operating and maintaining the irrigation facilities under a contract with Reclamation.



U.S. Department of the Interior
Bureau of Reclamation

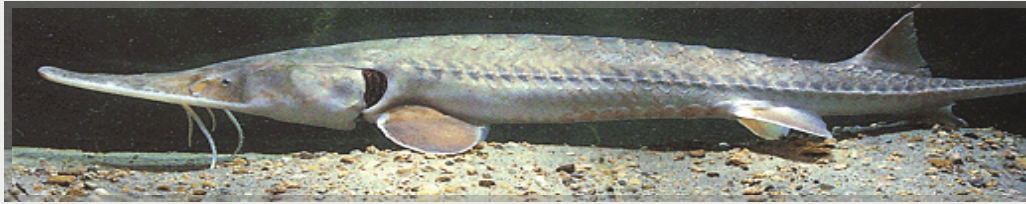
Intake Diversion Dam Fish Passage Project
Lower Yellowstone Project



US Army Corps
of Engineers
Omaha District



The Endangered Pallid Sturgeon



Status

- The pallid sturgeon is a descendant of fish that lived 70 million years ago.
- The U.S. Fish and Wildlife Service listed the pallid sturgeon as “endangered” in 1990.
- Their historical range spanned parts of the Missouri River, lower Mississippi River, and Yellowstone River.
- Pallid sturgeons in the Missouri and Yellowstone Rivers of Montana are at risk of dying out if natural recruitment (addition of young fish to the population) is not restored soon.

About Pallid Sturgeon

- The pallid sturgeon is covered by pale, bony plates, called scutes, instead of scales.
- They have a sucker-type mouth with whisker-like barbels. They feed on small fish, aquatic insects, mollusks and other food from the river bottom.
- Pallid sturgeons are related to shovelnose sturgeons, but are larger and usually paler.
- Pallid sturgeon can grow up to 6 feet long, weigh up to 80 pounds, and live more than 60 years.
- Females take 13-15 years to reach reproductive maturity and males usually mature to adulthood between the ages of 5 to 7 years.
- They are adapted to living on the bottom of large, turbid river systems and migrate great distances to fulfill their life history.

So, What is the Problem?

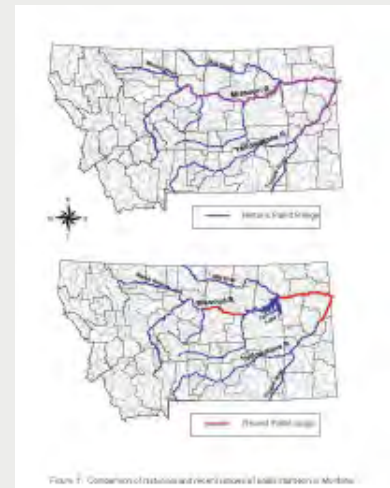
- Pallid sturgeons are strong swimmers in straight-line currents, but do not swim well in turbulent waters caused by the Intake Diversion Dam.
- They migrate upstream to spawn in the spring to lay eggs that adhere to the bottom of the river. As these eggs hatch, the larvae (newly hatched fish) cannot swim, but instead drift downstream until they are strong enough to swim and find suitable habitat. This takes about 13-15 days.
- If pallids spawn below the Intake Diversion Dam, the larvae are believed to drift into Lake Sakakawea and perish in the lake-like environment.



- If adults could pass over or around the Intake Diversion Dam, they could spawn far enough upstream that the larvae could gather strength to survive before drifting into Lake Sakakawea.
- The Yellowstone River above the Intake Diversion Dam is historic spawning habitat and is suitable for pallid sturgeon restoration.

Endangered Species Act

- Federal agencies are required by law to consult with the U.S. Fish and Wildlife Service on the effects of projects on endangered species. Consultation with the Service on this project has identified fish passage and entrainment protection issues that need to be addressed to protect the pallid sturgeon.





What Comes Next?

The public will have until February 18, 2016 to submit scoping comments on the proposed project for the Intake Draft Environmental Impact Statement.

Public scoping comments are encouraged to assist agencies in identifying the scope of potentially significant environmental, social, and economic issues relevant to the proposed Federal action and determining reasonable alternatives to be considered in the EIS. Reclamation and the Corps will carefully consider all comments received during the scoping period.

Comments are most useful when they are specific and relate to the proposed federal action, alternatives, or resources that may be impacted.

Example:

- I don't want this project.
- Better = I don't want this project because it will increase the amount of traffic and noise.
(This comment helps the agencies understand the issue of concern.)

NEPA Process
Notice of Intent
Public Scoping Meetings and 45-Day Comment Period
Scoping Report
Evaluation and Analysis of Issues and Alternatives
Draft EIS
Public Meetings and 45-Day Comment Period
Final EIS
30-Day Notice of Availability
Record of Decision

====< We are Here

How to Submit Comments:

Written comments at tonight's scoping meeting

Email : cenwo-planning@usace.army.mil

Mail : U.S. Army Corps of Engineers
 Omaha District
 ATTN: CENWO-PM-AA
 1616 Capitol Avenue
 Omaha, NE 68102



U.S. Department of the Interior
Bureau of Reclamation

Intake Diversion Dam Fish Passage Project
Lower Yellowstone Project



US Army Corps
of Engineers
Omaha District



Proposed Action, Purpose and Need, and Resources to be Considered

The Corps and Reclamation are jointly preparing an environmental impact statement (EIS) for the proposed Intake Diversion Dam Fish Passage Project.

The proposed federal action is to improve passage at Intake Diversion Dam for endangered pallid sturgeon and other native fish in the lower Yellowstone River.

The purpose and need for the project is to:

- Improve pallid sturgeon fish passage, and
- Continue viable and effective operation of the Lower Yellowstone Project.

The Corps and Reclamation will consider a range of reasonable alternatives to the proposed federal action that meet the purpose and need.

The preliminary resources expected to be analyzed in the EIS include:

- Fish and Wildlife
- Hydrology
- Water Quality
- Social and Economic Conditions
- Cultural Resources
- Recreation
- Climate Change and Air Quality
- Endangered Species
- Environmental Justice
- Geomorphology
- Transportation and Noise
- Land Use and Vegetation



U.S. Department of the Interior
Bureau of Reclamation

Intake Diversion Dam Fish Passage Project
Lower Yellowstone Project



US Army Corps
of Engineers
Omaha District

Alternatives

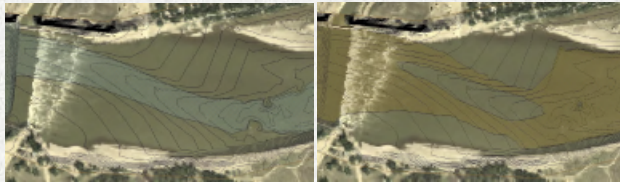


Rock Ramp Alternative

This alternative would replace the existing weir with a new concrete weir and a shallow sloped, un-grouted boulder and cobble rock ramp.

Main Features

- New concrete weir
- Shallow-sloped, un-grouted boulder and cobble rock ramp.
- The weir crest would vary in elevation, including at least one low-flow channel for fish passage.



7,000 cfs

15,000 cfs



30,000 cfs

40,000 cfs

Colors indicate where BRT depth and velocity criteria are being met

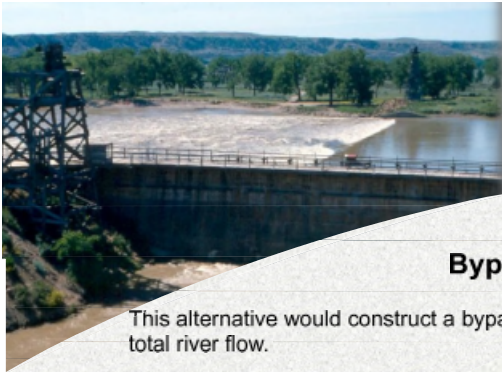


U.S. Department of the Interior
Bureau of Reclamation

Intake Diversion Dam Fish Passage Project
Lower Yellowstone Project



US Army Corps
of Engineers



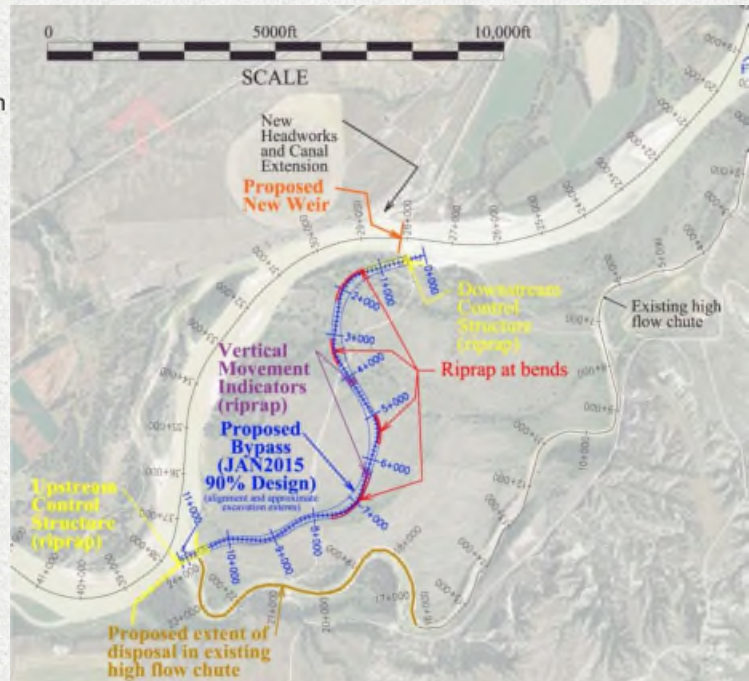
Alternatives

Bypass Channel Alternative

This alternative would construct a bypass channel around the existing weir to divert approximately 15% of total river flow.

Main Features

- Grade control structures at downstream and upstream ends of the channel
- Two vertical control structures (riprap sills)
- Bank riprap at four outside bends
- A new weir with 6' wide concrete cap
- Fill placed between the new weir and existing weir
- Excavated fill placed in existing high flow channel



U.S. Department of the Interior
Bureau of Reclamation

Intake Diversion Dam Fish Passage Project
Lower Yellowstone Project



US Army Corps
of Engineers

Alternatives



High Flow Channel Alternative

This alternative would modify an existing side channel around the existing weir to divert river flow, and meet fish passage criteria.

Main Features:

- The high flow channel is an approximately 4 mile long side channel along Joe's Island opposite the river channel to Intake.
- Excavate existing high flow channel to provide appropriate conditions for pallid sturgeon passage.
- Parameters to consider for fish passage are related to depth, velocity, and timing.

Table 1 U.S. Fish and Wildlife Service Design Criteria

Discharge at Sidney, Montana USGS Gage:	7,000-14,999 ft ³ /s	15,000-63,000 ft ³ /s
Bypass Channel Flow Split	≥12%	13% to ≥ 15%
Bypass Channel cross-sectional velocities (measured as mean column velocity)	2.0 - 6.0 ft/s	2.4 - 6.0 ft/s
Bypass Channel Depth (minimum cross-sectional depth for 30 contiguous feet at measured cross-section)	≥ 4.0 ft	≥ 6.0 ft
Bypass Channel Fish Entrance (measured as mean column velocity at HEC-RAS station 136)	2.0 - 6.0 ft/s	2.4-6.0 ft/s
Bypass Channel Fish Exit (measured as mean column velocity)	≤ 6.0 ft/s	≤ 6.0 ft/s



U.S. Department of the Interior
Bureau of Reclamation

Intake Diversion Dam Fish Passage Project
Lower Yellowstone Project



US Army Corps
of Engineers
Omaha District

Alternatives

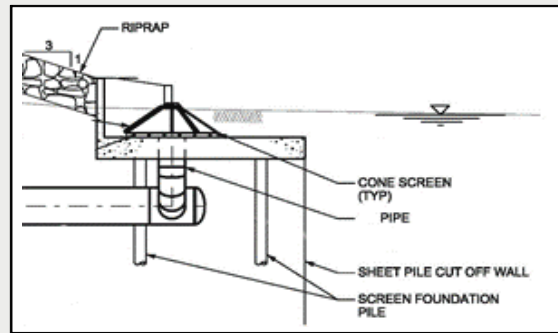
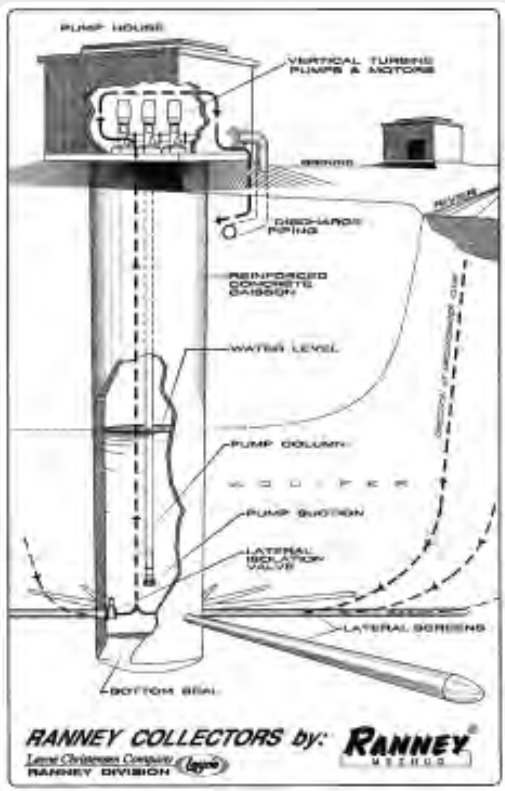


Pumping Alternative

The alternative is a conceptual design that includes either pumping stations (surface water) or Ranney® wells (infiltration galleries) to divert water into the existing irrigation canal.

Main Features:

- Removal of Intake Diversion Dam.
- Screened surface water intakes or infiltration galleries constructed along the Yellowstone River.
- Pumping stations and piping to deliver water to irrigation canal.
- Existing intake may still be used, depending on water levels.
- Power supply and backup generators.



Conceptual Cone Shaped Screen



U.S. Department of the Interior
Bureau of Reclamation

Intake Diversion Dam Fish Passage Project
Lower Yellowstone Project



US Army Corps
of Engineers
Omaha District

Alternatives

Non-weir Alternative

This alternative would include the removal of the Intake Diversion Dam and the implementation of either a pumping station (surface water) or a Ranney® well (infiltration gallery). Conservation measures would also be implemented to reduce water demands.

Main Features:

- Pumping Stations
- Conservation Measures
- Alternative Energy Sources
- Dam Removal



U.S. Department of the Interior
Bureau of Reclamation

Intake Diversion Dam Fish Passage Project
Lower Yellowstone Project



US Army Corps
of Engineers
Omaha District

APPENDIX E: SCOPING MEETING HANDOUTS



US Army Corps
of Engineers®
Omaha District

Intake Diversion Dam Fish Passage



Lower Yellowstone Project - Intake, Montana

Background

The diversion dam along the Yellowstone River at Intake, Montana was constructed by the Bureau of Reclamation in 1905 to divert water into a main canal in order to provide a dependable water supply sufficient to irrigate over 50,000 acres of land. For more than 100 years, the dam has likely impeded upstream migration of the federally-listed endangered pallid sturgeon and other native fish due to increased turbulence and velocities associated with the rocks at the dam.

The U.S. Fish and Wildlife Service listed the pallid sturgeon as endangered under the Endangered Species Act (ESA) in 1990. Section 7(a)(1) of the ESA authorizes all federal agencies to use their resources for the conservation and recovery of federally-listed species and the ecosystems upon which they depend, and Section 7(a)(2) requires federal agencies to consult

with the Service to ensure that any action authorized, funded or carried out by them is not likely to jeopardize the continued existence of any federally-listed species or to modify designated critical habitat. The lower Yellowstone River has been identified by the Service as an area of priority for pallid sturgeon recovery.

In 2007, the Corps received authorization under the Water Resources Development Act to use funds from the Missouri River Recovery Program to assist the Bureau of Reclamation with protecting the endangered pallid sturgeon and other native fish from becoming entrained in the irrigation canal and improving fish passage at the diversion dam.



Intake Diversion Dam

2010 Environmental Assessment (EA)

The Corps and Bureau of Reclamation, joint lead agencies on the proposed project, finalized an environmental assessment (EA) and Finding of No Significant Impact in 2010 which analyzed alternatives to reduce entrainment and improve fish passage. The selected alternative to reduce fish entrainment was construction of a new headworks structure and installation of fish screens, which was completed in the spring of 2012.

2015 Supplemental Environmental Assessment

In the 2010 EA, the selected alternative to improve fish passage was construction of a rock ramp. Based on new information on the rock ramp design, pallid sturgeon movement, and constructability and sustainability of the proposed rock ramp, the Corps and the Bureau of Reclamation coordinated extensively with the U.S. Fish and Wildlife Service; Montana Fish, Wildlife and Parks; Montana Department of Natural Resources and Conservation; the Lower Yellowstone Irrigation Project; and other interested parties, to develop new alternatives to improve fish passage. The result of that coordination was the development of a draft supplement to the 2010 EA. The supplement, issued in 2015, described three alternatives for improving fish passage. There were 1) continued present operations, 2) bypass channel, and 3) rock ramp. The Supplemental EA and the Finding of No Significant Impact selected the bypass channel.

www.nwo.usace.army.mil

Find us on Facebook: [facebook.com/OmahaUSACE](https://www.facebook.com/OmahaUSACE) • Twitter: twitter.com/OmahaUSACE • Flickr: <http://www.flickr.com/OmahaUSACE>

YouTube: <http://www.youtube.com/OmahaUSACE> • DVIDS: <http://www.dvidshub.net/unit/OmahaUSACE>

Environmental Impact Statement (EIS)

In response to concerns about the selected Bypass Channel Alternative, the Corps and Reclamation are proposing to prepare this EIS. The EIS will potentially look at the three alternatives examined in the 2015 Supplemental EA as well as other alternatives that may meet the project purpose and need. The Corps and Reclamation will use the scoping period to fully identify the range of potentially significant issues, actions, alternatives, and impacts to be considered in the EIS. The scoping period will ensure that the public has sufficient opportunity to review and comments on the proposed Federal action and reasonably alternatives for fish passage at the Intake Diversion Dam. While the three alternatives examined in the 2015 Supplemental EA, discussed below, will be carried forward into the EIS, additional alternatives may be added as a result of the scoping process. These new alternatives could include a high flow channel or various pumping options.

ALTERNATIVES TO BE CONSIDERED IN THE EIS

No Action	Continued operation and maintenance of the existing project, permit for rocking, Endangered Species Act Section 7 Consultation.
Rock Ramp Alternative	This alternative would replace the existing weir with a new concrete weir and a shallow sloped, un-grouted boulder and cobble rock ramp.
Bypass Channel Alternative	This alternative would construct a bypass channel around the existing weir to divert approximately 15% of total river flow.
High Flow Channel Alternative	This alternative would modify an existing side channel around the existing weir to divert river flow, and meet fish passage criteria.
Pumping Alternative	The alternative is a conceptual design that includes either pumping stations (surface water) or Ranney® wells (infiltration galleries) to divert water into the existing irrigation canal.
Non-weir Alternative	Possible features could include; pumping, alternative energy sources and conservation measures.
Others Recommended	Other alternatives identified during scoping.

Submitting Comments

The public and other interested parties are encouraged to submit comments on the scope of the issues and alternatives to be considered in the EIS. Comments may be submitted at the public scoping meeting to be held on January 21, 2016, 6:00 – 8:00 p.m. at the Dawson County High School, 900 N. Merrill Avenue, Glendive, MT 59330. Comments may also be mailed to U.S. Army Corps of Engineers, Omaha District, ATTN: CENWO-PM-AA, 1616 Capital Ave., Omaha, NE 68102 or emailed to cenwo-planning@usace.army.mil by February 18, 2016

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

What is NEPA?

NEPA discloses the environmental effects of proposed actions and alternatives, and informs and involves the public in the decision-making process. The Corps of Engineers (Corps) and Bureau of Reclamation (Reclamation) are preparing an environmental impact statement (EIS) to document this information.

In this case, Reclamation and Corps are proposing to improve fish passage at the Intake Diversion Dam to help pass the endangered pallid sturgeon and other native fish, and continue viable and effective operation of the Lower Yellowstone Project.

Public Participation

You have valuable information about Intake Diversion Dam and the potential environmental, social, and economic effects that could result from the implementation of the action.

Providing scoping comments is an

opportunity to provide input on project purpose and need, alternatives to be considered, what resources may be impacted by the project, and how changes may impact you or other groups. Both agencies will take into consideration all comments provided during the scoping comment period.

What's Next?

Reclamation and the Corps are using the scoping period to fully identify the range of potentially significant issues, actions, alternatives, and impacts to be considered in the EIS. The agencies are gathering public comments at the scoping meeting, via mail, and via e-mail until February 18, 2016.

Written Comments can be submitted to:
U.S. Army Corps of Engineers
Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102

For additional information on this

proposal or on the NEPA process, please contact *Tiffany Vanosdall: (402) 995-2695* *tiffany.k.vanosdall@usace.army.mil*. The project website can be accessed at: <http://www.usbr.gov/gp/mtao/loweryellowstone>.

NEPA Process	
Notice of Intent	
We are here	Public Scoping Meetings and 45-Day Comment Period
Scoping Report	
Evaluation and Analysis of Issues and Alternatives	
Draft EIS	
Public Meetings and 45-Day Comment Period	
Final EIS	
30-Day Notice of Availability	
Record of Decision	



US Army Corps of Engineers
Omaha District





US Army Corps of Engineers®
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name _____

Organization _____

Address _____

CITY

STATE

ZIPCODE

Phone () _____

Fax () _____

Email _____

Narrative Comments:

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:

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

Please mail comments to:

U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102

PLACE
STAMP
HERE

**U.S. ARMY CORPS OF ENGINEERS
OMAHA DISTRICT
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102**

Please fold on dotted line, staple, stamp and mail

Fold to inside

APPENDIX F: SCOPING SIGN-IN SHEETS



US Army Corps
of Engineers
Omaha District

Intake Diversion Dam Fish Passage Project

Public Scoping Open House

Thursday, January 21, 2016 • 6:00 PM – 8:00 PM

Dawson County High School

900 N. Merrill Avenue • Glendive, MT 59330



PLEASE PRINT ALL INFORMATION

Name [PLEASE PRINT]	Organization & Email Address	Mailing Address	City, ST Zip	Phone
EXAMPLE: John C. Doe	Acme Co Email Jdoe@usbr.gov	2900 4 th Ave North Apt #4	Billings, MT 59107	406-555- 7300
Caleb Boltman	Email cboltman@mtiga Reclamation	352-194 Business Loop	Miles City, MT 59301	234-0914
Jeff Baumberger	Email jbaumberger@usbr.gov USACE	2900 4 th Ave N. Ste 501	Billings MT 59101	406-247-7314
Tiffany Vanostall	Email tvanostall@usace			
Sage Joyce	USACE Email sage.l.joyce@usace.army.mil	PO Box 2256	Billings MT 59103	406-657- 5910
[Signature]	USACE Email esf@midrivers	Box 444	Fairview 59221	406-480- 3223
Romy Stevens	Email	Sidney, MT		406-480- 7016
Ethan Chamberlain	Email	1364 14 th St SW Sidney MT 59270	Sidney MT 59270	406-489- 1938
Scott Staffanson	Montana H.D.35 Rep Email scottstaffanson@gmail.com			
CRPI 6 Steinbeisser	Email	12246 CT, Rd 348	Sidney MT	489-1342
Alan Doane	Montana House of Rep Email alandoane@midrivers.com	268 CR 821 Bloomfield 59315		406- 583-7846

Your name, address, phone and email address, and any other information you provide are held in strict confidence. We do not sell or share your information with anyone else.



US Army Corps
of Engineers
Omaha District

Intake Diversion Dam Fish Passage Project

Public Scoping Open House

Thursday, January 21, 2016 • 6:00 PM – 8:00 PM

Dawson County High School

900 N. Merrill Avenue • Glendive, MT 59330



PLEASE PRINT ALL INFORMATION

Name [PLEASE PRINT]	Organization & Email Address	Mailing Address	City, ST Zip	Phone
EXAMPLE: John C. Doe	Acme Co Email Jdoe@usbr.gov	2900 4 th Ave North Apt #4	Billings, MT 59107	406-555- 7300
Mike Backes	Email mibackes@mt.gov	P.O. Box 1630	Miles City, MT 59201	406-234- 800 0925
Gerald Benock	Email gbenock@usbr.gov	2900 4th Ave North	Billings MT	406-247 1321
CHRIS FASSERO	christopher.a.fassero@usra.army.mil Email chris.fassero@gmail.com	1616 CAPITAL AVE	OMAHA, NE	412-985-2679
Leon Stevenson	Email	34705 County Rd 122 Sidney MT	59270	406 798 3337
Matt Skoslund	NRC Email mskoslund@nrc.org	317 E. Mendonhall Bozeman, MT	59715	406-223-1950
Dennis LeDoy	Email	47 RD 240 GLEN DIVERT		439 2581
Ken Brose	Email kbrosesr@midrivers.com	793 Hwy 16	Glendive 59330	687 3277
Don Stenbuss	Email LYP	11918 CR348	Sidney	433-2183
Shane Gorder	Richland County Commissioner Email sgorder@richland.org	WEST MAIN Sidney mt	Sidney	433-1706
	Email			

Your name, address, phone and email address, and any other information you provide are held in strict confidence. We do not sell or share your information with anyone else.

Intake Diversion Dam Fish Passage Project

Public Scoping Open House

Thursday, January 21, 2016 • 6:00 PM – 8:00 PM

Dawson County High School

900 N. Merrill Avenue • Glendive, MT 59330



US Army Corps
of Engineers
Omaha District



PLEASE PRINT ALL INFORMATION

Name [PLEASE PRINT]	Organization & Email Address	Mailing Address	City, ST Zip	Phone
EXAMPLE: John C. Doe	Acme Co Email Jdoe@usbr.gov	2900 4 th Ave North Apt #4	Billings, MT 59107	406-555- 7300
Steve Davies	sdavies@usbr.gov Email	2900 4th Ave N #501	LL	406 247 7298
ERIC LANX	CORPS ENGINEERS erik.g.lanx@usace.army.mil	1616 Poplar Ave	OMAHA NE 68162	402 995- 2682
Curtis Miller	USACE Email curtis.j.miller@usace.army.mil	"	"	402-995- 2339
CHRIS SVENDSEN	USACE Email christopher.j.svensen@usace.army.mil	"	"	402-995- 2352
Grea Reid	WWC Engineering Email greidewwcengineering.com	51 N 15 th St, Ste 1 Billings, MT 59101	Billings, MT 59101	406-797 1415
Steve Forrest	Defenders of Wildlife Email sforrest@defenders.org	535 16th St, Suite 310 Denver CO 80202	Denver, CO 80280	720 943-0454
Hugo Asbeck	OLYMP DISTRICT Board Member Email	13048 Hwy 200 Fairview, MT 59221		
Scott Baxbaum	Email 4bfarms1@gmail.com	16041 34th St NW Fairview, mt 59221	Fairview MT	406-480 1259
Henry Mischel	Email henry.m@midrivers.com	312 Cooke St Glendive MT	59330	406 377-8841
Leslie Messer	Email lmredc@midrivers.com	1060 S Central Ave, #3 Sidney, MT	59280	406 482-4679

Your name, address, phone and email address, and any other information you provide are held in strict confidence. We do not sell or share your information with anyone else.



US Army Corps
of Engineers
Omaha District

Intake Diversion Dam Fish Passage Project

Public Scoping Open House

Thursday, January 21, 2016 • 6:00 PM – 8:00 PM

Dawson County High School

900 N. Merrill Avenue • Glendive, MT 59330



PLEASE PRINT ALL INFORMATION

Name [PLEASE PRINT]	Organization & Email Address	Mailing Address	City, ST Zip	Phone
EXAMPLE: John C. Doe	Acme Co Email Jdoe@usbr.gov	2900 4 th Ave North Apt #4	Billings, MT 59107	406-555- 7300
William Hier	LYIP Email hier333@hotmail.com	12920 Co Rd 333 Glendive	Lambert, MT 59243	406-974 3775
Mat Rugg	Email	Glendive, MT		
William Bill Hamburg	LYIP Email	Sidney 2327 Lincoln SE	MT -	406 489-3318
Cody Fulton	Agri Industries Email codr@h2oagri.com	1775 S. Central Ave Sidney, MT 59270	Sidney, MT 59330	(701) 770-5110
Kathleen Trersen	M-K Trersen, Inc Email mKine@midrivers.com	35193 CR 126 Sidney, MT 59270	Sidney 59270	406 433-2173
Cassy Schlothauer	Blue Cabbage Farms, Inc. Email	2851 160 th Ave NW Fairview MT 59221	Fairview 59221	702-561- 3643
Sam Johnson	Montana DNRC Email sam.johnson@mt.gov			
LYNN PETERSON	MORAN FARM LLC Email us56639295@midrivers	2822 Brody NW Sidney MT 59270	SIDNEY 59270	406 488-4579
Greg Temple	Email	1615 Road 303 greg.temple529@gmail.com	Glendive	939-2257
Dave & Lanette Jorgensen	Email	10986 CR 342 Savage MT 59262		

Your name, address, phone and email address, and any other information you provide are held in strict confidence. We do not sell or share your information with anyone else.



US Army Corps
of Engineers
Omaha District

Intake Diversion Dam Fish Passage Project

Public Scoping Open House

Thursday, January 21, 2016 • 6:00 PM – 8:00 PM

Dawson County High School

900 N. Merrill Avenue • Glendive, MT 59330



PLEASE PRINT ALL INFORMATION

Name [PLEASE PRINT]	Organization & Email Address	Mailing Address	City, ST Zip	Phone
EXAMPLE: John C. Doe	Acme Co Email Jdoe@usbr.gov	2900 4 th Ave North Apt #4	Billings, MT 59107	406-555- 7300
Nancy Petula	2MG Email petula@a Lovgren.com	809 N 96 ST.	Omaha NE 68022	402 397-7158
Kayla Eckert Uptmor	Email Kayla.a.eckert@usace.army.mil		Omaha NE	402.659. 4441
Jeff Nielson	Email		Sidney MT	59271
Harvey Abeck	Farmer Email		Fairview	MT
Joe Steinbeisser	Farmer Email	690 22 nd Ave NW, Sidney		406-432-2185
Kim Nollmeyer	Email	34461 CR 112	Savage MT	406-798- 3376
Del Nollmeyer	Farmer Email Kim_nollmeyer@hotmail.com	34461 CR 112	Savage MT 59262	406-798- 3376
	Email			
	Email			
	Email			

Your name, address, phone and email address, and any other information you provide are held in strict confidence. We do not sell or share your information with anyone else.



US Army Corps
of Engineers
Omaha District

Intake Diversion Dam Fish Passage Project

Public Scoping Open House

Thursday, January 21, 2016 • 6:00 PM – 8:00 PM

Dawson County High School

900 N. Merrill Avenue • Glendive, MT 59330



PLEASE PRINT ALL INFORMATION

Name [PLEASE PRINT]	Organization & Email Address	Mailing Address	City, ST Zip	Phone
EXAMPLE: John C. Doe	Acme Co Email Jdoe@usbr.gov	2900 4 th Ave North Apt #4	Billings, MT 59107	406-555- 7300
Duane Peters	Email dpeters@crystal.sugar.com	1148 Safflower Lane	Sidney MT 59270	406-478 3470
DAVID GALLAND	Email dgalland@crystalsugar.com	611 2 nd St. NE	SIDNEY 59270	406-480 1212
Tracy Garland	Email dtg@midrivers.com	cell and STNR	Sidney 59270	406 488 7400
Cathy Kirkpatrick	Dawson Co Economic Development Email dcedc@midrivers.com	P.O. Box 173	59330 Glendive	406-377- 36 7792
Mike Carlson	Email mcarlson@midrivers.com	112 1 st Street	59330 Glendive	406-377- 2174
Alan Dorn	Email			583-7546
Ronald Etzel	Lower Yellowstone Irrigation Project Email	Box 102 SAVAGE MT	Savage MT 59262	406-480-2418
Meagan Dotson	Roundup Newspaper Email meagankdotson@gmail.com	518 26 th Ave NW Sidney, MT 59270	59270	406-478- 0517
Arthur Johnson	Email artge@midrivers.com	Glendive MT 59330		406-377 3503
Linda Lovgren	Lovgren Marketing Group Email Lovgren@Lovgren.Com	809 N 96 ST STE # 2	Omaha Ne 68114	402 397-7158

Your name, address, phone and email address, and any other information you provide are held in strict confidence. We do not sell or share your information with anyone else.



US Army Corps
of Engineers
Omaha District

Intake Diversion Dam Fish Passage Project

Public Scoping Open House

Thursday, January 21, 2016 • 6:00 PM – 8:00 PM

Dawson County High School

900 N. Merrill Avenue • Glendive, MT 59330



PLEASE PRINT ALL INFORMATION

Media Contacts

Name [PLEASE PRINT]	Organization & Email Address	Mailing Address	City, ST Zip	Phone
EXAMPLE: John C. Doe	Acme Co Email Jdoe@usbr.gov	2900 4 th Ave North Apt #4	Billings, MT 59107	406-555- 7300
Daniel Nolker	Ranger-Review Newspaper Email danews@rangerreview.com	119 West Bell st Glendive, MT 59330	Glendive, MT 59330	406-377- 5435
Meagan Dotson	Roundup Newspaper meagan.kdotson@gmail.	518 20th Ave. NW Sidney, MT 59270		406-478- 0517
	Email			
	Email			
	Email			
	Email			
	Email			
	Email			
	Email			

Your name, address, phone and email address, and any other information you provide are held in strict confidence. We do not sell or share your information with anyone else.

Intake Diversion Dam Fish Passage Project

Public Scoping Open House

Thursday, January 21, 2016 • 6:00 PM – 8:00 PM

Dawson County High School

900 N. Merrill Avenue • Glendive, MT 59330



US Army Corps
of Engineers
Omaha District



PLEASE PRINT ALL INFORMATION

Name [PLEASE PRINT]	Organization & Email Address	Mailing Address	City, ST Zip	Phone
EXAMPLE: John C. Doe	Acme Co Email Jdoe@usbr.gov	2900 4 th Ave North Apt #4	Billings, MT 59107	406-555- 7300
Chris Ballod	Email	620 6 th St SE Sidney MT	59270	
Steve Post	Email	1153 Hwy 16 SAVAGE MT.	59262	
Greg Anderson	City of Sidney Email sidneyutilities@midrivers.com	115 2nd St SE Sidney	59270	406 433 2809
Susan Price	Email	34373 CR 111 Savage, MT	59262	406 798-3848
Dale Price	Email	34373 CR 111 Savage, MT	59262	406 798-3848
Ron Bouchard	Email	Box 217 Lambert, MT	59243	406 774 3790
	Email			
Peggy Zimmerman	Senator Jon Tester Email			
	Email			
	Email			

Your name, address, phone and email address, and any other information you provide are held in strict confidence. We do not sell or share your information with anyone else.

Intake Diversion Dam Fish Passage Project

Public Scoping Open House

Thursday, January 21, 2016 • 6:00 PM – 8:00 PM

Dawson County High School

900 N. Merrill Avenue • Glendive, MT 59330



US Army Corps
of Engineers
Omaha District



PLEASE PRINT ALL INFORMATION

Name [PLEASE PRINT]	Organization & Email Address	Mailing Address	City, ST Zip	Phone
EXAMPLE: John C. Doe	Acme Co Email Jdoe@usbr.gov	2900 4 th Ave North Apt #4	Billings, MT 59107	406-555- 7300
Penny Zimmerman Senator	penny.zimmerman@tch.senate.gov Email P.D. Senator Tester	122 W. Domestic Glendive, MT. 59330		406-365- 3391
Matt Rosendale	Email Already listed			
Mark Iverson	Email	35193 Cn 126 S. Dawson MT. 59270		
Ray D. Anderson	Email	34127 CR 107 Savage mt. 59262		
Josh Whitehead	Email	10761 US 344 Savage MT 59262	MT 59262	
Jim Gentry	1017 Road 303 303 OIC (2350@gmail.com) Email	1017 Road 303 Glendive MT 59330	MT 59330	
Craig Wagner	Email	1 Fairgrounds Rd Glendive 59330	MT 59330	
Dave Rice	Email	2324 Hwy 16	Glendive 59330	
Bryce and Suzy Jorgensen	Email	11012 County Rd 342 Savage MT 59262		
	Email			

Your name, address, phone and email address, and any other information you provide are held in strict confidence. We do not sell or share your information with anyone else.

APPENDIX G: WRITTEN SCOPING COMMENTS

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Tuesday, February 16, 2016 10:08 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] diversion dam issue in Eastern Montana

-----Original Message-----

From: Steve Arnold [mailto:arn100@midrivers.com]
Sent: Sunday, February 14, 2016 3:10 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] diversion dam issue in Eastern Montana

Hi,

I am originally from California and I have seen what the Sierra Club and the rest of the radical environmentalist have done to the State of California. They have restricted that chances of future generations to see that beauty.

Now they come to Montana to ruin this state. I worked with the Sugar Company in Sidney for 40 years and they have provide good job opportunities to people of this town. The company puts a lot of money back into the town. Now that the oil industry has practically moved out, if Sidney Sugar's and Busch Ag would close this town would become a ghost town. I remember about 12 or so years ago they wanted to rebuild the bridge on 9th Street over Lone Tree Creek, but the Environmentalist stepped in and said a prehistoric fish was migrating during the time when they wanted to rebuild the bridge. The only problem was, the creek was dry, there was no way fish could migrate. The Sturgeon have managed to make their way up and down the Yellowstone River all this time what has changed? The paddle fish have also survived.

It would a shame to put a lot of people out of work including farmers from Trenton ND to Miles City MT.

These radical idiots would close all the National Parks, have us go back to horse and buggy and then complain about the horse droppings, claiming that is an environmental hazard.

We need to keep intake the way it is now, to provide irrigation for the products grown in this valley.

Thank You,

Steve Arnold

February 4, 2016

Ms. Tiffany Vanosdall
U.S. Army Corps of Engineers
Omaha District

ATTN: CENWO-PM-AA
1616 Capitol Ave.
Omaha, NE 68102

I am writing to urge you to remove the existing weir from the main channel of the Yellowstone River in order that the Pallid Sturgeon and other species will be able to pass unobstructed. Removal of the weir will increase the efficiency and reduce the waste in the current irrigation system. There are a variety of water conservation measures which can be implemented e.g. gravity diversions. The existing canal head gates can be used when river flows are sufficient and pumps and ranney wells, (if possible) can be used to provide only the amount of water necessary for corps when river flows are low, powering the system from renewable energy sources.

The removal of the existing weir promotes the recovery of the Pallid Sturgeon in the Yellowstone River as well as allowing for viable operation of the lower "Yellowstone Project" by applying sound conservation measures.

Removal of the weir is basic sound conservation for both the use of Montana's precious water resources and fish, like the Pallid Sturgeon that rely on a safe and unobstructed passage in order to survive!

Thank you for your time and consideration.

Respectfully,
Jannis Durkin Conselyea

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Wednesday, February 10, 2016 5:22 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Pallid Sturgeon - Yellowstone River

-----Original Message-----

From: Loren Ebner [mailto:zebnerx@gmail.com]
Sent: Tuesday, February 09, 2016 8:00 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Pallid Sturgeon - Yellowstone River

Please accept my comments for inclusion in your planning and decision making process.

I support the following actions to improve habitat for pallid sturgeon on the Yellowstone River:

1. Combine using the current irrigation headgate with gravity flow when the river discharge is high, and then switch to pumps in or next to the river during lower flows.
2. Invest in water conservation measures to reduce leakage in canals and ditches, thereby reducing pumping needs.
3. Produce power to run the pumps using a wind generator, low-head hydro in the main canal, or, establish a trust fund that can be tapped to purchase power for running pumps.

Mr. Loren Ebner
PO Box 7953
Missoula, MT 59807

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Wednesday, February 10, 2016 3:45 PM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Pallid sturgeon mitigation for Intake Dam

-----Original Message-----

From: Michael Enk [mailto:trouter@q.com]
Sent: Wednesday, February 10, 2016 3:59 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Pallid sturgeon mitigation for Intake Dam

I support the Trout Unlimited plan for restoring fish passage for pallid sturgeon at Intake Dam on the Yellowstone River as the most biologically-sound alternative. Please study this proposal and use the best available science to arrive at your decision. A larger dam and diversion channel is not the answer that will work for fish or irrigators.

Regards,

Michael Enk
Great Falls, MT
trouter@q.com <mailto:trouter@q.com>

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Tuesday, February 16, 2016 10:12 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW:

-----Original Message-----

From: mathew.w.erickson@gmail.com [mailto:mathew.w.erickson@gmail.com]
Sent: Monday, February 15, 2016 6:14 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject:

I agree with Montana TU that a new dam with accompanying artificial passage is inadequate to address the issue of habitat connectivity between the segments above and below the current dam as well as, and ultimately, pallid sturgeon recruitment. Dam removal is the preferred option because the area where the dam was becomes a natural connection between the segments currently divided by the dam. I believe fish will be much more inclined to move through the Intake Dam area if they don't need to exit the natural channel and swim through an artificial channel that, I believe, will be unlikely to adequately mimic natural flow regimes relative to the segments above and below the proposed artificial channel. I think it's unlikely pallid sturgeon will use the artificial channel. Also, the alternatives regarding removing the current low head, using a gravity fed/pump fed diversion and reducing water loss through improving irrigation ditches that Bruce Farling, Executive Director Montana TU, has proposed must be included and actually considered in the alternative actions in the new draft EIS. I hope these alternatives are accepted as the final, approved actions. These alternative mitigation measures, including removing the current dam, altering the diversion to gravity/pump fed, and incentivizing and implementing irrigation ditch improvements, amount to a common sense plan to connect habitat and increase pallid sturgeon recruitment, that, as you know, is currently at a big fat zero. It's a much better plan than spending \$59 million on replacing an old dam with another, more modern dam that is likely as ecologically detrimental as the old dam it'd replace.

Thank you for considering my comments as well as my fellow commenters' comments lol.

Take her easy.

Sent from my iPhone

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Tuesday, February 16, 2016 10:07 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] pallid sturgeon

-----Original Message-----

From: gjfee@blackfoot.net [mailto:gjfee@blackfoot.net]
Sent: Friday, February 12, 2016 1:58 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] pallid sturgeon

Your dams have pushed the pallid sturgeon to the verge of extinction. To date, your plans have not been favorable to these fish. Let's try a different plan this time.

The following proposal makes a lot more sense to me.

1. Combine using the current irrigation headgate with gravity flow when the river discharge is high, and then switch to pumps in or next to the river during lower flows.
2. Invest in water conservation measures to reduce leakage in canals and ditches, thereby reducing pumping needs.
3. Produce power to run the pumps using a wind generator, low-head hydro in the main canal, or, establish a trust fund that can be tapped to purchase power for running pumps.

Thank you for hearing my opinion.

Gary Fee
1101 Terrace View Dr.
Alberton, MT 59820
406-722-0009
gjfee@blackfoot.net <mailto:gjfee@blackfoot.net>

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Wednesday, February 10, 2016 1:20 PM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Dam

-----Original Message-----

From: Collyn Ferris [mailto:collynferris@gmail.com]
Sent: Wednesday, February 10, 2016 1:03 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Dam

You thought it was not important to preform an impact study? Doesn't this sturgeon deserve to be thought of as an asset to the state. The income from this fish is under rated and should be given more consideration. The fishing industry has not been allowed to weigh in view how this has affected them since 1907 when the dam was built. Only the farmers are included. Widen your net and do a better evaluation of the benefits of removing the dam.

Sincerely

Collyn Ferris
451 Grant Way
Yuba City, CA 95125
530-674-9400

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Wednesday, February 10, 2016 9:43 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Pallid sturgeon recovery

-----Original Message-----

From: Jed Fitzpatrick [mailto:bitterrootriverguides@gmail.com]
Sent: Wednesday, February 10, 2016 9:38 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Pallid sturgeon recovery

Dear sir or madam:

I am writing you in support of sturgeon recovery in the Yellowstone and Missouri River basins. As a licensed Montana outfitter, my life and livelihood is tied to the water and the species it supports.

It would be a tragedy to lose any aquatic critter to human activities, especially one as ancient and mysterious as the pallid sturgeon. Can we as humans say that we did everything within our means to help this fish survive?

We have options here, it is our choice if these fish survive the future. Let's make the right one!

Starting with dams impeding fish migration and spawning habitat, we can make adjustments to the structure as well as irrigation practices to save water downstream and provide more opportunity for fish to move throughout the system. Complete dam removal would be my first option; the river and its inhabitants are worth it! In-river pumps can move enormous amounts of water without dams, and are much more efficient than ditch irrigation practices. These pumps can operate on solar/wind/hydro power, or at the least support the electrical grid through these means offsetting the costs of powering the pumps.

If the dam must stay in place, altering irrigation practices could help save the sturgeon. When the river drops to low levels where the dam becomes impassable, regulation of ditch outflows could help keep enough water in stream to benefit the fish and aid their survival.

Please consider options that most benefit the river and the life it supports, not cattle, landowners, and contractors. These sturgeon inhabited these waters when the dinosaurs still roamed the earth, what a benevolent cause and specie to support! The ball is in our court, let's make the right choice for Montana fisheries and the life they give so selflessly to our short existence on this planet.

Sincerely,

James Fitzpatrick
MT Outfitter #8392
Hamilton, MT 59840

Sent from a Montana trout stream

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Friday, January 08, 2016 7:45 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Intake diversion dam scoping period

Please see comment below on Intake.

-----Original Message-----

From: Tyler George [mailto:thankyoudonny@gmail.com]
Sent: Thursday, January 07, 2016 9:16 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Intake diversion dam scoping period

This comment is in regards to the proposed intake diversion dam fish passage. Removal of the dam would be a much better option than a side channel. A \$59 million price tag seems absurd, when a dam removal would be much cheaper and offer a more natural habitat for native fish.

Tyler George
Sheridan, WY

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Tuesday, February 16, 2016 10:36 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Intake Diversion Dam

-----Original Message-----

From: Rita Hoch [mailto:darihoch@yahoo.com]
Sent: Tuesday, February 16, 2016 10:04 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Intake Diversion Dam

Attn: CENOW-PM-AA

It would be an awful loss to the farmers, towns, Sidney Sugars and entire communities if the Intake Dam were removed or affordable irrigation was lost. Please allow the work on the new weir to be completed for the benefit of both the fish and the people. It is not necessary to kill the dam to save the fish.

Rita Hoch

35448 County Road 131

Fairview, MT 59221



THE IZAAK WALTON LEAGUE OF AMERICA

February 16, 2016

U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102

The Izaak Walton League of America (League) thanks the U.S. Army Corps of Engineers and the Bureau of Reclamation for this opportunity to provide scoping comments on the Intake diversion dam on the Yellowstone River.

The League has over 42,000 members that care deeply about the health of our nation's rivers. This includes thousands of members that live within the Missouri River basin.

The current Intake rock and wood weir has impeded migration of pallid sturgeon and other native fish on the Yellowstone for more than a century. This impediment results in turbulence and increased water velocities caused by the rocks that are annually placed in the Yellowstone at Intake.

The League strongly encourages the Corps to seriously consider the proposed non-weir alternative for the Yellowstone. The no-weir alternative would open the main channel of the river to fish passage for the first time in more than 100 years.

The League continues to have great concerns about the proposed concrete weir and bypass project. We feel it may create an additional threat to the survival of the pallid sturgeon and many other native fish species. Larval drift is crucial to pallid reproduction. We fear that pallids hatched above Intake would not survive the created turbulence from the concrete dam or be unable to pass the obstacle created by the weir. The concrete weir will also result in the creation of a dam on what previously is the longest undammed river in America.

The proposed Intake project will take at least three years to construct and consume an estimated \$60 million of the Corps' Missouri River Recovery Program (MRRP) budget. The League believes that committing an enormous amount of money from future MRRP budgets, with no guarantee of successful fish passage or pallid reproduction, is a tremendous gamble on the continued existence the endangered pallid sturgeon.

With to the geographic location of the project we also request the Corps thoroughly scrutinize any modification or new structure done at Intake to assure it's constructed to withstand the massive ice flows on the Yellowstone every spring. The amount of MRRP funds, from taxpayer dollars, and the biological importance of the project warrant that extra examination.

As a science-based organization, the League strongly believes comprehensive monitoring, conducted by trained research teams from the U.S. Fish and Wildlife Service, and state fisheries biologists must be implemented following any steps taken. The monitoring program needs to evaluate the project's success. After work is done are pallids moving upstream? Are they spawning? Does whatever alternative is selected allow successful larval drift of newly hatched pallids? Are other native fish successfully reproducing and recruiting in the Yellowstone? If that monitoring shows no positive response, we urge that an adaptive management plan is in place to quickly implement changes to make the Intake project successful.

The enormous amount of MRRP money proposed to be expended on this project demands that it not only be successful but that it achieves its goal. This project may very well be the last chance we have to save the upper basin pallid population. Given the low number of pallids remaining in the system it appears we simply won't have another opportunity. Whatever alternative is selected has to succeed and lead to reproduction and recruitment of upper basin pallid sturgeon.

The League is also concerned about the public process used to date to evaluate this project. There have been few public meetings and little opportunity for public input or guidance from the Missouri River Recovery Implementation committee (MRRIC). We encourage you to allow more public input and ask that you engage in an independent scientific review of all aspects of any proposed modifications before selecting and implementing any modification.

The League understands that the total maintenance of the completed project will be the sole responsibility of the Lower Yellowstone Irrigation District. We are very concerned about how a limited number of irrigators, who will benefit from the diversion, will be able to pay for the needed maintenance and monitoring of the project. Ongoing maintenance and monitoring must be addressed. The League fears a lack of money to provide the needed annual maintenance and or needed repairs could lead to failure of the project in the future.

The League appreciates the opportunity to provide comments on the Intake project and respectfully requests to be added to the list of interested parties for all future information regarding the Intake dam project.

Thank you for your time and consideration.

Sincerely,

A handwritten signature in black ink that reads "Paul Lepisto". The signature is written in a cursive style with a large initial "P".

Paul Lepisto
Regional Conservation Coordinator
Izaak Walton League of America
1115 South Cleveland Avenue
Pierre, SD 57501-4456
605-224-1770
plepisto@iwla.org

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Wednesday, February 17, 2016 8:05 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Intake Diversion Dam

-----Original Message-----

From: johnson5@midrivers.com [mailto:johnson5@midrivers.com]
Sent: Tuesday, February 16, 2016 2:49 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Intake Diversion Dam

I am a citizen of Sidney, Montana, and am writing to urge you NOT to remove the Intake Diversion Dam. It is vital to the agriculture which sustains the communities of Sidney, Fairview, Savage, Glendive, and those in between. Removal of the dam could have dire consequences to this region and also the people who depend on the food raised in our area. I urge you to take this article into consideration

[https://protect.fireeye.com/url?k=04e5a170-322a-4917-827f-](https://protect.fireeye.com/url?k=04e5a170-322a-4917-827f-d87b3229dbdd&u=http://www.roundupweb.com/story/2016/02/17/news/pallid-sturgeon-endangered/7598.html)

[d87b3229dbdd&u=http://www.roundupweb.com/story/2016/02/17/news/pallid-sturgeon-endangered/7598.html](https://protect.fireeye.com/url?k=04e5a170-322a-4917-827f-d87b3229dbdd&u=http://www.roundupweb.com/story/2016/02/17/news/pallid-sturgeon-endangered/7598.html)

Sincerely,
Heather Johnson
2700 Red River Dr
Sidney MT 59270

Vanosdall, Tiffany K NWO

Sent:
To:
Subject:

-----Original Message-----

From: djorgy@midrivers.com [mailto:djorgy@midrivers.com]
Sent: Tuesday, February 16, 2016 1:02 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Intake Diversion Dam Fish Passage Project

To Whom it may Concern:

We are in favor of the bypass channel that will allow the pallid sturgeon to pass the dam and allow the water rights for the farmers to be fulfilled.

The cost to pump and to keep them running is too costly.

Keep in mind all the impacts on businesses, the economy of the area, the environment and other animal habitats that this will endanger if the water is not available.

Sincerely,
David Jorgensen
Lanette Jorgensen

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Wednesday, February 17, 2016 8:26 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Intake Diversion Issue-Montana

-----Original Message-----

From: Kate Knels [mailto:kate.knels@gmail.com]
Sent: Tuesday, February 16, 2016 5:47 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Intake Diversion Issue-Montana

As one of many people who would be adversely impacted by changes in how the Intake diversion dam functions, I have to wonder how and when it became more important in our world for a fish to have space to swim through or around a very small dam versus the survival of human beings in this same area. The valley that this dam services provides a living for many tax paying individuals as well as supporting the many towns and communities that these people live in and buy their goods and services in. The inability to be able to irrigate the ground in this area will put most of the farmers, ranchers and businessmen out of business if this water is taken away. How can anyone in their right mind even consider that this is an idea that should even be considered? Fish vs. Man?? Most farmers and ranchers in this area are already good stewards of our lands and waters and take good care with their use of water. No one wants to see a fish species become extinct. BUT...if it has to be a fish or humans there should be no choice as to which one's survival should be more important!!

Where has all common sense gone?

Please consider this matter carefully at the most basic level and realize how many lives and communities would be mostly destroyed if you should choose to take the dam out in favor of taking care of a fish that provides no use whatever in this world other than it is an old species.

I truly hope that common sense and fiscal responsibility will prevail on all counts and life will continue on as normal as can be in this part of Montana and North Dakota.

Sincerely,

Kate Knels
Fairview, Mt.

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Tuesday, February 16, 2016 10:23 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Intake diversion dam and Fish bypass

-----Original Message-----

From: Stacy Kober [mailto:sskober@gmail.com]
Sent: Tuesday, February 16, 2016 10:04 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Intake diversion dam and Fish bypass

I am writing to you today regarding the Intake Dam Issue.

I am very concerned that you are not thinking through these issues.

I don't think you are aware of the impact on the economy on Dawson and Richland counties, as well as the areas where all of the commodities are sold to. Which will effect pricing on those also.

First in the line of fire are the farmers and their families but that trickles down to everyone in the valley also.

I do not think you understand the ramifications of your decision. I hope that you look at this decision with a wide angle lens.

<Blockedhttps://ssl.gstatic.com/ui/v1/icons/mail/images/cleardot.gif>

--

Stacy Kober
941 14th Street SW
Sidney, MT 59270
406-488-1464 - Home
406-973-4114 - Cell

Curtis R. Kruer
P.O. Box 753
Sheridan, MT 59749
406-842-5099
kruer@3rivers.net

February 16, 2016

Via email to cenwo-planning@usace.army.mil.

U.S. Army Corps of Engineers
Omaha District Office
ATTN: CENWO-PM-AA, 1616 Capitol Ave.
Omaha, NE 68102

Re: Comment on Notice of Intent to Prepare a Draft Environmental Impact Statement for the Intake Diversion Dam Fish Passage Project, Dawson County, Montana

Dear District Engineer, U.S. Army Corps of Engineers:

In 2015, I filed a declaration on behalf of the plaintiffs (Natural Resources Defense Council and Defenders of Wildlife) in the litigation that resulted in the new EIS process referenced above. I'm a long time resident and landowner in Montana, continue to use and enjoy the Yellowstone River area, and have a 40 year professional work history in the conservation and restoration of aquatic resources. I believe strongly that alternatives for the Intake Diversion Dam exist to allow the responsible federal agencies to meet their mandate under the Endangered Species Act to ensure the project does not jeopardize the continued existence of any endangered or threatened species, including the pallid sturgeon of the Yellowstone River and other endemic species.

I recommend that the agencies design a project that removes the existing weir from the river and increases the efficiency and reduces the waste in the current irrigation system by pursuing a variety of water conservation measures. The new system should use gravity diversions and existing canal head gates when river flows are sufficient, and then use pumps and possibly Ranney wells to provide only the amount of water necessary for crops when river flows are low. There should be a large scale investment in water conservation measures to reduce leakage in canals and ditches, thereby reducing pumping needs. As a holder and user of senior water rights in Montana I can testify to the tremendous waste and over allocation of irrigation water inherent in systems such as that dependent on the Intake diversion. The entire new system should be powered by the available technology of renewable energy sources. There is a way to accommodate fish and irrigators that doesn't require placing a dam or diversion structure in the Yellowstone River and the redesign should accommodate both.

District Engineer, Omaha District
February 16, 2016
Page 2

And, understanding that this project will result in unavoidable impacts regulated by Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act of 1899, and the Endangered Species Act, I request that the Corps plan, fund, and implement mitigation measures that could include but not be limited to wetland, riparian, and stream habitat restoration along the lower Yellowstone, purchase of conservation or channel migration easements, and funding of research and management to aid the threatened and endangered species found in the Yellowstone River system.

Thank you for consideration of my comments and recommendations. Please place me on any e-mailing lists to receive future information as this project progresses.

Sincerely,

A handwritten signature in cursive script, appearing to read "C. Krueger".

Curtis Krueger

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Wednesday, February 17, 2016 8:32 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: Intake diversion dam

-----Original Message-----

From: David Linde [mailto:davidlinde250@hotmail.com]
Sent: Tuesday, February 16, 2016 8:57 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Intake diversion dam

To Whom it may concern:

I am a farmer rancher who has lived in the area most of my life, except for military service. The benefits of the diversion dam are immense. It helps the wildlife as the whitetail deer and bird populations are abundant. If one hunts down in the irrigated area it is like bagging a hand fed animal. They can graze small grains, sugar beets, alfalfa just to name a few. This irrigation project should be held up as a badge of honor to have a gravity system that feeds many acres of land from Intake to Nohly. It is truly an amazing project. I love the wildlife and enjoy to see it, I cut around nests and stop for baby deer so they don't get caught up in the machinery. The fish bypass would seem the best possible answer. Thank you

David Linde

34880 County Road 132

Fairview, Mt 59221

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Tuesday, February 16, 2016 10:12 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Intake diversion dam & fish bypass

-----Original Message-----

From: Dennis [mailto:dl@sidneyrental.com]
Sent: Monday, February 15, 2016 5:46 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Intake diversion dam & fish bypass

I am in favor of doing whatever it take to keep the diversion dam in place and keeping the Lower Yellowstone Irrigation Project in operation.

I am not in favor of removing the dam and pumping the water, the way it works now is by far the most economical and most efficient.

The farmers in the valley do not need the added cost to pump the water, their operating costs are already high enough.

This irrigation project has been the life blood of this valley since it has been in existence.

I can't believe the people who depend on this have to take second place to a fish. I believe it is time we quit letting all of the special interest groups and their agendas

destroy the lives of people who are feeding the people of this country and the world. These groups have cost this country millions upon millions of dollars and it's time to stop.

I think this should have already been decided before the 40+ million dollars was spent to build the new headworks.

If the pallid sturgeon is that important to the existence of mankind and these special interest groups than we need to get the bypass built.

Once again it's time for the nonsense to stop.

Thank you for your time.

Dennis Lorenz

Sidney Montana

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Tuesday, February 09, 2016 2:35 PM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Wild Pallid Sturgeon in Montana

Importance: High

-----Original Message-----

From: Philip Naro [mailto:pnaro21@gmail.com]
Sent: Tuesday, February 09, 2016 1:34 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Wild Pallid Sturgeon in Montana
Importance: High

U.S. Army Corps of Engineers:

Pallid sturgeon and their closely related forebears have been around for 65 million years, since the Cretaceous Period when dinosaurs began going extinct. As you know, wild pallid sturgeon number only in the hundreds within their recent historical range in the Missouri and Mississippi drainages. Fewer than 250 roam their native waters in Montana's Missouri and lower Yellowstone Rivers. They are a federally listed endangered species.

Much of their decline can be pinned on dams and large reservoirs that have sliced off important habitats, especially for spawning and rearing. Successful reproduction and recruitment of young fish has not occurred for decades. The population is aging and dying off. The U.S. Army Corps of Engineers can help by opening up a huge reach of historic habitat for the fish above the low-head irrigation dam that currently blocks upstream movement at Intake on the Lower Yellowstone River.

Please take the following recommendations into your EIS planning/preparation alternatives:

1. Combine using the current irrigation head-gate with gravity flow when the river discharge is high, and then switch to pumps in or next to the river during lower flows.
2. Invest in water conservation measures to reduce leakage in canals and ditches, thereby reducing pumping needs.
3. Produce power to run the pumps using a wind generator, low-head hydro in the main canal, or, establish a trust fund that can be tapped to purchase power for running pumps.

This approach will allow pallid sturgeon, and dozens of other fish species, to access hundreds of miles of Yellowstone River for spawning and rearing. It also keeps the irrigators whole, ensuring they get the water they need when they need it. Thank you very much for your consideration and work to save pallid sturgeon habitat and numbers.

Best regards,

Philip Naro

21 Crescent Point Road

Bozeman, MT 59715

(406) 595-6663

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Friday, February 12, 2016 11:34 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Intake Diversion Dam Fish Passage Project on Yellowstone

-----Original Message-----

From: Jeanne Olson [mailto:jeaolson@cyberport.net]
Sent: Friday, February 12, 2016 9:41 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Intake Diversion Dam Fish Passage Project on Yellowstone

Army Corps of Engineers

We'd like to urge you to consider another plan to better serve both fish, especially pallid sturgeon, and the interest of irrigators.

Instead of building another dam, consider using the current irrigation headgate with gravity flow when the river is high and pumps during lower flows. Improve water conservation by reducing leakage in canals and ditches, to reduce pumping. Produce power for the pumps with a wind generator or low head hydro in the main channel or other means.

This plan ensures that the irrigators get water when needed, and opens up miles of river to sturgeon and other fish for spawning.

Thank you.

Dan and Jeanne Olson

Kalispell, MT 59901

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Friday, January 22, 2016 8:49 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: Intake Diversion Dam

Tiffany/Eric,

Please see comments below regarding Intake.

Jennifer

Jennifer Salak
Outreach Specialist
Planning Branch
U.S. Army Corps of Engineers, Omaha District
1616 Capitol Avenue
Omaha, NE 68102
402-995-2680

-----Original Message-----

From: Duane Peters [mailto:dpeters@crystalsugar.com]
Sent: Friday, January 22, 2016 8:22 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Intake Diversion Dam

I attended the open house on January 21, 2016 at Glendive, MT. There were 6 plans on display. I find it very difficult to decide which option would be more beneficial when all facts such as cost of project were not available. Once again, the current proposed project appears to be the best option for all parties. I believe a mini-structure was constructed to show what may happen back in 2014/2015. Please correct me if I am wrong or mis-understood. I also understand the time to complete a project of this magnitude. I look forward to more meetings when the cost of these ideas can be presented. I would like to know why these meeting are not being held in locations where the significant impact will be realized. Sidney, MT and Fairview, MT is where I would suggest the meeting are held in the future.

Duane Peters, Agriculture Manager

Sidney Sugars, Inc

Phone Number 406-433-9313

Cell Phone 406-478-3470

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Tuesday, February 09, 2016 2:33 PM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Notice of Intent To Prepare a Draft Environmental Impact Statement for the Intake Diversion Dam Fish Passage Project, Dawson County, Montana

-----Original Message-----

From: Clarence Sanders [mailto:sandora99@msn.com]
Sent: Tuesday, February 09, 2016 12:08 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Notice of Intent To Prepare a Draft Environmental Impact Statement for the Intake Diversion Dam Fish Passage Project, Dawson County, Montana

Notice of Intent To Prepare a Draft Environmental Impact Statement for the Intake Diversion Dam Fish Passage Project, Dawson County, Montana

Dear Sir or Madam:

I am writing to comment on the above referenced Draft Environmental Impact Statement for the Intake Diversion Dam Fish Passage Project, Dawson County, Montana

As the Corps of Engineers is aware ecological stress on the Yellowstone riverine aquatic environment is reaching critically dangerous proportions, and the threatened extinction of the pallid sturgeon is one consequence, among others, of that ecological stress.

To address these severe problems the Corps should undertake steps to open up fish access to historic habitat in the Yellowstone River.

Regrettably the Corps has previously proposed to build a dam larger than the existing installation in hopes that an engineered-bypass channel or fish ladder might provide an upstream channel for the pallid sturgeon. This existing dam-building proposal fails to meet scientific muster, and biologists universally conclude that it is highly unlikely pallid sturgeon will use this engineered-channel. Indeed, the Corps proposal for a new dam is nothing more than an expensive, \$59 million gamble, that is likely to provide absolutely no remediation whatsoever of the current blockage to upstream access for pallid sturgeon.

Instead of a new dam building project the Corps should:

1. Combine use of the current irrigation head-gate with gravity flow when the river discharge is high, and then switch to pumps in or along side the river during lower flows.
2. Invest in water conservation measures to reduce water leakage in canals and ditches, thereby reducing pumping needs.
3. Produce power to run the pumps using a wind generator, low-head hydro in the main canal, or establish a trust fund to finance the purchase of power for running pumps.

An approach adopting these three recommended points will not only allow pallid sturgeon, but also many other fish species, to access hundreds of miles of the Yellowstone River for spawning, rearing, and recruitment. As scientific

evidence shows, this recommended approach is guaranteed to work, and do so efficiently for all interests and stake holders involved, both commercial and ecological. And do so at a far lower cost than the \$59 million experimental project the Corps has previously proposed. In short, the project as recommended by the three points above, when compared to the Corps-recommended new dam, would keep irrigators whole, ensuring they get the water they need when they need it, and also ensure upstream access for pallid sturgeon and other fish. Thus, the three-point recommended approach as a replacement for the ill-advised, Corps-recommended new dam will provide a clear win-win outcome.

Thank you for your careful consideration of my comments.

Clarence Sanders
4416 Morning Sun Drive
Bozeman, MT 59715
406-587-9218

ATTN: CENWO-PM-AA
U.S. Army Corps of Engineers
Omaha District
1616 Capitol Avenue
Omaha, NE 68102

B.B. Shepard
65 9th Street Island Drive
Livingston, MT 59047
February 12, 2016

emailed to: cenwo-planning@usace.army.mil

Dear Sir or Madame,

I am writing to provide comments for the scoping phase of the Intake Diversion Dam Fish Passage Project, Dawson County, Montana. I am providing both my personal comments as a citizen of Montana and the U.S. who lives on the Yellowstone River, near Livingston, Montana, and as a professional fisheries biologist with over 30 years of experience in fish conservation and management in the west. I will clearly identify when I am speaking as a private citizen with my opinion versus when I am speaking as a scientist reviewing scientific information by saying so in the topic sentence of each paragraph.

I have reviewed many documents, including reports, past environmental assessments, letters, and peer-reviewed journal articles associated with the proposed project. I will cite these as appropriate, but provide the full list I have reviewed as Appendix A. I focused my review on documents prepared by the U.S. Army Corps of Engineers (Corps), U.S. Bureau of Reclamation (BoR), U.S. Fish and Wildlife Service (FWS), and Montana Department of Fish, Wildlife & Parks (MFWP). I understand that a Pallid Sturgeon Recovery Biological Review Team (BRT) of Pallid Sturgeon experts was convened to provide scientifically sound recommendations for recovering Pallid Sturgeon in the Upper Missouri River system. I found documentation that identified the scientific recommendations of this BRT (Jordan 2008), but no summary documentation for the responses to these recommendations from the FWS, Corps, BoR, or other proponents of this project. I am formally requesting that documentation for the rationale used by the FWS, Corps, and BoR for accepting or rejecting the BRT recommendations be provided as part of the public record for the upcoming environmental analysis. I am also requesting that the following document be made available for public review.

Biological Review Team. 2006. Summary of the Biological Review Team's comments on Lower Yellowstone River Intake Dam Fish Passage and Screening Preliminary Design Report. US Fish and Wildlife Service. Billings, Montana.

I searched for this document and could not find it. Please make this part of the public record with easy access (preferably via a viable web link) so those reviewing the record can see what the scientists recommended. It was apparent from the record of letters from MFWP to the FWS, Corps, and BoR that MFWP was concerned about the issue of transparency and application for the use of the best available science to make ESA-related decisions (FWP letters 2012 to 2013; particularly FWP letter to FWS 2013). I share this concern.

Lastly, it is my understanding that the Corps is preparing a "Science and Adaptive Management Plan" for the Missouri River system. In my personal and scientific opinion this

plan should be completed prior to spending additional public funds on specific projects such as Intake Diversion Dam project. This is important because the public and our state and federal agency representatives need to understand how the Intake project will help to meet the objectives of this broader plan. Ideally this plan will have clearly stated: management objectives, criteria for meeting these objectives, methods to monitor these criteria, and contingencies that can be implemented if these criteria are not met by currently proposed actions.

In my personal opinion, the best course of action would be to provide irrigation water by pumping it using sustainable energy sources such as wind or solar power, modifying the existing irrigation system to make it as water efficient as feasible, and abandoning the existing diversion structure in the Yellowstone River. Since the Pallid Sturgeon BRT's initial recommendation was removal of the diversion structure (MFWP letter to FWS, February 5, 2013; Jordan 2008), it appears to me that this is the alternative with the highest probability for helping to recover Pallid Sturgeon. I believe this could be done in conjunction with upgrading the existing irrigation system to make it much more efficient so less water is needed to irrigate the land. I support agricultural use of the land, but question whether we can subsidize these private farmers to produce sugar beets in this arid environment. My understanding is that irrigators on this project pay much less for their water than any other irrigators in this area. While I believe that these irrigators have a right to water and have an early water right that should be honored, I do not condone using public resources to supply this water when it harms public resources, such as native fish and the Yellowstone River ecosystem. We in Montana are justifiably proud of the fact that the Yellowstone River is one of the largest un-dammed, free flowing rivers in the U.S. and I think we need to take this opportunity to provide irrigation water that allows us to remove the existing diversion structure.

My personal opinion is that I strongly urge the Corps and BoR to consider incorporating irrigation efficiency in this project. I suggest that water saved by increasing irrigation efficiency be transferred from irrigators and re-allocated to the federal government. I support the right of irrigators to provide water to their existing crops, but do not believe the public should subsidize any additional acres of irrigated land. This "saved" water could be used to augment instream (in river) flows to support ecosystem function, fish, and commercial barge traffic that operates in the lower Missouri and Mississippi rivers. The federal government could protect this water right through a federal reserved water right and ensure that these benefits are realized. This strategy would be a win-win in my opinion and could set the stage for future water allocation efforts in the Missouri-Mississippi basin in the face of a changing climate.

I personally do not care whether the entire existing diversion structure is removed as part of the project. Rather, I think one could remove rock from several slots across the structure to provide fish and water passage now, and then let nature take its course to remove the remaining structure. I believe that without constant maintenance of the structure, the rocks making up this structure would be moved down river over time by natural processes (i.e., ice and flood flows). This alternative would save money and allow natural processes to operate, while providing immediate fish passage opportunities. It might be worth maintaining the existing inlet canal structure for use only when the Yellowstone River flows are at or near bank full flows (i.e., flood flows). This strategy could provide flood irrigation water when the river is

near flood stage and help saturate soils when water is abundant. This alternative should be further analyzed.

In my review of the original EIS and its supplement for this project I noted that the water pumping alternative using wind and solar power was considered, but rejected as too expensive. However, part of the expense was due to the irrigators saying it was unacceptable to have any interruption of power to the pumps. Consequently, a series of huge propane or gas generators were included in the project. I am sorry, but in my personal opinion I think the irrigators are being unreasonable and it makes it very hard for me to be sympathetic to their concerns when they make these kind of demands. I believe that the “reasonable and prudent” criteria that are applied to native species conservation under the Endangered Species Act should also be applied to federal irrigation subsidies. I find it hard to believe that the irrigators’ crops would fail with the type of power interruptions typically encountered with a wind-solar power system as that which was originally proposed.

Additionally, irrigation water conservation measures were not considered in the original EIS supplement. I am not sure why irrigation efficiency was not considered. I believe this lack of consideration for water delivery efficiency indicated that the scope of analysis in the original EIS supplement was too narrow. I think that if the funding that was earmarked for the dam was instead used to make the irrigation system more efficient, such as reducing water loss by using pipes and impervious liners in canals, it would be feasible to use pumps to supply the water. Let’s take this opportunity to actually make this a good project, rather than a reason to pour concrete into a river. This alternative must be fully explored and, in my opinion, should be the preferred alternative.

In my professional opinion, I agree with the BRT’s original recommendation that the dam should be abandoned and that this will provide the lowest risk to the native fish of the Yellowstone River system, including Pallid Sturgeon (Jordan 2008). This alternative provides the highest assurance that adult Pallid Sturgeon will move upstream past the site and that larval sturgeon will not become entrained in the canal system. There is really no good way to reduce risk to drifting larval Pallid Sturgeon to an acceptable level with the current system, or any system that diverts water in a surface diversion. Screening will not work to protect these small drifting larval fish or prevent them from being lost into the diversion canal. While some larval Sturgeon might be lost to pumps, I believe the technology to reduce impacts at pump stations is much better developed and pumps are less likely to impact drifting larval Sturgeon. I also believe that all other native fish species in the Yellowstone River, like Sauger and Blue Suckers, will benefit from removal of the dam and open canal structure.

My professional opinion is that larval Pallid Sturgeon will suffer very high mortality in any open canal system, even one that is screened. There is no evidence that I am aware of that indicates any currently available canal screen system (even the rotating screen system that is now on the Intake Canal) can effectively prevent larval Sturgeon from either dying on screens or passing through screens. This fact needs to be acknowledged in the upcoming assessment.

My professional opinion is that if you must consider any alternative that uses or modifies the existing rock structure, you also must include funding for monitoring and research to ensure that your assumptions about likely effects of your actions on fish in the river are validated, or if not, that there is a contingency (including adequate funding) for protecting these valuable fish resources. In my personal opinion, it would be much less expensive to maintain pumps than to spend money to continually maintain a dam, diversion canal, diversion screens, and a by-pass channel. I recommend implementing and funding the monitoring of fish passage and recruitment success for all alternatives.

I found it difficult to follow the rationale used by the FWS for how they will recover Pallid Sturgeon in the upper Missouri River system (including the Yellowstone River). The original recovery plan (FWS 1993) by the FWS and its 2000 Biological Opinion (BiOp; FWS 2000) for the Corps' Fort Peck Dam appeared that to be a reasonable effort to recover Pallid Sturgeon. However, since 2000, when the FWS first revised this original BiOp (FWS 2003) through the period 2008 to 2015 when the FWS informally amended the 2003 BiOp through numerous letters between the FWS and Corps (see FWS to Corps and BoR letters 2008 to 2015), these original recommendations were incrementally weakened. During this consultation process the Corps continually asked for changes in the Reasonable and Prudent Alternatives (RPA) that the FWS requested to recover pallid sturgeon. In most cases, it appeared that the FWS granted these revised conditions to the Corps with little scientific support for these changes. My personal opinion is that this informal revision process that relaxed original FWS requirements has placed a higher risk and much greater uncertainty for the recovery of Pallid Sturgeon in the upper Missouri River system. FWS requirements that might have improved Pallid Sturgeon populations, or at least have allowed for better testing of what factors were limiting Pallid Sturgeon numbers, were not implemented. My questions are:

1. What kind of scientific review was conducted to assure that changes in the 2003 BiOp allowed by the FWS through these 2008 to 2015 letters will aid in the recovery of Pallid Sturgeon?
2. What constitutes "reasonable and prudent" measures and alternatives for recovery of Pallid Sturgeon by the FWS, how is that decision balanced with the "best science available", and what level of peer-review and economic analysis is considered reasonable for decision-support in this project?
3. What level of biological and economic statistical certainty is used to measure trade-offs between financial costs versus recovery risk for a species?
4. How will the FWS, Corps, and BoR evaluate the entire Pallid Sturgeon population segment that inhabits the Missouri-Yellowstone river system from North Dakota upriver and the effects that this Intake Diversion Dam has directly on that population, along with all implications if the FWS allows the Corps' involvement in this Intake project to satisfy their BiOp obligations for their Fort Peck Dam operations?
5. What amount of government funds will be spent to subsidize delivery of irrigation water to the private irrigators and how will the level of expenditure be evaluated as to whether demands made by irrigators are "reasonable and prudent"? In my opinion, expenditure of no government funds on this project might solve the fish passage issue. I don't think fish passage would be an issue if public funds were not spent on this project because the irrigators would use a cheap, and porous, rock diversion as

they did in the past. The analysis needs to make it clear that this is an irrigation subsidy project, not a fish passage subsidy project.

I would like to see an honest and clear appraisal of these trade-offs in the next analysis.

In my professional opinion, using physical criteria (i.e., depth and velocity criteria for the bypass channel in the previous EA; BoR and Corps 2015) to measure success of a project to pass fish upstream without an actual assessment of fish passage past the structure using radio-telemetry or other acceptable fish migration assessment and recruitment methods does not constitute acceptable success criteria. Monitoring of success criteria must be tied directly to the goals and objectives of the project.

My professional opinion is that funding must be allocated to adequately monitor reasonably developed biological success criteria. Lastly, I would like to see an analysis of the proposed project's effects on all native fishes of the Yellowstone River that inhabit this area of the river, either year-round or seasonally during their migrations.

In conclusion, my personal opinion is that abandonment of the existing diversion structure, implementing water efficiency measures throughout the irrigation system, and pumping water using sustainable energy sources makes the most sense for this project and should be the preferred alternative. It might be reasonable to retain the existing canal head structure with its fish screen for use during flood flows without an associated diversion structure in the river, but this option needs further evaluation. I recommend negotiating with the irrigators to transfer water rights for this "saved" or "salvaged" water to the federal government for protection as instream (in river) flows.

Thank you for your consideration!

Peace,

Brad Shepard, PhD.
65 9th Street Island Drive
Livingston, MT 59047
Email: shepard.brad@gmail.com

CC: Bureau of Reclamation, Montana Office
Montana Chapter of the American Fisheries Society
Montana Department of Fish, Wildlife and Parks
Governor Steve Bullock, Montana
Defenders of Wildlife, Denver, Colorado

Appendix A - Literature, Reports, Letters, Opinions, and EISs Reviewed

- Aaland, L. 2010. Reconnecting rivers: natural channel design in dam removals and fish passage. Minnesota Department of Natural Resources.
- Adams, S. R., J. J. Hoover, and K. J. Killgore. 1999. Swimming performance of juvenile pallid sturgeon, *Scaphirhynchus albus*. *Copeia* 1999: 802-807.
- Battelle Memorial Institute. 2013. Final Independent External Peer Review Report for the Intake Diversion Dam Modification, Lower Yellowstone Project, Montana: Draft Supplement to the 26 April 2010 Environmental Assessment and Appendices. Contract Number W912HQ-10-D-0002, Task Order 0035. Prepared for Department of the Army U.S. Army Corps of Engineers, Ecosystem Restoration Planning Center of Expertise for the St. Paul District.
- (BoR and Corps) Bureau of Reclamation and U.S. Army Corps of Engineers. 2015. Intake Diversion Dam Modification, Lower Yellowstone Project, Montana: Final Supplement to the 2010 Final Environmental Assessment. Billings, Montana and Omaha, Nebraska.
- (BoR and Corps) Bureau of Reclamation and U.S. Army Corps of Engineers. 2015. Finding of No Significant Impact: Intake Diversion Dam Modification, Lower Yellowstone Project. http://www.usbr.gov/gp/mtao/loweryellowstone/FSEA/final_fonsi.pdf.
- Braaten, P. J., D. B. Fuller, L. D. Holte, R. D. Lott, W. Viste, T. F. Brandt, and R. G. Legare. 2008. Drift dynamics of larval Pallid Sturgeon in a natural side channel of the Upper Missouri River, Montana. *North American Journal of Fisheries Management* 28:808-826.
- Braaten, P. J., D. B. Fuller, R. D. Lott, M. P. Ruggles, and R. J. Holm. 2010. Spatial distribution of drifting Pallid Sturgeon larvae in the Missouri River inferred from two net designs and multiple sampling locations. *North American Journal of Fisheries Management* 30:1062-1074.
- Braaten, P. J., D. B. Fuller, R. D. Lott, T. M. Haddix, L. D. Holte, R. H. Wilson, M. L. Bartron, J. A. Kalie, P. W. DeHaan, W. R. Ardren, R. J. Holm, and M. E. Jaeger. 2012. Natural growth and diet of known-age pallid sturgeon (*Scaphirhynchus albus*) early life stages in the upper Missouri River basin, Montana and North Dakota. *Journal of Applied Ichthyology*, 28: 496–504
- Braaten, P. J., D. B. Fuller, R. D. Lott, M. P. Ruggles, T. F. Brandt, R. G. Legare, and R. J. Holm. 2012. An experimental test and models of drift and dispersal processes of Pallid Sturgeon (*Scaphirhynchus albus*) free embryos in the Missouri River. *Environmental Biology of Fishes* 93:377-392.
- Braaten, P. J., C. M. Elliott, J. C. Rhoten, D. B. Fuller, and B. J. McElroy. 2015. Migrations and swimming capabilities of endangered pallid sturgeon (*Scaphirhynchus albus*) to guide passage designs in the fragmented Yellowstone River. *Restoration Ecology* 23:186-195.

Bramblett, R.G. and R.G. White. 2001. Habitat use and movements of Pallid and Shovelnose Sturgeon in the Yellowstone and Missouri Rivers in Montana and North Dakota. Transactions of the American Fisheries Society 130:1006-1025.

Bullock to Lower Yellowstone Irrigation District. 2014. May 16, 2014 letter from Montana Governor Steve Bullock to the Lower Yellowstone Irrigation District.

Corps to FWS. 2008. December 11, 2008 letter from the U.S. Fish and Wildlife Service to the U.S. Army Corps of Engineers.

Corps to FWS. 2009. May 20, 2009 letter from the U.S. Army Corps of Engineers (W. Anderson) to U.S. Fish and Wildlife Service (S. Guertin), ACE08356.

DNRC to Corps and BoR. 2013. October 29, 2013 letter from Montana Department of Natural Resources and Conservation (J. Tubbs) to Montana the U.S. Army Corps of Engineers (D. Ponganis) and U.S. Bureau of Reclamation (M. Ryan).

DNRC and FWP to BoR. 2015. January 29, 2015 letter from Montana Department of Natural Resources and Conservation (J. Tubbs) and Montana Department of Fish, Wildlife & Parks (J. Hagener) to U.S. Bureau of Reclamation (B. Esplin).

Fuller, D. B., M. E. Jaeger, M. Webb. 2008. Spawning and associated movement patterns of Pallid Sturgeon in the lower Yellowstone River. Upper Basin Pallid Sturgeon Recovery Workgroup 2007 Annual Report. Upper Basin Workgroup, U.S. Fish and Wildlife Service, Bozeman, Montana.

Fuller, D. B. and T. M. Haddix. 2012. Examination of pallid sturgeon use, migrations and spawning in Milk River and Missouri River below Fort Peck Dam during 2011. Report prepared for U.S. Geological Survey and U.S. Army Corps of Engineers by Montana Department of Fish, Wildlife & Parks, Helena, Montana.

FWP letter to Corps. 2012. November 13, 2012 letter from Montana Fish Wildlife & Parks (D. Risley) to U.S. Army Corps of Engineers (J. Cross).

FWP letter to FWS. 2013. February 5, 2013 letter from Montana Fish Wildlife & Parks (J. Hagener) to U.S. Fish and Wildlife Service (N. Walsh).

FWP letter to FWS, Corps, BoR. 2013. May 20, 2013 letter from Montana Fish Wildlife & Parks (J. Hagener) to U.S. Army Corps of Engineers (Ponganis), U.S. Fish and Wildlife Service (N. Walsh), and U.S. Bureau of Reclamation (M. Ryan).

(FWS) U.S. Fish and Wildlife Service. 1993. Recovery Plan for the Pallid Sturgeon (*Scaphirhynchus albus*). Region 6, U.S. Fish and Wildlife Service, Denver, Colorado.

(FWS) U.S. Fish and Wildlife Service. 2000. Biological Opinion on the Operation of the Missouri River Main Stem Reservoir System, Operation and Maintenance of the Missouri River Bank Stabilization and Navigation Project, and Operation of the Kansas River System. Denver, Colorado and Ft. Snelling, Minnesota.

- (FWS) U.S. Fish and Wildlife Service. 2003. Amendment to Biological Opinion on the Operation of the Missouri River Main Stem Reservoir System, Operation and Maintenance of the Missouri River Bank Stabilization And Navigation Project and Operation of the Kansas River reservoir system. U.S. Fish and Wildlife Service.
- (FWS) U.S. Fish and Wildlife Service. 2014. Revised Recovery Plan for the Pallid Sturgeon (*Scaphirhynchus albus*). U.S. Fish and Wildlife Service, Denver, Colorado. 115 pp. (<http://www.fws.gov/mountain-prairie/species/fish/pallidsturgeon/RecoveryPlan2014.pdf>)
- FWS to BoR 2013. December 18, 2013 (date stamped) letter from the U.S. Fish and Wildlife Service (M. Thabault) to the U.S. Bureau of Reclamation (G. W. Campbell), BOR-0003296.
- FWS to Corps 2008. August 13, 2008 (date stamped) letter from the U.S. Fish and Wildlife Service (Acting Regional Director – *signature unclear*) to the U.S. Army Corps of Engineers (W. Anderson), AE08360.
- FWS to Corps 2009. October 23, 2009 letter from the U.S. Fish and Wildlife Service (S. Guertin) to the U.S. Army Corps of Engineers (D. Ponganis), ACE08347.
- FWS to Corps 2010. April 7, 2010 (date stamped) letter from the U.S. Fish and Wildlife Service (Acting Regional Director – *signature unclear*) to the U.S. Army Corps of Engineers (W. Anderson), ACE08330.
- FWS to Corps 2012. April 23, 2012 (date stamped) letter from the U.S. Fish and Wildlife Service (N. Walsh) to the U.S. Army Corps of Engineers (D. Ponganis), ACE13990.
- FWS to Corps 2013. February 6, 2013 (date stamped) letter from the U.S. Fish and Wildlife Service (N. Walsh) to the U.S. Army Corps of Engineers (D. Ponganis), ACE08329.
- FWS to Corps 2014. March 19, 2004 (date stamped) letter from the U.S. Fish and Wildlife Service (N. Walsh) to the U.S. Army Corps of Engineers (D. Ponganis), no ACE reference number.
- FWS to Corps 2015. March 30, 2015 (date stamped) letter from the U.S. Fish and Wildlife Service (N. Walsh) to the U.S. Army Corps of Engineers (D. Ponganis), ACE08306.
- Helfrich, L. A., C. Liston, S. Hiebert, M. Albers, and K. Frazer. 1999. Influence of low-head diversion dams on fish passage, community composition, and abundance in the Yellowstone River, Montana. *Rivers* 7:21–32.
- Jordan, G. 2008. Summary of the Biological Review Team’s comments on Lower Yellowstone River Irrigation Project Fish Screening Preliminary Design. Prepared by the Pallid Sturgeon Recovery Biological Review Team for the U.S. Fish and Wildlife Service, Billings, Montana.
- Lentz, D. 2013. Lower Yellowstone River Intake Diversion Dam Fish Bypass Physical Model. Hydraulic Laboratory Report HL-2014-06, U.S. Department of the Interior Bureau of

Reclamation Technical Service Center Hydraulic Investigations and Laboratory Services Group Denver, Colorado.

McLaughlin, R. L., E. R. B. Smyth, T. Castro-Santos, M. L. Jones, M. A. Koops, T. C. Pratt, and L. A. Velez-Espino. 2013. Unintended consequences and trade-offs of fish passage. *Fish and Fisheries* 14: 580-604.

Noonan, M. J., J. W. A. Grant, and C. D. Jackson. 2012. A quantitative assessment of fish passage efficiency. *Fish and Fisheries* 13: 450-464.

Office of Technology and Assessment. 1995. Fish passage technologies: protection at hydropower facilities. OTA-ENV-641, Government Printing Office, Washington, D.C.



US Army Corps of Engineers®
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name Crazy Wayne

Organization _____

Address 1 Fairgrounds Road
Glendale MT 59330
CITY STATE ZIPCODE

Phone (406) 939-3649 Fax () _____

Email _____

Narrative Comments:

Thanks for information. Preferred alternate for me
is pumping. You should be able to get electricity cost
down to approx. \$3/acre. No dam => no impacts to
fisheries!

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:
<http://www.usbr.gov/gp/mtao/loweryellowstone/index.html>

Please mail comments to:
U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102



US Army Corps of Engineers®
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name Harold Schlotthauer

Organization _____

Address 15922 30th ST NW

Fairview MT. 59221
CITY STATE ZIPCODE

Phone (701) 744-5741 Fax () _____

Email hdFarms@gmail.com

Narrative Comments:

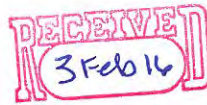
I Think it is Time To get something done
on this diversion dam. There is no doubt The
farmers need it. Pumping would be insane when
They can get water without wasting energy. The Fish
bypass looks like a reasonable way to protect The
Fish.

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:
<http://www.usbr.gov/gp/mtao/loweryellowstone/index.html>

Please mail comments to:
U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102



US Army Corps of Engineers
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name Heather Herrman

Organization Triple C Farms Inc.

Address 34127 CR 107
Savage MT 59262
CITY STATE ZIPCODE

Phone (406) 776-2415 Fax () N/A

Email htconradsen26@hotmail.com

Narrative Comments:

I believe the Bypass Channel Alternative is the only way to go
to help the fish get around the dam and can spawn up river.
And it still provides the water that the farmers need to continue
to grow their crops and have their lively herd for years
to come. This is the only option that benefits both the
fish and farmers, which is the only way to go.

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:
<http://www.usbr.gov/gp/mtao/loweryellowstone/index.html>

Please mail comments to:

U.S. Army Corps of Engineers Omaha District
ATTN: GENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102



RECEIVED
3 Feb 16



US Army Corps
of Engineers®
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name Troy Conradsen

Organization Triple C Farms Inc.

Address 34127 CR 107

Savage CITY MT STATE 592102 ZIPCODE

Phone (406) 480-5015 Fax () n/a

Email htconradsen26@hotmail.com

Narrative Comments:

I believe that The Bypass Channel Alternative is the best way to go to provide easy and faster passage for the fish when they come to the weirs. Still providing farmers and ranchers with the water they need to grow there crops.

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:

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

Please mail comments to:

U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102

COMMENTS ON INTAKE DIVERSION DAM FISH PASSAGE PROJECT



HENRY MISCHEL
312 COOKE ST
GLEN DIVE MT 59330

PHONE # 406-377-8841

ARMY CORPS of ENGINEERS OMAHA DISTRICT
ATTN: CENWO-PM-AA
1616 CAPITOL AVENUE

In February 2010, Bureau of Reclamation and the Army Corp of Engineers; both agreed that the rock ramp was the best plan to move forward with; so the new head gate was build and fish screens installed. This completed step one of the rock ramp plan.

The rock ramp alternative would meet the purpose and need of the proposed action and would improve fish passage.

In comparison to the other alternative being considered; it would improve fish passage by decreasing channel slope and shorten the cumulative length of bank stabilizing structures by at least 168 feet. Hydraulic modeling indicates that the Rock Ramp Alternative would be easier for pallid sturgeon to navigate than the other alternatives.

Recreational resources would be less affected than with the other action alternatives, because river would stay beside the camp ground and day use area, and access would be improved to Joe's Island. Because of the construction footprints in the same location but smaller than the other alternatives. There would be fewer impacts to natural resources and wildlife; thus fewer actions would be required to minimize effects!

The cost of the Rock Ramp Alternative will cost less than the other alternatives, especially since the head gate (step one) is already completed; and local rock can be used; saving on transportation cost. I have land next to the river, and in it are two large sand stone ridges that protrude into river at about a 45 degree angel up stream, they are about 6 feet tall by 10 feet wide; and are covered by water during the June rise. The ice as not even move them in my lifetime or during the last 100 years! Yes there are big fractures in them to the point that a backhoe could lift the chunks out; but they still have not moved for over a 100 years! The rock ramp will have lower annual O&M costs; and that less time to build.

To Alleviate any concerns that the rocks in the ramp would not stay in place, one just has to place the largest rock in first and then a little smaller and continue down like this to pit run size; and in the faster flow areas put a concrete slurry over the smaller rocks to lock them in place; thus locking the large boulders in place.

The concern that ice jams would shear off the rocks is a false concern: First ice floats on top of the water; thus would flow over the top of the rocks. Second in the ramp design is a gradual slope, and that does not present a barricade or resistance to ice, like a tree.

The Rock Ramp Plan is the only cost effective choice; it will achieve the main goal of allowing the pallid sturgeons access up stream. Change the river grade and the dam would allow boat traffic up stream and increase outdoor recreation opportunity; and the existing campground and day use area can still be used. It will take less time and money to build and maintain while still ensuring the pallid sturgeon objective is met. The By Pass Channel could very easily cause the river to change its course; were the channel will become the main river channel; I have personally witnessed this when a couple trees restricted the flow, more water started taking a side channel, within a month the main channel was now in the previous smaller side channel. This is what could easily happen to the pass channel alternative; and it is not known that the pallid sturgeon will use the by-pass. Don't mess with Mother Nature any more than needed! The first step is completed; now finish the rest of the Rock Ramp Plan as stated in 2010: You had all the facts and figures then; and the public accepted the concept; all you need to do now is **FINISH THE ROCK RAMP ALTERNATIVES:**

Sincerely:
Henry Mischel

A handwritten signature in cursive script that reads "Henry Mischel". The signature is written in black ink and is positioned below the typed name.

624 NE Washington St.
Lewistown, MT 59457

February 5, 2016

U.S. Army Corps of Engineers
Omaha District, ATTN: CENWO-PM-
AA, 1616 Capitol Ave., Omaha, NE
68102

Re: Scoping comments to the Intake Diversion Dam Fish Passage Project

I would like to provide scoping comments to be considered for the preparation of the Intake Diversion Dam fish passage project EIS. I believe a more thorough consideration should be given to the Intake Dam removal alternative. Intake Diversion Dam is located in a very critical reach of the Lower Yellowstone River (LYSR). The dam blocks pallid sturgeon access to up-river spawning areas in the mainstem and access to spawning habitat in two major tributary rivers. Additionally, the dam blocks pallid sturgeon access to 166 miles of feeding and resident habitat areas, thereby severely reducing the LYSR's carrying capacity for pallids.

First off, the need for pallid sturgeon passage should not be limited to just spawning and larval drift requirements but should also include pallid sturgeon feeding migrations and general distribution and recolonization to up-river pallid habitats as far upstream as Forsyth. Based on historical record and physical and biological features of the LYSR, there is 166 miles of pallid sturgeon habitat above Intake that is presently inaccessible to pallids. This reach provides habitat for healthy populations of sturgeon chub which are a favored food item of pallid sturgeon. It is important to recovery that pallid sturgeon disperse upstream and establish residence throughout this entire reach and not be limited to only the lower 70 miles of the LYSR. Therefore, pallids require passage through the Intake area year-round. The best way this can be provided is removal of Intake Dam which would give pallids, and several other migratory fish species, up and downstream access 100% of the time.

In summary I support an Intake Dam removal alternative. Secondly, the purpose of the Intake Diversion Dam fish passage project should be clearly stated as providing 100% unobstructed pallid sturgeon passage ; both up and down river and to be year-round.

Thank you for considering these comments.

Sincerely,



William M. Gardner



US Army Corps of Engineers®
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name CASEY Schlothauer

Organization Blue Carriage Farm, Inc.

Address 2851 160th Ave NW

FAIRVIEW CITY MT STATE 59221 ZIPCODE

Phone (701) 744-9012
702-561-3643

Fax () _____

Email _____

Narrative Comments:

I am in favor of the fish bypass option to sustain both the irrigation project and the pallid spawning environment. This area and many ag. and non-ag. businesses depend on it. This irrigation project must be allowed to continue its operation to ensure the resources from agriculture survive. Thank you.

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:

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

Please mail comments to:

U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102



US Army Corps of Engineers®
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016
Please PRINT clearly

Name Jim Gentry

Organization Gentry Land & Livestock Inc.

Address 1017 Road 303

Blondine CITY MT STATE 54330 ZIPCODE

Phone (406) 627-3442 Fax () _____

Email eatbeef@midrivens.com ajc12350@gmail.com

Narrative Comments:

I was born & raised on a farm-ranch near this project and am very interested in how this project proceeds. I know this will be a very expensive undertaking but I just don't see why local rock within 1/2 mi of construction site wouldn't do a sufficient job for the lifespan of this undertaking. Let's save some money where I feel money can be saved. Thank You Very Much *Jim Gentry*

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment - including your personal identifying information - may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:
<http://www.usbr.gov/gp/mtao/loweryellowstone/index.html>

Please mail comments to:

U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102



US Army Corps of Engineers®
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name Conrad & Linda Conradson

Organization Farmers

Address 10761 CR 344

Savage CITY mt. STATE 59262 ZIPCODE

Phone (406) 776-2262 Fax () _____

Email We support the Bypass Channel Alternative with concrete weirs

Narrative Comments:

The first thing we want to say is that this fish is NOT native to the Yellowstone River! We have already had several studies on this fish passage and it is costing millions of dollars that wouldn't be necessary now. We all agreed the last time things were

- Attach additional sheets if necessary - Continued:

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:
<http://www.usbr.gov/gp/mtao/loweryellowstone/index.html>

Please mail comments to:
U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102

studied that this was some-
thing that would work for all
parties. It was a compromise
now they want more studies.
Its like they are trying to wear
us down and get tired of
fighting for what we believe
would work for all. We are
farmers and we have always
been stewards of the land and
the water we use. We aren't
the bad guys. After all we
produce food for our nations
people. There are a lot of
people out there that don't
realize the magnitude of
this situation and the hard
work our farmers, Ranchers,
irrigation project and businesses
do for the valley. All who work
in this valley depend on each
other to work together.

Years and years ago this was
just Cattle Country and then
they introduced sheep into the
picture and it was a big

fight to keep the sheep out
but eventually we learned
to co-exist.

These two proposals can
work if we are all willing
to Compromise

Common sense should
rule.



US Army Corps
of Engineers®
Omaha District

Intake Diversion Dam Fish Passage



Lower Yellowstone Project - Intake, Montana

Background

The diversion dam along the Yellowstone River at Intake, Montana was constructed by the Bureau of Reclamation in 1905 to divert water into a main canal in order to provide a dependable water supply sufficient to irrigate over 50,000 acres of land. For more than 100 years, the dam has likely impeded upstream migration of the federally-listed endangered pallid sturgeon and other native fish due to increased turbulence and velocities associated with the rocks at the dam.

The U.S. Fish and Wildlife Service listed the pallid sturgeon as endangered under the Endangered Species Act (ESA) in 1990. Section 7(a)(1) of the ESA authorizes all federal agencies to use their resources for the conservation and recovery of federally-listed species and the ecosystems upon which they depend, and Section 7(a)(2) requires federal agencies to consult

with the Service to ensure that any action authorized, funded or carried out by them is not likely to jeopardize the continued existence of any federally-listed species or to modify designated critical habitat. The lower Yellowstone River has been identified by the Service as an area of priority for pallid sturgeon recovery.



Intake Diversion Dam

In 2007, the Corps received authorization under the Water Resources Development Act to use funds from the Missouri River Recovery Program to assist the Bureau of Reclamation with protecting the endangered pallid sturgeon and other native fish from becoming entrained in the irrigation canal and improving fish passage at the diversion dam.

2010 Environmental Assessment (EA)

The Corps and Bureau of Reclamation, joint lead agencies on the proposed project, finalized an environmental assessment (EA) and Finding of No Significant Impact in 2010 which analyzed alternatives to reduce entrainment and improve fish passage. The selected alternative to reduce fish entrainment was construction of a new headworks structure and installation of fish screens, which was completed in the spring of 2012.

2015 Supplemental Environmental Assessment

In the 2010 EA, the selected alternative to improve fish passage was construction of a rock ramp. Based on new information on the rock ramp design, pallid sturgeon movement, and constructability and sustainability of the proposed rock ramp, the Corps and the Bureau of Reclamation coordinated extensively with the U.S. Fish and Wildlife Service; Montana Fish, Wildlife and Parks; Montana Department of Natural Resources and Conservation; the Lower Yellowstone Irrigation Project; and other interested parties, to develop new alternatives to improve fish passage. The result of that coordination was the development of a draft supplement to the 2010 EA. The supplement, issued in 2015, described three alternatives for improving fish passage. There were 1) continued present operations, 2) bypass channel, and 3) rock ramp. The Supplemental EA and the Finding of No Significant Impact selected the bypass channel.

www.nwo.usace.army.mil

Find us on Facebook: [facebook.com/OmahaUSACE](https://www.facebook.com/OmahaUSACE) • Twitter: twitter.com/OmahaUSACE • Flickr: <http://www.flickr.com/OmahaUSACE>

YouTube: <http://www.youtube.com/OmahaUSACE> • DVIDS: <http://www.dvidshub.net/unit/OmahaUSACE>

112 1st Street
Glendive, Mt. 59330
2/10/16

U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102

Dear Sirs,

Here are my comments on the Intake Diversion Dam Fish Passage Project:

Any alternative must continue to provide irrigation water for the Lower Yellowstone Irrigation Project. The Intake diversion and canal is the lifeblood of the valley all the way to North Dakota. Any action to force the use of pumps instead of direct diversion would be a huge cost to the irrigated farmers and will not work. As the past manager for the Buffalo Rapids Irrigation Project we had to pump our water. The huge costs of the pumps, yearly and frequent repair and electric costs are very high. This is the main reasons to continue with direct diversion of irrigation water at Intake. It is by far the least cost method of getting irrigation water for their 75,000 acres of land.

The importance of the yearly paddle fishing at Intake and the number of visitors and fisherman to our community and its economy must be strongly considered. Also the Caviar Project and the paddlefish grant program are important to this region. Paddle fishing at Intake has not been seen as an issue within the federal agencies planning and their strong push for the Intake Bypass. This EIS is an opportunity to let the federal agencies know how important paddle fishing and the Caviar Project are to Glendive and eastern Montana.

The list shows 7 alternatives that are being considered by the US Bureau of Reclamation and the US Army Corps of Engineers. Some of these alternatives would drastically reduce the number of paddlefish caught yearly. The best alternative would be no action but that will be followed by years of legal action by environmentalists to save the pallid sturgeon. The \$59 Million to be spent there just for the pallid sturgeon will be a very expensive and ineffective effort to allow them to pass through Intake and upstream.

The proposed new bypass channel will allow paddlefish to move around Intake dam and reduce the fishery there. I support the rock ramp but not the proposed bypass channel. **The best alternative is #4** and that is to return part of the river to the "Slough" or the eastern old side channel the river used to run in all the time. 100 years ago most of the Yellowstone River ran in this old channel to the east. Opening this up will be the cheapest and best natural way to allow fish to pass around the Dam. Any work in the floodplain here is a dangerous situation with flooding and devastating ice jams. The wooden river diversion and rocks have stood the test of time. The costs to replace this with concrete may not last and will be expensive.

Also the Corps has promised Dawson County government that they would repave and repair the Intake road from Highway 16 to the intake FAS. This paved road was ruined by heavy equipment and trucks when the expensive fish screen project was done there. This work needs to be done!

Also the contractors left a huge unsightly pile of dirt at a historic site when excavating the new intake water channel and head works. This dirt needs to be moved away.

There has been no information put forth on the success or problems of the multimillion dollar fish screens and headwork's installed there five years ago.

Thanks

Mike Carlson

No Action Required:

Just have the fish & game relocate all the sturgeon that they catch below the dam to above the dam each year during their annual survey.

Do a 10-yr. study to see if the numbers increase or decrease.

If the number of caught sturgeon increases it would mean the sturgeon are spawning & coming back downstream.

If the number of caught sturgeon decreases it would mean the sturgeon are going upstream & staying there.

This would be a minimal cost because you are already trapping the sturgeon to count them.

Dennis LeDey



US Army Corps of Engineers®
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Name DENNIS D. LEDOUX Please PRINT clearly

Organization _____

Address 47 RD 240
GLENDIE MT 59330
CITY STATE ZIPCODE

Phone (406) 939-2581 Fax () _____

Email DDLEDoux@MIDRIVERS.COM

Narrative Comments:

See attached.

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:
<http://www.usbr.gov/gp/mtao/loweryellowstone/index.html>

Please mail comments to:

U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102

No Action Required:

Just have the fish & game relocate all the sturgeon that they catch below the dam to above the dam each year during their annual survey.

Do a 10 yr. study to see if the numbers increase or decrease.

If the number of caught sturgeon increases it would mean the sturgeon are spawning & coming back downstream.

If the number of caught sturgeon decreases it would mean the sturgeon are going upstream & staying there.

This would be a minimal cost because you are already trapping the sturgeon to count them.

Dennis LeDay



US Army Corps of Engineers®
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name MATT STOECKER

Organization FISH BIOLOGIST & OWNER, STOECKER ECOLOGICAL

Address P.O. Box 2062
SANTA BARBARA CA 93120
CITY STATE ZIPCODE

Phone (650) 380-2964 Fax () _____

Email matt@stoekerecological.com

Narrative Comments:

I URGE YOU TO REMOVE THE INTAKE DIVERSION DAM
AND REQUEST THAT YOU STUDY AND THEN REPLACE
THIS DAM WITH A DAMLESS DIVERSION ALTERNATIVE.
THE BUREAU AND U.S. FISH AND WILDLIFE HAVE COMPLETED
SUCH DAMLESS DIVERSION PROJECTS ELSEWHERE; INCLUDING
AT THE BUFFALO RAPIDS IRRIGATION DISTRICT'S SHIRLEY POMPART,
NEAR MILES CITY - AND ON THE YELLOWSTONE RIVER.

I REQUEST THAT YOU IMPLEMENT SUCH A DAMLESS DIVERSION
PROJECT
WITH DAM REMOVAL.

Additional information can be found on the Lower Yellowstone, Intake website at:
<http://www.usbr.gov/gp/rtrno/loweryellowstone/index.html>

Please mail comments to:

U.S. Army Corps of Engineers Omaha District
ATTN: CLNWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102



US Army Corps of Engineers®
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name Shane Gorder

Organization Richland County Commissioner

Address 201 West MAIN

Sidney Montana 59270
CITY STATE ZIPCODE

Phone (406) 433-1706 Fax (406) 433-3731

Email Sgorder@richland.org

Narrative Comments:

Bypass Channel Alternative : This alternative would construct a bypass channel around the existing weir to divert approximately 15% of total river flow.

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:

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

Please mail comments to:

U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Tuesday, February 09, 2016 2:34 PM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Intake diversion dam project

-----Original Message-----

From: Rebecca Spring [mailto:rebeccaspring11@gmail.com]
Sent: Tuesday, February 09, 2016 12:34 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Intake diversion dam project

Please consider fish friendly alternatives to installing a low head or diversion at Intake.
Thank you,
Rebecca Spring

Sent from my iPhone

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Monday, January 11, 2016 7:01 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Pallid Sturgeon and the Lower Yellowstone Project

Please see comment below regarding Intake project.

-----Original Message-----

From: Donnette Thayer [mailto:donnette.thayer@gmail.com]
Sent: Monday, January 11, 2016 12:20 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Cc: home@wscs.info; ronald.brunch@wisconsin.gov; Mark Poesch <poesch@ualberta.ca>
Subject: [EXTERNAL] Pallid Sturgeon and the Lower Yellowstone Project

Per Federal Register Volume 81, Number 1 (Monday, January 4, 2016)
request for public comment.

Fragmentation threatens not just sturgeon species, but all freshwater aquatic species. Between 1900 and 2010, "freshwater fish species in North America went extinct at a rate 877 times faster than the rate found in the fossil record (USGS)." According to the Nature Conservancy, one-third of the continent's fish, two-thirds of its crayfish and nearly three-fourths of its mussels are now "rare or imperiled." The impact of fragmentation is particularly acute for members of the highly migratory Pallid Sturgeon species, and it is appalling that \$59 million was proposed to build a new dam in this species' habitat when alternative measure would accomplish the stated water delivery goal.

As noted in your report, Pallid Sturgeon were designated endangered in 1990 under the Endangered Species Act (ESA) and are protected across their entire extent. The Bureau of Reclamation and Army Corps of Engineers are legally bound to protect this species' habitat.

Pallid Sturgeon have survived, albeit in diminishing numbers, an onslaught of anthropogenic change. Reduced and regulated river flows, degenerated water quality, introduction of agricultural, industrial, and municipal contaminants, backwater riverine area reduction via channelization and stream desiccation, habitat loss due to reservoir creation, and removal of spawning grounds to further urban development are among the challenges to this species. These impacts are exacerbated by life history traits inherent to the species, specifically: late maturity and intermittent spawning, slow growth, and low recruitment rates that further inhibit population recovery (Haxton and Findlay 2008). Much research has shown that dams, dikes, and weirs that hinder migration pose the greatest threat to sturgeon. If the objective of providing water to farms can be accomplished in accordance with the legal, Federally-mandated protection of this species, it is incumbent upon you to comply.

Donnette Thayer, US citizen
University of Alberta Master's student in Conservation Biology;
research focus on Lake Sturgeon seasonal migratory patterns
Blocked<http://poeschlab.ualberta.ca/>

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Wednesday, February 10, 2016 5:23 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Scoping Comments for the Intake Diversion Dam Fish Passage Project

-----Original Message-----

From: Steve & Diane [mailto:rodette33@yahoo.com]
Sent: Wednesday, February 10, 2016 1:39 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Scoping Comments for the Intake Diversion Dam Fish Passage Project

Thank you for the opportunity to comment on the Intake Diversion Dam Fish Passage Project

First I'd like to say that I support efforts to improve or restore fish passage at the Intake diversion on the Yellowstone River, but I am opposed to the proposed construction of a new and higher diversion dam and bypass channel if there is little to no evidence that it will effectively restore fish passage at the diversion.

Without effective passage at this location it seems unlikely this project will result in any meaningful difference in the recovery of pallid sturgeon. If the proposed dam and bypass fails to provide adequate fish passage I believe future options for improvement are limited once the nearly 60 million dollar project is completed.

In lieu of the dam and bypass channel I suggest that the agencies consider the feasibility of other alternatives that could guarantee fish passage and provide viable supply of water to irrigators. Guaranteed fish passage would require removal or at least significant modification of the existing low head dam. Providing irrigation water could then include provisions for a) using a combination of direct headgate diversion at high flow and pumping water from the river during low flows and b) improving the irrigation infrastructure and efficiency to reduce water needs.

To potentially reduce the cost of power to run diversion pumps the agencies should also investigate the feasibility of producing electricity locally through means such wind or solar generation or hydro power generated in the main canal. Establishing a trust fund that could be tapped to help offset costs of power to run and maintain a pump system could help to reduce the financial impacts to irrigators.

While the proposal might serve to pass a few more fish at the Intake diversion and technically meet the purpose and need of "improving" fish passage, I think there are other reasonable alternatives that could guarantee fish passage while continuing a viable and effective operation of the Lower Yellowstone Project. And these alternatives could potentially go much further in the recovery of the pallid sturgeon than the existing proposal.

Steve Tralles

Libby, Montana



UPPER BASIN PALLID STURGEON WORKGROUP

1420 E. 6th Ave.
P.O. Box 200701
Helena, MT 59620-0701
(406) 444-1231

17 February 2016

U.S. Army Corps of Engineers
Omaha District
ATTN: CENWO-PM-AA
1616 Capital Ave.
Omaha, NE 68102
cenwo-planning@usace.army.mil

(sent via electronic mail)

Re: Issues and alternatives for consideration in the draft Environmental Impact Statement for the Intake Diversion Dam Fish Passage Project, Dawson County, Montana

As the advisory body for Pallid Sturgeon recovery implementation in the upper Missouri River basin, with oversight from the Pallid Sturgeon Recovery Team, the Upper Basin Pallid Sturgeon Workgroup (Workgroup) would like to provide preferred alternatives and relevant issues to be considered in the draft Environmental Impact Statement (EIS) for the Intake Diversion Dam (Intake) Fish Passage Project. The Workgroup appreciates the opportunity to provide input as the U.S. Army Corps of Engineers (USACE) and U.S. Bureau of Reclamation (USBR) jointly prepare this EIS.

Foremost, the Workgroup supports the process of earnestly reviewing alternatives at Intake that best suit the recovery of Pallid Sturgeon and the sustainability of the lower Yellowstone River aquatic community. We believe the most beneficial alternative for Pallid Sturgeon would involve removing the barrier to provide full-river passage and investing in more contemporary methods of water delivery. Improved efficiencies and updated technologies in irrigation practices would serve an agreeable compromise between socioeconomic viability and ecological integrity; a cornerstone of the vision and mission of the Missouri River Recovery Program (MRRP). As funding for development at Intake is tied in-part to the MRRP, the Workgroup would like to underline that the project's primary goal should remain as fish passage with water delivery

aspects considered in that context. Regardless, the alternative that is ultimately selected in development at Intake needs to be accompanied with explicit monitoring objectives whose criteria are rooted in the biology of Pallid Sturgeon and the lower Yellowstone River aquatic community.

Although upstream passage of adult Pallid Sturgeon has garnered much of the attention at Intake, this aspect is merely one in a suite of criteria that should be evaluated in determining the potential for, and degree of success in the project. The Workgroup recommends close collaboration with the Biological Review Team in developing success criteria and suggests that engineering thresholds be used in complement to these criteria rather than as standalone. The Workgroup remains opposed to the use of Shovelnose Sturgeon as a surrogate for Pallid Sturgeon in the determination of success, particularly in the assessment of evaluating free embryo fate in downstream drift at Intake. Though closely related, these two species fail to overlap in many behavioral and ecological aspects and their use in implying success may yield inaccuracies. Furthermore, the Workgroup suggests greater emphasis in demonstrating fish passage for a selected alternative and recommends more a expansive commitment from federal partners post-development to ensure greater connectivity is attained in the lower Yellowstone River.

Undoubtedly, the Yellowstone River offers important habitat for Pallid Sturgeon and may provide a potential for recruitment success with improved connectivity; however, its role in the upper Missouri River basin should not be overstated. The Yellowstone and Missouri rivers are two components to one system and the Workgroup remains opposed to the idea that modifications at Intake should serve as a suitable substitute for operational changes at Fort Peck Dam (FPD). The USACE must remain committed to avoiding jeopardy to Pallid Sturgeon and help restore a self-regulating upper Missouri River system that functions more naturally.

The Workgroup appreciates the consideration of these recommendations and we look forward to collaborating in thoughtful development at Intake. Please contact me if I can clarify any of the items above or if you have comments or questions.

Sincerely,

A handwritten signature in black ink that reads "Zachary R. Shattuck". The signature is written in a cursive, flowing style.

Zachary R. Shattuck, Chair
Upper Basin Pallid Sturgeon Workgroup

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Tuesday, February 09, 2016 2:32 PM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Yellowstone EIS

-----Original Message-----

From: Sandy Volkmann [mailto:sandyvolkmann@bresnan.net]
Sent: Tuesday, February 09, 2016 11:45 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Yellowstone EIS

Dear Army Corps.,

I believe there is a way to accommodate fish and irrigators. The Army Corps. should develop alternatives in the EIS that don't require plugging the river with a low-head dam or diversion structure.

Please consider:

1. Combine using the current irrigation headgate with gravity flow when the river discharge is high, and then switch to pumps in or next to the river during lower flows.
2. Invest in water conservation measures to reduce leakage in canals and ditches, thereby reducing pumping needs.
3. Produce power to run the pumps using a wind generator, low-head hydro in the main canal, or, establish a trust fund that can be tapped to purchase power for running pumps.

The Yellowstone is our last free flowing major river in the lower 48 states. Please keep it that way.

Thank you,

Daniel G. Volkmann III

3925 Fox Farm Rd.

Missoula, MT 59802

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Friday, February 12, 2016 7:23 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL]

-----Original Message-----

From: tim whaling [mailto:timothy_whaling@yahoo.com]
Sent: Thursday, February 11, 2016 1:51 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL]

I am writing to ask you to please follow the recommendations of Montana Trout Unlimited to help preserve and increase spawning areas for the Pallid Sturgeon. It would be a shame for future generations not to be able to see, catch or even know that this fish lived in the Yellowstone and Missouri rivers because of the decisions made by people in 2016. This would be especially troubling given that solutions to irrigation concerns exist that would meet the needs of all parties involved. Please make decisions based on solid research that benefit the fish as well as landowners.

Thank-you,
Tim Whaling - Polson, MT

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Tuesday, February 09, 2016 2:39 PM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Draft EIS for the Intake Diversion Dam Fish Passage Project

-----Original Message-----

From: Mike Yinger [mailto:earmountain@gmail.com]
Sent: Tuesday, February 09, 2016 2:35 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Draft EIS for the Intake Diversion Dam Fish Passage Project

Don't build the dam. Do this instead:

1. Combine using the current irrigation headgate with gravity flow when the river discharge is high, and then switch to pumps in or next to the river during lower flows.
2. Invest in water conservation measures to reduce leakage in canals and ditches, thereby reducing pumping needs.
3. Produce power to run the pumps using a wind generator, low-head hydro in the main canal, or, establish a trust fund that can be tapped to purchase power for running pumps.

Regards,

Mike Yinger

POBox 307,

Bigfork, MT 59911

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Wednesday, February 17, 2016 8:33 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Intake Diversion Dam Fish Passage Project

-----Original Message-----

From: Loren Young [mailto:lyoung@richland.org]
Sent: Tuesday, February 16, 2016 9:26 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Intake Diversion Dam Fish Passage Project

I am in support of the Bypass Channel Alternative. A concrete weir should be built at Intake, Montana. A bypass should be constructed around the new weir to divert the river flow.

This bypass is needed to enable the livelihood of Dawson and Richland County irrigated farms.

Loren Young
Richland County Commissioner
Sidney, MT

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Tuesday, February 16, 2016 10:11 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Comment on NOI for DEIS for Proposed Intake Diversion Dam, Yellowstone River, Montana

-----Original Message-----

From: Hugh Zackheim [mailto:montanazac@mac.com]
Sent: Monday, February 15, 2016 3:29 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Comment on NOI for DEIS for Proposed Intake Diversion Dam, Yellowstone River, Montana

TO: U.S. Army Corps of Engineers, Omaha District

DATE: February 15, 2016

SUBJECT: Public comment on issues and alternatives for the Intake Diversion draft EIS

The Army Corps of Engineers and Bureau of Reclamation proposal to reconstruct the Intake diversion irrigation dam will have a significant impact on the habitat and the future of the pallid sturgeon. Fortunately our country has enacted the Endangered Species Act which mandates that federal agencies act in a manner that preserves and enhances the populations and survival outlook for the full complement of native fish and wildlife species that live within our national borders, including the endangered pallid sturgeon.

To date, however, your proposals have failed this test and this legal standard.

As Corps/Reclamation staff now move forward to prepare an environmental impact statement on revised options for the Intake facility, the agencies should abide by a number of key principles, as follows:

- Don't use the concept of "providing fish passage" as a smokescreen to engineer the Yellowstone River to serve agricultural water withdrawals at the expense of the pallid sturgeon. You've already tried that route unsuccessfully and have been instructed that it is both illegal and wasteful of public resources to come to the table with an option that is seriously compromised by agency prejudice.
- Do study and apply the findings of outside technical experts who have the sturgeon's interests in mind and who are developing hybrid solutions that will truly meet the multiple objectives of agriculture and environment. The best science, it may surprise you, often does not emanate from the federal agencies. It would be folly to simply continue the standard Corps/Reclamation approach of stubbornly following an uninformed approach intended to meet predetermined and narrowly conceived objectives that put the public's resources, including endangered species, at risk.
- Do incorporate a project component that includes investment in local water conservation measures, including leak repair and lining of ditches and canals. These measures represent a cost-effective approach that will lessen the stress on this water-short system. Similarly, using pumps powered by renewable energy sources and backed up by dedicated funding, will save money in the long run and ensure proper project operation.
- Do remember that this project may dictate the future -- or the absence of any future -- for the pallid sturgeon, as well as for other components of the Yellowstone River ecosystem. Agency arrogance has no place in this calculus, nor do

short-term cost-cutting measures that jeopardize the sturgeon and other irreplaceable resources. Reach out to those who have the knowledge and the broader perspective to come up with a true solution.

I appreciate this opportunity to comment, and trust that the work product of the Corps and Reclamation will show significant improvements over the failed plan the agencies have previously tried to apply to this unique and uniquely important river system.

Hugh Zackheim, 315 Ming Place, Helena, MT 59601

Vanosdall, Tiffany K NWO

From: Eldean & Sandy Flynn <esf@midrivers.com>
Sent: Thursday, January 28, 2016 7:23 PM
To: Vanosdall, Tiffany K NWO
Subject: [EXTERNAL] Fish Bypass Intake Montana

I would like to make a couple of comments on the Bypass for fish at Intake Montana.

1. I am for the High Flow Channel.
2. Why hasn't a study been done on the other fish eating the Pallid Sturgeon Eggs and fingerlings.

The Walleye has been planted many times in the Missouri drainage systems by the Fish and Game.
The Walleye are aggressive.

The Northern Pike is a very aggressive fish. There is never been a study, to say maybe these are a problem in the river.
Maybe they should be eliminated from the rivers,

3. You can visually see the Sturgeon jumping the old Dam in high water, so they are getting up and over the Dam.

Eldean Flynn
1-28-2016

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Tuesday, February 09, 2016 2:31 PM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Intake on the Lower Yellowstone River

-----Original Message-----

From: Jim Foley [mailto:jim@foleygroupinfo.com]
Sent: Tuesday, February 09, 2016 11:21 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Intake on the Lower Yellowstone River

Dear Army U.S. Army Corp. of Engineers:

I believe there is a way to accommodate fish and irrigators. Please develop alternatives for the Intake on the Lower Yellowstone that doesn't require plugging the river with a low-head dam or diversion structure. Please consider the following:

1. Combine using the current irrigation head gate with gravity flow when the river discharge is high, and then switch to pumps in or next to the river during lower flows.
2. Invest in water conservation measures to reduce leakage in canals and ditches, thereby reducing pumping needs.
3. Produce power to run the pumps using a wind generator, low-head hydro in the main canal, or, establish a trust fund that can be tapped to purchase power for running pumps.

This approach will allow Pallid Sturgeon, and dozens of other fish species, to access hundreds of miles of Yellowstone River for spawning and rearing. It will work, unlike the \$59 million experiment you had previously proposed. It also keeps the irrigators whole, ensuring they get the water they need when they need it. It's a win-win!

Thanks you for your consideration.

Best, Jim Foley

James R. Foley, ASLA, CLARB
Principal

100 N. 27th Street, Suite 401

Billings, MT 59101

Phone: 406-294-4477

Fax: 406-294-4478

email: jim@foleygroupinfo.com <mailto:jim@foleygroupinfo.com>

website: Blockedwww.foleygroupinfo.com <Blockedhttp://www.foleygroupinfo.com/>

The information contained in this email message is intended for the individual or entity named above. If the reader of this message is not the intended recipient, or the person authorized to receive it for delivery to the intended recipient, please take notice that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone or fax, and destroy the original message. Thank you.

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Tuesday, February 16, 2016 10:09 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] EIS statement

-----Original Message-----

From: Arthur W. Gehmert [mailto:artge@midrivers.com]
Sent: Sunday, February 14, 2016 6:29 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] EIS statement

Thank you for the opportunity to provide input on the Intake project. As proposed, the design is not considering the history or the nature of the Yellowstone river, nor using the best scientific data to complete the project.

Some of the history of the river as recorded by the USACE Cold Regions study, documents extreme ice jam events, loss of life and extensive loss of property which do occur frequently.. If the project as designed is constructed without protection from ice events to the one hundred year level, it will be destroyed and require extensive funding to maintain and operate. High summer flows cause extreme bank erosion, channel migration is recorded and occurs continually, work done in the flood plain should have a maintenance protection plan with associated costs considered.

The river is a natural river, uncontrolled flows, sedimentation, weather events, adding human considerations and economic values brings science into the equation, science defines what should be done to avoid historically recorded dangers.

The recovery of the endangered pallid sturgeon may be possible on the Yellowstone river, if the project is constructed using the best available science, please reference "The Final Science Report" dated November 30, 2009. Reference page 11, it clearly states that removal of the rock structure is desired. Page 30 Item 1b was apparently not considered in the planning of the new proposed concrete weir. The issue of larval drift and impingement on the screens suggests a one meter difference is needed. One meter would allow larval drift and small fish to pass below the screens, sedimentation levels are to monitored and corrected to prevent entrainment.

I understand if and when the proposed concrete weir and the fish bypass are constructed, the USACE will not be responsible for the endangered pallid sturgeon recovery. The possibility of some recovery on the Missouri river should not be negated, the construction of the main stem dams caused the endangerment of the sturgeon, all recovery efforts are needed. Funding of proposed structure maintenance if given to the irrigation district, may cause loss of their water due to high operational costs. Funding of species recovery efforts should not become the responsibility of the local residents upstream or downstream of the project,

Restoration to full access of the entire river for fish species and historic uses may not be possible but infringement on the flood plain and work in the river corridor should not endanger the nature of the Yellowstone river. A water delivery canal with inlet and outlet gates, constructed parallel to the BNSF RR grade, could provide flood control to the 100 year flood level for the railway and the screen structures. The canal could leave the flood plain at the upstream creek crossing to access an abandoned highway right of way. The old roadway extends upstream to the proposed inlet gate structure, see attached Google Earth photo.

Removal of the present rock timber weir would provide a natural river for pallid sturgeon upstream migration, the removed rocks could be utilized as stream bank protection on the proposed delivery canal.

Thanks, Arthur W Gehmert

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Wednesday, February 17, 2016 8:28 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] re: Pallid Sturgeon: Intake Diversion Fish Passage

-----Original Message-----

From: Bonnie Gestring [mailto:bgestring@earthworksaction.org]
Sent: Tuesday, February 16, 2016 12:32 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] re: Pallid Sturgeon: Intake Diversion Fish Passage

Dear Army Corps of Engineers,

I'm concerned about federally listed pallid sturgeon in Montana, and I'm concerned about the lack of habitat for successful spawning and rearing for this important fish species. The Corps is legally obligated to help recover this fish. One project that could help is to open up a large reach of historic habitat for pallid sturgeon above the low-head irrigation dam that currently blocks upstream movement at intake on the Lower Yellowstone River.

Please develop alternatives in the EIS that don't require plugging the river with a low-head dam or diversion structure. Please follow the recommendations of Trout Unlimited, which recommends that the agency:

1. Combine using the current irrigation headgate with gravity flow when the river discharge is high, and then switch to pumps in or next to the river during lower flows.
2. Invest in water conservation measures to reduce leakage in canals and ditches, thereby reducing pumping needs.
3. Produce power to run the pumps using a wind generator, low-head hydro in the main canal, or, establish a trust fund that can be tapped to purchase power for running pumps.

Sincerely
Bonnie Gestring

U.S. Army Corps of Engineers
Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Ave.
Omaha, NE 68102

Dear Ms. Vanosdall:

Some background, Our Montana, Inc. is a non profit organization that has as one of our purposes conservation of Montana Rivers. We have accomplished considerable research work on the Yellowstone River looking at the formation of islands and ownership of riparian zones. In the process of that work we have become keenly aware of rapidly changing aspects of the river channel and over commitment of water rights. Our work has been to encourage river conservation and sustainable use of the water resource as well as preserving amenity values of the river corridor.

Currently we are developing a web site for recreationists on the river and within the river corridor (exploreyellowstoneriver.org <Blocked<http://exploreyellowstoneriver.org>> .) We expect to see growing participation of multiday floating trips along this River and much interest in fish and wildlife. Intake currently is a significant hazard to floaters. We believe that all EIS options should consider floater safety.

We have talked to fisheries Biologists who voice private concern whether the concrete dam / bypass channel option will serve the intended use of freeing Pallid Sturgeon to access upstream habitat. We would like to see careful analysis of all options including new technologies to acquire irrigation water from the river and assure more natural main channel bypass of Pallid Sturgeon. Inflatable weirs and ranney wells would be options to consider.

Alternatives should assess the potential of modernizing the entire irrigation system to reduce water volume needs. The options we favor will open the natural channel for Pallid Sturgeon passage and achieve water conservation for irrigators.

The legal goal of your project should be ecological restoration of the Yellowstone River with Pallid Sturgeon as a main object. We will want to see careful analysis of all alternatives including those rejected.

Sincerely yours,

Mike Penfold
Field Program Leader
Our Montana, Inc.

--

Mike Penfold

February 17, 2016

U.S. Army Corps of Engineers
Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102

RE: Comments Regarding the Intake Diversion Dam Project

To Whom This May Concern:

On behalf of the Lower Yellowstone Irrigation Project (LYIP), WWC Engineering is submitting comments regarding the Intake Diversion Dam Project. We have listed the alternatives below, followed by our comments for each alternative.

Rock Ramp Alternative

- Increased rock placement will be required for this alternative to maintain the shape and function of the rock ramp. Placement of the rock would have to be done during low flow periods and would be difficult, time consuming and expensive. An entire new system for rock placement would need to be constructed to allow the LYIP to be able to place rock in the correct positions. It is anticipated that the permits and/or methods required to perform this work would be unobtainable or prohibitive.
- Impacts due to ice scour and large floating debris would ultimately result in annual repairs to the rock ramp. Ice jams in the Yellowstone River system are a common occurrence, and often result in significant damage to infrastructure within the river system. It is anticipated that ice jams would cause significant damage to the proposed rock ramp alternative, resulting in significant maintenance by the LYIP and more likely significant reconstruction efforts on a frequent basis. The Yellowstone River is an unregulated river system that transports large volumes of water during spring and summer runoff, which picks up trees and transports boulders throughout the system. These large and heavy debris will act to displace rock within the rock ramp during periods of high flow due to the weight and momentum of the debris, resulting in annual maintenance by the LYIP to replace displaced rocks within the ramp to maintain its functionality.

Bypass Channel Alternative

- The LYIP has concerns over the constant migration of the Yellowstone River within its historic channel migration zone (CMZ). The LYIP has concerns that use of the bypass channel on a consistent basis may encourage the Yellowstone River to migrate in this direction, and eventually the bypass channel may become the main channel of the Yellowstone River, which would leave the LYIP intake structure without sufficient water to supply the irrigation system.

- It is anticipated that continued use of the Bypass Channel would result in the deposition of sediments within the channel that would need to be removed on a semi-frequent basis to facilitate fish passage. It is our understanding that the removal of sediments in the bypass channel would be the responsibility of the LYIP, adding additional O&M expense for dredging. The LYIP also has concerns over permit requirements for dredging, and the associated environmental impacts and regulatory liability from this type of maintenance.

High Flow Channel Alternative

- The LYIP has concerns over the constant migration of the Yellowstone River within its historic channel migration zone (CMZ). The LYIP has concerns that use of the high flow channel on a consistent basis may encourage the Yellowstone River to migrate in this direction, and eventually the high flow channel may become the main channel of the Yellowstone River, which would leave the LYIP intake structure without sufficient water to supply the irrigation system.
- It is anticipated that continued use of the High Flow Channel would result in the deposition of sediments within the channel that would need to be removed on a semi-frequent basis to facilitate fish passage. It is our understanding that the removal of sediments in the high flow channel would be the responsibility of the LYIP, adding additional O&M expense for dredging. It is important to note that the high flow channel alternative is significantly longer than the bypass channel, and would create a significantly longer length of channel to maintain, thus driving O&M costs much higher than the bypass channel alternative. The LYIP also has concerns over permit requirements for dredging, and the associated environmental impacts and regulatory liability from this type of maintenance.

Pumping Alternative

- New pump stations along the Yellowstone River will be subject to the Yellowstone River channel migration, and the proposed stations may become inoperable if the Yellowstone River changes course. The implementation of multiple points of diversion only increases this probability and provides additional O&M requirements for LYIP.
- The new discharge lines from the pump stations will require easements and/or purchased right-of-way from the river to the main canal. This will impact private property rights to owners who might refuse to sell, thus prompting potential eminent domain concerns that will impact the entire community. The new discharge lines may also be within identified Sage Grouse habitat areas.
- Pump stations will require redundant pumps and generators to ensure reliable water delivery. Power outages can cause significant damage to the water delivery system through sudden drops in water levels that result in canal instability, failure of siphon tubes and damage to pumps.
- The LYIP is concerned that the implementation of new pumping stations will require significant annual maintenance to service the pumps and motors. The O&M of these new pump stations will be borne solely by the LYIP.

- Removal of the existing rock diversion dam will drop water surface elevations significantly in the river, resulting in lower water levels in the canal. Many turnouts within the main canal, especially in the upper end of the system, are set high in order to irrigate the highest part of the field given the water right, and also because of a lack of elevation difference between the beginning and end of laterals to achieve better flow. Additional check structures will be required in the main canal to meet these elevation requirements. Additional check structures will reduce velocity in the canal, increase seepage and sediment deposition, and impede the flow of water to the lower end of the system. If pumping systems are implemented, the entire system would require a substantial if not complete reconfiguration to provide functional reliability to the system users.
- Ranney wells tend to plug and deteriorate when river systems contain fine particles. The LYIP is concerned that implementation of Ranney wells to provide a reliable source of water will be subject to plugging from the significant amounts of sediment generated from the Yellowstone River system. In addition, several sources indicate that seasonal patterns of riverbed permeability exist and can impact flow to Ranney well systems, resulting in an inconsistent source of water for the system.

Non-weir Alternative

- (Mimic pumping comments from above)
- Water conservation on a mass scale within the LYIP will have negative effects on the underlying groundwater aquifer. Many landowners within the area depend on groundwater as a source for both drinking water and irrigation. The City of Sidney's water wells are supplied by an alluvial aquifer that is fed by LYIP losses. Mass scale water conservation efforts within the LYIP system will significantly reduce recharge of this groundwater system, and provide a hardship to many of the landowners and the City of Sidney who utilize this water for domestic, irrigation and other uses.
- Waste spills from the LYIP system support wildlife, wetlands and an entire ecosystem. This system has been ongoing for 107 years supporting this well established ecosystem, and mass scale water conservation efforts will eliminate the water that supports this ecosystem.
- The Non-Weir Alternative conservation measures are based on overstated losses. LYIP 2000 & 2012 flow records show minimal loss during periods of high demand and significant use (nearly 1,100 cfs delivered with a 1,300 cfs diversion) during peak periods. Additionally, the records show losses in the main canal system are as low as 6% during the peak demand periods.
- The Non-Weir Alternative appears to be using the table identified within the Bureau of Reclamation's 2013 Lower Yellowstone Fish Passage Alternatives Planning Study to estimate losses within the LYIP system. For example, Item 4 of the table suggests that lining 7 miles of the LYIP main canal or select laterals will save 200 cfs. To our knowledge there has not been 7 miles of canal or laterals identified that exhibit severe seepage. Although seepage throughout the LYIP

system appears to be somewhat inconsistent, losses of this magnitude have not been identified. Putting this into perspective, if the LYIP were to line all 72 miles of the main canal, this analysis would conclude that this conservation measure would save over 4,900 cfs. Since the LYIP diverts only up to their maximum water right of 1,374 cfs and the flow records of the LYIP show that water is delivered throughout the LYIP system and to the end of the main canal, these estimates are obviously overstated. We believe that there are better and more accurate estimates of loss that should be utilized including use of the LYIP flow records, which provide the best available information that is specific to the LYIP.

- The Non-Weir Alternative suggests that the LYIP could get by with less than the legal rate of diversion of 1,374 cfs. However, when the lands irrigated by the LYIP are evaluated based on their peak daily consumptive use requirements as calculated using the NRCS methodology with local data and the 2013 LYIP Crop Census information, the amount of water required to satisfy the peak crop water requirement is very close to the legal rate of diversion of 1,374 cfs, assuming a 100% efficient delivery system to each field (not realistic), and a moderately efficient on-farm irrigation efficiency of 60% to account for a mix of center pivot, wheel-line, flood irrigation and other methods being utilized or that could be utilized. Therefore, a reduction in the rate of diversion and delivery to the LYIP system would cause significant harm to existing producers.
- Water rationing occurs during the peak demand period within the LYIP on an annual basis. Water savings realized from conservation efforts would first go to provide the allotted water to all users to fulfill their appropriations. In fact, the LYIP utilizes 4 pump stations to provide an additional 62 cfs at the lower end of the system to alleviate water rationing, which still does not resolve this problem.
- The LYIP has a legal right to divert 1,374 cfs through their water rights. The proposed alternative calls for a reduction in the physical capacity of the existing system, which does not allow them to utilize their full water rights. If the LYIP can no longer utilize their full water rights, this alternative would cause the water users to permanently lose part of their water right against their will (forced abandonment).
- Wind turbines are highly dependent on constant wind speed to provide a reliable source of energy. The upkeep and maintenance of wind turbines is costly, and the knowledge and training requirements are significant. It is anticipated that the cost of maintaining the wind turbines will be more than the LYIP can afford to pay, and the low life expectancy of wind turbines will create a substantial O&M capital cost to rebuild or replace these structures in the future. The LYIP is also concerned with the significant dangers to birds, visual resources impacts, impacts from transmission mains to and from the wind turbines to the project, and other environmental factors that are associated with wind turbines such as the disposal of potentially hazardous materials that are utilized in the manufacture of wind turbines. There are also questions on the reliability, long-term guarantee of rates on the buying and selling of the power, and the ability to obtain agreements for construction of the proposed wind turbine facilities.

U.S. Army Corps of Engineers
Omaha District
February 17, 2016
Page 5 of 5

We sincerely appreciate the opportunity to provide comments on the alternatives. If you have any questions regarding these comments, please contact us at your convenience.

Sincerely,



Shawn Higley, P.E., P.H.
Helena Branch Manager

SH/af

cc: James Brower, LYIP

K:\Helena\LYIP\16-009 NEPA\CORREIUS Army Corps 021716.doc



February 18, 2016

**US Army Corps of Engineers
Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Ave.
Omaha, NE 68102**

email to cenwo-planning@usace.army.mil

Dear Sir or Madam,

The Montana Chapter of the American Fisheries Society (MT AFS) would like to comment on the US Army Corps of Engineers (ACOE) and Bureau of Reclamation (BOR) Environmental Impact Statement (EIS) for the Intake Dam (Intake) on the Yellowstone River with respect to the scope and focus of alternatives to be considered in the EIS. MT AFS has filed previous comments on this project, subsequent permits, and the overall process. The American Fisheries Society (AFS), the oldest professional society in North America dealing with natural resources, was organized in 1870. The MT AFS was chartered in 1967. Among its objectives are conservation, development, and wise utilization of the fisheries, promotion of the educational, scientific and technological development, advancement of all branches of fisheries science and practice, and exchange and dissemination of knowledge about fish, fisheries, and related subject.

The MT AFS Resource Management Concerns Committee has already reviewed the revised recovery plan, some of the more recent interagency planning for the renovation of Intake, and the Environmental Assessment. As an organization of fisheries professionals, our primary concerns relate to the planning and follow-up concerning fish passage at Intake. Specifically, how the proposed project design alternatives will affect biological success criteria for Pallid Sturgeon.

The purpose of the proposed Federal action at Intake Dam is stated as, "to improve passage of endangered Pallid Sturgeon and other native fish in the lower Yellowstone River." The National Environmental Policy Act (NEPA) requires that decision-makers consider alternatives that meet the purpose and need for an action. MT AFS requests that any alternative considered in this EIS prioritize successful fish passage as a test of the alternative's reasonableness. If the purpose of the project is to increase passage success, then the level of review of the passage structure design and effectiveness should reflect this focus. At a minimum, MT AFS expects that the ACOE review and summarize



passage efficiencies in similar systems for the species they are targeting (Pallid Sturgeon and all natives). The goal of improved passage dictates that the project quantifies the level of passage occurring pre- and post-project implementation, and determine whether passage and associated recruitment has actually improved.

We further put forward that the timeline stipulated in the court documents is likely to be insufficient to collect and analyze pre-project data, review recent literature on Pallid Sturgeon, or evaluate the alternatives in appropriate detail.

Although MT AFS agrees that the project should provide passage for all native species in this reach of the Yellowstone River, the status of the Pallid Sturgeon under the Endangered Species Act compels the ACOE to describe how improved passage will meet the recovery goal of sturgeon and be able to achieve the necessary passage in other ways if not achieved with this project. MT AFS is of the opinion that the recent proposal to remove the Upper Missouri from consideration in Pallid Sturgeon recovery goals is unsubstantiated and premature given the uncertainty in the outcome at the Intake project.

In summary, MT AFS encourages the ACOE and BOR to prioritize and validate achievement of the purported goal of “improving fish passage for endangered Pallid Sturgeon and other native species at Intake Dam.” We also recommend that the EIS:

1. **Consider and assess multiple options for supplying irrigation water to the irrigators**
Current project designs have been limited to traditional on-channel diversions. The EIS should broaden the options for a dependable, efficient method for water delivery. The irrigators are entitled to their water, but not at the expense of the primary stated goal of the project.
2. **Define the cumulative impacts area to include the Upper Missouri River Basin**
Recent studies have determined that the Yellowstone River may only account for 10 to 20% of adult Pallid Sturgeon spawning migration in the Recovery Priority Management Area 2 (RPMA2). The potential impacts of improving passage at Intake need to be assessed in the context of recovery for the species.
3. **Include mitigation monitoring**
Any alternative under consideration should include a plan with defined fish passage and recruitment targets as well as enforcement criteria to address target shortcomings if they occur. Using physical criteria (i.e., depth and velocity criteria for the by-pass channel in the previous EA; BOR and Corps 2015a, 2015b) to measure success of a fish-passage project without an actual assessment of fish passage using radio-telemetry or other acceptable fish migration assessment methods does not constitute acceptable success criteria. Monitoring of success criteria must be tied directly to the goals and objectives of the project, and



responsible agencies must be named and held accountable if the planned passage mechanism is not effective or if its implementation is delayed.

4. Rigorously consider a dam removal alternative

As stated in the judge's order, the EIS should examine the possibility of meeting the irrigator's needs without blocking the flow of the Yellowstone River. Using Missouri River recovery plan funding to build the new dam structure and headgate screens before establishing definite plans for fish passage and structure specifics does not promote any of the Pallid Sturgeon recovery tasks (Jordan, 2013). Limiting the ACOE's responsibility to the construction of the physical structure, and associated hydrologic parameters only ignores the original intent of the design to incorporate and improve fish passage. Delaying passage because of a lack of funding after the diversion dam was heightened is difficult for our committee of biologists to view as justified.

5. Assess the likelihood of passage success biologically:

In general, the ACOE 2015 404 permit's stated goals for the project and the content related to meeting the goal are disconnected from Pallid Sturgeon recovery and seem counter to biological science. The EIS must assess each alternative using best available science and in-situ data whenever possible.

- It is critical that the proposed bypass channel alternative accommodate prescribed flows to allow successful passage. It is our understanding that the preliminary engineering models (one and two-dimensional) suggests that the current plan may not meet this goal.
- Given the absence of swimming ability studies for these fish, it is imperative that in-situ monitoring be used to assess how the fish respond to the engineered channel, and whether the flow model achieves viable passage paths for the fish.
- Although Pallid Sturgeon is the focal species in this project, increased passage and hydrograph naturalization will benefit multiple native species. Benefits to these species may prevent future listings, specifically for six species of special concern listed in Montana (Sauger, Sturgeon Chub, Sicklefin Chub, Paddlefish, Blue Sucker, and Shortnose Gar).

In summary, the focus of the EIS for the Intake project should be whether the alternatives under consideration functionally improve fish passage and subsequent recruitment, not if the engineering criteria are met. Once completed, the design must be evaluated in the context of demonstrated successful fish passage upstream of the Intake structure. In addition, responsibility for fish passage success must be explicitly assigned and executed so shortfalls are addressed directly and effectively.

MT AFS is aware of the ACOE work on the Science and Adaptive Management Plan (SAM) that is scheduled for completion later this year. The actions prescribed in the SAM and the alternative selected for Intake will drive recovery actions for Pallid Sturgeon well into the future. MT AFS will be looking to see that the ACOE and the



USFWS make use of the wealth of information emerging from recent studies on Pallid Sturgeon to improve both documents and ensure a proactive, integrated approach to recovery. We appreciate your attention to our concerns.

Sincerely,

Dave Moser
President
Montana Chapter of the American Fisheries Society

CC:

Noreen Walsh, USFWS
Jodi Bush, USFWS
Jeff Hagener, Montana Department of Fish, Wildlife and Parks
Governor Steve Bullock
Senator John Tester
Congressman Ryan Zinke
John Tubbs, Department of Natural Resources and Conservation
Brent Esplin, Bureau of Reclamation
Jim Bowker, President, Western Division of the American Fisheries Society
Mindy McCarthy, Montana Department of Environmental Quality MMcCarthy3@mt.gov.

References Cited:

- (BOR and Corps) Bureau of Reclamation and U.S. Army Corps of Engineers. 2015a. Intake Diversion Dam Modification, Lower Yellowstone Project, Montana: Final Supplement to the 2010 Final Environmental Assessment. Billings, Montana and Omaha, Nebraska.
- (BOR and Corps) Bureau of Reclamation and U.S. Army Corps of Engineers. 2015b. Finding of No Significant Impact: Intake Diversion Dam Modification, Lower Yellowstone Project. http://www.usbr.gov/gp/mtao/loweryellowstone/FSEA/final_fonsi.pdf.
- Campbell, G. (2013, December 18). Letter to Michael Thibault, USFWS Region 6 Director, Lower Yellowstone Intake dam modifications- fish passage improvement. Billings, Montana: U.S. Department of Interior, Bureau of Reclamation.
- Jordan, G. (2013). *US Fish and Wildlife Service Draft Revised Recovery Plan for the Pallid Sturgeon (Scaphirhynchus albus)*. Denver: US Fish and Wildlife Service, Mountain Prairie Region.





February 17, 2016

U.S. Army Corps of Engineers
Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Ave.
Omaha, NE 68102
Email: cenwo-planning@usace.army.mil

Submitted via email and UPS Next Day Air (attachments submitted by UPS Next Day Air only)

Dear Ms. Vanosdall:

Thank you for this opportunity to comment on the U.S. Army Corps of Engineers (Corps) and U.S. Bureau of Reclamation's (Reclamation) Notice of Intent to jointly prepare a draft Environmental Impact Statement (EIS) for the Intake Diversion Dam Fish Passage Project ("Intake Project"). We submit these comments on behalf of Defenders of Wildlife and Natural Resources Defense Council (NRDC). Together, Defenders and NRDC have over 3 million members, supporters, and activists nationwide, including thousands in Montana.

Defenders and NRDC urge the Corps and Reclamation (collectively, the "Agencies") to analyze and adopt a scientifically-based alternative that provides unobstructed passage for the endangered pallid sturgeon and other native fish through the main channel of the Yellowstone River. Removing the existing rock dam at Intake is the best way to allow pallid sturgeon to once again successfully spawn and "recruit" (i.e. produce young which survive to adulthood) and begin re-building a self-sustaining population in the Yellowstone River.

To that end, Defenders and NRDC retained an expert consultant who developed a conceptual alternative (described in more detail below and in the accompanying attachments) that would provide unobstructed passage for pallid sturgeon and other fish, restore a free-flowing Yellowstone River, and meet the needs of the local irrigators as well. This alternative would meet the Agencies' stated purpose and need for the Intake Project. Our conceptual alternative:

- Provides up to 766 cubic feet per second (cfs) of water through modern water conservation measures and an alternative water source;
- Suggests providing needed irrigation water via a pumping system;

- Suggests using gravity diversions through the existing headworks when river flows are high enough in order to reduce the electricity needs of the pumping system;
- Suggests using free wind energy to eliminate pumping electricity costs for the irrigation districts.

Such a plan is long overdue. The Agencies have known for more than 15 years that their operations of Fort Peck Dam on the Missouri River and Intake Dam on the Yellowstone River violate the Endangered Species Act (ESA). The Agencies are also well aware that these operations, if unchanged, will shortly cause the extinction of the wild population of pallid sturgeon in Montana. Nonetheless, the Agencies have failed to remedy their ESA violations. As a result, and as predicted by the U.S. Fish and Wildlife Service (FWS), the wild pallid sturgeon population is on the brink of being extirpated from the state.

The Agencies apparently now plan to rely solely on the Intake Project to prevent the demise of this pallid sturgeon population and remedy their ESA violations. A central premise of the Intake Project is that the Corps will fund the Project – even though Intake is a Reclamation facility – in exchange for being allowed to abandon at least some of the changes to its Fort Peck Dam operations required by the 2003 Biological Opinion on the Corps’ Missouri River dam operations (“2003 BiOp”). While we support restoring a free-flowing Yellowstone River as the best and only means of protecting the pallid sturgeon and other native fish species in this River, addressing the Yellowstone alone may not be sufficient to allow for the recovery of the pallid sturgeon in the upper Missouri River basin, nor resolve the Corps’ ESA obligations at Fort Peck Dam. We urge the Corps not to abandon the effort to modify operations at Fort Peck Dam as required by the 2003 BiOp. Restoration of the Missouri River, in addition to any changes made at Intake, may well be necessary for the Corps to avoid jeopardizing the pallid sturgeon. As a result, the Agencies must fully analyze the consequences of foregoing restoration of the Missouri River for pallid sturgeon recovery in this EIS process.

We also urge the Agencies to reject the dam reconstruction/bypass channel alternative that they selected in their April 2015 Final Supplement to the 2010 Final Environmental Assessment (EA) (“2015 Final EA”). This alternative is inconsistent with the best available science and likely ensures the extinction of the wild pallid sturgeon population in Montana. This misguided approach was preliminarily enjoined by order of the U.S. District Court for the District Court of Montana, in response to litigation brought by Defenders and NRDC. The Court temporarily blocked construction in part because the Agencies failed to analyze the most critical factor in approving the dam and bypass channel – how it would affect pallid sturgeon recovery. See Defenders of Wildlife v. U.S. Army Corps of Engineers, CV-15-14-GF-BMM (D. Mont. Sept. 4, 2015) (Dkt. #73). The Court concluded that the Agencies’ failure to analyze this fundamental issue and their additional failure to complete an EIS (as opposed to an EA) likely violates the National Environmental Policy Act (NEPA). See id. at 8-15. The Agencies are now curing the latter violation by completing an EIS – but through this EIS they must also cure the former violation. To comply with the Court’s direction, as expressed in its

preliminary injunction order, the Agencies must evaluate how the alternatives proposed in the EIS affect pallid sturgeon survival and recovery. *Id.* at 12.

The current Intake Project has arisen from a long history of false starts by the Agencies and is complicated by interlocking statutory mandates. Our comments describe this history and the multiple statutory obligations governing this Project because they are inseparable from the Agencies' NEPA obligations and are essential to understanding the scope of the analysis required in this EIS. Accordingly, our comments discuss the following:

- (1) The Agencies' respective substantive and procedural obligations under the ESA with respect to the Intake Project;
- (2) The Agencies' obligation, under both the ESA and NEPA, to analyze and adopt a dam removal alternative (also referred to as "non-weir" alternative in other correspondence);
- (3) Defenders' and NRDC's proposed conceptual dam removal alternative;
- (4) The Agencies' obligation to take a "hard look" at all of the impacts associated with this Project;
- (5) The Agencies' obligation to analyze and disclose the impacts relevant to the Corps' Clean Water Act (CWA) findings.

I. THE SUBSTANTIVE STANDARDS OF THE ESA MUST GUIDE THE AGENCIES' NEPA ANALYSIS AND DECISION

The underlying purpose for initiating the Intake Project EIS – and the reason the Agencies have been considering fish passage ideas for more than a decade – is to remedy ongoing ESA violations at Intake Dam (Reclamation) and Fort Peck Dam (Corps) and facilitate the recovery of the pallid sturgeon in the upper Missouri River basin. *See, e.g.*, BOR-4439 (FWS noting in 2012 that, "[a]s stated in the 2010 FONSI, the underlying need for the proposed action (i.e. the overall Intake Project) is for Reclamation and the Corps to comply with the ESA.").

The Corps' authority to fund the Intake Project, found in Section 3109 of the Water Resources Development Act of 2007 (WRDA), P.L. 110-114, 121 Stat. 1041 § 3109, reflects this purpose. This section states:

The Secretary [of Defense] 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.

This purpose is reiterated in the Corps' Implementation Guidance for Section 3109. The Implementation Guidance describes the *only* purpose of the authorization as "endangered species recovery and ecosystem restoration following provisions of the Missouri River Recovery Program." *See* Attachment 2 at 2.

The Agencies have stated an additional purpose and need for the Intake Project: “improving [fish] passage while continuing a viable and effective operation of the Lower Yellowstone Project.” 81 Fed. Reg. 82, 82-83 (Jan. 4, 2016). As described in more detail below, this purpose is compatible with restoring the pallid sturgeon’s Yellowstone River habitat so that they may successfully spawn and recruit. However, to the extent the Agencies choose an alternative that meets this additional purpose without meeting the fundamental purpose of facilitating the recovery of the pallid sturgeon, the Corps would have no authority to fund the Project, and both Agencies would be out compliance with the ESA. Thus, the Agencies’ priority – and bottom line – must be compliance with the ESA.

A. The Wild Pallid Sturgeon Population is on the Brink of Extinction in Montana

The endangered pallid sturgeon population in the upper Missouri River basin (hereinafter, the “Montana population”) has been nearly extirpated due the Agencies’ dam operations on the Yellowstone River and the Missouri River. Once found throughout approximately 3,515 river miles in the Missouri River and its major tributaries from Great Falls, Montana to New Orleans, Louisiana, the species now lives in only tiny remnants of that historic range. See FWS Revised Recovery Plan for the Pallid Sturgeon (*Scaphirhynchus albus*) (Jan. 2014) at 3 (hereinafter, “2014 Recovery Plan”). Moreover, the sturgeon population is no longer self-sustaining or viable; there has been no evidence of successful reproduction and recruitment in the wild for decades. See id. at 4, 11-15. The pallid sturgeon’s precarious status is the legacy of more than a century of dam-building, river channelization, and other river modifications, primarily by the Corps and Reclamation. See id. These dams and river modifications have cut off the pallid sturgeon’s migratory corridors and destroyed spawning and nursery habitats. See id. Because this species is on the brink of extinction in the wild, federal and state agencies maintain the species through an aggressive hatchery program. This program has always been intended to be a temporary band-aid, and cannot substitute for recovery of the pallid sturgeon in the wild.

The largest identified wild population of pallid sturgeon remaining – those not raised in hatcheries – is found in the Missouri and Yellowstone Rivers between Fort Peck Dam and Lake Sakakawea. This population is estimated to be at most 125 fish, and they are near the end of their very long lifespans. See 2014 Recovery Plan at 4. This population likely has not successfully reproduced and recruited in the wild since the closure of Garrison Dam in the mid-1950s, which created Lake Sakakawea.

The creation of Lake Sakakawea likely ended all natural reproduction and recruitment because it significantly truncated the river habitat available for pallid sturgeon larvae to drift after hatching. When pallid sturgeon eggs hatch, the free embryos and larvae (hereinafter, “larvae”) drift along the bottom of the river for somewhere between 152 and 329, miles depending on water temperatures, river velocity, and habitat complexity. See 2014 Recovery Plan at 12-13. Larvae require intact river habitat to survive this period; if they drift into the oxygen-depleted waters of a reservoir, like Lake

Sakakawea, they suffocate and die. See Guy et al., Broadening the Regulated-River Management Paradigm: A Case Study of the Forgotten Dead Zone Hindering Pallid Sturgeon Recovery, (2015) at 7 (Attachment 3) (concluding that “transition zones [from river to reservoirs] are an ecological sink”). As described below, the operations of Fort Peck Dam and Intake Dam make it impossible for sturgeon to spawn anywhere with sufficient drift distance. Instead, to the extent spawning occurs, the larvae are likely killed in Lake Sakakawea. The only way to restore pallid sturgeon natural reproduction in the upper Missouri River basin is to restore productive spawning habitat and increase the distance of free-flowing river habitat needed for successful larval drift.

B. The Corps’ Fort Peck Dam Operations Prevent Natural Reproduction in Violation of the ESA

The Montana population of pallid sturgeon lives most of the year in the Missouri River, below the confluence of the Yellowstone and Missouri Rivers. See 2014 Recovery Plan at 12. The best available science indicates that historically, the high flows in the Missouri River in the spring would provide the cue for the sturgeon to swim upstream to spawn. See 2003 BiOp at 22-23. Prior to the construction of Fort Peck Dam, the river’s spring flows would have been high volume, warm, and muddy. See id. at 22-24. However, since the construction of Fort Peck Dam and as a result of the Corps’ operational decisions, the Missouri River’s flows below the dam are lower volume, cold, and clear. See id.; Recovery Plan at 12. As a result, in most years, sturgeon no longer swim upstream to Fort Peck Dam during spawning season and are unable to spawn or recruit in the Missouri River. See id.; 2014 Recovery Plan at 12 (noting first documented spawning success took place in 2011 during historic flood flows, but no recruitment has been documented).

The Corps’ operation of Fort Peck Dam in a manner that precludes successful pallid sturgeon spawning and recruitment violates sections 7 and 9 of the ESA, 16 U.S.C. §§ 1536 and 1538. Section 7(a)(2) requires federal agencies to ensure, among other things, that any discretionary action they authorize, fund, or carry out “is not likely to jeopardize the continued existence of any endangered species.” 16 U.S.C. § 1536(a)(2). Jeopardy results when it is reasonable to expect that a federal action would “reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.” 50 C.F.R. § 402.02. The jeopardy standard mandates that agencies consider whether and how their actions will affect imperiled species’ ability to both survive and “recover.” NWF v. NMFS, 524 F.3d 917, 931-33 (9th Cir. 2008). “Recovery” is the point at which a species is healthy enough to be taken off the endangered species list. Alaska v. Lubchenko, 723 F.3d 1043, 1054 (9th Cir. 2013).

To comply with the jeopardy standard, the “action agency” must “consult” with and obtain the opinion of FWS before it takes any discretionary action that “may affect” a listed species. See 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a); NWF, 524 F.3d at 924. At the conclusion of the formal consultation process, FWS provides the action agency with a “biological opinion” (BiOp) as to whether jeopardy is likely to occur due to the

action. 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. §§ 402.14(g), (h). If so, the BiOp sets forth a “reasonable and prudent alternative” (RPA) that would avoid this ESA violation. 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. §§ 402.02 (defining “reasonable and prudent alternative”), 402.14(h)(3).

Section 9(a)(1)(B) of the ESA makes it unlawful to “take” an endangered species. 16 U.S.C. § 1538(a)(1)(B). Congress defined “take” to mean “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect . . .” *Id.* § 1532(19). “Harm,” in turn, is defined as “an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife *by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.*” 50 C.F.R. § 17.3 (emphasis added). Congress created an “incidental take” exception to section 9’s take prohibition for federal agencies. FWS may issue an “incidental take statement” (ITS) that permits take if an agency action does not result in jeopardy. 16 U.S.C. § 1536(b)(4), (o)(2); 50 C.F.R. § 402.14(i).

The Corps has known that its operation of Fort Peck Dam violates the ESA since at least 2000, when FWS issued a “jeopardy” BiOp for the Corps’ Missouri River operations. FWS re-stated its conclusion in an “amended” 2003 BiOp, which again found that Fort Peck Dam operations are likely to cause jeopardy. In order to avoid this ESA violation, the 2003 BiOp required the Corps to take several actions as part of an RPA. The 2003 BiOp also concluded that Fort Peck Dam operations take pallid sturgeon in violation of section 9 of the ESA. The ITS allowed that take so long as the RPA is implemented.

The Corps has not implemented the RPA for pallid sturgeon at Fort Peck Dam. Among other things, the Corps is required to test and implement flow enhancements. In 2009, the Corps abandoned its efforts to implement the first “mini-test” for flow modifications in favor of assisting Reclamation at Intake. *See, e.g.*, ACE-14422-14423 (Corps’ Summary of Actual 2009 Regulation, Missouri River Mainstem Reservoir System); ACE-21331 (Corps’ Final 2009-2010 Annual Operating Plan, Missouri River Mainstem System).¹ The Corps was also required by the RPA to study and implement a temperature control device, if feasible and economical, in order to warm the water temperatures below the Dam for the benefit of the pallid sturgeon. The Corp’s contractor completed a Temperature Control Device Reconnaissance Study in June 2009. The study recommended that the Corps complete a feasibility study for six alternatives. The study also noted that a submerged weir alternative, estimated to cost between \$8 million and \$25 million, could be implemented on an expedited schedule. In April 2012, the Corps’ contractor completed an “interim implementation report” on the preliminary design of a submerged weir. The Corps has not taken action to implement a temperature control device of any kind and comply with the RPA.

¹ All citations labeled ACE-, BOR-, or FWS- refer to pages in the administrative records provided to the Court by the three agencies on October 21, 2016. *See Defenders of Wildlife*, CV-15-14-GF-BMM (Dkt. # 78).

FWS has acknowledged that the Corps is failing to comply with the ESA, but has chosen not to take any action. According to an FWS briefing paper prepared for a high level Department of Interior official in 2012, “[t]he [Corps] is lagging in its compliance with ESA and biological opinion implementation but continues to serve as a great partner in the basin-wide restoration efforts. In order to foster the positive direction of restoration activities, the Service has not criticized the COE on the pace of ESA compliance.” FWS-4182.

Despite the Corps’ failure to implement operational modifications at Fort Peck Dam, the best available science indicates that the Missouri River could be restored for pallid sturgeon spawning and nursery habitat if the agency did so. For example, one recent study prepared for the U.S. Geological Survey noted the pallid sturgeon successfully spawned in the Missouri River just downstream of the confluence with the Milk River in 2011, when record-setting snowfall and spring rains resulted in a spill over Fort Peck Dam. Fuller and Haddix, Examination of pallid sturgeon use, migrations, and spawning in Milk River and Missouri River below Fort Peck Dam during 2013, at 2 (Attachment 4). This event indicates that the Missouri River can be restored for spawning near Fort Peck Dam. *Id.* at 11 (“Verification of successful reproduction by wild pallid sturgeon has provided information that shows spawning, fertilization, egg survival, and hatch can occur in the Missouri River when flows deviate from baseline operations.”). Other studies indicate that successful larval drift may be possible if spawning habitat is restored. For example, Braaten, *et al.*, Drift Dynamics of Larval Pallid Sturgeon and Shovelnose Sturgeon in a Natural Side Channel of the Upper Missouri River, Montana, *North American Journal of Fisheries Management* 28:808-826 (Attachment 5) at 824 indicates:

Currently, much of the 340-km reach of the Missouri River downstream from Fort Peck Dam is considered unsuitable for pallid sturgeon spawning owing to altered discharge regimes and suppressed water temperatures resulting from hypolimnetic operations of Fort Peck Dam. Habitat enhancements for this reach are proposed whereby operations of Fort Peck Dam will be modified as a mechanism to increase flows and enhance water temperature suitability for spawning pallid sturgeon. If enhanced discharge and water temperature conditions facilitate spawning by pallid sturgeon similar to that observed after habitat enhancements for other sturgeons, larval pallid sturgeon would be provide an extended length (>340 km) of free-flowing Missouri River to complete ontogenetic development, provided that suitable spawning habitat was available. (internal citations omitted).

See also Bramblett and White, Habitat use and Movements of Pallid and Shovelnose Sturgeon in the Yellowstone and Missouri Rivers in Montana and North Dakota, *Transactions of the American Fisheries Society*, 2011, 1:30:1006-1025 (Attachment 6), at 1022 (describing both the lower Yellowstone River and the Missouri River below the confluence with the Yellowstone as “essential” pallid sturgeon habitat); Eichelberger, *et al.*, Novel Single-Nucleotide Polymorphism Markers Confirm Successful Spawning of Endangered Pallid Sturgeon in the Upper Missouri River Basin, *Transactions of the American Fisheries Society*, 2014, 143:1373-1385, at 1383 (documenting successful

pallid sturgeon spawning in both the upper Missouri River and Yellowstone River in 2012-2013) (Attachment 7).

Accordingly, the best available science indicates that the remaining wild population of pallid sturgeon is spawning and attempting to successfully recruit young in both the Yellowstone and Missouri Rivers and that both rivers contain habitat essential to this population's survival. More importantly, this science confirms the premise of the 2003 BiOp – that the Missouri River below the Fort Peck Dam could be restored to allow successful pallid sturgeon spawning and recruitment if the Corps implemented flow modifications like those contemplated in the 2003 BiOp.

In short, the Corps' operation of Fort Peck Dam is currently violating sections 7 and 9 of the ESA. As detailed below, the Corps envisions the Intake Project as the means to remedy these violations. If the Corps elects to do so, the EIS must address the substantive standards of the ESA in the NEPA analysis as set forth below.

C. Reclamation's Intake Dam Operations Prevent Natural Reproduction in Violation of the ESA

A small proportion of the pallid sturgeon in the Montana population – roughly one-quarter, or 32 fish, according to FWS – migrate up the Yellowstone River to Intake Dam to spawn. See “Biological Opinion on effects to the pallid sturgeon from the Lower Yellowstone Irrigation Project and construction of fish passage in Montana and North Dakota,” July 10, 2015 (hereinafter, “2015 BiOp”) at 17-18. However, these fish are almost universally blocked by Intake Dam. Id. at 12. Blocked by this dam, sturgeon swim back downriver, and spawn in the lower-most 10 miles of the Yellowstone. Id. at 12-13. This site is too close to Lake Sakakawea for larvae hatched here to survive. Instead, the larvae likely drift into the reservoir's oxygen-deprived waters and suffocate. Id.

A handful of pallid sturgeon have migrated past Intake through an existing, natural side channel. Radio receivers were placed on the upstream end of the natural side channel in 2014. See ACE-3599. In that year, FWP tracked five tagged pallid sturgeon using the channel. Since not all pallid sturgeon are tagged, other individuals could have also used the channel. The next summer, in 2015, one female was tracked using the side channel. 2015 BiOp at 13. Regardless of the precise number that have used the natural side channel over the years, there has been no documented recruitment in this population. Id. at 12-13.

If Intake Dam was removed, pallid sturgeon would have access to approximately 165 miles of river habitat upstream of the dam and access to two large tributaries, the Tongue and Powder Rivers. See, e.g., FWS-12190-91 (email noting that female pallid sturgeon in 2014 swam 20 miles up the Powder River, suggesting historic range includes at least that much of the Powder). While spawning has been documented in the Yellowstone River, scientists do not yet know whether this means the Yellowstone's habitat is preferred by pallid sturgeon. See, e.g., FWS-4844-45. If sturgeon are able to

swim far enough upstream past Intake Dam, it is presumed that they could spawn in an area that likely has sufficient drift distance for the larvae to survive. However, that drift distance is still likely on the lower end of what is required. See FWS-2423-2508.

While it is presumed the drift distance on the Yellowstone is likely sufficient for some larval survival if Intake is passable, it is uncertain whether larvae hatched upstream would, in fact, survive the journey and successfully recruit to adulthood. For example, larvae are expected to be entrained in the main irrigation canal at Intake because the fish screens cannot block pallid sturgeon larvae. 2015 BiOp at 26. They may also be killed on the screens themselves. Id. at 26, 30. In addition, the upstream, neighboring Buffalo Rapids Irrigation District has an unscreened canal that could entrain pallid sturgeon larvae. Depending on whether the Agencies decide to build a structure on the Yellowstone River, some number of larvae will also be killed on that structure. See id. Reducing such impediments is a key element of ensuring that any plan to open the river to upstream passage is also conducive to downstream passage.

To date, however, Reclamation has approved the continued operation of Intake Dam in a manner that precludes survival, let alone recovery, of the pallid sturgeon, in violation of sections 7 and 9 of the ESA. The 2015 BiOp conceded that the current operations of Intake Dam cause “injury” to the breeding ability of the pallid s (precluding successful breeding altogether) and “take” adult sturgeon by preve from successfully breeding. 2015 BiOp at 30-35. However, the BiOp allowe continued annual “rocking” of the dam – required to re-build the dam most ye assumption that a new project would be built with 2-3 years (by 2017) that w alleviate this jeopardy and take. Id. The BiOp’s assumption that the dam/byp would alleviate the harm caused by the annual “rocking” of the dam is scienti unfounded. Regardless, the dam/bypass channel has been enjoined, and the A beginning another decision-making process, which will take at least until the Accordingly, even if the 2015 BiOp’s original conclusion was lawful (which that conclusion is no longer applicable. Reclamation’s continuing operation o violates sections 7 and 9 of the ESA. Reclamation must remedy its ongoing E violations at Intake by adopting a plan that facilitates survival and recovery o and ends its illegal take of the species.

D. The Agencies Envision the Intake Project as the Remedy fo Agencies’ ESA Violations and Therefore Must Fulfill that

As noted above, both Reclamation and the Corps have dragged their f remedying their existing ESA violations at their respective dams for more tha decades and, as a result, pushed the Montana population of pallid sturgeon to extinction. The current EIS process is intended to provide Reclamation and t another opportunity to resolve their ESA violations.

The Corps has proposed to help Reclamation fund modifications at Intake Dam to bring Intake into compliance with the law, in exchange for forgiveness of its own violations at Fort Peck Dam. This exchange is not an equal trade; it resolves two

problems by addressing only one. Thus, rather than two agencies remediating violations on two different rivers and restoring the habitat of two different rivers, they have agreed to remedy only one violation, on one river. Such a plan can only comply with the ESA if – and only if – addressing the migration issue at Intake Dam *also* removes jeopardy to the species caused by Fort Peck Dam. In other words, the pallid sturgeon would have to be able to recover in the upper Missouri River basin, despite the continued operations of Fort Peck Dam, based on successful breeding, feeding, and sheltering in the Yellowstone alone.

Given the current status of the species, the prospect for recovery is daunting. FWS defines “recovery” for the pallid sturgeon to mean that the species will meet the criteria for reclassification to “threatened” and that there will be sufficient regulatory mechanisms “to provide reasonable assurances of long-term persistence of the species within each management unit in the absence of the [ESA’s] protections.” 2014 Recovery Plan at 54. The criteria for reclassification for “threatened” species includes, among other things:

the listing/recovery factor criteria are sufficiently addressed such that a *self-sustaining genetically diverse population of 5,000 adult Pallid Sturgeon is realized and maintained within each management unit for 2 generations (20-30 years)*. In this context, a self-sustaining population is described as a spawning population that results in sufficient recruitment of naturally-produced Pallid Sturgeon into the adult population at levels necessary to maintain a genetically diverse wild adult population in the absence of artificial population augmentation.

Id. at 54 (emphasis added). The relevant management unit here is the Great Plains Management Unit, which stretches from Great Falls to Fort Randall Dam, South Dakota. Id. at 48-49. The only identifiable wild population remaining in this management unit is the Montana population, and the best available habitat remaining in this management unit is on the Yellowstone and Missouri Rivers. Making progress toward the goal of recovery for this population – meaning the attainment of a self-sustaining population of 5,000 adults – depends on removing the threats posed by Intake Dam and Fort Peck Dam.

Biologists at the time of the Corps’ decision to forego the Fort Peck RPA elements protested the change as scientifically unsound. As one explained,

I concur with [then-FWP pallid sturgeon biologist] Bill [Gardner] that it will be very unfortunate to take restoration of the 185-mile river reach between Fort Peck dam and the MT/ND border off the table, probably for decades, while the painstaking process of evaluation including the almost certain protracted biological studies and debates regarding success/failure of the Intake project play out. No biologist opposes rehabbing Intake. There are only questions of tradeoffs and whether pallid restoration should be done piecemeal or holistically.

FWS-1807; see also FWS-1809 (Mr. Gardner stating, “in my mind naturalizing flows below Ft. Peck Dam potentially has a greater benefit to pallids and aquatics than simply opening up the Intake barrier.”).

More recently, after reviewing the best available science, the Montana Chapter of the American Fisheries Society concluded that the chances for pallid sturgeon recovery in the upper Missouri River basin will be harmed if the Agencies pursue their current strategy of focusing on the Yellowstone River restoration alone. Defenders of Wildlife, 15-cv-00014-GF-BMM, Dkt. #63 at pp. 13-16 (Amicus Brief of Montana Chapter of the American Fisheries Society); see also ACE-4792 (Montana Chapter of AFS comments on 2014 Draft EA) (“In addition, the Missouri and Yellowstone River are connected; ignoring that connection disregards population biology and large river ecology tenets.”). Even the Corps has acknowledged the problem. See e.g., ACE-2194 (Corps’ “Upper Basin Pallid Approach” noting, “Intake still leaves substantial uncertainty regarding pallid recovery”). As a result, as described in more detail below, the EIS must both recognize and address these scientific opinions and explain why the Agencies appear to disagree.

The Corps’ decision to forego the 2003 RPA elements at Fort Peck also suffers from a procedural ESA violation because the Corps and FWS should have re-initiated formal consultation on the 2003 BiOp once the Corps requested a modification of the RPA. An action agency (here the Corps) and FWS are required by FWS’s implementing regulations to re-initiate formal consultation in two circumstances relevant here:

- (b) If new information reveals effects of the action that may affect listed species ... to an extent not previously considered; [or]
- (c) If the identified action is subsequently modified in a manner that causes an effect to the listed species ... that was not considered in the biological opinion.

50 C.F.R. § 402.16(b), (c); see Cottonwood Env'tl. Law Ctr. v. USFS, 789 F.3d 1075, 1084-88 (9th Cir. 2015). Pursuant to these regulations, where an agency fails to perform a required measure in a BiOp, the agency and FWS must re-initiate and complete a new formal consultation to ensure that the failure to perform that action does not jeopardize the listed species. See Sierra Club v. Marsh, 816 F.2d 1376, 1386-88 (9th Cir. 1987), abrogation on other grounds recognized by Cottonwood, 789 F.3d at 1088-91; Southwest Center for Biological Diversity v. Klasse, 1999 WL 34689321, at *6-7 (E.D. Cal. 1999). Because the Corps has failed to implement the RPA at Fort Peck Dam – and has no intention of implementing that RPA now – the Corps and FWS must re-initiate consultation on the Missouri River BiOp. The Corps and FWS have never done so, in violation of the ESA.

The Corps and FWS’s failure to comply with the ESA with respect to Fort Peck Dam operations or the plan to “amend” the 2003 BiOp and RPA to exchange the Intake Project for Fort Peck Dam modifications means that the Corps has ESA obligations with respect to the Intake Project that are separate and in addition to Reclamation’s ESA

obligations. To meet their procedural ESA section 7 obligations, both Agencies must complete a formal consultation with FWS regarding the preferred alternative. Through these consultations, both Agencies must also ensure that the preferred alternative avoids jeopardy to the pallid sturgeon. The Corps' consultation must *also* analyze a specific set of circumstances outside of Reclamation's authority – whether the alternative chosen for Intake will also remove the jeopardy caused by the Corps' Fort Peck Dam operations – and must ensure that the Intake Project *alone* remediates the impacts caused by Fort Peck Dam operations and facilitate the survival and recovery of the pallid sturgeon in the wild.²

In short, in adopting a preferred alternative at Intake, the Agencies must evaluate several key factors to determine whether the preferred alternative will comply with the ESA, including:

- (1) Whether and how the proposed action will restore spawning and nursery habitat such that the pallid sturgeon can successfully spawn and recruit in the Yellowstone River and Reclamation will avoid jeopardizing the species; and
- (2) Whether and how the proposed action can serve as a substitute for the required modifications at Fort Peck Dam, such that Fort Peck Dam operations no longer cause jeopardy to the pallid sturgeon.

Reclamation is required to implement an alternative that meets the requirements of #1, regardless of the Corps' involvement and funding.

The Corps may only assume that this alternative serves as a *substitute* for operational modifications at Fort Peck Dam if it also fulfills #2.

II. THE AGENCIES MUST ANALYZE AND ADOPT A DAM REMOVAL ALTERNATIVE TO COMPLY WITH THE ESA AND NEPA

A. The Best Available Science Demonstrates That Dam Removal Provides the Best Opportunity for Pallid Sturgeon Spawning and Recruitment in the Yellowstone River

Scientific analyses have been consistent and uncontroverted for the past two decades: for the Yellowstone River, removing Intake Dam and restoring a free-flowing river is the only reliable way to facilitate successful pallid sturgeon spawning and recruitment. For example, as far back as 2005, FWS biologists repeatedly noted that “open river” alternatives – alternatives that opened up the main channel of the Yellowstone River to pallid sturgeon migration – were the only alternatives likely to

² The Agencies' consultations should be completed on a timeline in which the scientific information gathered and analyzed can be shared with the public in the NEPA process and used to inform the Agencies' decision under NEPA. The Agencies' NEPA obligations are described more fully below.

avoid jeopardy. See, e.g., FWS-1016 (“I concur with George that with alternatives other than the Open River Alternatives, we are taking a risk that we will reduce appreciably the likelihood of both the survival and recovery of the pallid sturgeon in the wild.”); FWS-1017 (“there are only two options that will insure no future jeopardy for the BOR and both involve removing the dam and screening the intake”); FWS-1026, 1027 (FWS biologists noting potential for “jeopardy” BiOp); FWS-1044 (FWS biologist concurring with FWS biologist’s statement that, “I believe that the only two options currently presented that essentially insure passage and reduce the likely hood [sic] of any future jeopardy opinion for pallid sturgeon at this site are the dam removal options. . . Toss out the bypass channels.”); FWS-1117 (“[FWS’s] position as presented at the meeting is that the two options that remove the dam have the highest probability of biological success followed closely by the full channel rock ramp bypass. Montana FWP indicated that there [sic] preferences align pretty closely with ours.”).

The fact that removing the dam is the most biologically-sound alternative – and that all other alternatives involve significantly more risk to the pallid sturgeon – has not changed over the many years that the Agencies have considered various alternatives. For example, in the 2013 Fish Passage Alternative Study, Alternative Theme A – a non-weir/dam removal alternative much like the one Defenders and NRDC propose below – was the only alternative given a “5” out of “5” for “Likelihood of ESA success.” BOR-5678. The two action alternatives considered in the EA, the rock ramp and the dam/bypass channel alternative, both received a “3.” Id. As the Biological Review Team (BRT) explained in 2009, “[c]onceptually, [a dam removal] alternative has the least amount of uncertainty associated with providing upstream passage as there is no anticipated anthropogenic feature in the channel. The team recommends that this alternative continue to be evaluated and considered as it provides the least biological uncertainty of meeting objectives related to pallid sturgeon passage and ecosystem benefit.” FWS-1443. The BRT reiterated this thinking in 2013, noting that they had long ago concluded that dam removal and restoration of the Yellowstone to a “near-natural condition” would “likely have the greatest probability of allowing successful pallid sturgeon passage.” BOR-5543.

Nonetheless, dam removal alternatives have been consistently rejected without detailed analysis in the prior two EAs based on anticipated costs to the irrigation districts – not for any biological reason. See, e.g., FWS-1230; FWS-1437; BOR-5679 (dropping “open river” theme “because of the high cost to install the Ranney Well System and the high energy costs that would be placed upon the district”); Final Supplement to the 2010 Final EA on the Intake Dam Diversion Modification (April 2015) (hereinafter, “2015 Final EA”) at 2-20 through 2-21 (construction and operating costs too high for single pump and multiple pump alternatives); BOR-5543 (BRT noting that the one alternative that would restore the river to near-natural conditions – dam removal and installation of a pumping facility for irrigation water delivery – had been rejected because “it was believed that anticipated operation and maintenance of a pumping facility were too burdensome for irrigators”). Worse, these cost estimates have also apparently influenced the *biological* standards used by the Agencies. See, e.g., FWS-3519 (2011 Corps presentation noting that “*Increased costs on the rock ramp alternative resulted in:*

Review of biological criteria for passage (addition of USACE and FWS pallid and passage experts); *Resulted in relaxed requirement* that any passage option must provide full river channel width passage.”) (emphasis added).

In short, the scientific evidence remains undisputed that restoring a free-flowing river is the most reliable way to provide for pallid sturgeon spawning and recruitment in the Yellowstone River. In addition, given that the Agencies intend to abandon the efforts at Fort Peck Dam, there is even less room for error with the Intake Project – the fate of the species may rest entirely on this decision and therefore must be the best possible project for the pallid sturgeon.

B. The EIS Must Evaluate at Least One Dam Removal Alternative as Part of a Range of Reasonable Alternatives Under NEPA

Because removal of the dam will most fully and reliably fulfill Reclamation’s mandate to comply with the ESA with respect to Intake Dam and thereby be most likely to meet the purpose of the Project, the Agencies must consider at least one such alternative as part of the EIS in order to comply with NEPA.

NEPA’s goal is twofold. First, it requires federal agencies to evaluate the environmental impacts of their actions. Marsh v. ONRC, 490 U.S. 360, 371 (1989). Through this review, NEPA ensures agencies make informed decisions before taking action. Id. at 371 (“By so focusing agency attention, NEPA ensures that the agency will not act on incomplete information, only to regret it decision after it is too late to correct.”) (citation omitted); Bob Marshall Alliance v. Hodel, 852 F.2d 1223, 1228 (9th Cir. 1988) (“The goal of the statute is to ensure ‘that federal agencies infuse in project planning a thorough consideration of environmental values’”) (citation omitted). Second, NEPA provides a mechanism for the public to learn about and comment on the impacts of a proposed action. Marsh, 490 U.S. at 371.

To further these goals, NEPA requires agencies to “study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternatives use of available resources.” 42 U.S.C. § 4332(2)(E), (2)(C). The alternatives analysis is characterized as “the heart” of the EIS. 40 C.F.R. §1502.14. In the EIS, the agency must “[r]igorously explore and objectively evaluate all reasonable alternatives” in response to a “specif[ied] . . . purpose and need.” 40 C.F.R. §§ 1502.13, 1502.14(a) (emphasis added). As the Ninth Circuit has explained,

NEPA’s requirement that alternatives be studied, developed, and described both guides the substance of environmental decisionmaking and provides evidence that the mandated decisionmaking process has actually taken place. Informed and meaningful consideration of alternatives – including the no action alternative – is thus an integral part of the statutory scheme.

Bob Marshall Alliance, 852 F.2d at 1228 (internal citations omitted).

The existence of a viable but unexamined alternative renders an environmental impact statement inadequate. Citizens for a Better Henderson v. Hodel, 768 F.2d 1051, 1057 (9th Cir. 1985) (citation omitted). The “touchstone” for determining whether an agency’s range of alternatives is reasonable “is whether an EIS’s selection and discussion of alternatives fosters informed decision-making and informed public participation.” Westlands Water Dist. v. U.S. Dep’t of Interior, 376 F.3d 853, 872 (9th Cir. 2004) (quoting Calif. v. Block, 690 F.2d 753, 767 (9th Cir. 1982)). This means that an agency may not eliminate from consideration any alternatives that are “more consistent with its basic policy objectives than the alternatives that were the subject of final consideration.” Muckleshoot Indian Tribe v. U.S. Forest Service, 177 F.3d 800, 813 (9th Cir. 1999).

As noted above, dam removal is the best means of providing for pallid sturgeon spawning and recruitment in the Yellowstone and avoid jeopardizing the species – the fundamental purpose of the Project. Further, as described below, such an alternative can fulfill the Agencies’ purpose and need. Thus, a viable dam removal alternative must be considered in detail in this EIS. See Muckleshoot, 177 F.3d at 813. Absent such an alternative, neither the public nor decision-makers can make a fully informed decision about the tradeoffs involved in choosing any particular alternative. See Block, 690 F.2d at 767 (holding that agency failed to consider a range of reasonable alternatives because it did not evaluate an alternative with significant wilderness protection in order to provide an analysis of the “trade-off between wilderness use and development”).

Dam removal alternatives also meet the Agencies’ additional purpose of maintaining the viability of the Lower Yellowstone Project (LYP). The Agencies have never defined what “maintaining the viability” of the LYP means, but the primary concern appears to be minimization of operations and maintenance (O&M) costs. Defenders’ and NRDC’s conceptual alternative, described below, meets this stated need.

C. The Agencies’ Prior Rationales for Eliminating Dam Removal Alternatives from Detailed Consideration Were Arbitrary

Even though there is no scientific dispute that a dam removal alternative would best fulfill the fundamental purpose of the Intake Project – complying with the ESA – the Agencies have repeatedly rejected these alternatives from detailed consideration based on an economic, rather than biological, rationale. This rationale was and remains arbitrary and cannot serve as the basis for failing to complete a detailed consideration of such an alternative.

Specifically, the Agencies have rejected dam removal alternatives based on two different kinds of costs, even though only one appears to relate to the Agencies’ stated purpose and need: (1) construction costs; and (2) O&M costs. The Corps intends to pay the construction costs, which means they will not be passed on to the irrigation districts. Thus, construction costs do not affect the purpose and need of maintaining the viability of the LYP. Moreover, so long as the Corps envisions this Project as a means of abandoning required modifications at Fort Peck Dam, the scale of construction costs, whatever they may be, must be measured against the “saved” costs of abandoning the

Fort Peck operational modifications. These “savings” must be fully explained in the NEPA analysis as well. Regardless, construction costs have no effect on the Agencies’ additional purpose and need and cannot serve as a basis to eliminate a dam removal alternative from detailed consideration.

The second kind of costs, for O&M for the chosen alternative, are generally paid for by the irrigation districts. However, the Agencies have never disclosed the current financial status of the irrigation districts, how various O&M costs might affect the viability of the LYP, or even what the standard is for “viability.” Instead, there appears to have been a presumption that any increase in O&M cost would mean the Project could not meet the additional purpose and need. See FWS-4960-4961 (FWS official noting that “the irrigators have enlisted congressional inquiry to ensure full implementation of the project **does not result in any** added costs to the irrigators”) (emphasis in original).

Neither set of costs should affect the analysis of whether an alternative complies with the ESA – the fundamental purpose of the Intake Project. Indeed, limiting the range of alternatives based on costs would unduly narrow this fundamental purpose. See City of Carmel-by-the-Sea v. U.S. Dep’t of Transp., 123 F.3d 1142, 1155 (9th Cir. 1997) (“The stated goal of a project necessarily dictates the range of ‘reasonable’ alternatives and an agency cannot define its objectives in unreasonably narrow terms.”).

In any case, the Agencies’ concerns in the past regarding O&M costs are likely moot because Defenders’ and NRDC’s conceptual alternative eliminates the Agencies’ main concern: electricity costs for pumping water to the irrigation canal. As described below, Defenders’ and NRDC’s expert consultant has demonstrated that the purchase of a windmill would convert potential O&M costs to a capital cost and would provide free electricity for the LYP. Alternatively, the Agencies could also lease the electricity from a wind farm to substantially reduce estimated power costs, and could apply for subsidized power rates through various means. All of these options would significantly reduce or eliminate the primary concern for the irrigation districts, as stated in prior NEPA documents.

In short, the Agencies must evaluate a no-dam alternative in detail in this EIS regardless of the costs of that alternative so that the decision-makers and the public can fully understand both the costs and the benefits. If the Agencies consider alternatives that do not comply with the ESA – such as the 2015 decision to adopt the dam/bypass channel – they are not viable alternatives and cannot be adopted in compliance with federal law, regardless of their cost.

D. The Agencies Should Explore Alternative Funding

At present, the Corps alone is funding the Intake Project. Part of the Corps’ apparent rationale for doing so is to be excused from at least some of its ESA driven obligations to modify its Fort Peck Dam operations as required by the 2003 BiOp, discussed above. However, as also discussed above, Reclamation has obligations under the ESA independent of those of the Corps and is also in violation of the ESA concerning

its existing Intake Dam operations. Accordingly, as the Intake Project is proposed to cure both the Corps' and Reclamation's violations of the ESA it appears reasonable that Reclamation also provide funding for the Project. It makes little sense that one agency alone be responsible for funding activities vital to both agencies' compliance with the law. The EIS should examine alternative funding mechanisms for both agencies to pay for at least a portion of the Intake Project, while minimizing impacts on irrigators.

For example, when similar ESA non-compliant operations impeded Reclamation's ability to deliver water to local irrigators along the Sacramento River in the Central Valley Project, congressional and state funding helped pay for an ESA-compliant pumping system as an alternative to a dam that impeded fish passage. The agencies should analyze the approach taken to fund the Fish Passage Improvement Project at the Red Bluff Diversion Dam³ and similar projects and determine the full range of funding options available here.

III. THE AGENCIES SHOULD FULLY ANALYZE AND CHOOSE DEFENDERS' AND NRDC'S PROPOSED DAM REMOVAL ALTERNATIVE

A. Defenders' and NRDC's Conceptual Alternative Would Provide the Best Opportunity for Pallid Sturgeon Spawning and Recruitment on the Yellowstone River and Fulfill the Agencies' Stated Purpose and Need

Consistent with the stipulation staying the above-mentioned litigation, Defenders and NRDC submitted a draft conceptual dam removal alternative that would provide for pallid sturgeon spawning and recruitment on the Yellowstone River on January 15, 2016. A slightly modified version, based on information obtained after January 15, is attached to this comment letter as Attachment 1, with supporting attachments A-G. This alternative has several essential components:

- Implementation of water conservation measures and an alternative water source that would reduce the amount of water needed to be diverted by approximately 766 cfs;
- Delivery of needed irrigation water via a pumping system;
- Gravity diversions through the existing headworks when the river is high enough to reduce the amount of pumping electricity needed;
- Use of free wind energy to eliminate pumping electricity costs for the irrigation districts.

Removing the existing rock dam is the best way to fully restore the Yellowstone River for pallid sturgeon migration and provide an opportunity for successful spawning

³ For more information about the project, see <http://www.tccanal.com/RBDD-Bro-Sept2012-NoCrop.pdf> (Attachment 30); http://www.usbr.gov/mp/2010_accomp_rpt/accomp/red_bluff/ (Attachment 31); http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=237.

and recruitment. This alternative also meets the additional purpose and need for the Project with respect to maintaining the viability of the LYP. With this alternative, the O&M costs for electricity – a significant concern in past NEPA processes – are zero.

B. Water Conservation Measures are an Essential Element of This or Any Dam Removal Alternative

One critical aspect of this alternative that has not been considered in detail by the Agencies in their prior NEPA processes is the implementation of a suite of conservation measures. The LYP diverts far more water than it actually delivers. Approximately 66% of the water that is diverted is wasted through seepage, evaporation, spillage, or some other means. See Attachment 1 at 5. In addition, conversion of fields to sprinkler systems would significantly reduce the amount of water needed on-farm. See id. at 8. Implementing water conservation measures would reduce these inefficiencies and reduce the amount of water that needs to be diverted. As a result, the capital costs and electricity needs for pumps would be reduced significantly. Id. at 10-11. In contrast, a dam removal alternative that does not include water conservation will have unnecessary costs built in that do not provide a fair picture of the true costs of a dam removal alternative.

During our discussions with the Agencies over the course of the scoping period, there was some ambiguity about how the Corps interprets its authority to implement water conservation measures as part of a dam removal alternative. Our understanding is that the Corps currently interprets its authority to implement such measures to be co-extensive with Reclamation's authority. Reclamation, in turn, interprets its authority to implement such measures to be applicable to all components that the agency owns – roughly speaking, the off-farm aspects of the irrigation districts such as canals, pipes, and other fixtures. Defenders and NRDC agree with these interpretations. We emphasize the Agencies' authority here due to the importance of considering water conservation measures as part of any dam removal alternative.

1. The Corps Has Authority to Implement Water Conservation Measures as Part of the Intake Project

The Corps and Reclamation have co-extensive authority to fund and implement water conservation measures, at least where they involve the “off-farm” irrigation infrastructure. As described above, the Corps' authority is based in section 3109 of the Water Resources Development Act of 2007, P.L. 110-114, 121 Stat. 1041 § 3109, which authorizes the Corps to use Missouri River Recovery Program funds to “*assist the Bureau of Reclamation in the design and construction of the Lower Yellowstone project of the Bureau, Intake, Montana...*” The Lower Yellowstone Project (LYP), also called the Lower Yellowstone Irrigation Project (LYIP), is owned by Reclamation and includes 71 miles of the main canal, 225 miles of laterals, 118 miles of drains, and three pumping plants. See BOR-1955-1966 (2015 Amended Biological Assessment describing background of Lower Yellowstone Irrigation Project). Accordingly, Reclamation owns the canal, laterals, and other facilities that would be upgraded through water conservation

and efficiency, and plainly has authority to make changes to its own property.⁴ Because the Corps' authority in this case is co-extensive with Reclamation's authority, both Agencies have the ability to fund and implement conservation measures throughout Reclamation-owned irrigation facilities.

This interpretation is supported by the Corps' Implementation Guidance for Section 3109, dated December 12, 2008, which contains no limitations that would impede the agency's ability to authorize and fund conservation measures as part of the Intake Project. See Attachment 2. The Implementation Guidance broadly reiterates that the purpose of the authorization is "endangered species recovery and ecosystem restoration following provisions of the Missouri River Recovery Program." Id. at 2. "Ecosystem restoration" is a term frequently used in other WRDA provisions, and is consistently applied to mean just what it says: comprehensive watershed restoration through various means. For example, in 2004, under the authority of Section 206 of the 1996 WRDA, which more generally authorizes projects for "ecosystem restoration," the Corps authorized a fish passage project on the Mill River that involved removing a dam, removing the concrete retaining walls around the pond that had formed behind the dam, and removing 18,600 cubic yards of sediment. See <http://www.nae.usace.army.mil/Portals/74/docs/Topics/MillRiver/FONSI.pdf> (Attachment 8). As part of the project, the Corps authorized planting native woody and herbaceous vegetation and removing invasive plant species in order to enhance the riparian corridor; re-grading banks and planting native salt marsh vegetation to create and restore tidal wetlands, and even incorporating a trail system to connect the greenway and parks along the river corridor. Id. This project illustrates the comprehensive nature of ecosystem restoration, which is not limited to building new structures in the river itself. Indeed, the Corps touts its broad authority and problem-solving ability on its website: "The [Corps] works to restore degraded ecosystems to a more natural condition through large-scale ecosystem restoration projects. . . and by employing *system-wide watershed approaches* to problem solving and management for smaller ecosystem restoration projects." See <http://www.usace.army.mil/Media/NewsArchive/StoryArticleView/tabid/232/Article/477888/what-is-ecosystem-restoration.aspx> (emphasis added) (Attachment 9). Implementing water conservation measures – which would update federally-owned property that was designed and built more than 100 years ago and reduce the costs of restoring the Yellowstone River – is the very definition of a "system-wide watershed approach to problem solving."

Further, not only is the LYP owned by Reclamation, but Reclamation regularly engages in water conservation and efficiency upgrades for its irrigation projects across the West. Indeed, through the WaterSMART program, established in 2010, Reclamation is specifically "[f]ocused on improving water conservation and helping water and resource managers make wise decisions about water use."

⁴ Reclamation also owns the water rights with the irrigation districts, lending further support to Reclamation's ability to improve the efficiency of that right.

<http://www.usbr.gov/watersmart/water.html> (Attachment 10).⁵ Under this program, Reclamation is authorized to “work with States, Tribes, local governments, and non-governmental organizations to pursue a sustainable water supply for the Nation by establishing a framework to provide federal leadership and assistance on the efficient use of water, integrating water and energy policies to support the sustainable use of all natural resources, and coordinating the water conservation activities of the various Interior offices.” *Id.* Moreover, the WaterSMART program provides grants and other funding assistance to improve water conservation and sustainability. *See, e.g.,* <http://www.usbr.gov/newsroom/newsrelease/detail.cfm?RecordID=51707> (Attachment 11). For example, in Montana, WaterSMART helped fund a partnership between local ranchers and landowners and Trout Unlimited to implement efficient new center-pivot irrigation systems, 2,000 feet of new lined canal and 2,310 feet of PVC pipe, and a new bypass canal and pipe for water delivery. *See* <http://www.trcp.org/images/uploads/wygwam/TRCP-Montana.pdf> (Attachment 12).

Similarly, the Buffalo Rapids Project immediately upstream of the LYP illustrates the availability of funding and effectiveness of water conservation measures in reducing costs for the LYP. Buffalo Rapids Irrigation District uses a large irrigation pumping system that provides Yellowstone River water to the Glendive, Fallon, and Terry areas. *See* “Yellowstone River Historic Events Timeline,” Final Report, November 17, 2008, at 21-22 (Attachment 13), available at: ftp://ftp.geoinfo.msl.mt.gov/Documents/Projects/Yellowstone_River_Clearinghouse/Events_Occurrences_Final_Report_111708.pdf. The Buffalo Rapids Project – a Reclamation project started in the late 1930s – consists of six pumping plants and 63 miles of canal, which provides irrigation water for 22,719 acres of land. *Id.*; *see also* http://www.usbr.gov/projects/Project.jsp?proj_Name=Buffalo+Rapids+Project (Attachment 14). Buffalo Rapids Irrigation District has already converted much of their infrastructure in the same manner proposed in Defenders’ and NRDC’s conceptual alternative. For example, the Buffalo Rapids Irrigation District has converted 82-95% of their open ditches to pipelines. *See* 5/23/2013 Legislative Hearing on H.R. 1963, Bureau of Reclamation Conduit Hydropower Development Equity and Jobs Act, Written

⁵ More generally, according to the agency’s press materials, Reclamation has prioritized water conservation in distributing its Congressional funding. For example, on February 8, 2016, Reclamation issued a press release describing its spending plan from the Consolidated Appropriations Act of 2016. Commissioner Estevan López stated in this release, “Reclamation and its partners have created a spending plan that will help ensure sustainable water supplies across the Western United States. The funding will go toward conservation and improving long-term infrastructure and environmental work on key water projects.” <http://www.usbr.gov/newsroom/newsrelease/detail.cfm?RecordID=52587>. The implementation of water conservation and efficiency measures is consistent with the President’s announcement in December of a new Public-Private Innovation Strategy to Build a Sustainable Water Future. *See* <https://www.whitehouse.gov/the-press-office/2015/12/15/fact-sheet-administration-announces-public-private-innovation-strategy>.

Testimony of Michael Carlson, Manager of Buffalo Rapids Irrigation District #1, at 1-2 (Attachment 15), available at: <http://naturalresources.house.gov/uploadedfiles/carlsontestimony05-23-13.pdf>. These improvements were paid for through “financial support from the District, the State of Montana, the [U.S. Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS) Environmental Quality Incentives Program (EQIP)] cost share program and the many farmers.” *Id.* at 2. Through their water conservation efforts, Michael Carlson, then-District Manager, testified in 2013 that the District had reduced water usage by 25% and reduced pumping costs by \$100,000/year. *Id.* Mr. Carlson also stated that farmers were “rapidly converting their fields to sprinklers to further reduce costs, improve irrigation efficiency and crop yields.” *Id.* According to the NRCS, one center-pivot irrigation project cost more than \$484,000 but is expected to yield approximately \$2.3 million/year in benefits to the local economy. *See* Attachment 16, available at: ftp://ftp.geoinfo.msl.mt.gov/Documents/Projects/Yellowstone_River_Clearinghouse/Events_Occurrences_Final_Report_111708.pdf.

As noted by Mr. Carlson, the EQIP cost-share program provides financial and technical assistance to agricultural producers on a voluntary basis in order to “plan and implement conservation practices that improve soil, water, animal, air and related natural resources on agricultural land and non-industrial private forestland.” *See* <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip/> (Attachment 17). NRCS has multiple programs designed to provide financial assistance to farmers and ranchers and improve agricultural practices for the benefit of natural resources. *See* <http://www.nrcs.usda.gov/wps/portal/nrcs/main/mt/programs/> (Attachment 18).

In other words, there is no impediment to planning and implementing the design and funding of water conservation measures. Such measures would reduce the costs to the federal government of a dam removal alternative, help provide for the restoration of the Yellowstone River for the pallid sturgeon and benefit the irrigation districts.

2. The Agencies Must Consider Viable Conservation Measures Even if These Measures are Outside of Their Authority

Even if some of the water conservation measures proposed in Defenders’ and NRDC’s conceptual alternative would require other agencies’ participation and funding, the Agencies must still evaluate them as part of the dam removal alternative. An agency must include reasonable alternatives that are “not within the jurisdiction of the lead agency.” 40 C.F.R. § 1502.14(c). “An agency’s refusal to consider an alternative that would require some action beyond that of its congressional authorization is counter to NEPA’s intent to provide options for both agencies and Congress.” *NWF v. NMFS*, 235 F. Supp. 2d 1143, 1154 (W.D. Wash. 2002) (“NWF”) (citing *Natural Resources Defense Council v. Morton*, 458 F.2d 827, 836 (D.C. Cir. 1972), overruling on other grounds recognized by *Idaho Rivers United v. U.S. Army Corps of Engineers*, 2015 WL 9700887, at*5 (W.D. Wash. 2015)). Courts have repeatedly rejected NEPA analyses that fail to evaluate alternatives that require non-agency funding or actions. *See Muckleshoot*, 177

F.3d at 814 (rejecting range of alternatives because Forest Service failed to consider the option of purchasing private land outright with funds from the Land and Water Conservation Fund instead of brokering an exchange); NWE, 235 F. Supp. 2d at 1154-55 (rejecting failure to analyze an alternative outside of Corps' authority because it would meet the basic policy objective).

Reclamation has previously stated that it does not have authority to implement “on-farm” conservation measures such as center-pivot irrigation systems. Other federal agencies do have this authority, however. For example, the NRCS provides funding for on-farm conservation measures through its EQIP program. As in Muckleshoot and NWE, these measures must be included as part of the NEPA analysis because they provide important means of reducing the construction costs of a dam removal alternative. We recommend that the Agencies invite NRCS to be a cooperating agency in the NEPA process, as provided by 40 C.F.R. § 1501.6.

IV. THE AGENCIES MUST TAKE A “HARD LOOK” AT THE IMPACTS OF EACH ALTERNATIVE TO COMPLY WITH NEPA

For each alternative in the EIS, NEPA requires the Agencies to carefully and thoroughly describe the environmental consequences of that action, including its direct and indirect effects. See 40 C.F.R. §§ 1502.16(a), (b), 1508.25(c). “Direct effects” are those “caused by the action and occur at the same time and place.” Id. § 1508.8(a). “Indirect effects” are those “caused by the action and [] later in time or farther removed in distance, but still [] reasonably foreseeable.” Id. § 1508.8(b). These effects “may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial.” Id. § 1508.8.

A. The Agencies Must Take a “Hard Look” at the Consequences of Each Alternative on Pallid Sturgeon Survival and Recovery

As described above, the core purpose of the Intake Project is to remedy the Agencies' ongoing ESA violations. Thus, the scope of the NEPA analysis must be commensurate with that purpose. The Ninth Circuit has held that the scope of a NEPA analysis is determined in part by the relevant substantive statute driving the action – here, the ESA. See Montana Wilderness Ass'n v. Connell, 725 F.3d 988, 1002 (9th Cir. 2013) (noting that “NEPA analysis should be informed by the laws driving the federal action being reviewed”) (citations omitted); ONDA v. BLM, 625 F.3d 1092, 1109-12 (9th Cir. 2008) (finding that agency must evaluate affected wilderness values where underlying statute requires agency to balance multiple uses, including wilderness resources). As noted above, in the preliminary injunction ruling, the Court agreed that an analysis of impacts to pallid sturgeon recovery is required in an EIS. See Defenders of Wildlife, CV-15-14-GF-BMM, Dkt. # 73 at 12 (“The new analysis should include the anticipated effects of the Project on the recovery of pallid sturgeon.”) (citation omitted).

Such an analysis would address whether and how each alternative will move the pallid sturgeon closer to achieving the 2014 Recovery Plan’s goal of a self-sustaining population of 5,000 adult fish in the upper Missouri River basin, including what percentage of the adult sturgeon are expected to migrate upstream under a new plan; their likelihood of successfully spawning and in what numbers; the likelihood of their larvae surviving the downstream drift and in what numbers, whether and why the Yellowstone River alone would be enough to re-establish a viable, self-sustaining population, and any other relevant factors. The EIS must take a “hard look” at the consequences of every alternative to the status of the species under every alternative, in light of ESA standards.

B. The Agencies Must Fairly Evaluate the No-Action Alternative and Disclose That Current Operations are Illegal and Past Operations Will Not Continue

NEPA requires the Agencies to evaluate a “no-action” alternative. See 40 C.F.R. §§ 1502.14(d), 1508.25(b)(1). This alternative is intended to provide an analysis of the status quo and establish a baseline against which the other alternatives may be measured. Id. § 1502.14(b); Ctr. for Biological Diversity v. U.S. Dep’t of Interior, 623 F.3d 633, 645 (9th Cir. 2010) (“It is black letter law that NEPA requires a comparative analysis of the environmental consequences of the alternatives before the agency,” including the no-action alternative); N. Carolina Wildlife Fed’n v. N. Carolina Dep’t of Transp., 677 F.3d 596, 603 (4th Cir. 2012) (“Without [accurate baseline] data, an agency cannot carefully consider information about significant environment impacts ... resulting in an arbitrary and capricious decision.”) (citing N. Plains Res. Council, Inc. v. Surface Transp. Bd., 668 F.3d 1067, 1085 (9th Cir.2011)). The analysis must be informed by what others are likely to do if the agency chooses not to act. “Where a choice of ‘no action’ by the agency would result in predictable actions by others, this consequence of the ‘no action’ alternative should be included in the analysis.” Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations, at 4-5, available at: <http://energy.gov/sites/prod/files/G-CEQ-40Questions.pdf>.

Here, the “no-action” alternative – meaning no modifications to Intake Dam to create fish passage – should not be “continue present operations,” as described in the 2015 Final EA at 2-1 – 2-3. “Continu[ing] present operations” would be illegal. Present operations allow the re-construction of the dam each year, which violates sections 7 and 9 of the ESA, as described above.⁶ The 2015 BiOp conceded that the current “injury” to breeding for pallid sturgeon would continue as long as the existing dam was re-built each year. 2015 BiOp at 30-32. The 2015 BiOp also conceded that the existing dam operations “take” 32 adult sturgeon per year. Id. at 33. The 2015 BiOp’s no-jeopardy

⁶ The “no-action” alternative also likely violates the Clean Water Act, 33 U.S.C. § 1344 because Reclamation has never obtained a Section 404 permit for the “rocking.” The Corps has apparently relied on the exemption in section 404(f)(1)(C) to section 404’s requirements, but this exemption “for the purpose of construction or maintenance of farm or stock ponds or irrigation ditches, or the maintenance of drainage ditches” does not apply here. 13 U.S.C. §1344(f)(1)(C).

conclusion and ITS were based on the idea that the construction of the dam/bypass channel by 2017 would alleviate the harm to pallid sturgeon and avoid causing jeopardy to the species. *Id.* at 30-35. That conclusion is no longer even facially valid (to the extent it ever was) because the dam/bypass channel has been enjoined and the Agencies are currently engaging in a new NEPA analysis that should result in an entirely different resolution with an unknown timeline for implementation. Thus, the alleged mitigating factor – immediate commencement of the construction of the dam/bypass channel – is no longer in place. Because the present operations are violating the ESA, continuation of these operations as part of the “no-action” alternative is unrealistic and cannot serve as the baseline comparison for the EIS. See Friends of Yosemite Valley v. Kempthorne, 520 F.3d 1024, 1038 (9th Cir. 2008) (holding that agency “did not set forth a true ‘no-action’ alternative because” the alternative assumed the existence of a plan that the court has already found to be invalid). As the Ninth Circuit has explained, an agency “cannot properly include elements from [an illegal] plan in the no action alternative as the status quo....” *Id.*

Instead, if the Agencies chose not to modify the Dam through an action alternative, that decision would precipitate a series of predictable, and legally required, actions by others. The predictable results would be that the rocking would be prohibited because it is illegal and the dam would eventually naturally erode away, or Reclamation would finally comply with the law and actively remove the barrier. The Agencies must analyze the consequences of those realistic, predictable scenarios. See Ctr. for Biological Diversity, 623 F.3d at 645-46, (holding that EIS “must make a meaningful comparison of the environmental consequences of [the applicant’s] likely mining operations” both with and without the additional regulations that would apply under the no action alternative).

In the 2015 Final EA, the Agencies acknowledged the reality that the rocking could not continue. 2015 Final EA at 2-1 (Under the no-action alternative “it is likely that Reclamation would be obligated to continue consultation with the Service under Section 7(a)(2) of the ESA, with fish passage being a requirement at Intake Diversion Dam”). Nonetheless, the Agencies stated that for purposes of the EA’s analysis, “the future without project condition consists of continued operation of Intake Diversion Dam without modification for improved fish passage.” *Id.* The EA used this alternative as “a baseline from which to measure benefits and impacts of implementing fish passage improvement alternatives considered in this document.” *Id.*

The problem with this analysis is that when presented against an illegal, unrealistic baseline where there is no fish passage, every alternative can, at least theoretically, be analyzed as a “benefit.” But the no-action alternative would also present a benefit – at worst, the dam would be allowed to erode away and fish passage would eventually be restored; at best, Reclamation would be finally forced to comply with the ESA and provide for immediate passage. Either way, the comparison between the action alternatives and the no-action alternatives should compare the consequences of different means of providing passage – not whether the action alternatives are a benefit, no matter how minute, over no passage at all. Such an analysis would acknowledge that the pallid

sturgeon has been nearly extirpated as a result of past actions, but would assume that those past actions cannot continue under any scenario.

C. To the Extent the Agencies Evaluate a Dam/Bypass Channel Alternative, the Agencies Must Disclose all of its Impacts

Defenders and NRDC urge the Agencies to abandon their prior decision to adopt the dam/bypass channel. Adopting this alternative will likely drive the pallid sturgeon to extinction in Montana, permanently foreclose recovery of this ancient species in the Yellowstone River, and involve the construction of a concrete dam that will permanently block the migrations of many other native fish species along with the pallid sturgeon. This alternative is not supported by the best available science and has no precedent for success. Indeed, we are not aware of any examples of a successful artificial bypass channel for pallid sturgeon in the Missouri or Mississippi River systems.

In general, the available evidence suggests that fish passage facilities for other targeted species often fail to pass high numbers of fish. See, e.g., Noonan *et al.*, *A quantitative assessment of fish passage efficiency*, (2012) (Attachment 19) (study referenced in Braaten *et al.*, finding that at existing fish passage facilities in the northeast United States, upstream passage for non-salmonids was only 21.1%); Brown *et al.* (Attachment 20) (“It may be time to admit failure of fish passage and hatchery-based restoration programs and acknowledge that significant diadromous species restoration is not possible without dam removals.”); http://e360.yale.edu/feature/blocked_migration_fish_ladders_on_us_dams_are_not_effective/2636/ (article summarizing findings) (Attachment 21). A 2015 study on the Yellowstone River specifically noted that pallid sturgeon may have an even lower success rate than other species:

Although improving, ecological engineering (Mitsch 2012) applied to designs of fish passage structures has generated limited success in passing fishes as noted by Noonan *et al.* (2012) in their review of 50 years of fish passage studies. Furthermore, designs of fishways or devices engineered for sturgeon passage must consider that sturgeons have reduced swimming capabilities and unique behavioral and morphological attributes relative to other fishes (e.g. salmonids, Peake et al. 1997) for which passage structures have traditionally been developed.

Braaten, *et al.*, *Migrations and swimming capabilities of endangered pallid sturgeon (Scaphirhynchus albus) to guide passage designs in the fragmented Yellowstone River*, (2015) at 191 (Attachment 22).

Moreover, Braaten *et al.* noted that there was little information about pallid sturgeon use of natural side channels prior to their own study and that pallid sturgeon use of these channels is inconsistent and not well understood. *Id.* at 192. The Braaten study “identified that pallid sturgeon will use side channels as a component of the migration pathways. However, side channel use was not consistent among migrating pallid sturgeon to suggest that a by-pass channel might be used by some but not all individuals.”

Id. at 193. In light of this and other data, the 2015 BiOp’s summary conclusion that every adult sturgeon that swam to Intake would find and use the artificial bypass (see 2015 BiOp at 29) was unsupported by scientific evidence.

Thus, even if some sturgeon use the artificial bypass, it will be a small fraction of the potential breeding population. The inevitable result will be further genetic degradation and high probability of reproductive failure simply due to stochastic effects on small populations, made smaller by the process of limiting access to the breeding reaches of the river to a handful of individuals. Indeed, truncating the breeding population of an already small, fragmented endangered population of any organism is tantamount to ensuring its demise for a host of reasons – genetic, ecological, and behavioral. See, e.g., Hildebrand and Kershner, *Conserving Inland Cutthroat Trout in Small Streams: How Much Stream is Enough?* (2000) (Attachment 23). This is biologically unsustainable, and unacceptable conservation practice. The best science informing this situation requires providing the maximum access to the full range of breeding possibilities for sturgeon, and this can only be accomplished by access to the full flow of the river.

More fundamentally, the EA must analyze what factors have precluded the pallid sturgeon from successfully reproducing so far, even though a handful of sturgeon swam past Intake in 2014 and 2015 and may have done so for years prior to the monitoring being in place. As one former member of the Missouri River Recovery Implementation Committee (MRRIC) summarized the problem in 2014, “[i]f the Pallid have been using the old side channel and therefore spawning above Intake as No. 36 did, why haven’t we had the recruitment promised by the scientists who support building the new side-channel?” ACE-3600. The reasons for the recruitment failure could be related to many factors, including, but not limited to, the fact that the numbers of individuals successfully migrating upstream are too few, that larvae cannot survive the journey downstream with a dam at Intake and/or due to other hazards, or that the drift distance is too short from the point at which the pallid sturgeon have spawned so far. These and other factors that would indicate why the small number of pallid sturgeon currently passing the dam are insufficient for successful recruitment must be analyzed and addressed. Otherwise, any plan to construct more facilities in the Yellowstone River will sentence the species to near-certain extinction by making an unsustainable situation even worse.

If the Agencies re-analyze the dam/bypass channel adopted in the last EA, the Agencies must provide the public with a much more thorough analysis to comply with NEPA. In the 2015 EA, the Agencies hypothetically analyzed the technical suitability of the channel for upstream migration, but never analyzed the scientific evidence indicating whether or not pallid sturgeon would actually use the channel.⁷ Moreover, the Agencies

⁷ However, even the technical suitability of the bypass channel is unsupported by the best available science. As the BRT explained, “[p]roviding passage for pallid sturgeon (and all other fish species) is the purpose of this action. However, the decision appears to have been based primarily on irrigation efficiency by choosing a very conservative flow split at the expense of being generous about whether that flow split

failed to evaluate whether larvae, juveniles, or adults will survive the migration downstream. As FWS Director Jeff Hagener explained in a letter to FWS in 2013, “[s]pecies are not recovered just because flows are engineered to ‘accepted’ standards. Species are recovered when biological parameters such as spawning, recruitment, and survival are met.” BOR-5981.

FWS made a last-minute attempt in the 2015 BiOp to fill in the analytical hole in the Agencies’ 2015 EA related to survival of pallid sturgeon larvae by comparing the pallid sturgeon to shovelnose sturgeon in a manner not mentioned in the 2015 Final EA. However, that attempt does not comply with the ESA or NEPA and should not be substituted for a thorough analysis of larval survival in the forthcoming EIS process. Specifically, FWS predicted – without supporting analysis – that the new concrete dam’s impacts to the pallid sturgeon would be similar, proportionately, to the existing dam’s impacts on the shovelnose sturgeon. See 2015 BiOp at 27-28. Yet, shovelnose sturgeon are stable and self-sustaining in the Yellowstone, despite the presence of the new dam, and pallid sturgeon are not. Id. at 28. The biological reason for the two species’ differing success rates was never explained. Without some explanation, there is no scientific basis to assume that the two subspecies would react the same way to the new dam, even though they react different ways to the existing dam. Moreover, even if FWS’s premise was sound, there is no scientific basis to assume that the same percentage of larvae will die on a concrete dam and downstream rock field as currently die at the existing rock dam. This surrogate was also adopted even though the Agencies did not yet even know what percentage of shovelnose sturgeon larvae die at the existing rock dam. Id. at 35 (requiring Reclamation to “[w]ork with appropriate parties... to establish monitoring plan” and setting deadline of December 31, 2015 to “discuss goals, strategy and logistics of monitoring shovelnose sturgeon for a baseline”). To the extent the Agencies have put a monitoring program in place since that time, the findings and limitations of such monitoring must be clearly explained in the EIS.

Similarly, the Agencies’ prior plan to fill in the natural side channel – even though a handful of pallid sturgeon have used it in the past – has no scientific support. See ACE-3599 (“No credible biologist, I know, would even consider a plan to destroy a used side-channel in favor of one Pallids may, or may not, use.”). The artificial side channel would be heavily armored and would likely require regular dredging to maintain, operating more as a ditch than as a natural wetland that it is replacing. Natural side channels are important for fish passage and habitat. See, e.g., Reinhold *et al.*, Anthropogenic Habitat Change Effects on Fish Assemblages of the Middle and Lower Yellowstone River, (2014) at 35-118 (Attachment 24). Natural side channels are disappearing on the lower Yellowstone, largely as a result of the human-built environment. Id. at 16-34. Yet the dam/bypass channel essentially called for destruction of a natural, functioning side channel in order to replace it with a human-constructed side channel that may not have the nuanced characteristics common of side channels on the

could effectively pass fish.” FWS-4825. To the extent the Agencies include the dam/bypass channel as a potential alternative in the EIS, the Agencies must evaluate and disclose the best available science relating to technical aspects of the bypass channel.

lower Yellowstone. Not only would the dam/bypass channel contribute to a negative trend of fewer natural side channels on the lower Yellowstone, this alternative would place more faith in a conceptual design that hopes to mimic a side channel rather than simply allowing a natural, functioning side channel to continue to exist.

Finally, even if the dam/bypass channel had a valid scientific basis (which it did not), the design of the bypass channel apparently continued to evolve after the 2015 Final EA was completed and the FONSI signed. For at least one of the changes, proposed in May 2015, the BRT cautioned that it would cause “some reduction in the probability of pallid sturgeon passage success.” FWS-11978. Such changes – after the completion of the EA and without any public knowledge or input – undermine the purpose of NEPA and any claim that the Intake Project is being adopted with pallid sturgeon passage as a priority.

In short, the Agencies should reject the dam/bypass channel because it does not comply with the fundamental purpose and requirement of this project – to remedy the existing ESA violations at Intake Dam and Fort Peck Dam. To the extent the Agencies evaluate this alternative, the Agencies must fully disclose the impacts to the survival and recovery of the pallid sturgeon.

D. The EIS Must Disclose Impacts to the Entire Ecosystem

The Intake EIS must also evaluate the impacts of every alternative on the migrations and ecological needs of the many other native fish species in the Yellowstone. The Yellowstone River is a high value public resource that provides substantial fish and wildlife habitat, recreational, historic, and aesthetic values. The Lower Yellowstone is one of the most biodiverse and important grassland riverine systems in the northern Great Plains as ranked by both The Nature Conservancy and World Wildlife Fund. See Northern Plains Conservation Network, *Ocean of Grass: A Conservation Assessment for the Northern Great Plains*, (2004) at 106-108 (Attachment 25). There are about 59 fish species in the Yellowstone River, 37 of which are native. See U.S. Army Corps of Engineers, Technical Appendix 8: Fisheries, at 1-1 (Attachment 26). At least seven imperiled fish species besides the pallid sturgeon inhabit the lower Yellowstone River and its tributaries, as well as Montana fish species of concern and sportfish sauger, paddlefish, burbot, trout-perch, channel catfish, and shortnose gar. The Intake EIS must address the impacts of all of the potential alternatives on the Yellowstone River fish community.

The alternative chosen could also alter the public’s ability to use and appreciate the Yellowstone River. For instance, diversion dams along the Yellowstone currently pose a threat to recreational boaters. Any decision to place a permanent structure across the river could have safety implications for public use, while removing the existing structure would likely improve the safety and experience for recreational boaters.

In addition, the Agencies should take into account any potential impacts of climate change. Recent CEQ Guidance requires the Agencies to incorporate climate change

impacts into the NEPA process. See <https://www.whitehouse.gov/administration/eop/ceq/initiatives/nepa/ghg-guidance>. The Corps' Climate Change policy states, "It is the policy of USACE to integrate climate change preparedness and resilience planning and actions in all activities for the purpose of enhancing the resilience of our built and natural water-resource infrastructure...." See http://corpsclimate.us/docs/USACE_Adaptation_Plan_Policy_2014Jun27_highres.pdf. Similarly, the Secretary of the Department of Interior (which houses Reclamation) issued an order in 2010 stating: "Each bureau and office of the Department must consider and analyze potential climate change impacts when undertaking long-range planning exercises, setting priorities for scientific research and investigations, developing multi-year management plans, and making major decisions regarding potential use of resources under the Department's purview." <http://elips.doi.gov/elips/DocView.aspx?id=155&searchid=b564dce7-ee70-4e7d-a703-84a139203a4a&dbid=0> (Attachment 27). Nonetheless, the Agencies failed to evaluate the resilience of the potential alternatives to changes in climate in the prior NEPA processes. In the upper Missouri River basin, climate change will likely result in changes in precipitation. Flows in the upper Missouri River basin have already been declining in part to decreased snowpack. See Norton, P.A., Anderson, M.T., and Stamm, J.F., 2014, Trends in Annual, Seasonal, and Monthly Streamflow Characteristics at 227 Streamgages in the Missouri River Watershed, Water Years 1960–2011: U.S. Geological Survey Scientific Investigations Report 2014–5053 (Attachment 28). These changes will likely have many different impacts. For example, for the dam/bypass channel, precipitation changes could alter the bypass channel flows, which would alter its use, as well potentially affect the stability of the project and the channel and change downstream sediment transport. These and other impacts of climate change must be assessed in the Intake EIS.

The EIS must also address the resilience of each potential alternative given the fact that the Yellowstone is a highly dynamic, changeable river prone to ice flows, floods, and other natural processes that will undoubtedly alter any engineered structures in the river. The costs of repairing such engineered structures must also be considered as part of the O&M costs associated with each alternative.

V. THE AGENCIES MUST EVALUATE AND DISCLOSE ALL IMPACTS RELEVANT TO THE CORPS' REQUIRED CLEAN WATER ACT SECTION 404 ANALYSIS

In addition to the ESA and NEPA, the Agencies must also comply with section 404 of the Clean Water Act prior to making a final decision on the Intake Project. In the 2015 NEPA process, the Corps relied on the 2015 Final EA adopting the dam/bypass channel alternative for the analysis underlying its CWA section 404 findings. However, although a NEPA analysis may be used to inform the 404 permitting decision, the CWA differs significantly from NEPA in that it has substantive standards and section 404 *prohibits* activities that violate those standards. See Bering Strait Citizens v. Army Corps of Engineers, 524 F.3d 938, 947-48 (9th Cir. 2008). Where the NEPA analysis fails to consider the alternatives "in sufficient detail to respond to the requirements of these

Guidelines,” the Corps should supplement the NEPA documents with additional information. 40 C.F.R. § 230.10(a)(4).

Here, the analysis relevant to determining whether the plan will comply with the CWA should be the same as the analysis under NEPA because both statutes require an analysis of all of the relevant impacts of potential alternatives. However, the prior NEPA process did not provide sufficient information or analysis to inform the section 404 findings. Accordingly, Defenders and NRDC provide the following framework of analysis for the CWA standards and urge the Agencies to fully disclose the impacts that relate to these standards.

The CWA is designed to “restore and maintain the chemical, physical and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251(a). The CWA generally prohibits the discharge of pollutants, including dredged or fill material, into the waters of the United States unless authorized by a permit. 33 U.S.C. § 1311(a); see also 33 C.F.R. § 323.2 (defining discharge of dredged and fill material); 40 C.F.R. § 232.2 (same). Section 404 of the CWA authorizes the Corps to issue such permits. 33 U.S.C. § 1344. The section 404 requirements apply to the Corps where, as here, it is authorizing its own activities. See 33 C.F.R. Parts 335-337. However, instead of issuing itself a permit, the Corps issues a Statement of Findings (SOF) to authorize its activities. 33 C.F.R. §§ 336.1(a), 337.6.

The Corps adopted regulations, known as the “public interest” factors, to implement this permitting authority. 33 C.F.R. §§ 320 et seq. The Corps must “weigh the benefits that reasonably may be expected to accrue from the proposal against its reasonably foreseeable detriments, considering all relevant factors.” Alliance to Save the Mattaponi v. U.S. Army Corps of Engineers, 606 F. Supp. 2d 121, 124 (D.D.C. 2009) (citing 33 C.F.R. § 320.4). The Corps must consider a broad range of potential impacts as part of its public interest review, including “conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.” 33 C.F.R. § 320.4(a)(1). Moreover, in the evaluation of every permit, the Corps must consider:

- (i) The relevant extent of the public and private need for the proposed structure or work;
- (ii) Where there are unresolved conflicts as to resource use, the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work; and
- (iii) The extent and permanence of the beneficial and/or detrimental effects which the proposed structure or work is likely to have on the public and private uses to which the area is suited.

Id. § 320.4(a)(2).

The Section 404 process is also governed by the Environmental Protection Agency's (EPA) "404(b)(1) Guidelines." 33 U.S.C. § 1344(b)(1); 40 C.F.R. §§ 230 et seq. The Corps reviews all proposed Section 404 permits under both the Corps' public interest factors and EPA's 404(b)(1) guidelines. 33 U.S.C. § 1344(b)(1); 33 C.F.R. § 320.2(f). A permit must be denied if it is contrary to the public interest or does not comport with the Section 404(b)(1) Guidelines. 33 C.F.R. §§ 320.4, 323.6; 40 C.F.R. §§ 230.10, 230.12.

To ensure these mandatory CWA requirements are satisfied, the Corps must fully evaluate the direct, secondary, and cumulative impacts of the activity, including impacts to endangered species, the aquatic environment, fish and wildlife, and human impacts. See, e.g., 33 C.F.R. §§ 320.4(a)(1), 336.1(c)(5), 336.1(c)(8); 40 C.F.R. §§ 230.11(a)-(h), 230.20-23, 230.30, 230.31, 230.51, 230.53. The 404(b)(1) guidelines also set forth particular restrictions on discharges, described more fully below. 40 C.F.R. § 230.12. The Corps must set forth its findings in writing on the short-term and long-term effects of the discharge of dredge or fill activities, as well as compliance or non-compliance with the restrictions on discharge. Id. §§ 230.11, 230.12(b).

EPA's 404(b)(1) guidelines prohibit the Corps from authorizing an application for dredge and fill activities under several circumstances relevant to this case:

- (1) the activity "jeopardizes the continued existence" of an endangered species under the Endangered Species Act ("ESA") (40 C.F.R. §§ 230.10(b)(3), 230.12(a)(3)(ii));
- (2) there is a practicable alternative which would have less adverse impact and does not have other significant adverse environmental consequences (40 C.F.R. §§ 230.10(a), 230.12(a)(3)(i));
- (3) the discharge will result in significant degradation to waters of the U.S. (40 C.F.R. § 230.10(c) 230.12(a)(3)(ii)); or
- (4) there does not exist sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with the COE's Guidelines for permit issuance. (40 C.F.R. § 230.12(3)(iv)).

See Utahns for Better Transp. v. U.S. Dep't of Transp., 305 F.3d 1152, 1163 (10th Cir. 2002) (citing 40 C.F.R. § 230.12(a)(3)(i-iv)). The Corps must document its findings of compliance or noncompliance with the restrictions on discharge set forth in these guidelines. 40 C.F.R. § 230.12(b). Where there is not sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with the Guidelines, the Corps must deny the permit. 40 C.F.R. § 230.12(a)(3)(iv).

A. Dam Removal is the Only Alternative That Will Avoid Jeopardizing the Endangered Pallid Sturgeon

Under EPA's guidelines, the Corps may not permit a dredge and fill activity that "jeopardizes the continued existence" of an endangered species – the standard for prohibiting federal activities under section 7 of the ESA, 16 U.S.C. § 1536(a)(2); 40

C.F.R. § 230.10(b)(3). As noted above, Reclamation and the Corps are currently violating their procedural and substantive duties under section 7 of the ESA. The only way for the Agencies to comply with the ESA with respect to the Yellowstone is to remove the dam and restore the Yellowstone as a free-flowing river. Whether restoration of the Yellowstone alone is enough to remove the jeopardy caused by Fort Peck Dam must be thoroughly evaluated in the NEPA documents and consulted upon by the Corps and FWS prior to making the CWA's section 404 findings.

B. The Least Environmentally Damaging Practicable Alternative is to Remove the Dam

As noted above, in order to comply with section 404, the Corps must choose the alternative that is the least damaging alternative unless it is proven to be impracticable. See Utahns, 305 F.3d at 1186-87; Alliance to Save the Mattaponi, 606 F. Supp. 2d at 128; 40 C.F.R. § 230.10(a). The Corps is required to deny the application “if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.” 40 C.F.R. § 230.10(a). The Clean Water Act “compels that the [least-damaging] alternative be considered and selected unless proven impracticable.” Utahns, 305 F.3d at 1189; Alliance to Save the Mattaponi, 606 F. Supp. 2d at 130 (“The Corps must adequately explain why there is no less-damaging practicable alternative. If the Corps cannot so explain based on the record before it, it must reconsider its determination based on an adequate analysis of the alternatives.”). An alternative is practicable if it is “available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.” 40 C.F.R. § 230.10(a)(2).

Notably, although one factor of the practicability test involves the cost of a particular alternative, the fact that one alternative may cost more than another is not, by itself, sufficient to reject it. Instead, the Corps must weigh the relative benefits and impacts of all of the potential alternatives. See Alameda Water & Sanitation District v. Reilly, 930 F. Supp. 486, 489, 492 (D. Colo. 1996) (upholding EPA's determination that practicable alternatives existed even though the record showed “very substantial regulatory and legal obstacles to these alternatives” – such as moving an entire town and obtaining a Presidential exemption); Friends of the Earth v. Hall, 693 F. Supp. 904, 946-47 (W.D. Wash. 1988) (noting that whether costs make an alternative impracticable depends on whether “competing alternatives can reasonably be viewed as equivalent with respect to other factors” including the “potential for environmental harm”); Hough v. Marsh, 557 F. Supp. 74, 83-84 (D. Mass. 1982) (remanding because “‘exorbitant cost’ . . . by itself carries little weight; although cost is relevant to an assessment of an alternative's ‘practicability,’ the Corps conducted no examination of whether the price was unreasonably high [or] whether the defendants could afford it . . .”). Accordingly, the Agencies must fully evaluate the relative benefits of each all of these costs and benefits for public information and comment.

As described above, it is indisputable that the least environmentally damaging alternative is removing the dam. However, the Agencies have also eliminated

alternatives involving dam removal prior to detailed consideration based on their conclusions about the costs associated with diverting water for irrigation – conclusions that have since been proven unfounded. For this EIS, the Agencies must evaluate a dam removal alternative in detail. Costs of such an alternative will be a relevant factor in the 404 analysis, but cost alone is not an appropriate criterion for rejection of an alternative if the alternative chosen instead: (1) lacks scientific support; (2) provides a “solution” that will not lead to recovery of the pallid sturgeon; and (3) has likely impacts to other species of concern that will result in future resource impacts.

Moreover, all costs must be incorporated into the analysis. For example, if an alternative is chosen that will not recover the species, there will be additional costs associated with (1) the costs of evaluating and implementing a new alternative to comply with the ESA if the initial plan fails to provide for recovery of the species; (2) the adaptive management activities required to tear down any construction and implement a new solution; and (3) the maintenance, in perpetuity, of a hatchery program for pallid sturgeon if the species continues to be unable to be self-sustaining. In addition, there are likely significant costs associated with any engineering alternative, stemming from the removal of the accumulation of rock and other fill from the existing rockpile that have collected downstream in the Yellowstone River, ongoing maintenance of any new construction in what is a floodplain and subject to significant ice and floods in any year.

Nonetheless, the Corps’ 2015 Statement of Findings for the dam/bypass channel failed to comply with the CWA in part because the Corps failed to even evaluate – let alone adopt – the least environmentally damaging alternative, which, as discussed above, requires dam removal. We urge the Agencies to fully evaluate removing the dam as a viable alternatives and realistically assess the ecological and economic costs and benefits of all alternatives in order to provide a basis for the Corps to make a reasoned decision that complies with the 404(b)(1) guidelines.

C. Dam Removal is the Only Alternative That Will Avoid Causing Significant Degradation to the Yellowstone River

The Corps may not permit a dredge and fill activity that “cause[s] or contribute[s] to significant degradation of the waters of the United States,” which includes the Yellowstone River. 40 C.F.R. § 230.10(c). Effects that contribute to significant degradation include: “[s]ignificant adverse effects of the discharge of pollutants on aquatic ecosystem diversity, productivity, and stability. Such effects may include ... loss of fish and wildlife habitat.” 40 C.F.R. § 230.10(c)(3).

First and foremost, any alternative that contributes to the extirpation of an endangered species will cause significant degradation to the Yellowstone River. Moreover, the Intake Project will significantly degrade the entire aquatic ecosystem of the Yellowstone. See, Greater Yellowstone Coalition v. Flowers, 321 F.3d 1250, 1257-1258 (10th Cir. 2003) (“adverse impact on the aquatic ecosystem” under the Guidelines does not require showing jeopardy; harm to individuals can suffice). The Yellowstone River is often referred to as the longest undammed river in the contiguous United States; it is certainly the longest unimpounded river in the contiguous United States. Its

floodplain is largely intact. See Reinhold *et al.*, *Anthropogenic Habitat Change Effects on Fish Assemblages of the Middle and Lower Yellowstone River*, (2014) at 11 (Attachment 24). The lower Yellowstone River is regarded by the Environmental Protection Agency as an aquatic resource of national importance.

In general, riparian habitat is of high value for many fish and wildlife species and is unique and irreplaceable on a regional and national basis. See, e.g., Knopf *et al.*, *Conservation of Riparian Ecosystems in the United States*, (1987) (Attachment 29). Any alternative that requires additional bank stabilization or river modification, such as the dam/bypass channel, will run counter to the Yellowstone River Conservation District Council's plan to protect and encourage channel migration easements within channel migration zones on the Yellowstone River as well as the Agencies' acknowledgment that dam building, bank stabilization, and other river modification efforts throughout the Missouri and Mississippi River basins are the primary reason that the pallid sturgeon is nearing extinction.

Indeed, any highly engineered alternative, such as the dam/bypass channel, that continues to block any native fish from migrating throughout the Yellowstone River, and that requires significant river modification, will significantly alter and degrade the Yellowstone River's fishery and riparian habitat. In contrast, removing the dam will start the process of reversing the degradation caused by the more than a century of dam building and river modifications that have destroyed the habitat for pallid sturgeon and other sensitive species. These impacts must be thoroughly evaluated in the EIS

VI. CONCLUSION

Thank you for providing the opportunity to comment on scoping process for the Intake Project EIS. Defenders and NRDC urge the Agencies to take this opportunity to protect and restore the pallid sturgeon in the state of Montana and adopt an alternative that removes the existing dam, restores the free-flowing Yellowstone River, and provides an alternative means of providing water for the LYP.

Sincerely,



McCrystie Adams
Jay Tutchton
Defenders of Wildlife

On behalf of:
Defenders of Wildlife
Natural Resources Defense Council



February 17, 2016

U.S. Army Corps of Engineers
Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Ave.
Omaha, NE 68102
Email: cenwo-planning@usace.army.mil

Submitted via email and UPS Next Day Air (attachments submitted by UPS Next Day Air only)

Dear Ms. Vanosdall:

Thank you for this opportunity to comment on the U.S. Army Corps of Engineers (Corps) and U.S. Bureau of Reclamation's (Reclamation) Notice of Intent to jointly prepare a draft Environmental Impact Statement (EIS) for the Intake Diversion Dam Fish Passage Project ("Intake Project"). We submit these comments on behalf of Defenders of Wildlife and Natural Resources Defense Council (NRDC). Together, Defenders and NRDC have over 3 million members, supporters, and activists nationwide, including thousands in Montana.

Defenders and NRDC urge the Corps and Reclamation (collectively, the "Agencies") to analyze and adopt a scientifically-based alternative that provides unobstructed passage for the endangered pallid sturgeon and other native fish through the main channel of the Yellowstone River. Removing the existing rock dam at Intake is the best way to allow pallid sturgeon to once again successfully spawn and "recruit" (i.e. produce young which survive to adulthood) and begin re-building a self-sustaining population in the Yellowstone River.

To that end, Defenders and NRDC retained an expert consultant who developed a conceptual alternative (described in more detail below and in the accompanying attachments) that would provide unobstructed passage for pallid sturgeon and other fish, restore a free-flowing Yellowstone River, and meet the needs of the local irrigators as well. This alternative would meet the Agencies' stated purpose and need for the Intake Project. Our conceptual alternative:

- Provides up to 766 cubic feet per second (cfs) of water through modern water conservation measures and an alternative water source;
- Suggests providing needed irrigation water via a pumping system;

- Suggests using gravity diversions through the existing headworks when river flows are high enough in order to reduce the electricity needs of the pumping system;
- Suggests using free wind energy to eliminate pumping electricity costs for the irrigation districts.

Such a plan is long overdue. The Agencies have known for more than 15 years that their operations of Fort Peck Dam on the Missouri River and Intake Dam on the Yellowstone River violate the Endangered Species Act (ESA). The Agencies are also well aware that these operations, if unchanged, will shortly cause the extinction of the wild population of pallid sturgeon in Montana. Nonetheless, the Agencies have failed to remedy their ESA violations. As a result, and as predicted by the U.S. Fish and Wildlife Service (FWS), the wild pallid sturgeon population is on the brink of being extirpated from the state.

The Agencies apparently now plan to rely solely on the Intake Project to prevent the demise of this pallid sturgeon population and remedy their ESA violations. A central premise of the Intake Project is that the Corps will fund the Project – even though Intake is a Reclamation facility – in exchange for being allowed to abandon at least some of the changes to its Fort Peck Dam operations required by the 2003 Biological Opinion on the Corps’ Missouri River dam operations (“2003 BiOp”). While we support restoring a free-flowing Yellowstone River as the best and only means of protecting the pallid sturgeon and other native fish species in this River, addressing the Yellowstone alone may not be sufficient to allow for the recovery of the pallid sturgeon in the upper Missouri River basin, nor resolve the Corps’ ESA obligations at Fort Peck Dam. We urge the Corps not to abandon the effort to modify operations at Fort Peck Dam as required by the 2003 BiOp. Restoration of the Missouri River, in addition to any changes made at Intake, may well be necessary for the Corps to avoid jeopardizing the pallid sturgeon. As a result, the Agencies must fully analyze the consequences of foregoing restoration of the Missouri River for pallid sturgeon recovery in this EIS process.

We also urge the Agencies to reject the dam reconstruction/bypass channel alternative that they selected in their April 2015 Final Supplement to the 2010 Final Environmental Assessment (EA) (“2015 Final EA”). This alternative is inconsistent with the best available science and likely ensures the extinction of the wild pallid sturgeon population in Montana. This misguided approach was preliminarily enjoined by order of the U.S. District Court for the District Court of Montana, in response to litigation brought by Defenders and NRDC. The Court temporarily blocked construction in part because the Agencies failed to analyze the most critical factor in approving the dam and bypass channel – how it would affect pallid sturgeon recovery. See Defenders of Wildlife v. U.S. Army Corps of Engineers, CV-15-14-GF-BMM (D. Mont. Sept. 4, 2015) (Dkt. #73). The Court concluded that the Agencies’ failure to analyze this fundamental issue and their additional failure to complete an EIS (as opposed to an EA) likely violates the National Environmental Policy Act (NEPA). See id. at 8-15. The Agencies are now curing the latter violation by completing an EIS – but through this EIS they must also cure the former violation. To comply with the Court’s direction, as expressed in its

preliminary injunction order, the Agencies must evaluate how the alternatives proposed in the EIS affect pallid sturgeon survival and recovery. Id. at 12.

The current Intake Project has arisen from a long history of false starts by the Agencies and is complicated by interlocking statutory mandates. Our comments describe this history and the multiple statutory obligations governing this Project because they are inseparable from the Agencies' NEPA obligations and are essential to understanding the scope of the analysis required in this EIS. Accordingly, our comments discuss the following:

- (1) The Agencies' respective substantive and procedural obligations under the ESA with respect to the Intake Project;
- (2) The Agencies' obligation, under both the ESA and NEPA, to analyze and adopt a dam removal alternative (also referred to as "non-weir" alternative in other correspondence);
- (3) Defenders' and NRDC's proposed conceptual dam removal alternative;
- (4) The Agencies' obligation to take a "hard look" at all of the impacts associated with this Project;
- (5) The Agencies' obligation to analyze and disclose the impacts relevant to the Corps' Clean Water Act (CWA) findings.

I. THE SUBSTANTIVE STANDARDS OF THE ESA MUST GUIDE THE AGENCIES' NEPA ANALYSIS AND DECISION

The underlying purpose for initiating the Intake Project EIS – and the reason the Agencies have been considering fish passage ideas for more than a decade – is to remedy ongoing ESA violations at Intake Dam (Reclamation) and Fort Peck Dam (Corps) and facilitate the recovery of the pallid sturgeon in the upper Missouri River basin. See, e.g., BOR-4439 (FWS noting in 2012 that, "[a]s stated in the 2010 FONSI, the underlying need for the proposed action (i.e. the overall Intake Project) is for Reclamation and the Corps to comply with the ESA.").

The Corps' authority to fund the Intake Project, found in Section 3109 of the Water Resources Development Act of 2007 (WRDA), P.L. 110-114, 121 Stat. 1041 § 3109, reflects this purpose. This section states:

The Secretary [of Defense] 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.

This purpose is reiterated in the Corps' Implementation Guidance for Section 3109. The Implementation Guidance describes the *only* purpose of the authorization as "endangered species recovery and ecosystem restoration following provisions of the Missouri River Recovery Program." See Attachment 2 at 2.

The Agencies have stated an additional purpose and need for the Intake Project: “improving [fish] passage while continuing a viable and effective operation of the Lower Yellowstone Project.” 81 Fed. Reg. 82, 82-83 (Jan. 4, 2016). As described in more detail below, this purpose is compatible with restoring the pallid sturgeon’s Yellowstone River habitat so that they may successfully spawn and recruit. However, to the extent the Agencies choose an alternative that meets this additional purpose without meeting the fundamental purpose of facilitating the recovery of the pallid sturgeon, the Corps would have no authority to fund the Project, and both Agencies would be out compliance with the ESA. Thus, the Agencies’ priority – and bottom line – must be compliance with the ESA.

A. The Wild Pallid Sturgeon Population is on the Brink of Extinction in Montana

The endangered pallid sturgeon population in the upper Missouri River basin (hereinafter, the “Montana population”) has been nearly extirpated due the Agencies’ dam operations on the Yellowstone River and the Missouri River. Once found throughout approximately 3,515 river miles in the Missouri River and its major tributaries from Great Falls, Montana to New Orleans, Louisiana, the species now lives in only tiny remnants of that historic range. See FWS Revised Recovery Plan for the Pallid Sturgeon (*Scaphirhynchus albus*) (Jan. 2014) at 3 (hereinafter, “2014 Recovery Plan”). Moreover, the sturgeon population is no longer self-sustaining or viable; there has been no evidence of successful reproduction and recruitment in the wild for decades. See *id.* at 4, 11-15. The pallid sturgeon’s precarious status is the legacy of more than a century of dam-building, river channelization, and other river modifications, primarily by the Corps and Reclamation. See *id.* These dams and river modifications have cut off the pallid sturgeon’s migratory corridors and destroyed spawning and nursery habitats. See *id.* Because this species is on the brink of extinction in the wild, federal and state agencies maintain the species through an aggressive hatchery program. This program has always been intended to be a temporary band-aid, and cannot substitute for recovery of the pallid sturgeon in the wild.

The largest identified wild population of pallid sturgeon remaining – those not raised in hatcheries – is found in the Missouri and Yellowstone Rivers between Fort Peck Dam and Lake Sakakawea. This population is estimated to be at most 125 fish, and they are near the end of their very long lifespans. See 2014 Recovery Plan at 4. This population likely has not successfully reproduced and recruited in the wild since the closure of Garrison Dam in the mid-1950s, which created Lake Sakakawea.

The creation of Lake Sakakawea likely ended all natural reproduction and recruitment because it significantly truncated the river habitat available for pallid sturgeon larvae to drift after hatching. When pallid sturgeon eggs hatch, the free embryos and larvae (hereinafter, “larvae”) drift along the bottom of the river for somewhere between 152 and 329, miles depending on water temperatures, river velocity, and habitat complexity. See 2014 Recovery Plan at 12-13. Larvae require intact river habitat to survive this period; if they drift into the oxygen-depleted waters of a reservoir, like Lake

Sakakawea, they suffocate and die. See Guy *et al.*, Broadening the Regulated-River Management Paradigm: A Case Study of the Forgotten Dead Zone Hindering Pallid Sturgeon Recovery, (2015) at 7 (Attachment 3) (concluding that “transition zones [from river to reservoirs] are an ecological sink”). As described below, the operations of Fort Peck Dam and Intake Dam make it impossible for sturgeon to spawn anywhere with sufficient drift distance. Instead, to the extent spawning occurs, the larvae are likely killed in Lake Sakakawea. The only way to restore pallid sturgeon natural reproduction in the upper Missouri River basin is to restore productive spawning habitat and increase the distance of free-flowing river habitat needed for successful larval drift.

B. The Corps’ Fort Peck Dam Operations Prevent Natural Reproduction in Violation of the ESA

The Montana population of pallid sturgeon lives most of the year in the Missouri River, below the confluence of the Yellowstone and Missouri Rivers. See 2014 Recovery Plan at 12. The best available science indicates that historically, the high flows in the Missouri River in the spring would provide the cue for the sturgeon to swim upstream to spawn. See 2003 BiOp at 22-23. Prior to the construction of Fort Peck Dam, the river’s spring flows would have been high volume, warm, and muddy. See *id.* at 22-24. However, since the construction of Fort Peck Dam and as a result of the Corps’ operational decisions, the Missouri River’s flows below the dam are lower volume, cold, and clear. See *id.*; Recovery Plan at 12. As a result, in most years, sturgeon no longer swim upstream to Fort Peck Dam during spawning season and are unable to spawn or recruit in the Missouri River. See *id.*; 2014 Recovery Plan at 12 (noting first documented spawning success took place in 2011 during historic flood flows, but no recruitment has been documented).

The Corps’ operation of Fort Peck Dam in a manner that precludes successful pallid sturgeon spawning and recruitment violates sections 7 and 9 of the ESA, 16 U.S.C. §§ 1536 and 1538. Section 7(a)(2) requires federal agencies to ensure, among other things, that any discretionary action they authorize, fund, or carry out “is not likely to jeopardize the continued existence of any endangered species.” 16 U.S.C. § 1536(a)(2). Jeopardy results when it is reasonable to expect that a federal action would “reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.” 50 C.F.R. § 402.02. The jeopardy standard mandates that agencies consider whether and how their actions will affect imperiled species’ ability to both survive and “recover.” NWF v. NMFS, 524 F.3d 917, 931-33 (9th Cir. 2008). “Recovery” is the point at which a species is healthy enough to be taken off the endangered species list. Alaska v. Lubchenko, 723 F.3d 1043, 1054 (9th Cir. 2013).

To comply with the jeopardy standard, the “action agency” must “consult” with and obtain the opinion of FWS before it takes any discretionary action that “may affect” a listed species. See 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a); NWF, 524 F.3d at 924. At the conclusion of the formal consultation process, FWS provides the action agency with a “biological opinion” (BiOp) as to whether jeopardy is likely to occur due to the

action. 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. §§ 402.14(g), (h). If so, the BiOp sets forth a “reasonable and prudent alternative” (RPA) that would avoid this ESA violation. 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. §§ 402.02 (defining “reasonable and prudent alternative”), 402.14(h)(3).

Section 9(a)(1)(B) of the ESA makes it unlawful to “take” an endangered species. 16 U.S.C. § 1538(a)(1)(B). Congress defined “take” to mean “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect . . .” *Id.* § 1532(19). “Harm,” in turn, is defined as “an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife *by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.*” 50 C.F.R. § 17.3 (emphasis added). Congress created an “incidental take” exception to section 9’s take prohibition for federal agencies. FWS may issue an “incidental take statement” (ITS) that permits take if an agency action does not result in jeopardy. 16 U.S.C. § 1536(b)(4), (o)(2); 50 C.F.R. § 402.14(i).

The Corps has known that its operation of Fort Peck Dam violates the ESA since at least 2000, when FWS issued a “jeopardy” BiOp for the Corps’ Missouri River operations. FWS re-stated its conclusion in an “amended” 2003 BiOp, which again found that Fort Peck Dam operations are likely to cause jeopardy. In order to avoid this ESA violation, the 2003 BiOp required the Corps to take several actions as part of an RPA. The 2003 BiOp also concluded that Fort Peck Dam operations take pallid sturgeon in violation of section 9 of the ESA. The ITS allowed that take so long as the RPA is implemented.

The Corps has not implemented the RPA for pallid sturgeon at Fort Peck Dam. Among other things, the Corps is required to test and implement flow enhancements. In 2009, the Corps abandoned its efforts to implement the first “mini-test” for flow modifications in favor of assisting Reclamation at Intake. *See, e.g.*, ACE-14422-14423 (Corps’ Summary of Actual 2009 Regulation, Missouri River Mainstem Reservoir System); ACE-21331 (Corps’ Final 2009-2010 Annual Operating Plan, Missouri River Mainstem System).¹ The Corps was also required by the RPA to study and implement a temperature control device, if feasible and economical, in order to warm the water temperatures below the Dam for the benefit of the pallid sturgeon. The Corp’s contractor completed a Temperature Control Device Reconnaissance Study in June 2009. The study recommended that the Corps complete a feasibility study for six alternatives. The study also noted that a submerged weir alternative, estimated to cost between \$8 million and \$25 million, could be implemented on an expedited schedule. In April 2012, the Corps’ contractor completed an “interim implementation report” on the preliminary design of a submerged weir. The Corps has not taken action to implement a temperature control device of any kind and comply with the RPA.

¹ All citations labeled ACE-, BOR-, or FWS- refer to pages in the administrative records provided to the Court by the three agencies on October 21, 2016. *See Defenders of Wildlife*, CV-15-14-GF-BMM (Dkt. # 78).

FWS has acknowledged that the Corps is failing to comply with the ESA, but has chosen not to take any action. According to an FWS briefing paper prepared for a high level Department of Interior official in 2012, “[t]he [Corps] is lagging in its compliance with ESA and biological opinion implementation but continues to serve as a great partner in the basin-wide restoration efforts. In order to foster the positive direction of restoration activities, the Service has not criticized the COE on the pace of ESA compliance.” FWS-4182.

Despite the Corps’ failure to implement operational modifications at Fort Peck Dam, the best available science indicates that the Missouri River could be restored for pallid sturgeon spawning and nursery habitat if the agency did so. For example, one recent study prepared for the U.S. Geological Survey noted the pallid sturgeon successfully spawned in the Missouri River just downstream of the confluence with the Milk River in 2011, when record-setting snowfall and spring rains resulted in a spill over Fort Peck Dam. Fuller and Haddix, Examination of pallid sturgeon use, migrations, and spawning in Milk River and Missouri River below Fort Peck Dam during 2013, at 2 (Attachment 4). This event indicates that the Missouri River can be restored for spawning near Fort Peck Dam. *Id.* at 11 (“Verification of successful reproduction by wild pallid sturgeon has provided information that shows spawning, fertilization, egg survival, and hatch can occur in the Missouri River when flows deviate from baseline operations.”). Other studies indicate that successful larval drift may be possible if spawning habitat is restored. For example, Braaten, *et al.*, Drift Dynamics of Larval Pallid Sturgeon and Shovelnose Sturgeon in a Natural Side Channel of the Upper Missouri River, Montana, *North American Journal of Fisheries Management* 28:808-826 (Attachment 5) at 824 indicates:

Currently, much of the 340-km reach of the Missouri River downstream from Fort Peck Dam is considered unsuitable for pallid sturgeon spawning owing to altered discharge regimes and suppressed water temperatures resulting from hypolimnetic operations of Fort Peck Dam. Habitat enhancements for this reach are proposed whereby operations of Fort Peck Dam will be modified as a mechanism to increase flows and enhance water temperature suitability for spawning pallid sturgeon. If enhanced discharge and water temperature conditions facilitate spawning by pallid sturgeon similar to that observed after habitat enhancements for other sturgeons, larval pallid sturgeon would be provide an extended length (>340 km) of free-flowing Missouri River to complete ontogenetic development, provided that suitable spawning habitat was available. (internal citations omitted).

See also Bramblett and White, Habitat use and Movements of Pallid and Shovelnose Sturgeon in the Yellowstone and Missouri Rivers in Montana and North Dakota, *Transactions of the American Fisheries Society*, 2011, 1:30:1006-1025 (Attachment 6), at 1022 (describing both the lower Yellowstone River and the Missouri River below the confluence with the Yellowstone as “essential” pallid sturgeon habitat); Eichelberger, *et al.*, Novel Single-Nucleotide Polymorphism Markers Confirm Successful Spawning of Endangered Pallid Sturgeon in the Upper Missouri River Basin, *Transactions of the American Fisheries Society*, 2014, 143:1373-1385, at 1383 (documenting successful

pallid sturgeon spawning in both the upper Missouri River and Yellowstone River in 2012-2013) (Attachment 7).

Accordingly, the best available science indicates that the remaining wild population of pallid sturgeon is spawning and attempting to successfully recruit young in both the Yellowstone and Missouri Rivers and that both rivers contain habitat essential to this population's survival. More importantly, this science confirms the premise of the 2003 BiOp – that the Missouri River below the Fort Peck Dam could be restored to allow successful pallid sturgeon spawning and recruitment if the Corps implemented flow modifications like those contemplated in the 2003 BiOp.

In short, the Corps' operation of Fort Peck Dam is currently violating sections 7 and 9 of the ESA. As detailed below, the Corps envisions the Intake Project as the means to remedy these violations. If the Corps elects to do so, the EIS must address the substantive standards of the ESA in the NEPA analysis as set forth below.

C. Reclamation's Intake Dam Operations Prevent Natural Reproduction in Violation of the ESA

A small proportion of the pallid sturgeon in the Montana population – roughly one-quarter, or 32 fish, according to FWS – migrate up the Yellowstone River to Intake Dam to spawn. See “Biological Opinion on effects to the pallid sturgeon from the Lower Yellowstone Irrigation Project and construction of fish passage in Montana and North Dakota,” July 10, 2015 (hereinafter, “2015 BiOp”) at 17-18. However, these fish are almost universally blocked by Intake Dam. Id. at 12. Blocked by this dam, sturgeon swim back downriver, and spawn in the lower-most 10 miles of the Yellowstone. Id. at 12-13. This site is too close to Lake Sakakawea for larvae hatched here to survive. Instead, the larvae likely drift into the reservoir's oxygen-deprived waters and suffocate. Id.

A handful of pallid sturgeon have migrated past Intake through an existing, natural side channel. Radio receivers were placed on the upstream end of the natural side channel in 2014. See ACE-3599. In that year, FWP tracked five tagged pallid sturgeon using the channel. Since not all pallid sturgeon are tagged, other individuals could have also used the channel. The next summer, in 2015, one female was tracked using the side channel. 2015 BiOp at 13. Regardless of the precise number that have used the natural side channel over the years, there has been no documented recruitment in this population. Id. at 12-13.

If Intake Dam was removed, pallid sturgeon would have access to approximately 165 miles of river habitat upstream of the dam and access to two large tributaries, the Tongue and Powder Rivers. See, e.g., FWS-12190-91 (email noting that female pallid sturgeon in 2014 swam 20 miles up the Powder River, suggesting historic range includes at least that much of the Powder). While spawning has been documented in the Yellowstone River, scientists do not yet know whether this means the Yellowstone's habitat is preferred by pallid sturgeon. See, e.g., FWS-4844-45. If sturgeon are able to

swim far enough upstream past Intake Dam, it is presumed that they could spawn in an area that likely has sufficient drift distance for the larvae to survive. However, that drift distance is still likely on the lower end of what is required. See FWS-2423-2508.

While it is presumed the drift distance on the Yellowstone is likely sufficient for some larval survival if Intake is passable, it is uncertain whether larvae hatched upstream would, in fact, survive the journey and successfully recruit to adulthood. For example, larvae are expected to be entrained in the main irrigation canal at Intake because the fish screens cannot block pallid sturgeon larvae. 2015 BiOp at 26. They may also be killed on the screens themselves. Id. at 26, 30. In addition, the upstream, neighboring Buffalo Rapids Irrigation District has an unscreened canal that could entrain pallid sturgeon larvae. Depending on whether the Agencies decide to build a structure on the Yellowstone River, some number of larvae will also be killed on that structure. See id. Reducing such impediments is a key element of ensuring that any plan to open the river to upstream passage is also conducive to downstream passage.

To date, however, Reclamation has approved the continued operation of Intake Dam in a manner that precludes survival, let alone recovery, of the pallid sturgeon, in violation of sections 7 and 9 of the ESA. The 2015 BiOp conceded that the current operations of Intake Dam cause “injury” to the breeding ability of the pallid sturgeon (by precluding successful breeding altogether) and “take” adult sturgeon by preventing them from successfully breeding. 2015 BiOp at 30-35. However, the BiOp allowed the continued annual “rocking” of the dam – required to re-build the dam most years – on the assumption that a new project would be built with 2-3 years (by 2017) that would alleviate this jeopardy and take. Id. The BiOp’s assumption that the dam/bypass channel would alleviate the harm caused by the annual “rocking” of the dam is scientifically unfounded. Regardless, the dam/bypass channel has been enjoined, and the Agencies are beginning another decision-making process, which will take at least until the end of 2016. Accordingly, even if the 2015 BiOp’s original conclusion was lawful (which it is not), that conclusion is no longer applicable. Reclamation’s continuing operation of the dam violates sections 7 and 9 of the ESA. Reclamation must remedy its ongoing ESA violations at Intake by adopting a plan that facilitates survival and recovery of the species and ends its illegal take of the species.

D. The Agencies Envision the Intake Project as the Remedy for Both Agencies’ ESA Violations and Therefore Must Fulfill that Goal

As noted above, both Reclamation and the Corps have dragged their feet in remedying their existing ESA violations at their respective dams for more than two decades and, as a result, pushed the Montana population of pallid sturgeon to the brink of extinction. The current EIS process is intended to provide Reclamation and the Corps yet another opportunity to resolve their ESA violations.

The Corps has proposed to help Reclamation fund modifications at Intake Dam to bring Intake into compliance with the law, in exchange for forgiveness of its own violations at Fort Peck Dam. This exchange is not an equal trade; it resolves two

problems by addressing only one. Thus, rather than two agencies remedying violations on two different rivers and restoring the habitat of two different rivers, they have agreed to remedy only one violation, on one river. Such a plan can only comply with the ESA if – and only if – addressing the migration issue at Intake Dam *also* removes jeopardy to the species caused by Fort Peck Dam. In other words, the pallid sturgeon would have to be able to recover in the upper Missouri River basin, despite the continued operations of Fort Peck Dam, based on successful breeding, feeding, and sheltering in the Yellowstone alone.

Given the current status of the species, the prospect for recovery is daunting. FWS defines “recovery” for the pallid sturgeon to mean that the species will meet the criteria for reclassification to “threatened” and that there will be sufficient regulatory mechanisms “to provide reasonable assurances of long-term persistence of the species within each management unit in the absence of the [ESA’s] protections.” 2014 Recovery Plan at 54. The criteria for reclassification for “threatened” species includes, among other things:

the listing/recovery factor criteria are sufficiently addressed such that a *self-sustaining genetically diverse population of 5,000 adult Pallid Sturgeon is realized and maintained within each management unit for 2 generations (20-30 years)*. In this context, a self-sustaining population is described as a spawning population that results in sufficient recruitment of naturally-produced Pallid Sturgeon into the adult population at levels necessary to maintain a genetically diverse wild adult population in the absence of artificial population augmentation.

Id. at 54 (emphasis added). The relevant management unit here is the Great Plains Management Unit, which stretches from Great Falls to Fort Randall Dam, South Dakota. Id. at 48-49. The only identifiable wild population remaining in this management unit is the Montana population, and the best available habitat remaining in this management unit is on the Yellowstone and Missouri Rivers. Making progress toward the goal of recovery for this population – meaning the attainment of a self-sustaining population of 5,000 adults – depends on removing the threats posed by Intake Dam and Fort Peck Dam.

Biologists at the time of the Corps’ decision to forego the Fort Peck RPA elements protested the change as scientifically unsound. As one explained,

I concur with [then-FWP pallid sturgeon biologist] Bill [Gardner] that it will be very unfortunate to take restoration of the 185-mile river reach between Fort Peck dam and the MT/ND border off the table, probably for decades, while the painstaking process of evaluation including the almost certain protracted biological studies and debates regarding success/failure of the Intake project play out. No biologist opposes rehabbing Intake. There are only questions of tradeoffs and whether pallid restoration should be done piecemeal or holistically.

FWS-1807; see also FWS-1809 (Mr. Gardner stating, “in my mind naturalizing flows below Ft. Peck Dam potentially has a greater benefit to pallids and aquatics than simply opening up the Intake barrier.”).

More recently, after reviewing the best available science, the Montana Chapter of the American Fisheries Society concluded that the chances for pallid sturgeon recovery in the upper Missouri River basin will be harmed if the Agencies pursue their current strategy of focusing on the Yellowstone River restoration alone. Defenders of Wildlife, 15-cv-00014-GF-BMM, Dkt. #63 at pp. 13-16 (Amicus Brief of Montana Chapter of the American Fisheries Society); see also ACE-4792 (Montana Chapter of AFS comments on 2014 Draft EA) (“In addition, the Missouri and Yellowstone River are connected; ignoring that connection disregards population biology and large river ecology tenets.”). Even the Corps has acknowledged the problem. See e.g., ACE-2194 (Corps’ “Upper Basin Pallid Approach” noting, “Intake still leaves substantial uncertainty regarding pallid recovery”). As a result, as described in more detail below, the EIS must both recognize and address these scientific opinions and explain why the Agencies appear to disagree.

The Corps’ decision to forego the 2003 RPA elements at Fort Peck also suffers from a procedural ESA violation because the Corps and FWS should have re-initiated formal consultation on the 2003 BiOp once the Corps requested a modification of the RPA. An action agency (here the Corps) and FWS are required by FWS’s implementing regulations to re-initiate formal consultation in two circumstances relevant here:

(b) If new information reveals effects of the action that may affect listed species ... to an extent not previously considered; [or]

(c) If the identified action is subsequently modified in a manner that causes an effect to the listed species ... that was not considered in the biological opinion.

50 C.F.R. § 402.16(b), (c); see Cottonwood Env'tl. Law Ctr. v. USFS, 789 F.3d 1075, 1084-88 (9th Cir. 2015). Pursuant to these regulations, where an agency fails to perform a required measure in a BiOp, the agency and FWS must re-initiate and complete a new formal consultation to ensure that the failure to perform that action does not jeopardize the listed species. See Sierra Club v. Marsh, 816 F.2d 1376, 1386-88 (9th Cir. 1987), abrogation on other grounds recognized by Cottonwood, 789 F.3d at 1088-91; Southwest Center for Biological Diversity v. Klasse, 1999 WL 34689321, at *6-7 (E.D. Cal. 1999). Because the Corps has failed to implement the RPA at Fort Peck Dam – and has no intention of implementing that RPA now – the Corps and FWS must re-initiate consultation on the Missouri River BiOp. The Corps and FWS have never done so, in violation of the ESA.

The Corps and FWS’s failure to comply with the ESA with respect to Fort Peck Dam operations or the plan to “amend” the 2003 BiOp and RPA to exchange the Intake Project for Fort Peck Dam modifications means that the Corps has ESA obligations with respect to the Intake Project that are separate and in addition to Reclamation’s ESA

obligations. To meet their procedural ESA section 7 obligations, both Agencies must complete a formal consultation with FWS regarding the preferred alternative. Through these consultations, both Agencies must also ensure that the preferred alternative avoids jeopardy to the pallid sturgeon. The Corps' consultation must *also* analyze a specific set of circumstances outside of Reclamation's authority – whether the alternative chosen for Intake will also remove the jeopardy caused by the Corps' Fort Peck Dam operations – and must ensure that the Intake Project *alone* remediates the impacts caused by Fort Peck Dam operations and facilitate the survival and recovery of the pallid sturgeon in the wild.²

In short, in adopting a preferred alternative at Intake, the Agencies must evaluate several key factors to determine whether the preferred alternative will comply with the ESA, including:

- (1) Whether and how the proposed action will restore spawning and nursery habitat such that the pallid sturgeon can successfully spawn and recruit in the Yellowstone River and Reclamation will avoid jeopardizing the species; and
- (2) Whether and how the proposed action can serve as a substitute for the required modifications at Fort Peck Dam, such that Fort Peck Dam operations no longer cause jeopardy to the pallid sturgeon.

Reclamation is required to implement an alternative that meets the requirements of #1, regardless of the Corps' involvement and funding.

The Corps may only assume that this alternative serves as a *substitute* for operational modifications at Fort Peck Dam if it also fulfills #2.

II. THE AGENCIES MUST ANALYZE AND ADOPT A DAM REMOVAL ALTERNATIVE TO COMPLY WITH THE ESA AND NEPA

A. The Best Available Science Demonstrates That Dam Removal Provides the Best Opportunity for Pallid Sturgeon Spawning and Recruitment in the Yellowstone River

Scientific analyses have been consistent and uncontroverted for the past two decades: for the Yellowstone River, removing Intake Dam and restoring a free-flowing river is the only reliable way to facilitate successful pallid sturgeon spawning and recruitment. For example, as far back as 2005, FWS biologists repeatedly noted that “open river” alternatives – alternatives that opened up the main channel of the Yellowstone River to pallid sturgeon migration – were the only alternatives likely to

² The Agencies' consultations should be completed on a timeline in which the scientific information gathered and analyzed can be shared with the public in the NEPA process and used to inform the Agencies' decision under NEPA. The Agencies' NEPA obligations are described more fully below.

avoid jeopardy. See, e.g., FWS-1016 (“I concur with George that with alternatives other than the Open River Alternatives, we are taking a risk that we will reduce appreciably the likelihood of both the survival and recovery of the pallid sturgeon in the wild.”); FWS-1017 (“there are only two options that will insure no future jeopardy for the BOR and both involve removing the dam and screening the intake”); FWS-1026, 1027 (FWS biologists noting potential for “jeopardy” BiOp); FWS-1044 (FWS biologist concurring with FWS biologist’s statement that, “I believe that the only two options currently presented that essentially insure passage and reduce the likely hood [sic] of any future jeopardy opinion for pallid sturgeon at this site are the dam removal options. . . Toss out the bypass channels.”); FWS-1117 (“[FWS’s] position as presented at the meeting is that the two options that remove the dam have the highest probability of biological success followed closely by the full channel rock ramp bypass. Montana FWP indicated that there [sic] preferences align pretty closely with ours.”).

The fact that removing the dam is the most biologically-sound alternative – and that all other alternatives involve significantly more risk to the pallid sturgeon – has not changed over the many years that the Agencies have considered various alternatives. For example, in the 2013 Fish Passage Alternative Study, Alternative Theme A – a non-weir/dam removal alternative much like the one Defenders and NRDC propose below – was the only alternative given a “5” out of “5” for “Likelihood of ESA success.” BOR-5678. The two action alternatives considered in the EA, the rock ramp and the dam/bypass channel alternative, both received a “3.” Id. As the Biological Review Team (BRT) explained in 2009, “[c]onceptually, [a dam removal] alternative has the least amount of uncertainty associated with providing upstream passage as there is no anticipated anthropogenic feature in the channel. The team recommends that this alternative continue to be evaluated and considered as it provides the least biological uncertainty of meeting objectives related to pallid sturgeon passage and ecosystem benefit.” FWS-1443. The BRT reiterated this thinking in 2013, noting that they had long ago concluded that dam removal and restoration of the Yellowstone to a “near-natural condition” would “likely have the greatest probability of allowing successful pallid sturgeon passage.” BOR-5543.

Nonetheless, dam removal alternatives have been consistently rejected without detailed analysis in the prior two EAs based on anticipated costs to the irrigation districts – not for any biological reason. See, e.g., FWS-1230; FWS-1437; BOR-5679 (dropping “open river” theme “because of the high cost to install the Ranney Well System and the high energy costs that would be placed upon the district”); Final Supplement to the 2010 Final EA on the Intake Dam Diversion Modification (April 2015) (hereinafter, “2015 Final EA”) at 2-20 through 2-21 (construction and operating costs too high for single pump and multiple pump alternatives); BOR-5543 (BRT noting that the one alternative that would restore the river to near-natural conditions – dam removal and installation of a pumping facility for irrigation water delivery – had been rejected because “it was believed that anticipated operation and maintenance of a pumping facility were too burdensome for irrigators”). Worse, these cost estimates have also apparently influenced the *biological* standards used by the Agencies. See, e.g., FWS-3519 (2011 Corps presentation noting that “*Increased costs on the rock ramp alternative resulted in:*

Review of biological criteria for passage (addition of USACE and FWS pallid and passage experts); *Resulted in relaxed requirement* that any passage option must provide full river channel width passage.”) (emphasis added).

In short, the scientific evidence remains undisputed that restoring a free-flowing river is the most reliable way to provide for pallid sturgeon spawning and recruitment in the Yellowstone River. In addition, given that the Agencies intend to abandon the efforts at Fort Peck Dam, there is even less room for error with the Intake Project – the fate of the species may rest entirely on this decision and therefore must be the best possible project for the pallid sturgeon.

B. The EIS Must Evaluate at Least One Dam Removal Alternative as Part of a Range of Reasonable Alternatives Under NEPA

Because removal of the dam will most fully and reliably fulfill Reclamation’s mandate to comply with the ESA with respect to Intake Dam and thereby be most likely to meet the purpose of the Project, the Agencies must consider at least one such alternative as part of the EIS in order to comply with NEPA.

NEPA’s goal is twofold. First, it requires federal agencies to evaluate the environmental impacts of their actions. Marsh v. ONRC, 490 U.S. 360, 371 (1989). Through this review, NEPA ensures agencies make informed decisions before taking action. Id. at 371 (“By so focusing agency attention, NEPA ensures that the agency will not act on incomplete information, only to regret it decision after it is too late to correct.”) (citation omitted); Bob Marshall Alliance v. Hodel, 852 F.2d 1223, 1228 (9th Cir. 1988) (“The goal of the statute is to ensure ‘that federal agencies infuse in project planning a thorough consideration of environmental values’”) (citation omitted). Second, NEPA provides a mechanism for the public to learn about and comment on the impacts of a proposed action. Marsh, 490 U.S. at 371.

To further these goals, NEPA requires agencies to “study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternatives use of available resources.” 42 U.S.C. § 4332(2)(E), (2)(C). The alternatives analysis is characterized as “the heart” of the EIS. 40 C.F.R. §1502.14. In the EIS, the agency must “[r]igorously explore and objectively evaluate all reasonable alternatives” in response to a “specif[ied] . . . purpose and need.” 40 C.F.R. §§ 1502.13, 1502.14(a) (emphasis added). As the Ninth Circuit has explained,

NEPA’s requirement that alternatives be studied, developed, and described both guides the substance of environmental decisionmaking and provides evidence that the mandated decisionmaking process has actually taken place. Informed and meaningful consideration of alternatives – including the no action alternative – is thus an integral part of the statutory scheme.

Bob Marshall Alliance, 852 F.2d at 1228 (internal citations omitted).

The existence of a viable but unexamined alternative renders an environmental impact statement inadequate. Citizens for a Better Henderson v. Hodel, 768 F.2d 1051, 1057 (9th Cir. 1985) (citation omitted). The “touchstone” for determining whether an agency’s range of alternatives is reasonable “is whether an EIS’s selection and discussion of alternatives fosters informed decision-making and informed public participation.” Westlands Water Dist. v. U.S. Dep’t of Interior, 376 F.3d 853, 872 (9th Cir. 2004) (quoting Calif. v. Block, 690 F.2d 753, 767 (9th Cir. 1982)). This means that an agency may not eliminate from consideration any alternatives that are “more consistent with its basic policy objectives than the alternatives that were the subject of final consideration.” Muckleshoot Indian Tribe v. U.S. Forest Service, 177 F.3d 800, 813 (9th Cir. 1999).

As noted above, dam removal is the best means of providing for pallid sturgeon spawning and recruitment in the Yellowstone and avoid jeopardizing the species – the fundamental purpose of the Project. Further, as described below, such an alternative can fulfill the Agencies’ purpose and need. Thus, a viable dam removal alternative must be considered in detail in this EIS. See Muckleshoot, 177 F.3d at 813. Absent such an alternative, neither the public nor decision-makers can make a fully informed decision about the tradeoffs involved in choosing any particular alternative. See Block, 690 F.2d at 767 (holding that agency failed to consider a range of reasonable alternatives because it did not evaluate an alternative with significant wilderness protection in order to provide an analysis of the “trade-off between wilderness use and development”).

Dam removal alternatives also meet the Agencies’ additional purpose of maintaining the viability of the Lower Yellowstone Project (LYP). The Agencies have never defined what “maintaining the viability” of the LYP means, but the primary concern appears to be minimization of operations and maintenance (O&M) costs. Defenders’ and NRDC’s conceptual alternative, described below, meets this stated need.

C. The Agencies’ Prior Rationales for Eliminating Dam Removal Alternatives from Detailed Consideration Were Arbitrary

Even though there is no scientific dispute that a dam removal alternative would best fulfill the fundamental purpose of the Intake Project – complying with the ESA – the Agencies have repeatedly rejected these alternatives from detailed consideration based on an economic, rather than biological, rationale. This rationale was and remains arbitrary and cannot serve as the basis for failing to complete a detailed consideration of such an alternative.

Specifically, the Agencies have rejected dam removal alternatives based on two different kinds of costs, even though only one appears to relate to the Agencies’ stated purpose and need: (1) construction costs; and (2) O&M costs. The Corps intends to pay the construction costs, which means they will not be passed on to the irrigation districts. Thus, construction costs do not affect the purpose and need of maintaining the viability of the LYP. Moreover, so long as the Corps envisions this Project as a means of abandoning required modifications at Fort Peck Dam, the scale of construction costs, whatever they may be, must be measured against the “saved” costs of abandoning the

Fort Peck operational modifications. These “savings” must be fully explained in the NEPA analysis as well. Regardless, construction costs have no effect on the Agencies’ additional purpose and need and cannot serve as a basis to eliminate a dam removal alternative from detailed consideration.

The second kind of costs, for O&M for the chosen alternative, are generally paid for by the irrigation districts. However, the Agencies have never disclosed the current financial status of the irrigation districts, how various O&M costs might affect the viability of the LYP, or even what the standard is for “viability.” Instead, there appears to have been a presumption that any increase in O&M cost would mean the Project could not meet the additional purpose and need. See FWS-4960-4961 (FWS official noting that “the irrigators have enlisted congressional inquiry to ensure full implementation of the project **does not result in any** added costs to the irrigators”) (emphasis in original).

Neither set of costs should affect the analysis of whether an alternative complies with the ESA – the fundamental purpose of the Intake Project. Indeed, limiting the range of alternatives based on costs would unduly narrow this fundamental purpose. See City of Carmel-by-the-Sea v. U.S. Dep’t of Transp., 123 F.3d 1142, 1155 (9th Cir. 1997) (“The stated goal of a project necessarily dictates the range of ‘reasonable’ alternatives and an agency cannot define its objectives in unreasonably narrow terms.”).

In any case, the Agencies’ concerns in the past regarding O&M costs are likely moot because Defenders’ and NRDC’s conceptual alternative eliminates the Agencies’ main concern: electricity costs for pumping water to the irrigation canal. As described below, Defenders’ and NRDC’s expert consultant has demonstrated that the purchase of a windmill would convert potential O&M costs to a capital cost and would provide free electricity for the LYP. Alternatively, the Agencies could also lease the electricity from a wind farm to substantially reduce estimated power costs, and could apply for subsidized power rates through various means. All of these options would significantly reduce or eliminate the primary concern for the irrigation districts, as stated in prior NEPA documents.

In short, the Agencies must evaluate a no-dam alternative in detail in this EIS regardless of the costs of that alternative so that the decision-makers and the public can fully understand both the costs and the benefits. If the Agencies consider alternatives that do not comply with the ESA – such as the 2015 decision to adopt the dam/bypass channel – they are not viable alternatives and cannot be adopted in compliance with federal law, regardless of their cost.

D. The Agencies Should Explore Alternative Funding

At present, the Corps alone is funding the Intake Project. Part of the Corps’ apparent rationale for doing so is to be excused from at least some of its ESA driven obligations to modify its Fort Peck Dam operations as required by the 2003 BiOp, discussed above. However, as also discussed above, Reclamation has obligations under the ESA independent of those of the Corps and is also in violation of the ESA concerning

its existing Intake Dam operations. Accordingly, as the Intake Project is proposed to cure both the Corps' and Reclamation's violations of the ESA it appears reasonable that Reclamation also provide funding for the Project. It makes little sense that one agency alone be responsible for funding activities vital to both agencies' compliance with the law. The EIS should examine alternative funding mechanisms for both agencies to pay for at least a portion of the Intake Project, while minimizing impacts on irrigators.

For example, when similar ESA non-compliant operations impeded Reclamation's ability to deliver water to local irrigators along the Sacramento River in the Central Valley Project, congressional and state funding helped pay for an ESA-compliant pumping system as an alternative to a dam that impeded fish passage. The agencies should analyze the approach taken to fund the Fish Passage Improvement Project at the Red Bluff Diversion Dam³ and similar projects and determine the full range of funding options available here.

III. THE AGENCIES SHOULD FULLY ANALYZE AND CHOOSE DEFENDERS' AND NRDC'S PROPOSED DAM REMOVAL ALTERNATIVE

A. Defenders' and NRDC's Conceptual Alternative Would Provide the Best Opportunity for Pallid Sturgeon Spawning and Recruitment on the Yellowstone River and Fulfill the Agencies' Stated Purpose and Need

Consistent with the stipulation staying the above-mentioned litigation, Defenders and NRDC submitted a draft conceptual dam removal alternative that would provide for pallid sturgeon spawning and recruitment on the Yellowstone River on January 15, 2016. A slightly modified version, based on information obtained after January 15, is attached to this comment letter as Attachment 1, with supporting attachments A-G. This alternative has several essential components:

- Implementation of water conservation measures and an alternative water source that would reduce the amount of water needed to be diverted by approximately 766 cfs;
- Delivery of needed irrigation water via a pumping system;
- Gravity diversions through the existing headworks when the river is high enough to reduce the amount of pumping electricity needed;
- Use of free wind energy to eliminate pumping electricity costs for the irrigation districts.

Removing the existing rock dam is the best way to fully restore the Yellowstone River for pallid sturgeon migration and provide an opportunity for successful spawning

³ For more information about the project, see <http://www.tccanal.com/RBDD-Bro-Sept2012-NoCrop.pdf> (Attachment 30); http://www.usbr.gov/mp/2010_accomp_rpt/accomp/red_bluff/ (Attachment 31); http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=237.

and recruitment. This alternative also meets the additional purpose and need for the Project with respect to maintaining the viability of the LYP. With this alternative, the O&M costs for electricity – a significant concern in past NEPA processes – are zero.

B. Water Conservation Measures are an Essential Element of This or Any Dam Removal Alternative

One critical aspect of this alternative that has not been considered in detail by the Agencies in their prior NEPA processes is the implementation of a suite of conservation measures. The LYP diverts far more water than it actually delivers. Approximately 66% of the water that is diverted is wasted through seepage, evaporation, spillage, or some other means. See Attachment 1 at 5. In addition, conversion of fields to sprinkler systems would significantly reduce the amount of water needed on-farm. See id. at 8. Implementing water conservation measures would reduce these inefficiencies and reduce the amount of water that needs to be diverted. As a result, the capital costs and electricity needs for pumps would be reduced significantly. Id. at 10-11. In contrast, a dam removal alternative that does not include water conservation will have unnecessary costs built in that do not provide a fair picture of the true costs of a dam removal alternative.

During our discussions with the Agencies over the course of the scoping period, there was some ambiguity about how the Corps interprets its authority to implement water conservation measures as part of a dam removal alternative. Our understanding is that the Corps currently interprets its authority to implement such measures to be co-extensive with Reclamation’s authority. Reclamation, in turn, interprets its authority to implement such measures to be applicable to all components that the agency owns – roughly speaking, the off-farm aspects of the irrigation districts such as canals, pipes, and other fixtures. Defenders and NRDC agree with these interpretations. We emphasize the Agencies’ authority here due to the importance of considering water conservation measures as part of any dam removal alternative.

1. The Corps Has Authority to Implement Water Conservation Measures as Part of the Intake Project

The Corps and Reclamation have co-extensive authority to fund and implement water conservation measures, at least where they involve the “off-farm” irrigation infrastructure. As described above, the Corps’ authority is based in section 3109 of the Water Resources Development Act of 2007, P.L. 110-114, 121 Stat. 1041 § 3109, which authorizes the Corps to use Missouri River Recovery Program funds to “*assist the Bureau of Reclamation in the design and construction of the Lower Yellowstone project of the Bureau, Intake, Montana....*” The Lower Yellowstone Project (LYP), also called the Lower Yellowstone Irrigation Project (LYIP), is owned by Reclamation and includes 71 miles of the main canal, 225 miles of laterals, 118 miles of drains, and three pumping plants. See BOR-1955-1966 (2015 Amended Biological Assessment describing background of Lower Yellowstone Irrigation Project). Accordingly, Reclamation owns the canal, laterals, and other facilities that would be upgraded through water conservation

and efficiency, and plainly has authority to make changes to its own property.⁴ Because the Corps' authority in this case is co-extensive with Reclamation's authority, both Agencies have the ability to fund and implement conservation measures throughout Reclamation-owned irrigation facilities.

This interpretation is supported by the Corps' Implementation Guidance for Section 3109, dated December 12, 2008, which contains no limitations that would impede the agency's ability to authorize and fund conservation measures as part of the Intake Project. See Attachment 2. The Implementation Guidance broadly reiterates that the purpose of the authorization is "endangered species recovery and ecosystem restoration following provisions of the Missouri River Recovery Program." Id. at 2. "Ecosystem restoration" is a term frequently used in other WRDA provisions, and is consistently applied to mean just what it says: comprehensive watershed restoration through various means. For example, in 2004, under the authority of Section 206 of the 1996 WRDA, which more generally authorizes projects for "ecosystem restoration," the Corps authorized a fish passage project on the Mill River that involved removing a dam, removing the concrete retaining walls around the pond that had formed behind the dam, and removing 18,600 cubic yards of sediment. See <http://www.nae.usace.army.mil/Portals/74/docs/Topics/MillRiver/FONSI.pdf> (Attachment 8). As part of the project, the Corps authorized planting native woody and herbaceous vegetation and removing invasive plant species in order to enhance the riparian corridor; re-grading banks and planting native salt marsh vegetation to create and restore tidal wetlands, and even incorporating a trail system to connect the greenway and parks along the river corridor. Id. This project illustrates the comprehensive nature of ecosystem restoration, which is not limited to building new structures in the river itself. Indeed, the Corps touts its broad authority and problem-solving ability on its website: "The [Corps] works to restore degraded ecosystems to a more natural condition through large-scale ecosystem restoration projects. . . and by employing *system-wide watershed approaches* to problem solving and management for smaller ecosystem restoration projects." See <http://www.usace.army.mil/Media/NewsArchive/StoryArticleView/tabid/232/Article/477888/what-is-ecosystem-restoration.aspx> (emphasis added) (Attachment 9). Implementing water conservation measures – which would update federally-owned property that was designed and built more than 100 years ago and reduce the costs of restoring the Yellowstone River – is the very definition of a "system-wide watershed approach to problem solving."

Further, not only is the LYP owned by Reclamation, but Reclamation regularly engages in water conservation and efficiency upgrades for its irrigation projects across the West. Indeed, through the WaterSMART program, established in 2010, Reclamation is specifically "[f]ocused on improving water conservation and helping water and resource managers make wise decisions about water use."

⁴ Reclamation also owns the water rights with the irrigation districts, lending further support to Reclamation's ability to improve the efficiency of that right.

<http://www.usbr.gov/watersmart/water.html> (Attachment 10).⁵ Under this program, Reclamation is authorized to “work with States, Tribes, local governments, and non-governmental organizations to pursue a sustainable water supply for the Nation by establishing a framework to provide federal leadership and assistance on the efficient use of water, integrating water and energy policies to support the sustainable use of all natural resources, and coordinating the water conservation activities of the various Interior offices.” *Id.* Moreover, the WaterSMART program provides grants and other funding assistance to improve water conservation and sustainability. *See, e.g.,* <http://www.usbr.gov/newsroom/newsrelease/detail.cfm?RecordID=51707> (Attachment 11). For example, in Montana, WaterSMART helped fund a partnership between local ranchers and landowners and Trout Unlimited to implement efficient new center-pivot irrigation systems, 2,000 feet of new lined canal and 2,310 feet of PVC pipe, and a new bypass canal and pipe for water delivery. *See* <http://www.trcp.org/images/uploads/wygwam/TRCP-Montana.pdf> (Attachment 12).

Similarly, the Buffalo Rapids Project immediately upstream of the LYP illustrates the availability of funding and effectiveness of water conservation measures in reducing costs for the LYP. Buffalo Rapids Irrigation District uses a large irrigation pumping system that provides Yellowstone River water to the Glendive, Fallon, and Terry areas. *See* “Yellowstone River Historic Events Timeline,” Final Report, November 17, 2008, at 21-22 (Attachment 13), available at:

ftp://ftp.geoinfo.msl.mt.gov/Documents/Projects/Yellowstone_River_Clearinghouse/Events_Occurrences_Final_Report_111708.pdf. The Buffalo Rapids Project – a Reclamation project started in the late 1930s – consists of six pumping plants and 63 miles of canal, which provides irrigation water for 22,719 acres of land. *Id.*; *see also* http://www.usbr.gov/projects/Project.jsp?proj_Name=Buffalo+Rapids+Project (Attachment 14). Buffalo Rapids Irrigation District has already converted much of their infrastructure in the same manner proposed in Defenders’ and NRDC’s conceptual alternative. For example, the Buffalo Rapids Irrigation District has converted 82-95% of their open ditches to pipelines. *See* 5/23/2013 Legislative Hearing on H.R. 1963, Bureau of Reclamation Conduit Hydropower Development Equity and Jobs Act, Written

⁵ More generally, according to the agency’s press materials, Reclamation has prioritized water conservation in distributing its Congressional funding. For example, on February 8, 2016, Reclamation issued a press release describing its spending plan from the Consolidated Appropriations Act of 2016. Commissioner Estevan López stated in this release, “Reclamation and its partners have created a spending plan that will help ensure sustainable water supplies across the Western United States. The funding will go toward conservation and improving long-term infrastructure and environmental work on key water projects.”

<http://www.usbr.gov/newsroom/newsrelease/detail.cfm?RecordID=52587>. The implementation of water conservation and efficiency measures is consistent with the President’s announcement in December of a new Public-Private Innovation Strategy to Build a Sustainable Water Future. *See* <https://www.whitehouse.gov/the-press-office/2015/12/15/fact-sheet-administration-announces-public-private-innovation-strategy>.

Testimony of Michael Carlson, Manager of Buffalo Rapids Irrigation District #1, at 1-2 (Attachment 15), available at: <http://naturalresources.house.gov/uploadedfiles/carlsontestimony05-23-13.pdf>. These improvements were paid for through “financial support from the District, the State of Montana, the [U.S. Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS) Environmental Quality Incentives Program (EQIP)] cost share program and the many farmers.” *Id.* at 2. Through their water conservation efforts, Michael Carlson, then-District Manager, testified in 2013 that the District had reduced water usage by 25% and reduced pumping costs by \$100,000/year. *Id.* Mr. Carlson also stated that farmers were “rapidly converting their fields to sprinklers to further reduce costs, improve irrigation efficiency and crop yields.” *Id.* According to the NRCS, one center-pivot irrigation project cost more than \$484,000 but is expected to yield approximately \$2.3 million/year in benefits to the local economy. See Attachment 16, available at: ftp://ftp.geoinfo.msl.mt.gov/Documents/Projects/Yellowstone_River_Clearinghouse/Events_Occurrences_Final_Report_111708.pdf.

As noted by Mr. Carlson, the EQIP cost-share program provides financial and technical assistance to agricultural producers on a voluntary basis in order to “plan and implement conservation practices that improve soil, water, animal, air and related natural resources on agricultural land and non-industrial private forestland.” See <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip/> (Attachment 17). NRCS has multiple programs designed to provide financial assistance to farmers and ranchers and improve agricultural practices for the benefit of natural resources. See <http://www.nrcs.usda.gov/wps/portal/nrcs/main/mt/programs/> (Attachment 18).

In other words, there is no impediment to planning and implementing the design and funding of water conservation measures. Such measures would reduce the costs to the federal government of a dam removal alternative, help provide for the restoration of the Yellowstone River for the pallid sturgeon and benefit the irrigation districts.

2. The Agencies Must Consider Viable Conservation Measures Even if These Measures are Outside of Their Authority

Even if some of the water conservation measures proposed in Defenders’ and NRDC’s conceptual alternative would require other agencies’ participation and funding, the Agencies must still evaluate them as part of the dam removal alternative. An agency must include reasonable alternatives that are “not within the jurisdiction of the lead agency.” 40 C.F.R. § 1502.14(c). “An agency’s refusal to consider an alternative that would require some action beyond that of its congressional authorization is counter to NEPA’s intent to provide options for both agencies and Congress.” *NWF v. NMFS*, 235 F. Supp. 2d 1143, 1154 (W.D. Wash. 2002) (“NWF”) (citing *Natural Resources Defense Council v. Morton*, 458 F.2d 827, 836 (D.C. Cir. 1972), *overruling on other grounds recognized by Idaho Rivers United v. U.S. Army Corps of Engineers*, 2015 WL 9700887, at*5 (W.D. Wash. 2015)). Courts have repeatedly rejected NEPA analyses that fail to evaluate alternatives that require non-agency funding or actions. See *Muckleshoot*, 177

F.3d at 814 (rejecting range of alternatives because Forest Service failed to consider the option of purchasing private land outright with funds from the Land and Water Conservation Fund instead of brokering an exchange); NWF, 235 F. Supp. 2d at 1154-55 (rejecting failure to analyze an alternative outside of Corps' authority because it would meet the basic policy objective).

Reclamation has previously stated that it does not have authority to implement "on-farm" conservation measures such as center-pivot irrigation systems. Other federal agencies do have this authority, however. For example, the NRCS provides funding for on-farm conservation measures through its EQIP program. As in Muckleshoot and NWF, these measures must be included as part of the NEPA analysis because they provide important means of reducing the construction costs of a dam removal alternative. We recommend that the Agencies invite NRCS to be a cooperating agency in the NEPA process, as provided by 40 C.F.R. § 1501.6.

IV. THE AGENCIES MUST TAKE A "HARD LOOK" AT THE IMPACTS OF EACH ALTERNATIVE TO COMPLY WITH NEPA

For each alternative in the EIS, NEPA requires the Agencies to carefully and thoroughly describe the environmental consequences of that action, including its direct and indirect effects. See 40 C.F.R. §§ 1502.16(a), (b), 1508.25(c). "Direct effects" are those "caused by the action and occur at the same time and place." Id. § 1508.8(a). "Indirect effects" are those "caused by the action and [] later in time or farther removed in distance, but still [] reasonably foreseeable." Id. § 1508.8(b). These effects "may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial." Id. § 1508.8.

A. The Agencies Must Take a "Hard Look" at the Consequences of Each Alternative on Pallid Sturgeon Survival and Recovery

As described above, the core purpose of the Intake Project is to remedy the Agencies' ongoing ESA violations. Thus, the scope of the NEPA analysis must be commensurate with that purpose. The Ninth Circuit has held that the scope of a NEPA analysis is determined in part by the relevant substantive statute driving the action – here, the ESA. See Montana Wilderness Ass'n v. Connell, 725 F.3d 988, 1002 (9th Cir. 2013) (noting that "NEPA analysis should be informed by the laws driving the federal action being reviewed") (citations omitted); ONDA v. BLM, 625 F.3d 1092, 1109-12 (9th Cir. 2008) (finding that agency must evaluate affected wilderness values where underlying statute requires agency to balance multiple uses, including wilderness resources). As noted above, in the preliminary injunction ruling, the Court agreed that an analysis of impacts to pallid sturgeon recovery is required in an EIS. See Defenders of Wildlife, CV-15-14-GF-BMM, Dkt. # 73 at 12 ("The new analysis should include the anticipated effects of the Project on the recovery of pallid sturgeon.") (citation omitted).

Such an analysis would address whether and how each alternative will move the pallid sturgeon closer to achieving the 2014 Recovery Plan's goal of a self-sustaining population of 5,000 adult fish in the upper Missouri River basin, including what percentage of the adult sturgeon are expected to migrate upstream under a new plan; their likelihood of successfully spawning and in what numbers; the likelihood of their larvae surviving the downstream drift and in what numbers, whether and why the Yellowstone River alone would be enough to re-establish a viable, self-sustaining population, and any other relevant factors. The EIS must take a "hard look" at the consequences of every alternative to the status of the species under every alternative, in light of ESA standards.

B. The Agencies Must Fairly Evaluate the No-Action Alternative and Disclose That Current Operations are Illegal and Past Operations Will Not Continue

NEPA requires the Agencies to evaluate a "no-action" alternative. See 40 C.F.R. §§ 1502.14(d), 1508.25(b)(1). This alternative is intended to provide an analysis of the status quo and establish a baseline against which the other alternatives may be measured. *Id.* § 1502.14(b); *Ctr. for Biological Diversity v. U.S. Dep't of Interior*, 623 F.3d 633, 645 (9th Cir. 2010) ("It is black letter law that NEPA requires a comparative analysis of the environmental consequences of the alternatives before the agency," including the no-action alternative); *N. Carolina Wildlife Fed'n v. N. Carolina Dep't of Transp.*, 677 F.3d 596, 603 (4th Cir. 2012) ("Without [accurate baseline] data, an agency cannot carefully consider information about significant environment impacts ... resulting in an arbitrary and capricious decision.") (citing *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1085 (9th Cir.2011)). The analysis must be informed by what others are likely to do if the agency chooses not to act. "Where a choice of 'no action' by the agency would result in predictable actions by others, this consequence of the 'no action' alternative should be included in the analysis." Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, at 4-5, available at: <http://energy.gov/sites/prod/files/G-CEQ-40Questions.pdf>

Here, the "no-action" alternative – meaning no modifications to Intake Dam to create fish passage – should not be "continue present operations," as described in the 2015 Final EA at 2-1 – 2-3. "Continu[ing] present operations" would be illegal. Present operations allow the re-construction of the dam each year, which violates sections 7 and 9 of the ESA, as described above.⁶ The 2015 BiOp conceded that the current "injury" to breeding for pallid sturgeon would continue as long as the existing dam was re-built each year. 2015 BiOp at 30-32. The 2015 BiOp also conceded that the existing dam operations "take" 32 adult sturgeon per year. *Id.* at 33. The 2015 BiOp's no-jeopardy

⁶ The "no-action" alternative also likely violates the Clean Water Act, 33 U.S.C. § 1344 because Reclamation has never obtained a Section 404 permit for the "rocking." The Corps has apparently relied on the exemption in section 404(f)(1)(C) to section 404's requirements, but this exemption "for the purpose of construction or maintenance of farm or stock ponds or irrigation ditches, or the maintenance of drainage ditches" does not apply here. 13 U.S.C. §1344(f)(1)(C).

conclusion and ITS were based on the idea that the construction of the dam/bypass channel by 2017 would alleviate the harm to pallid sturgeon and avoid causing jeopardy to the species. *Id.* at 30-35. That conclusion is no longer even facially valid (to the extent it ever was) because the dam/bypass channel has been enjoined and the Agencies are currently engaging in a new NEPA analysis that should result in an entirely different resolution with an unknown timeline for implementation. Thus, the alleged mitigating factor – immediate commencement of the construction of the dam/bypass channel – is no longer in place. Because the present operations are violating the ESA, continuation of these operations as part of the “no-action” alternative is unrealistic and cannot serve as the baseline comparison for the EIS. See Friends of Yosemite Valley v. Kempthorne, 520 F.3d 1024, 1038 (9th Cir. 2008) (holding that agency “did not set forth a true ‘no-action’ alternative because” the alternative assumed the existence of a plan that the court has already found to be invalid). As the Ninth Circuit has explained, an agency “cannot properly include elements from [an illegal] plan in the no action alternative as the status quo....” *Id.*

Instead, if the Agencies chose not to modify the Dam through an action alternative, that decision would precipitate a series of predictable, and legally required, actions by others. The predictable results would be that the rocking would be prohibited because it is illegal and the dam would eventually naturally erode away, or Reclamation would finally comply with the law and actively remove the barrier. The Agencies must analyze the consequences of those realistic, predictable scenarios. See Ctr. for Biological Diversity, 623 F.3d at 645-46, (holding that EIS “must make a meaningful comparison of the environmental consequences of [the applicant’s] likely mining operations” both with and without the additional regulations that would apply under the no action alternative).

In the 2015 Final EA, the Agencies acknowledged the reality that the rocking could not continue. 2015 Final EA at 2-1 (Under the no-action alternative “it is likely that Reclamation would be obligated to continue consultation with the Service under Section 7(a)(2) of the ESA, with fish passage being a requirement at Intake Diversion Dam”). Nonetheless, the Agencies stated that for purposes of the EA’s analysis, “the future without project condition consists of continued operation of Intake Diversion Dam without modification for improved fish passage.” *Id.* The EA used this alternative as “a baseline from which to measure benefits and impacts of implementing fish passage improvement alternatives considered in this document.” *Id.*

The problem with this analysis is that when presented against an illegal, unrealistic baseline where there is no fish passage, every alternative can, at least theoretically, be analyzed as a “benefit.” But the no-action alternative would also present a benefit – at worst, the dam would be allowed to erode away and fish passage would eventually be restored; at best, Reclamation would be finally forced to comply with the ESA and provide for immediate passage. Either way, the comparison between the action alternatives and the no-action alternatives should compare the consequences of different means of providing passage – not whether the action alternatives are a benefit, no matter how minute, over no passage at all. Such an analysis would acknowledge that the pallid

sturgeon has been nearly extirpated as a result of past actions, but would assume that those past actions cannot continue under any scenario.

C. To the Extent the Agencies Evaluate a Dam/Bypass Channel Alternative, the Agencies Must Disclose all of its Impacts

Defenders and NRDC urge the Agencies to abandon their prior decision to adopt the dam/bypass channel. Adopting this alternative will likely drive the pallid sturgeon to extinction in Montana, permanently foreclose recovery of this ancient species in the Yellowstone River, and involve the construction of a concrete dam that will permanently block the migrations of many other native fish species along with the pallid sturgeon. This alternative is not supported by the best available science and has no precedent for success. Indeed, we are not aware of any examples of a successful artificial bypass channel for pallid sturgeon in the Missouri or Mississippi River systems.

In general, the available evidence suggests that fish passage facilities for other targeted species often fail to pass high numbers of fish. *See, e.g., Noonan et al., A quantitative assessment of fish passage efficiency*, (2012) (Attachment 19) (study referenced in Braaten *et al.*, finding that at existing fish passage facilities in the northeast United States, upstream passage for non-salmonids was only 21.1%); Brown *et al.* (Attachment 20) (“It may be time to admit failure of fish passage and hatchery-based restoration programs and acknowledge that significant diadromous species restoration is not possible without dam removals.”); http://e360.yale.edu/feature/blocked_migration_fish_ladders_on_us_dams_are_not_effective/2636/ (article summarizing findings) (Attachment 21). A 2015 study on the Yellowstone River specifically noted that pallid sturgeon may have an even lower success rate than other species:

Although improving, ecological engineering (Mitsch 2012) applied to designs of fish passage structures has generated limited success in passing fishes as noted by Noonan *et al.* (2012) in their review of 50 years of fish passage studies. Furthermore, designs of fishways or devices engineered for sturgeon passage must consider that sturgeons have reduced swimming capabilities and unique behavioral and morphological attributes relative to other fishes (e.g. salmonids, Peake et al. 1997) for which passage structures have traditionally been developed.

Braaten, *et al.*, *Migrations and swimming capabilities of endangered pallid sturgeon (Scaphirhynchus albus) to guide passage designs in the fragmented Yellowstone River*, (2015) at 191 (Attachment 22).

Moreover, Braaten *et al.* noted that there was little information about pallid sturgeon use of natural side channels prior to their own study and that pallid sturgeon use of these channels is inconsistent and not well understood. *Id.* at 192. The Braaten study “identified that pallid sturgeon will use side channels as a component of the migration pathways. However, side channel use was not consistent among migrating pallid sturgeon to suggest that a by-pass channel might be used by some but not all individuals.”

Id. at 193. In light of this and other data, the 2015 BiOp’s summary conclusion that every adult sturgeon that swam to Intake would find and use the artificial bypass (see 2015 BiOp at 29) was unsupported by scientific evidence.

Thus, even if some sturgeon use the artificial bypass, it will be a small fraction of the potential breeding population. The inevitable result will be further genetic degradation and high probability of reproductive failure simply due to stochastic effects on small populations, made smaller by the process of limiting access to the breeding reaches of the river to a handful of individuals. Indeed, truncating the breeding population of an already small, fragmented endangered population of any organism is tantamount to ensuring its demise for a host of reasons – genetic, ecological, and behavioral. See, e.g., Hildebrand and Kershner, *Conserving Inland Cutthroat Trout in Small Streams: How Much Stream is Enough?* (2000) (Attachment 23). This is biologically unsustainable, and unacceptable conservation practice. The best science informing this situation requires providing the maximum access to the full range of breeding possibilities for sturgeon, and this can only be accomplished by access to the full flow of the river.

More fundamentally, the EA must analyze what factors have precluded the pallid sturgeon from successfully reproducing so far, even though a handful of sturgeon swam past Intake in 2014 and 2015 and may have done so for years prior to the monitoring being in place. As one former member of the Missouri River Recovery Implementation Committee (MRRIC) summarized the problem in 2014, “[i]f the Pallid have been using the old side channel and therefore spawning above Intake as No. 36 did, why haven’t we had the recruitment promised by the scientists who support building the new side-channel?” ACE-3600. The reasons for the recruitment failure could be related to many factors, including, but not limited to, the fact that the numbers of individuals successfully migrating upstream are too few, that larvae cannot survive the journey downstream with a dam at Intake and/or due to other hazards, or that the drift distance is too short from the point at which the pallid sturgeon have spawned so far. These and other factors that would indicate why the small number of pallid sturgeon currently passing the dam are insufficient for successful recruitment must be analyzed and addressed. Otherwise, any plan to construct more facilities in the Yellowstone River will sentence the species to near-certain extinction by making an unsustainable situation even worse.

If the Agencies re-analyze the dam/bypass channel adopted in the last EA, the Agencies must provide the public with a much more thorough analysis to comply with NEPA. In the 2015 EA, the Agencies hypothetically analyzed the technical suitability of the channel for upstream migration, but never analyzed the scientific evidence indicating whether or not pallid sturgeon would actually use the channel.⁷ Moreover, the Agencies

⁷ However, even the technical suitability of the bypass channel is unsupported by the best available science. As the BRT explained, “[p]roviding passage for pallid sturgeon (and all other fish species) is the purpose of this action. However, the decision appears to have been based primarily on irrigation efficiency by choosing a very conservative flow split at the expense of being generous about whether that flow split

failed to evaluate whether larvae, juveniles, or adults will survive the migration downstream. As FWS Director Jeff Hagen explained in a letter to FWS in 2013, “[s]pecies are not recovered just because flows are engineered to ‘accepted’ standards. Species are recovered when biological parameters such as spawning, recruitment, and survival are met.” BOR-5981.

FWS made a last-minute attempt in the 2015 BiOp to fill in the analytical hole in the Agencies’ 2015 EA related to survival of pallid sturgeon larvae by comparing the pallid sturgeon to shovelnose sturgeon in a manner not mentioned in the 2015 Final EA. However, that attempt does not comply with the ESA or NEPA and should not be substituted for a thorough analysis of larval survival in the forthcoming EIS process. Specifically, FWS predicted – without supporting analysis – that the new concrete dam’s impacts to the pallid sturgeon would be similar, proportionately, to the existing dam’s impacts on the shovelnose sturgeon. See 2015 BiOp at 27-28. Yet, shovelnose sturgeon are stable and self-sustaining in the Yellowstone, despite the presence of the new dam, and pallid sturgeon are not. Id. at 28. The biological reason for the two species’ differing success rates was never explained. Without some explanation, there is no scientific basis to assume that the two subspecies would react the same way to the new dam, even though they react different ways to the existing dam. Moreover, even if FWS’s premise was sound, there is no scientific basis to assume that the same percentage of larvae will die on a concrete dam and downstream rock field as currently die at the existing rock dam. This surrogate was also adopted even though the Agencies did not yet even know what percentage of shovelnose sturgeon larvae die at the existing rock dam. Id. at 35 (requiring Reclamation to “[w]ork with appropriate parties... to establish monitoring plan” and setting deadline of December 31, 2015 to “discuss goals, strategy and logistics of monitoring shovelnose sturgeon for a baseline”). To the extent the Agencies have put a monitoring program in place since that time, the findings and limitations of such monitoring must be clearly explained in the EIS.

Similarly, the Agencies’ prior plan to fill in the natural side channel – even though a handful of pallid sturgeon have used it in the past – has no scientific support. See ACE-3599 (“No credible biologist, I know, would even consider a plan to destroy a used side-channel in favor of one Pallids may, or may not, use.”). The artificial side channel would be heavily armored and would likely require regular dredging to maintain, operating more as a ditch than as a natural wetland that it is replacing. Natural side channels are important for fish passage and habitat. See, e.g., Reinhold et al., Anthropogenic Habitat Change Effects on Fish Assemblages of the Middle and Lower Yellowstone River, (2014) at 35-118 (Attachment 24). Natural side channels are disappearing on the lower Yellowstone, largely as a result of the human-built environment. Id. at 16-34. Yet the dam/bypass channel essentially called for destruction of a natural, functioning side channel in order to replace it with a human-constructed side channel that may not have the nuanced characteristics common of side channels on the

could effectively pass fish.” FWS-4825. To the extent the Agencies include the dam/bypass channel as a potential alternative in the EIS, the Agencies must evaluate and disclose the best available science relating to technical aspects of the bypass channel.

lower Yellowstone. Not only would the dam/bypass channel contribute to a negative trend of fewer natural side channels on the lower Yellowstone, this alternative would place more faith in a conceptual design that hopes to mimic a side channel rather than simply allowing a natural, functioning side channel to continue to exist.

Finally, even if the dam/bypass channel had a valid scientific basis (which it did not), the design of the bypass channel apparently continued to evolve after the 2015 Final EA was completed and the FONSI signed. For at least one of the changes, proposed in May 2015, the BRT cautioned that it would cause “some reduction in the probability of pallid sturgeon passage success.” FWS-11978. Such changes – after the completion of the EA and without any public knowledge or input – undermine the purpose of NEPA and any claim that the Intake Project is being adopted with pallid sturgeon passage as a priority.

In short, the Agencies should reject the dam/bypass channel because it does not comply with the fundamental purpose and requirement of this project – to remedy the existing ESA violations at Intake Dam and Fort Peck Dam. To the extent the Agencies evaluate this alternative, the Agencies must fully disclose the impacts to the survival and recovery of the pallid sturgeon.

D. The EIS Must Disclose Impacts to the Entire Ecosystem

The Intake EIS must also evaluate the impacts of every alternative on the migrations and ecological needs of the many other native fish species in the Yellowstone. The Yellowstone River is a high value public resource that provides substantial fish and wildlife habitat, recreational, historic, and aesthetic values. The Lower Yellowstone is one of the most biodiverse and important grassland riverine systems in the northern Great Plains as ranked by both The Nature Conservancy and World Wildlife Fund. See Northern Plains Conservation Network, [Ocean of Grass: A Conservation Assessment for the Northern Great Plains](#), (2004) at 106-108 (Attachment 25). There are about 59 fish species in the Yellowstone River, 37 of which are native. See U.S. Army Corps of Engineers, Technical Appendix 8: Fisheries, at 1-1 (Attachment 26). At least seven imperiled fish species besides the pallid sturgeon inhabit the lower Yellowstone River and its tributaries, as well as Montana fish species of concern and sportfish sauger, paddlefish, burbot, trout-perch, channel catfish, and shortnose gar. The Intake EIS must address the impacts of all of the potential alternatives on the Yellowstone River fish community.

The alternative chosen could also alter the public’s ability to use and appreciate the Yellowstone River. For instance, diversion dams along the Yellowstone currently pose a threat to recreational boaters. Any decision to place a permanent structure across the river could have safety implications for public use, while removing the existing structure would likely improve the safety and experience for recreational boaters.

In addition, the Agencies should take into account any potential impacts of climate change. Recent CEQ Guidance requires the Agencies to incorporate climate change

impacts into the NEPA process. See <https://www.whitehouse.gov/administration/eop/ceq/initiatives/nepa/ghg-guidance>. The Corps' Climate Change policy states, "It is the policy of USACE to integrate climate change preparedness and resilience planning and actions in all activities for the purpose of enhancing the resilience of our built and natural water-resource infrastructure...." See [http://corpsclimate.us/docs/USACE Adaptation Plan Policy 2014Jun27_highres.pdf](http://corpsclimate.us/docs/USACE_Adaptation_Plan_Policy_2014Jun27_highres.pdf). Similarly, the Secretary of the Department of Interior (which houses Reclamation) issued an order in 2010 stating: "Each bureau and office of the Department must consider and analyze potential climate change impacts when undertaking long-range planning exercises, setting priorities for scientific research and investigations, developing multi-year management plans, and making major decisions regarding potential use of resources under the Department's purview." <http://elips.doi.gov/elips/DocView.aspx?id=155&searchid=b564dce7-ee70-4e7d-a703-84a139203a4a&dbid=0> (Attachment 27). Nonetheless, the Agencies failed to evaluate the resilience of the potential alternatives to changes in climate in the prior NEPA processes. In the upper Missouri River basin, climate change will likely result in changes in precipitation. Flows in the upper Missouri River basin have already been declining in part to decreased snowpack. See Norton, P.A., Anderson, M.T., and Stamm, J.F., 2014, Trends in Annual, Seasonal, and Monthly Streamflow Characteristics at 227 Streamgages in the Missouri River Watershed, Water Years 1960–2011: U.S. Geological Survey Scientific Investigations Report 2014–5053 (Attachment 28). These changes will likely have many different impacts. For example, for the dam/bypass channel, precipitation changes could alter the bypass channel flows, which would alter its use, as well potentially affect the stability of the project and the channel and change downstream sediment transport. These and other impacts of climate change must be assessed in the Intake EIS.

The EIS must also address the resilience of each potential alternative given the fact that the Yellowstone is a highly dynamic, changeable river prone to ice flows, floods, and other natural processes that will undoubtedly alter any engineered structures in the river. The costs of repairing such engineered structures must also be considered as part of the O&M costs associated with each alternative.

V. THE AGENCIES MUST EVALUATE AND DISCLOSE ALL IMPACTS RELEVANT TO THE CORPS' REQUIRED CLEAN WATER ACT SECTION 404 ANALYSIS

In addition to the ESA and NEPA, the Agencies must also comply with section 404 of the Clean Water Act prior to making a final decision on the Intake Project. In the 2015 NEPA process, the Corps relied on the 2015 Final EA adopting the dam/bypass channel alternative for the analysis underlying its CWA section 404 findings. However, although a NEPA analysis may be used to inform the 404 permitting decision, the CWA differs significantly from NEPA in that it has substantive standards and section 404 *prohibits* activities that violate those standards. See Bering Strait Citizens v. Army Corps of Engineers, 524 F.3d 938, 947-48 (9th Cir. 2008). Where the NEPA analysis fails to consider the alternatives "in sufficient detail to respond to the requirements of these

Guidelines,” the Corps should supplement the NEPA documents with additional information. 40 C.F.R. § 230.10(a)(4).

Here, the analysis relevant to determining whether the plan will comply with the CWA should be the same as the analysis under NEPA because both statutes require an analysis of all of the relevant impacts of potential alternatives. However, the prior NEPA process did not provide sufficient information or analysis to inform the section 404 findings. Accordingly, Defenders and NRDC provide the following framework of analysis for the CWA standards and urge the Agencies to fully disclose the impacts that relate to these standards.

The CWA is designed to “restore and maintain the chemical, physical and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251(a). The CWA generally prohibits the discharge of pollutants, including dredged or fill material, into the waters of the United States unless authorized by a permit. 33 U.S.C. § 1311(a); see also 33 C.F.R. § 323.2 (defining discharge of dredged and fill material); 40 C.F.R. § 232.2 (same). Section 404 of the CWA authorizes the Corps to issue such permits. 33 U.S.C. § 1344. The section 404 requirements apply to the Corps where, as here, it is authorizing its own activities. See 33 C.F.R. Parts 335-337. However, instead of issuing itself a permit, the Corps issues a Statement of Findings (SOF) to authorize its activities. 33 C.F.R. §§ 336.1(a), 337.6.

The Corps adopted regulations, known as the “public interest” factors, to implement this permitting authority. 33 C.F.R. §§ 320 et seq. The Corps must “weigh the benefits that reasonably may be expected to accrue from the proposal against its reasonably foreseeable detriments, considering all relevant factors.” Alliance to Save the Mattaponi v. U.S. Army Corps of Engineers, 606 F. Supp. 2d 121, 124 (D.D.C. 2009) (citing 33 C.F.R. § 320.4). The Corps must consider a broad range of potential impacts as part of its public interest review, including “conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.” 33 C.F.R. § 320.4(a)(1). Moreover, in the evaluation of every permit, the Corps must consider:

- (i) The relevant extent of the public and private need for the proposed structure or work;
- (ii) Where there are unresolved conflicts as to resource use, the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work; and
- (iii) The extent and permanence of the beneficial and/or detrimental effects which the proposed structure or work is likely to have on the public and private uses to which the area is suited.

Id. § 320.4(a)(2).

The Section 404 process is also governed by the Environmental Protection Agency's (EPA) "404(b)(1) Guidelines." 33 U.S.C. § 1344(b)(1); 40 C.F.R. §§ 230 *et seq.* The Corps reviews all proposed Section 404 permits under both the Corps' public interest factors and EPA's 404(b)(1) guidelines. 33 U.S.C. § 1344(b)(1); 33 C.F.R. § 320.2(f). A permit must be denied if it is contrary to the public interest or does not comport with the Section 404(b)(1) Guidelines. 33 C.F.R. §§ 320.4, 323.6; 40 C.F.R. §§ 230.10, 230.12.

To ensure these mandatory CWA requirements are satisfied, the Corps must fully evaluate the direct, secondary, and cumulative impacts of the activity, including impacts to endangered species, the aquatic environment, fish and wildlife, and human impacts. *See, e.g.*, 33 C.F.R. §§ 320.4(a)(1), 336.1(c)(5), 336.1(c)(8); 40 C.F.R. §§ 230.11(a)-(h), 230.20-23, 230.30, 230.31, 230.51, 230.53. The 404(b)(1) guidelines also set forth particular restrictions on discharges, described more fully below. 40 C.F.R. § 230.12. The Corps must set forth its findings in writing on the short-term and long-term effects of the discharge of dredge or fill activities, as well as compliance or non-compliance with the restrictions on discharge. *Id.* §§ 230.11, 230.12(b).

EPA's 404(b)(1) guidelines prohibit the Corps from authorizing an application for dredge and fill activities under several circumstances relevant to this case:

- (1) the activity "jeopardizes the continued existence" of an endangered species under the Endangered Species Act ("ESA") (40 C.F.R. §§ 230.10(b)(3), 230.12(a)(3)(ii));
- (2) there is a practicable alternative which would have less adverse impact and does not have other significant adverse environmental consequences (40 C.F.R. §§ 230.10(a), 230.12(a)(3)(i));
- (3) the discharge will result in significant degradation to waters of the U.S. (40 C.F.R. § 230.10(c) 230.12(a)(3)(ii)); or
- (4) there does not exist sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with the COE's Guidelines for permit issuance. (40 C.F.R. § 230.12(3)(iv)).

See *Utahns for Better Transp. v. U.S. Dep't of Transp.*, 305 F.3d 1152, 1163 (10th Cir. 2002) (citing 40 C.F.R. § 230.12(a)(3)(i-iv)). The Corps must document its findings of compliance or noncompliance with the restrictions on discharge set forth in these guidelines. 40 C.F.R. § 230.12(b). Where there is not sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with the Guidelines, the Corps must deny the permit. 40 C.F.R. § 230.12(a)(3)(iv).

A. Dam Removal is the Only Alternative That Will Avoid Jeopardizing the Endangered Pallid Sturgeon

Under EPA's guidelines, the Corps may not permit a dredge and fill activity that "jeopardizes the continued existence" of an endangered species – the standard for prohibiting federal activities under section 7 of the ESA, 16 U.S.C. § 1536(a)(2); 40

C.F.R. § 230.10(b)(3). As noted above, Reclamation and the Corps are currently violating their procedural and substantive duties under section 7 of the ESA. The only way for the Agencies to comply with the ESA with respect to the Yellowstone is to remove the dam and restore the Yellowstone as a free-flowing river. Whether restoration of the Yellowstone alone is enough to remove the jeopardy caused by Fort Peck Dam must be thoroughly evaluated in the NEPA documents and consulted upon by the Corps and FWS prior to making the CWA's section 404 findings.

B. The Least Environmentally Damaging Practicable Alternative is to Remove the Dam

As noted above, in order to comply with section 404, the Corps must choose the alternative that is the least damaging alternative unless it is proven to be impracticable. See Utahns, 305 F.3d at 1186-87; Alliance to Save the Mattaponi, 606 F. Supp. 2d at 128; 40 C.F.R. § 230.10(a). The Corps is required to deny the application “if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.” 40 C.F.R. § 230.10(a). The Clean Water Act “compels that the [least-damaging] alternative be considered and selected unless proven impracticable.” Utahns, 305 F.3d at 1189; Alliance to Save the Mattaponi, 606 F. Supp. 2d at 130 (“The Corps must adequately explain why there is no less-damaging practicable alternative. If the Corps cannot so explain based on the record before it, it must reconsider its determination based on an adequate analysis of the alternatives.”). An alternative is practicable if it is “available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.” 40 C.F.R. § 230.10(a)(2).

Notably, although one factor of the practicability test involves the cost of a particular alternative, the fact that one alternative may cost more than another is not, by itself, sufficient to reject it. Instead, the Corps must weigh the relative benefits and impacts of all of the potential alternatives. See Alameda Water & Sanitation District v. Reilly, 930 F. Supp. 486, 489, 492 (D. Colo. 1996) (upholding EPA's determination that practicable alternatives existed even though the record showed “very substantial regulatory and legal obstacles to these alternatives” – such as moving an entire town and obtaining a Presidential exemption); Friends of the Earth v. Hall, 693 F. Supp. 904, 946-47 (W.D. Wash. 1988) (noting that whether costs make an alternative impracticable depends on whether “competing alternatives can reasonably be viewed as equivalent with respect to other factors” including the “potential for environmental harm”); Hough v. Marsh, 557 F. Supp. 74, 83-84 (D. Mass. 1982) (remanding because “‘exorbitant cost’ . . . by itself carries little weight; although cost is relevant to an assessment of an alternative's ‘practicability,’ the Corps conducted no examination of whether the price was unreasonably high [or] whether the defendants could afford it . . .”). Accordingly, the Agencies must fully evaluate the relative benefits of each all of these costs and benefits for public information and comment.

As described above, it is indisputable that the least environmentally damaging alternative is removing the dam. However, the Agencies have also eliminated

alternatives involving dam removal prior to detailed consideration based on their conclusions about the costs associated with diverting water for irrigation – conclusions that have since been proven unfounded. For this EIS, the Agencies must evaluate a dam removal alternative in detail. Costs of such an alternative will be a relevant factor in the 404 analysis, but cost alone is not an appropriate criterion for rejection of an alternative if the alternative chosen instead: (1) lacks scientific support; (2) provides a “solution” that will not lead to recovery of the pallid sturgeon; and (3) has likely impacts to other species of concern that will result in future resource impacts.

Moreover, all costs must be incorporated into the analysis. For example, if an alternative is chosen that will not recover the species, there will be additional costs associated with (1) the costs of evaluating and implementing a new alternative to comply with the ESA if the initial plan fails to provide for recovery of the species; (2) the adaptive management activities required to tear down any construction and implement a new solution; and (3) the maintenance, in perpetuity, of a hatchery program for pallid sturgeon if the species continues to be unable to be self-sustaining. In addition, there are likely significant costs associated with any engineering alternative, stemming from the removal of the accumulation of rock and other fill from the existing rockpile that have collected downstream in the Yellowstone River, ongoing maintenance of any new construction in what is a floodplain and subject to significant ice and floods in any year.

Nonetheless, the Corps’ 2015 Statement of Findings for the dam/bypass channel failed to comply with the CWA in part because the Corps failed to even evaluate – let alone adopt – the least environmentally damaging alternative, which, as discussed above, requires dam removal. We urge the Agencies to fully evaluate removing the dam as a viable alternative and realistically assess the ecological and economic costs and benefits of all alternatives in order to provide a basis for the Corps to make a reasoned decision that complies with the 404(b)(1) guidelines.

C. Dam Removal is the Only Alternative That Will Avoid Causing Significant Degradation to the Yellowstone River

The Corps may not permit a dredge and fill activity that “cause[s] or contribute[s] to significant degradation of the waters of the United States,” which includes the Yellowstone River. 40 C.F.R. § 230.10(c). Effects that contribute to significant degradation include: “[s]ignificant adverse effects of the discharge of pollutants on aquatic ecosystem diversity, productivity, and stability. Such effects may include ... loss of fish and wildlife habitat.” 40 C.F.R. § 230.10(c)(3).

First and foremost, any alternative that contributes to the extirpation of an endangered species will cause significant degradation to the Yellowstone River. Moreover, the Intake Project will significantly degrade the entire aquatic ecosystem of the Yellowstone. See Greater Yellowstone Coalition v. Flowers, 321 F.3d 1250, 1257-1258 (10th Cir. 2003) (“adverse impact on the aquatic ecosystem” under the Guidelines does not require showing jeopardy; harm to individuals can suffice). The Yellowstone River is often referred to as the longest undammed river in the contiguous United States; it is certainly the longest unimpounded river in the contiguous United States. Its

floodplain is largely intact. See Reinhold *et al.*, Anthropogenic Habitat Change Effects on Fish Assemblages of the Middle and Lower Yellowstone River, (2014) at 11 (Attachment 24). The lower Yellowstone River is regarded by the Environmental Protection Agency as an aquatic resource of national importance.

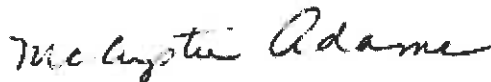
In general, riparian habitat is of high value for many fish and wildlife species and is unique and irreplaceable on a regional and national basis. See, e.g., Knopf *et al.*, Conservation of Riparian Ecosystems in the United States, (1987) (Attachment 29). Any alternative that requires additional bank stabilization or river modification, such as the dam/bypass channel, will run counter to the Yellowstone River Conservation District Council's plan to protect and encourage channel migration easements within channel migration zones on the Yellowstone River as well as the Agencies' acknowledgment that dam building, bank stabilization, and other river modification efforts throughout the Missouri and Mississippi River basins are the primary reason that the pallid sturgeon is nearing extinction.

Indeed, any highly engineered alternative, such as the dam/bypass channel, that continues to block any native fish from migrating throughout the Yellowstone River, and that requires significant river modification, will significantly alter and degrade the Yellowstone River's fishery and riparian habitat. In contrast, removing the dam will start the process of reversing the degradation caused by the more than a century of dam building and river modifications that have destroyed the habitat for pallid sturgeon and other sensitive species. These impacts must be thoroughly evaluated in the EIS

VI. CONCLUSION

Thank you for providing the opportunity to comment on scoping process for the Intake Project EIS. Defenders and NRDC urge the Agencies to take this opportunity to protect and restore the pallid sturgeon in the state of Montana and adopt an alternative that removes the existing dam, restores the free-flowing Yellowstone River, and provides an alternative means of providing water for the LYP.

Sincerely,



McCrystie Adams
Jay Tutchton
Defenders of Wildlife

On behalf of:
Defenders of Wildlife
Natural Resources Defense Council



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8

1595 Wynkoop Street
Denver, CO 80202-1129
Phone 800-227-8917
www.epa.gov/region08

FEB 18 2016

Ref: 8EPR-N

Colonel John W. Henderson
District Commander
US Army Corps of Engineers, Omaha District
1616 Capitol Ave.
Omaha, NE 68102

John F. Soucy
Deputy Regional Director
Bureau of Reclamation, Great Plains Regional Office
P.O Box 36900
Billings, Montana 59107-6990

Re: Intake Diversion Dam Modification Lower Yellowstone Project, Montana, Draft
Environmental Impact Statement Scoping

Dear Colonel Henderson and Mr. Soucy:

The US Environmental Protection Agency (EPA) Region 8 appreciates the opportunity to provide the US Army Corps of Engineers (USACE), Omaha District and the Bureau of Reclamation (BOR), Great Plains Region our comments during the scoping period for the Intake Diversion Dam Modification Lower Yellowstone Project, Montana.

Upon review of the scoping materials, the EPA was generally satisfied with the level of detail and information presented. We were pleased that the range of alternatives to be considered in the Draft Environmental Impact Statement (EIS) includes pumping and non-weir alternatives, which are both alternatives the EPA has requested to be considered in prior Environmental Assessment (EA) and Supplemental EA. Though the fish bypass has been the preferred lead agency alternative, the evaluation and consideration of the full range of alternatives will make the Draft (EIS) a comprehensive and well-rounded decision tool. The following recommendations are for your consideration in developing a Final EIS that fully characterizes environmental impacts and potential mitigation measures for the all the alternatives and the cumulative impacts.

EPA Recommendations

The EPA recommends that the Draft EIS analyze the alternatives for their impacts on other aquatic species in addition to the pallid sturgeon. There are other native aquatic species, including recreational species such as native paddlefish, which may be impacted by the various alternatives. Such impacts may arise from physical changes, such as sediment flow and deposition, or as a result of water quality

degradation caused by the alternatives. Additionally, we recommend the Draft EIS identify life histories for impacted species and mitigation for any impacts resulting from the alternatives.

The EPA reiterates from previous comments on this project that the Clean Water Act (CWA) Section 404(b)(1) Guidelines (40 CFR Part 230) and April 10, 2008 Mitigation Rule (40 CFR 230, Subpart J) require consideration of impacts to aquatic resources. The direct and indirect adverse effects associated with loss of natural stream channel migration and river floodplain access, as well as wetlands impacts and other potential aquatic impacts, should be addressed in the Draft EIS. The Mitigation Rule identifies streams as difficult-to-replace resources for which compensation should be required, if practicable, through in-kind rehabilitation, enhancement, or preservation (40 CFR 230.93(e)(3)). Since the Lower Yellowstone has been designated by the EPA as an Aquatic Resource of National Importance (ARNI) and is one of the last remaining large free-flowing rivers in the continental United States, it is important that consideration be given to a full range of alternatives, including those that minimize or avoid environmental impacts.

For the cumulative effects analysis, we recommend considering the effects of reasonably foreseeable agricultural growth in the area and its effects on the need for irrigation water from the Intake Diversion Dam. The EA looked at population growth and agricultural use, but did not provide a reasonable estimate for what the future agricultural water needs will be, especially considering climate change. This is important because projecting and understanding the expected flows in the Lower Yellowstone and the changing anthropogenic demands on water resources have potential effects on the viability of alternatives such as the bypass channel.

The EPA recommends that the adaptive management monitoring strategy be established for a greater period of time than the proposed eight years. We have previously recommended that the project be monitored for no less than 15-20 years in order to adequately evaluate the long-term recruitment success of the pallid sturgeon. The female pallid sturgeon requires 15-20 years to reach breeding age, and the eight year monitoring period may not afford adequate monitoring considering this cycle.

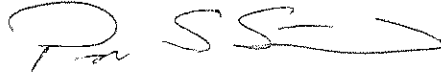
Finally, we suggest the Draft EIS take into consideration the impacts of climate change on the alternatives. As noted above, climate change influences on the project may translate into modified design and operational assumptions for determining resource supplies, system demands, system performance requirements, and operational constraints. This could assist with estimating the number of days in a year when alternatives such as the fish bypass will be available to aquatic species.

Although predictions of the potential influences of climate change on specific regions involve inherent uncertainty, several publications may be instructive, including;

- A recent overview of climate change impact in the U.S. (Global Climate Change Impacts in the United States, Thomas R. Karl, Jerry M. Melillo, and Thomas C. Peterson, (eds.). Cambridge University Press, 2009);
- A synthesis of climate change in Colorado (Ray et al., 2008; Climate Change in Colorado, A Report by the Western Water Assessment for the Colorado Water Conservation Board); and
- Ongoing and planned studies by the Colorado Water Conservation Board including the *Joint Front Range Climate Change Vulnerability Study* and the *Colorado River Availability Study* (see <http://cwcb.state.co.us/>).

In closing, we appreciate the opportunity to provide comment during this scoping period, and we hope our recommendations help the USACE and BOR when drafting the EIS. If you have any questions or would like to discuss our comments, please contact me at (303) 312-6704 or Matt Hubner of my staff at (303) 312-6500 or hubner.matt@epa.gov.

Sincerely,



Philip S. Strobel
Director, NEPA Program
Office of Ecosystems Protection and Remediation



February 14, 2016



To:

U.S Army Copse of Engineers

Attn: CENWO-PM-AA 1616 Capitol Ave

Omaha Nebraska 68102

We approve the construction of the proposed concrete wier and fish bi-pass. This proposal has been studied and found to be a practical solution.

We are a small farming partnership that hopes to continue to farm using water from the Yellowstone River. We have proved our dedication to conserving that water by spending many thousands to go from gravity flow irrigation to sprinkler systems for water delivery. We continue to make payments to our lender for those systems. We can not add any additional debt to our farming operation! We, like many other farmers in our country are experiencing very low prices for whatever product that we produce.

The Intake facility must remain operational to provide water for the growing of crops in this area. The surrounding communities depend, to a large degree , on income from farming activity .

Linda Hardy

*3162 160th Ave. N.W.
FAIRVIEW, MT. 59221*

701-744-5864

February 12, 2016

US Army Corp of Engineers
ATTN: CENW0-PM-AA
1616 Capital Ave
Omaha, NE 68102



I am writing in regard to Application No: NW)-2008-02556-MTB

As I have written twice in the past two years, the weir and fish bypass proposed will save the irrigation in Yellowstone valley as well as any endangered fish. I purchase hay from many irrigated farms there for my ranch in Wibaux County. There would never be enough hay on dryland farms.

It's a very sensible plan to allow the Intake diversion dam that serves irrigated farmers on a 55,000 area area in both northeastern Montana and northwestern North Dakota while helping to save the pallid sturgeon.

Ray Hansen
81 Dry Creek Road
Wibaux, MT 59353

Ray Hansen

February 13, 2016

U.S. Army Corps of Engineers
Attn: CENWO-PM-AA
1616 Capitol Ave
Omaha, NE 68102



To Whom It May Concern

I am very concerned that adverse decisions will be made to lose the irrigation farms along with Sidney Sugars from Sidney's economy. As I've written before, my grandfathers homesteaded here, and my paternal one, R. P. Blair helped to build the canal system. I've operated businesses here since 1965 and still have the South 40 restaurant which we built in 1977, and the Winner's Pub built in 1997. These could never have continued to operate without the stable agriculture provided by irrigated crops. This is quite terrifying that there are people that simply want to remove this dam and let this become a ghost community when the sugar factor closes.

The proposed weir and fish bypass needs to be built right away to help the farmer and any endangered fish. It looks like a great solution for both. It's been delayed entirely too long.

Lola Hansen,
207 2nd Ave NW
Sidney, MT 59270

February 15, 2016



U.S. Army Corps of Engineers
Attn: CENWO-PM-AA
1616 Capitol Ave
Omaha, NE 68102

Dear,

I've attended all of the meetings that show a weir and fish bpass for the Intake Diversion dam. Very disappointed that this hasn't already being built. I have an irrigated farm south of Sidney that I put a pivot on last year for my alfalfa crop for hay to feed my cattle. The pivot was terrible costly. I am quite dismayed at the expensive electrical cost for my pivot already and the projections for alternate plans for this dam would totally make it prohibitive to irrigate because of electrical expense.

Please get this weir with fish bypass built. It looks like a marvelous solution, and this constant delay by fisherman in Glendive that don't want to be hindered by a dam when boating is just not right.

Arnold Hansen
207 2nd Ave NW
Sidney, MT 59270

February 13, 2016



US Army Corps of Engineers
ATTN:CENWO-PM-AA
1616 Capital Ave
Omaha, NE 68102

RE: Application No: NOW-2008-02556-MTB

Save the Palid Sturgeon and any other endangered fish with this excellent fish friendly ramp & concrete weir at the Lower Yellowstone Intake.

I live on an irrigated farm which probably won't even exist if good sense doesn't prevail and the economy of eastern Montana protected as well as the fish.

Brandi Wevley
11171 Hwy 16
Sidney, MT 59270

PS There wasn't a pivot on the irrigated farm I live on when I wrote the first letter in 2014. It was very expensive and I know they need to Be able to access water for it.



US Army Corps of Engineers®
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name STEPHANIE SCHLOTTHAUER

Organization SUGAR BEET FARMER

Address 2891 160th AVE NW
FAIRVIEW, MONTANA 59221
CITY STATE ZIPCODE

Phone (401) 944-5811 Fax () —

Email —

Narrative Comments:

I support the continued use of water from the Yellowstone River - coming through the Intake Dam - which for 100 years has irrigated the Yellowstone Valley and is the major support of thousands of people.

- Attach additional sheets if necessary - →

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment - including your personal identifying information - may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:

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

Please mail comments to:

U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102

The Yellowstone Valley Irrigation Project allows the production of crops that are used for food as well as forage crops that feed the large cattle industry that also provides food for our human population. Food that is vital to human existence!! The pallid sturgeon is not a food fish. This fish has been proven to be successfully raised in captivity, thus keeping it from becoming extinct.

The argument that a non-food fish is more valuable to civilization than is the value of human life and the success of family, community, and industry should not be an argument. We need to find a solution that is acceptable to the continued success of the amazing engineering accomplishment of the Yellowstone Valley Irrigation Project as well as a satisfactory environment for a fish that can be raised in captivity and transplanted to friendly waters.

22 Feb 16

February 14, 2016

To:

U.S Army Corps of Engineers

Attn: CENWO-PM-AA 1616 Capitol Ave

Omaha Nebraska 68102

We approve the construction of the proposed concrete wier and fish bi-pass. This proposal has been studied and found to be a practical solution.

We are a small farming partnership that hopes to continue to farm using water from the Yellowstone River. We have proved our dedication to conserving that water by spending many thousands to go from gravity flow irrigation to sprinkler systems for water delivery. We continue to make payments to our lender for those systems. We can not add any additional debt to our farming operation! We, like many other farmers in our country are experiencing very low prices for whatever product that we produce.

The Intake facility must remain operational to provide water for the growing of crops in this area. The surrounding communities depend, to a large degree , on income from farming activity .

John Hanson
3162 160th Ave NW
Fairview, WA 99221
701-744-5864
2/14/16



710-85th SE
Sidney, MT 59270

US Army Corps of Engineers
ATTN: CENWO-PM-AA
1616 - Capitol Ave
Omaha, NE 68102

RE: Ly I P Diversion Dam Intake, Montana
Yellowstone River

I feel it's imperative we continue to get irrigation water from the Yellowstone River for irrigation of our many crops grown in over 50,000 acres in the MonDak region. We need the continued use to support the farms and their families along with hundreds of sugar factory jobs. Without the irrigation as it is, we would lose a major part of our communities and tremendous financial loss. Eliminating any of the dam and installing pumps would be a hardship the farmers would be unable to pay for and we would lose all. Replacing an existing weir and a shallow sloped ramp or bypass channel for river flow would be a plan better suited to help the sturgeon. Losing our precious irrigation system is not an option in favor of the fish and losing the beauty of our lush green growing irrigated crops our Yellowstone Valley is known for. Thank you and please consider an acceptable plan we continue with and continue our current way of living and growing crops in our Valley.

Bernard Schwartzberger



US Army Corps of Engineers®
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name Sandy Stimson

Organization _____

Address 209 South B St
Livingston MT 59047
CITY STATE ZIPCODE

Phone (406) 222-5529 Fax () _____

Email Sandystim@ yahoo.com

Narrative Comments:

Please keep the Yellowstone river in its free flowing state. We in Montana are proud to have the last such major river in the nation free of dams. Let's not fall back and do things the old way. There are better ways to accomplish irrigation at this point in the river. Please examine the alternatives to a dam. To save the pallid sturgeon, please provide it with full river access.

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:
<http://www.usbr.gov/gp/mtao/loweryellowstone/index.html>

Please mail comments to:

U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102

February 17, 2016

U.S. Army Corps of Engineers
Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102



RE: Comments Regarding the Intake Diversion Dam Project

To Whom This May Concern:

On behalf of the Lower Yellowstone Irrigation Project (LYIP), WWC Engineering is submitting comments regarding the Intake Diversion Dam Project. We have listed the alternatives below, followed by our comments for each alternative.

Rock Ramp Alternative

- Increased rock placement will be required for this alternative to maintain the shape and function of the rock ramp. Placement of the rock would have to be done during low flow periods and would be difficult, time consuming and expensive. An entire new system for rock placement would need to be constructed to allow the LYIP to be able to place rock in the correct positions. It is anticipated that the permits and/or methods required to perform this work would be unobtainable or prohibitive.
- Impacts due to ice scour and large floating debris would ultimately result in annual repairs to the rock ramp. Ice jams in the Yellowstone River system are a common occurrence, and often result in significant damage to infrastructure within the river system. It is anticipated that ice jams would cause significant damage to the proposed rock ramp alternative, resulting in significant maintenance by the LYIP and more likely significant reconstruction efforts on a frequent basis. The Yellowstone River is an unregulated river system that transports large volumes of water during spring and summer runoff, which picks up trees and transports boulders throughout the system. These large and heavy debris will act to displace rock within the rock ramp during periods of high flow due to the weight and momentum of the debris, resulting in annual maintenance by the LYIP to replace displaced rocks within the ramp to maintain its functionality.

Bypass Channel Alternative

- The LYIP has concerns over the constant migration of the Yellowstone River within its historic channel migration zone (CMZ). The LYIP has concerns that use of the bypass channel on a consistent basis may encourage the Yellowstone River to migrate in this direction, and eventually the bypass channel may become the main channel of the Yellowstone River, which would leave the LYIP intake structure without sufficient water to supply the irrigation system.

- It is anticipated that continued use of the Bypass Channel would result in the deposition of sediments within the channel that would need to be removed on a semi-frequent basis to facilitate fish passage. It is our understanding that the removal of sediments in the bypass channel would be the responsibility of the LYIP, adding additional O&M expense for dredging. The LYIP also has concerns over permit requirements for dredging, and the associated environmental impacts and regulatory liability from this type of maintenance.

High Flow Channel Alternative

- The LYIP has concerns over the constant migration of the Yellowstone River within its historic channel migration zone (CMZ). The LYIP has concerns that use of the high flow channel on a consistent basis may encourage the Yellowstone River to migrate in this direction, and eventually the high flow channel may become the main channel of the Yellowstone River, which would leave the LYIP intake structure without sufficient water to supply the irrigation system.
- It is anticipated that continued use of the High Flow Channel would result in the deposition of sediments within the channel that would need to be removed on a semi-frequent basis to facilitate fish passage. It is our understanding that the removal of sediments in the high flow channel would be the responsibility of the LYIP, adding additional O&M expense for dredging. It is important to note that the high flow channel alternative is significantly longer than the bypass channel, and would create a significantly longer length of channel to maintain, thus driving O&M costs much higher than the bypass channel alternative. The LYIP also has concerns over permit requirements for dredging, and the associated environmental impacts and regulatory liability from this type of maintenance.

Pumping Alternative

- New pump stations along the Yellowstone River will be subject to the Yellowstone River channel migration, and the proposed stations may become inoperable if the Yellowstone River changes course. The implementation of multiple points of diversion only increases this probability and provides additional O&M requirements for LYIP.
- The new discharge lines from the pump stations will require easements and/or purchased right-of-way from the river to the main canal. This will impact private property rights to owners who might refuse to sell, thus prompting potential eminent domain concerns that will impact the entire community. The new discharge lines may also be within identified Sage Grouse habitat areas.
- Pump stations will require redundant pumps and generators to ensure reliable water delivery. Power outages can cause significant damage to the water delivery system through sudden drops in water levels that result in canal instability, failure of siphon tubes and damage to pumps.
- The LYIP is concerned that the implementation of new pumping stations will require significant annual maintenance to service the pumps and motors. The O&M of these new pump stations will be borne solely by the LYIP.

- Removal of the existing rock diversion dam will drop water surface elevations significantly in the river, resulting in lower water levels in the canal. Many turnouts within the main canal, especially in the upper end of the system, are set high in order to irrigate the highest part of the field given the water right, and also because of a lack of elevation difference between the beginning and end of laterals to achieve better flow. Additional check structures will be required in the main canal to meet these elevation requirements. Additional check structures will reduce velocity in the canal, increase seepage and sediment deposition, and impede the flow of water to the lower end of the system. If pumping systems are implemented, the entire system would require a substantial if not complete reconfiguration to provide functional reliability to the system users.
- Ranney wells tend to plug and deteriorate when river systems contain fine particles. The LYIP is concerned that implementation of Ranney wells to provide a reliable source of water will be subject to plugging from the significant amounts of sediment generated from the Yellowstone River system. In addition, several sources indicate that seasonal patterns of riverbed permeability exist and can impact flow to Ranney well systems, resulting in an inconsistent source of water for the system.

Non-weir Alternative

- (Mimic pumping comments from above)
- Water conservation on a mass scale within the LYIP will have negative effects on the underlying groundwater aquifer. Many landowners within the area depend on groundwater as a source for both drinking water and irrigation. The City of Sidney's water wells are supplied by an alluvial aquifer that is fed by LYIP losses. Mass scale water conservation efforts within the LYIP system will significantly reduce recharge of this groundwater system, and provide a hardship to many of the landowners and the City of Sidney who utilize this water for domestic, irrigation and other uses.
- Waste spills from the LYIP system support wildlife, wetlands and an entire ecosystem. This system has been ongoing for 107 years supporting this well established ecosystem, and mass scale water conservation efforts will eliminate the water that supports this ecosystem.
- The Non-Weir Alternative conservation measures are based on overstated losses. LYIP 2000 & 2012 flow records show minimal loss during periods of high demand and significant use (nearly 1,100 cfs delivered with a 1,300 cfs diversion) during peak periods. Additionally, the records show losses in the main canal system are as low as 6% during the peak demand periods.
- The Non-Weir Alternative appears to be using the table identified within the Bureau of Reclamation's 2013 Lower Yellowstone Fish Passage Alternatives Planning Study to estimate losses within the LYIP system. For example, Item 4 of the table suggests that lining 7 miles of the LYIP main canal or select laterals will save 200 cfs. To our knowledge there has not been 7 miles of canal or laterals identified that exhibit severe seepage. Although seepage throughout the LYIP

system appears to be somewhat inconsistent, losses of this magnitude have not been identified. Putting this into perspective, if the LYIP were to line all 72 miles of the main canal, this analysis would conclude that this conservation measure would save over 4,900 cfs. Since the LYIP diverts only up to their maximum water right of 1,374 cfs and the flow records of the LYIP show that water is delivered throughout the LYIP system and to the end of the main canal, these estimates are obviously overstated. We believe that there are better and more accurate estimates of loss that should be utilized including use of the LYIP flow records, which provide the best available information that is specific to the LYIP.

- The Non-Weir Alternative suggests that the LYIP could get by with less than the legal rate of diversion of 1,374 cfs. However, when the lands irrigated by the LYIP are evaluated based on their peak daily consumptive use requirements as calculated using the NRCS methodology with local data and the 2013 LYIP Crop Census information, the amount of water required to satisfy the peak crop water requirement is very close to the legal rate of diversion of 1,374 cfs, assuming a 100% efficient delivery system to each field (not realistic), and a moderately efficient on-farm irrigation efficiency of 60% to account for a mix of center pivot, wheel-line, flood irrigation and other methods being utilized or that could be utilized. Therefore, a reduction in the rate of diversion and delivery to the LYIP system would cause significant harm to existing producers.
- Water rationing occurs during the peak demand period within the LYIP on an annual basis. Water savings realized from conservation efforts would first go to provide the allotted water to all users to fulfill their appropriations. In fact, the LYIP utilizes 4 pump stations to provide an additional 62 cfs at the lower end of the system to alleviate water rationing, which still does not resolve this problem.
- The LYIP has a legal right to divert 1,374 cfs through their water rights. The proposed alternative calls for a reduction in the physical capacity of the existing system, which does not allow them to utilize their full water rights. If the LYIP can no longer utilize their full water rights, this alternative would cause the water users to permanently lose part of their water right against their will (forced abandonment).
- Wind turbines are highly dependent on constant wind speed to provide a reliable source of energy. The upkeep and maintenance of wind turbines is costly, and the knowledge and training requirements are significant. It is anticipated that the cost of maintaining the wind turbines will be more than the LYIP can afford to pay, and the low life expectancy of wind turbines will create a substantial O&M capital cost to rebuild or replace these structures in the future. The LYIP is also concerned with the significant dangers to birds, visual resources impacts, impacts from transmission mains to and from the wind turbines to the project, and other environmental factors that are associated with wind turbines such as the disposal of potentially hazardous materials that are utilized in the manufacture of wind turbines. There are also questions on the reliability, long-term guarantee of rates on the buying and selling of the power, and the ability to obtain agreements for construction of the proposed wind turbine facilities.

U.S. Army Corps of Engineers
Omaha District
February 17, 2016
Page 5 of 5

We sincerely appreciate the opportunity to provide comments on the alternatives. If you have any questions regarding these comments, please contact us at your convenience.

Sincerely,



Shawn Higley, P.E., P.H.
Helena Branch Manager

SH/af

cc: James Brower, LYIP

K:\Helena\LYIP\16-009 NEPA\CORRE\US Army Corps 021716.doc



US Army Corps of Engineers
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name JOHN HELVEY

Organization NONE

Address 567 CAYUSE TRAIL

BOZEMAN MT 59718
CITY STATE ZIPCODE

Phone 406 580-0235 Fax () _____

Email _____

Narrative Comments:

LET THE FISH HAVE THE RIVER AND
PUT THE WATER IN A PIPE TO THE
IRRIGATORS. FISH FIRST IN THIS.

John Helvey

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:

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

Please mail comments to:

U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102

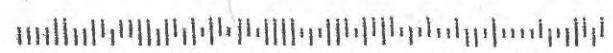


16 FEB 2 016 3:11 PM



U.S. ARMY CORPS OF ENGINEERS
OMAHA DISTRICT
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102

6810284926



Please fold on dotted line, staple, stamp and mail

Fold to inside



RECEIVED
22 Feb 16



US Army Corps
of Engineers®
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name CURTIS T. HELVEY

Organization _____

Address 6220 ELKHORN ROAD

HELENA MT 59602
CITY STATE ZIPCODE

Phone (406) 465-1144 Fax () _____

Email _____

Narrative Comments:

just follow the Science on this.
City

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:

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

Please mail comments to:

U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102

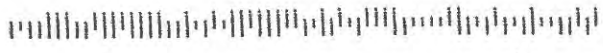


6220 Elkhorn Rd
Helena, MT 59602



U.S. ARMY CORPS OF ENGINEERS
OMAHA DISTRICT
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102

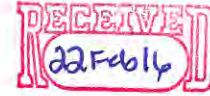
681024926 0009



Please fold on dotted line, staple, stamp and mail

Fold to inside

To:



U.S Army Copse of Engineers

Attn: CENWO-PM-AA 1616 Capitol Ave

Omaha Nebraska 68102

We approve the construction of the proposed concrete wier and fish bi-pass. This proposal has been studied and found to be a practical solution.

We are a small farming partnership that hopes to continue to farm using water from the Yellowstone River. We have proved our dedication to conserving that water by spending many thousands to go from gravity flow irrigation to sprinkler systems for water delivery. We continue to make payments to our lender for those systems. We can not add any additional debt to our farming operation! We, like many other farmers in our country are experiencing very low prices for whatever product that we produce.

The Intake facility must remain operational to provide water for the growing of crops in this area. The surrounding communities depend, to a large degree , on income from farming activity .

- Mary Handley
3164 160th Ave NW
Fairview, mt 59221
701-744-5006
2/16/14

To:



U.S Army Copse of Engineers

Attn: CENWO-PM-AA 1616 Capitol Ave

Omaha Nebraska 68102

We approve the construction of the proposed concrete wier and fish bi-pass. This proposal has been studied and found to be a practical solution.

We are a small farming partnership that hopes to continue to farm using water from the Yellowstone River. We have proved our dedication to conserving that water by spending many thousands to go from gravity flow irrigation to sprinkler systems for water delivery. We continue to make payments to our lender for those systems. We can not add any additional debt to our farming operation! We, like many other farmers in our country are experiencing very low prices for whatever product that we produce.

The Intake facility must remain operational to provide water for the growing of crops in this area. The surrounding communities depend, to a large degree , on income from farming activity .

Jim Hardy
3164 160th Ave NW
Fairview MT 59221
701-744-5006
2/16/16



US Army Corps of Engineers®
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name Greg Brewer

Organization _____

Address 35330 Cty Rd 147
Fairview mt 59221
CITY STATE ZIPCODE

Phone (406) 489-3429 Fax () _____

Email Brewer@midrivers.com

Narrative Comments:

its a bad day when fish have more rights than people
that make a living and support the economy they live
in. This diversion has been use long before the endan-
gered species act, and should be approved to complete.
You want to know if the new one works because it is
new and never tried did the trip to the moon get put on
hold because it was never tried.

Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:
<http://www.usbr.gov/gp/mtao/loweryellowstone/index.html>

Please mail comments to:
U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102



US Army Corps of Engineers®
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name KEN SCHLOTHAUER

Organization FARMER

Address 2891 160th AVE. NW,
FAIRVIEW MT. 52221
CITY STATE ZIPCODE

Phone (701) 744 5811 Fax () _____

Email _____

Narrative Comments:

THE FISH HAS SURVIVED OVER 100 YRS.
THIS ALONE SHOULD PROVE ITS ABILITY TO ADAPT
FAMILY'S AND BUSINESSES HAVE LIVED ALONG
THE RIVER FOR 5 GENERATIONS. THESE SMALL
MINDED PEOPLE SHOULD LOOK SOMEWHERE ELSE
FOR PERSONAL SATISFACTION.

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:
<http://www.usbr.gov/gp/mtao/loweryellowstone/index.html>

Please mail comments to:
U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102



US Army Corps of Engineers®
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by **FEBRUARY 18, 2016**

Please PRINT clearly

Name Ken Brose

Organization _____

Address 793 Hwy 16
Glendora MT 59330
CITY STATE ZIPCODE

Phone (406) 687-3277 ~~939-2060~~ Fax () _____

Email kbrosesr@midrivers.com

Respectfully Submitted Ken Brose

Narrative Comments:

I suggest putting a by pass just south of the existing diversion dam. 100' wide ± about 2000' long with various flow restrictions for sturgeon rest areas as natural flows. The elevation in a 2000' run is not any more than some areas of the Yellowstone River as it now exists in some areas where the sturgeon now navigate

Attach additional sheets if necessary

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:
<http://www.usbr.gov/go/mtao/loweryellowstone/index.html>

Please mail comments to:

U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102



US Army Corps of Engineers
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name George and Jenny Lee

Organization Privileged Farmers

Address 122 Rd 555

Glendale CITY mt. STATE 59330 ZIPCODE

Phone (406) 687-3769 Fax () _____

Email _____

Narrative Comments:

Please take down the dam and fish
above !!

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:

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

Please mail comments to:

U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102



RECEIVED
22 Feb 16



US Army Corps
of Engineers®
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name Joe G. Steinbeisser

Organization Steinbeisser & Sons - Irrigated farming

Address 690 22nd Ave NW

Sidney Montana 59220
CITY STATE ZIPCODE

Phone (404) 433-2185 Fax () _____

Email jstein@midrivers.com

Narrative Comments:

I am in favor of the concrete weir
with a fish passage around it.

Also I would like to see more proof of
this fish being endangered. There are a lot of
them being caught ~~at~~ by local fishermen.

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment - including your personal identifying information - may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:

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

Please mail comments to:

U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102



RECEIVED
Feb 14



US Army Corps
of Engineers
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name Sheridan Martin

Organization _____

Address P.O. Box 632

Culbertson MT 59218
CITY STATE ZIPCODE

Phone (406) 529-4031 Fax () _____

Email roundupreporter@gmail.com

Narrative Comments: Thoughts on the Pallid Sturgeon

Can't fish be capable of handling themselves? Teach the fish where to go to spawn, just as they can be taught where predators are. Fish are capable of remembering locations and figuring out their place, and it would be passed down generation to generation. Time-Place learning: learning a place and associating it with time. Example: night side of tank at time of day to get fed. This part of the river to safely spawn and thrive.

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:

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

Please mail comments to:

U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102



US Army Corps
of Engineers®
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name Matt Rosendale

Organization Intake Irrigation Project

Address 1954 Hwy 116
Glendive MT 59330
CITY STATE ZIPCODE

Phone (406) 687-3549 Fax () N/A

Email linden@midrivers.com

Narrative Comments:

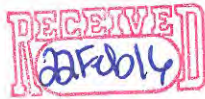
I have major reservations about removing the diversion and converting the canal to a pump supply. The additional energy that is necessary to run these pumps is not available. We have problems now with the supply of energy to the IIP pumps which are much smaller.

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:
<http://www.usbr.gov/gp/mtao/loweryellowstone/index.html>

Please mail comments to:
U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102



US Army Corps of Engineers®
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name BYRON SUNWALL

Organization _____

Address P.O. Box 83
SAVAGE MT 59262
CITY STATE ZIPCODE

Phone (406) 776-2213 Fax () N/A

Email N/A

Narrative Comments:

Since I live in Savage I have to pay taxes
for LYRI, + I don't use any irrigation water,
so to me this is taxation without
utilization. Byron Sunwall

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:
<http://www.usbr.gov/go/mtao/loweryellowstone/index.html>

Please mail comments to:
U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102

Congress of the United States
Washington, DC 20515

September 18, 2015



The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army for Civil Works
U.S. Army Corps of Engineers
108 Army Pentagon, Room 3E446
Washington, DC 20310

The Honorable Estevan Lopez
Commissioner
Bureau of Reclamation
1849 C Street NW
Washington, DC 20240

Assistant Secretary Darcy and Commissioner Lopez:

We write about the recent decision of the U.S. District Court of Montana that enjoined construction at the Lower Yellowstone Irrigation Project and directed the U.S. Army Corps of Engineers (ACE) and Bureau of Reclamation (BOR) to provide evidence of the benefits the project would provide to species prior to proceeding with construction. We urge ACE and BOR to address the concerns of the Court and conduct the necessary analyses in a timely manner to ensure this essential source of water for farmers, ranchers, and communities throughout much of northeastern Montana and northwestern North Dakota is not unduly disrupted.

This project is critical to close to four hundred farms and irrigates over 50,000 acres of cropland, and time is of the essence as winter is approaching and inclement weather could further damage existing infrastructure. If the agencies have not already done so, we urge ACE and BOR to develop and implement an interim plan to manage the existing intake dam should the project continue to be enjoined and the lawsuit moves through the judicial process. Additionally, we encourage ACE and BOR to provide assurances to Congress and stakeholders that funding currently allocated for this project will not be transferred or reduced while ACE and BOR conduct further analyses.

As ACE and BOR move forward in addressing the issues detailed by the Court in granting the injunction, we request ACE and BOR act in as expeditious a manner as possible. Thank you for your consideration, and we look forward to your prompt response and staying in close contact on this critically important issue.

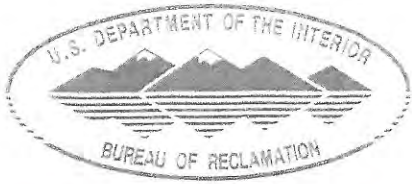
Sincerely,

A handwritten signature in blue ink that reads "Steve Daines".

STEVE DAINES
United States Senator

A handwritten signature in blue ink that reads "Jon Tester".

JON TESTER
United States Senator



US Army Corps of Engineers
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name Stacey Brower

Organization _____

Address 34515 CR 115

SAVAGE MT 59262
CITY STATE ZIPCODE

Phone () _____ Fax () _____

Email _____

Narrative Comments:

I believe upgrading the existing weir is the best solution economically and environmentally. Thank you

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:
<http://www.usbr.gov/gp/mtao/loweryellowstone/index.html>

Please mail comments to:
U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102



US Army Corps of Engineers
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name Mike Otterstetter

Organization Horizon Resources

Address 605 South Ellery Ave.
Fairview Montana 59221
CITY STATE ZIPCODE

Phone (701) 844-5852 Fax () _____

Email _____

Narrative Comments:

I have lived here in our little town,
supported mostly from agriculture, and worked
here all that time. By doing what you propose
to do will ultimately devastate our way
of life and people for years to come.
Please use some (not often found) common sense.

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:
<http://www.usbr.gov/gp/mtao/loweryellowstone/index.html>

Please mail comments to:
U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102



US Army Corps of Engineers®
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name JAY E Reidle

Organization _____

Address 3341 HWY 58

Fairview MT 5922
CITY STATE ZIPCODE

Phone (408) 480-5102 Fax () _____

Email _____

Narrative Comments:

I HAVED LIVED IN THIS VALLEY FOR
56 YEARS. AG IS THE LIFE BLOOD OF
THIS VALLEY. WITHOUT IRRIGATION THIS
VALLEY WILL DIE ALONG WITH LOSS
OF THOUSANDS OF JOBS PLEASE KEEP
THE DAM.

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:

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

Please mail comments to:

U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102



**RICHLAND COUNTY
COMMISSIONER**



**US Army Corps
of Engineers®**
Omaha District

DUANE MITCHELL
dmitchell@richland.org

406-433-1706 · Fax: 406-433-3731
201 West Main · Sidney, Montana 59270

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016



Please PRINT clearly

Name Duane Mitchell

Organization Richland Co. Commissioner

Address 201 West Main Street

Sidney Montana 59270-
CITY STATE ZIPCODE

Phone (406) 433-1706 Fax () _____

Email dmitchell@richland.org

Narrative Comments:

I support the Bypass Channel Alternative which would construct a bypass channel around the existing weir to divert approximately 15% of total river flow.

I understand there are these types of operations in Michigan that have been working just fine for years.
Thank you Duane Mitchell

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:

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

Please mail comments to:

U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102



US Army Corps of Engineers®
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name David Allen

Organization Patagonia

Address 899 Two Rivers Dr

Telluride Co 81435
CITY STATE ZIPCODE

Phone (970) 708 7071 Fax ()

Email dgaller2@gmail.com

Narrative Comments:

I support the removal of the Yellowstone River Dam.
It appears that both the agricultural needs and the prevention
of the extinction of the pallid sturgeon can be achieved
with this action. Thank you.

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:

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

Please mail comments to:

U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102



US Army Corps
of Engineers
Omaha District

RECEIVED
Jaredoke

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name Rob Schlothaver

Organization NPARL

Address 409 7th Ave SW

Sidney MT 59270
CITY STATE ZIPCODE

Phone (406) 488-3451 Fax () N/A

Email _____

Narrative Comments:

This is a thinly veiled land grab attempt. Devaluation of
valuable irrigation land under the guise of saving a fish. A
fish that can be spawned in captivity. A fish that is most likely
going to become extinct no matter what is done to the river due to
everchanging climate and diversity. The pros of production outweigh
the value of one fish of falsely exaggerated importance

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:
<http://www.usbr.gov/gp/mtao/loweryellowstone/index.html>

Please mail comments to:

U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102



RECEIVED
24 Feb 11



US Army Corps
of Engineers
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name Raymond Bell

Organization Sidney water users Irrigation District

Address ~~501 7th St~~ 1101 11th St SW

Sidney MT 59720
CITY STATE ZIPCODE

Phone (406) 489-2627 Fax () _____

Email rayb@midrivers.com

Narrative Comments:

SWUID is a 100% Pumping Irrigation District
Just on the East side of River from LYIP serving
4600 Acres. With the Expenses we have in our Pumps
+ motors Alone I Don't see Pumping Even Being an
option for LYIP with All these Acres. The Increased
Taxes would put the Farmers out of Production. Not to
mention the environmental Issues with Burning Electricity or Fuel.
- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:
<http://www.usbr.gov/go/mtao/loweryellowstone/index.html>

Please mail comments to:
U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102



Feb 1, 2016

Reference:

Intake Diversions Dam



Dear Sir

We live southeast of Sidney in Richland County. We irrigate a big garden, fruit trees and other evergreen trees and about $\frac{3}{4}$ acre of grass with water from the Lower Yellowstone Irrigation project. The warm river water is better than cold water from a ground well for the garden. The farmers in this area need this irrigation water from the Yellowstone River for the crops.

This is more important than the survival of the pallid sturgeon.

Please consider a workable
solution to this project.

Sincerely

Harold and Elaine Emley

34992 Hwy 23

Sidney, Ont. S9Z 70

406-488-1148

-----Original Message-----

From: Kenny Vannatta SR [<mailto:kvdude52@outlook.com>]

Sent: Friday, February 26, 2016 10:38 AM

To: CENWO-Planning <CENWO-Planning@usace.army.mil>

Subject: [EXTERNAL] Diversion Dam issue

Dear US Army Corps:

I am a resident of the area of this dam and for you to do what you want to do to save this fish is wrong

And it will devastate these counties . The farmers the Sugar Factory and businesses would suffer and more

Than likely close not to mention thousands of jobs lost. Don't you think the people and this economy is

more important than saving a fish that has and still are doing just fine right now. And spending 59 million

on this is crazy when we have homeless veterans etc. This dam has worked just fine for the last 100 years

so I see no reason to do this and destroy thousands and thousands of peoples lives . So please think about

what you are doing and go back to the drawing board.

Kenny V

Sent from Mail <Blocked<https://go.microsoft.com/fwlink/?LinkId=550986>> for Windows 10

p



February 22, 2016

U.S. Army Corps of Engineers
Attn: CENWO-PM-AA
1616 Capitol Ave.
Omaha, NE 68102

1. I support the proposed construction of the concrete weir and durable fish passage at the Intake Diversion to provide our irrigators a continued reliable water system.
2. The Lower Yellowstone Irrigation Project and its water system supports thousands of irrigated acres of farms in eastern Montana and western North Dakota and the production of high value/value added crops not possible under non-irrigated conditions due to our low growing seasonal rainfall in the MonDak region.
3. The loss of a reliable irrigation water system will likely result in the loss of the Sidney Sugarbeet Processing Facility, Sidney, MT and over 30,000 acres of irrigated sugarbeet production and the Busch Ag Malt Barley Storage and Handling facility in Sidney, MT that handles and markets over 3 million bushels of irrigated barley from the Lower Yellowstone Valley Region. The loss of a reliable water system for irrigation will have a huge negative economic impact in the Yellowstone River Valley and in both the Montana and North Dakota economic wellbeing.
4. Irrigated production also provides feed for the livestock industries but also often helps provide feed and habitat for wildlife during years of drought and/or harsh winters with heavy snows and deep snow depth on the non-irrigated lands and rangelands. I have

lived in Sidney, MT for 38 years and have observed numerous times flights of sharptail grouse and migration of deer and antelope from the dryland and rangelands to seek feed and shelter in the lower Yellowstone Irrigated Valley.

5. The Lower Yellowstone Irrigation Project and irrigated agriculture has secured a stable economy for the citizens of Richland County and Dawson County in Montana and McKenzie County and Williams County in western North Dakota, its communities, and beyond. The loss of the lower Yellowstone Irrigation Project will devastate our regional economy and wellbeing of our citizens and our communities.
6. Therefore, I make this declaration in support of the fish bypass and the new concrete weir.

Sincerely,



Dr. Jerald Bergman
Director, North Dakota State University
Williston Research Extension Center, Williston, North Dakota
Professor Emeritus of Agronomy, Montana State University,
Superintendent/Agronomist of MSU Eastern Agricultural Research Center (1974-2012)



PO Box 7186 Missoula, MT 59807 (406) 543-0054

15 February 2016

U.S. Army Corps of Engineers
Omaha District
ATTN:CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102

Re: NEPA scoping for Intake Diversion DEIS

Dear Madam/Sir:

Thank you for the opportunity to comment for scoping for the draft environmental impact statement that will evaluate options for fish passage at the Intake Diversion project on the lower Yellowstone River in Montana. Montana Trout Unlimited represents nearly 4,000 conservation minded anglers who have an abiding concern for Montana's free-flowing waterways and native aquatic communities. We have previously submitted detailed comments on proposals affecting Intake, including most recently for a proposed Section 404 permit for dredge and fill at the site (NOW-2008-02556-MTB, 8 April 2015) and for the Supplemental draft to the 2019 Intake Project EA (14 May 2014).

Among the items we believe are critical to address in detail in this DEIS are:

1. Development of an alternative that requires removal of the existing weir to allow for unimpeded volitional upstream passage of pallid sturgeon and other native and important sport fish species.
2. Development of an alternative that allows for removal of the existing weir, does not require a replacement structure, and which accommodates traditional agricultural water use by:
 - Using gravity flow into the existing headworks when river stage allows (appears to be at flows exceeding 12,000 cfs).
 - Uses pumps, either in the river or in the alluvium, during periods of low flows.
 - Reducing diversion volumes by investing in conservation measures in the canal, at turnouts and in laterals (lining, piping, possibly sprinkler conversion, improving headgate efficiency, etc.)
 - Employing groundwater pumps in appropriate locations within the irrigation project area, as a backup if necessary.

- Providing power for pumps using a wind generator, or, if feasible low-head hydro in the main canals.
 - If power cannot be produced on site, establish a trust fund dedicated to purchasing power, and possibly to fund O and M for pump system.
3. Economic analysis for alternatives requiring a weir or dam and a bypass should include the long-term annual estimated cost of maintenance of all structures and the bypass channel. Further, the DEIS should identify the mechanism that will ensure maintenance is covered, who will be responsible for it, and who will pay for monitoring to demonstrate the alternative is successful at adequately passing sturgeon and other species upstream.
 4. Criteria used for determining upstream passage is successful should be biological, and perhaps include telemetry data and monitoring that measures recruitment. The DEIS should be clear that the Corps is responsible for funding biological monitoring if a weir and bypass is the selected alternative.
 5. The DEIS should identify next steps, and commitments, from the Corps should the selected alternative not demonstrate upstream passage is biologically successful. This includes adaptive management, a time-frame for determining success and the next range of alternatives that will be considered.
 6. The DEIS should be clear in ensuring that biological criteria will be the primary determinant for success for all alternatives. Modeled hydraulic criteria simply do not guarantee upstream passage will be successful, nor does it comport, we believe, with the incidental take and recovery goals of the Endangered Species Act.
 7. The DEIS should not include any alternative that relieves the Corps of its larger obligation under the Endangered Species Act and previous biological opinions to recover pallid sturgeon elsewhere in the upper Missouri River basin.

Again, thank you for the opportunity to comment.

Sincerely,



Bruce Farling
Executive Director

cc.

Chris Schustrom, Chairman, Montana TU
Pat Byorth, Director, Montana Water Project, TU
Governor Steve Bullock
Jeff Hagener, Director, Montana DFWP
John Tubbs, Director, Montana DNRC

Jodi Bush, Field Supervisor, USFWS, Helena Office
Noreen Walsh, Regional Director, Mountain-Prairie Region, USFWS
Brent Esplin, Montana Area Manager, US Bureau of Reclamation



US Army Corps of Engineers®
Omaha District

Comment Form

Intake Diversion Dam Fish Passage Project

COMMENTS must be received by FEBRUARY 18, 2016

Please PRINT clearly

Name Hugo Asbeck

Organization Dist 1 & 2

Address 13048 Hwy 200

Fairview WY CITY STATE ZIPCODE 59221

Phone (406) 4-89-3244 Fax () _____

Email _____

Narrative Comments:

Pivot saves no water. evaporation becomes
as great as seepage water goes up & down
depending if P. & G. & Corner Area are
putting out water 900 gal/minute can go
from 900 to 500 gal

- Attach additional sheets if necessary -

Before including your address, phone number, email address or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Additional information can be found on the Lower Yellowstone, Intake website at:
<http://www.usbr.gov/gp/mtoa/loweryellowstone/index.html>

Please mail comments to:
U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102



February 17, 2016

Scott Bosse
Northern Rockies Director
American Rivers
321 East Main, Suite 408
Bozeman, MT 59715
sbosse@americanrivers.org

U.S. Army Corps of Engineers - Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Avenue
Omaha, NE 68102
cenwo-planning@usace.army.mil

RE: Scoping comments on Intake Diversion Dam Fish Passage Project

To Whom It May Concern:

On behalf of American Rivers, I am pleased to present the following scoping comments on the Intake Diversion Dam Fish Passage Project in Dawson County, Montana. American Rivers is the leading conservation organization working to protect and restore our nation's rivers and streams. Since our founding in 1973, we have helped conserve more than 150,000 miles of rivers across the United States through Wild and Scenic River designations, dam removals, other on-the-ground projects, and our America's Most Endangered Rivers® campaign. Our Northern Rockies office based in Bozeman, Montana has a long history of working to conserve the Yellowstone River from harmful channelization projects and other threats, including the proposed new concrete dam and fish bypass channel at Intake that recently was the subject of litigation.

American Rivers appreciates that the U.S. Army Corps of Engineers (Corps) and U.S. Bureau of Reclamation (Bureau) have agreed to conduct a full environmental impact statement (EIS) exploring fish passage alternatives at Intake Diversion Dam. In order to fulfill the National Environmental Policy Act (NEPA) requirement that the agencies analyze a full range of reasonable alternatives, we respectfully request that the Corps and Bureau analyze the following four alternatives at a minimum:

1. No-action alternative
2. Construction of a new dam and fish bypass channel
3. Construction of a rock ramp in place of the existing diversion dam
4. Removal of the existing Intake Diversion Dam

In analyzing each of these alternatives, the action agencies should address the following questions:

- Does the alternative comply with the federal Endangered Species Act by meeting the goal of recovering pallid sturgeon to the point that there is a self-sustaining, genetically diverse population of 5,000 adult fish in each recovery unit (Missouri River above Fort Peck Dam; and Missouri River below Fort Peck Dam and the Lower Yellowstone River)?
- Does the alternative provide improved fish passage for other extant native fish species, including the six species of special concern that reside in the lower Yellowstone River (blue sucker, paddlefish, sauger, shortnose gar, sicklefin chub, sturgeon chub)?
- Does the alternative include long-term funding to monitor impacts on fish passage?
- What are the long-term operation and maintenance (O & M) costs?
- What is the likelihood that the alternative will be able to withstand major flood and ice jam events, both of which are common on the lower Yellowstone River?
- What assurances are there that funding would be available to repair or rebuild the project if it is seriously damaged by a major flood or ice jam event?
- Does the alternative ensure that the Lower Yellowstone Project remains viable?
- How does the alternative impact recreational navigation on the lower Yellowstone River?

For each alternative that is analyzed, we request that the Corps and Bureau assess the anticipated environmental impacts and calculate its cost over a 50-year period in order to ensure that a robust and accurate analysis of its costs and benefits is conducted.

Based on all the information that has been presented by the action agencies, the Montana Department of Fish, Wildlife and Parks (FWP), and other outside experts, American Rivers believes that the most biologically certain and cost-effective alternative is to remove the existing diversion dam from the river and install pumps to ensure that sufficient amounts of water can be delivered to the Lower Yellowstone Project. As the Corps and Bureau analyze a dam removal alternative, we strongly encourage the agencies to answer the following questions:

- Can the water supply needs of the Lower Yellowstone Project be met through a combination of pumping from the river and groundwater pumping in lieu of diverting flows from the river with a diversion dam?
- For how many months during each irrigation season would pumping from the river and groundwater pumping be required, and at what cost?
- Could the pumps be powered by renewable energy such as on or off-site wind generation or micro-hydro installed in the main irrigation canal, and if so, at what cost?
- Could any electricity that is produced by wind turbines outside of the pumping season be sold to help offset the costs of the project?
- Can the water supply needs of the Lower Yellowstone Project be significantly reduced by implementing practical efficiency measures (e.g., lining canals, moving water through pipes instead of ditches, converting from flood irrigation to sprinklers), thereby minimizing the need to pump water from the river?

American Rivers is confident that once each alternative is evaluated based on its probability of achieving pallid sturgeon recovery goals, likelihood of withstanding major flood and ice jam

events, long-term O & M costs, and ability to meet the needs of the Lower Yellowstone Project, the dam removal option will emerge as the most desirable alternative.

We thank you for considering our scoping comments and stand ready to assist the Corps and Bureau in developing and evaluating a full range of reasonable alternatives in the upcoming EIS.

Sincerely,

A handwritten signature in blue ink that reads "Scott Bosse". The signature is written in a cursive style with a large initial 'S'.

Scott Bosse
Northern Rockies Director

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Wednesday, February 17, 2016 1:44 PM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Lower Yellowstone River

-----Original Message-----

From: Scott Buxbaum [mailto:4bfarms1@gmail.com]
Sent: Wednesday, February 17, 2016 12:29 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Lower Yellowstone River

I am commenting on the diversion dam project at intake. I am in favor of the concrete weir and fish bypass. It has been studied and shown it works. The alternative for pumps would add far to many costs to the farms to absorb.

Thankyou,
Scott Buxbaum
16041 34th st nw

Fairview, Mt. 59221

Vanosdall, Tiffany K NWO

From: Trimpe, David <dtrimpe@usbr.gov>
Sent: Wednesday, February 17, 2016 8:47 AM
To: Vanosdall, Tiffany K NWO
Subject: [EXTERNAL] Fwd: Lower Yellowstone Irrigation Project Intake Fish Passage Environmental Study

----- Forwarded message -----

From: Terry Cayko <tcayko@midrivers.com <mailto:tcayko@midrivers.com> >
Date: Tue, Feb 16, 2016 at 4:30 PM
Subject: Lower Yellowstone Irrigation Project Intake Fish Passage Environmental Study
To: dtrimpe@usbr.gov <mailto:dtrimpe@usbr.gov>

Dear Sirs:

I'm in support of the original alternative that I felt was approved last year. This has been studied and gone over and the best alternative was agreed upon that the cement weir for the pallad sturgeon would work. We are a 55,000 acre consumption use which exceeds peak usage of 1350 cfs delivered to the farm. You must remember evapo-transpiration. If the 110 year old structure was removed which is an 11 foot tall dam it would drop the level or dry up 100's of natural side channels effecting aquatic habitat and drop levels up stream which would affect other water pumping sights for irrigators and their water rights. This structure which now flows has no pollution to the environment and the removal and placing of more pumps to run will definitely cause more pollution.

I'm a life time resident of 63 years and I live next to the Yellowstone River near the confluence with the Missouri River. Our farmers in this irrigated valley will not survive with taking the Intake Dam out and putting in pumps would also be so costly we couldn't afford it. This effects the whole community, DON'T MAKE US EXTINCT. We live to pass on our farms to our children and their children. The people who want to take the dam out are not effected economically. They are doing this to stop the funding that has been approved and just want to keep this tied up in the court system.

Terry Cayko

15852 36th St NW

Fairview, MT 59221

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Friday, February 19, 2016 8:54 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: Environmental Impact Statement for the Intake Diversion Dam Fish Passage Project

-----Original Message-----

From: David Garland [mailto:Dgarland@crystalsugar.com]
Sent: Thursday, February 18, 2016 7:46 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Cc: David Garland <Dgarland@crystalsugar.com>
Subject: [EXTERNAL] Environmental Impact Statement for the Intake Diversion Dam Fish Passage Project

My name is David Garland, General Manager of Sidney Sugars Incorporated. I and my family are residents of Sidney, MT.

Our sugar factory was built in 1925 as a result of the fertile soil and abundance of water due to the irrigation canal built in 1909 (LYIP). Without the water which is diverted from the Yellowstone River, farming in this valley would not continue as it does today. Although the oil activity increases and dies down, the communities and residents of Eastern Montana rely on Agriculture. This is true of the valley along the Yellowstone River.

My work keeps me in Sidney, but as a Montanan it is a privilege to live in Eastern Montana. I care for the wildlife, the land, and the waters of Montana. Without Agriculture, I would not be able to live here as would most of the people that live here.

The concrete weir and fish by-pass provided a solution for both wildlife (pallid sturgeon) and for residence of the area. Other proposals have been presented from removing the dam altogether to pumps, windmills, etc. I believe the original concrete weir and fish by-pass would be the most economical, environmental friendly, best for the pallid sturgeon, and best for the agricultural community.

David Garland

General Manager

Sidney Sugars Incorporated

35140 County Rd 125

Sidney, MT 59270

406-433-9333

406-480-1212

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Thursday, February 18, 2016 6:58 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Yellowstone Intake Diversion Dam Comment

-----Original Message-----

From: Rob Gregoire [mailto:rob.gregoire@gmail.com]
Sent: Wednesday, February 17, 2016 3:43 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Yellowstone Intake Diversion Dam Comment

Hello,

I urge you to utilize pumps to fill the irrigation ditches instead of diverting the water with the diversion dam. This has a far higher probability of success in restoring fish passage than any other proposal, including the proposal to dig a bypass channel.

Thank you,

Rob Gregoire

1105 Woodland Dr

Bozeman, MT 59718

Lou Hanebury
656 Oasis Dr.
Billings, MT 59105
February 18, 2016

U.S. Army Corps of Engineers
Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Ave.
Omaha, NE 68102
Email: cenwo-planning@usace.army.mil *Submitted via email*

Dear Ms. Vanosdall:

These are my scoping comments for the “Draft Environmental Impact Statement for the Intake Diversion Dam Fish Passage Project, Dawson County, Montana “.

I. Introduction

Federal agencies have an obligation under section 7(a)(1) of the Endangered Species Act (ESA) to use their authorities to conserve and recover federally-listed species and the ecosystems upon which they depend. In addition, section 7(a)(2) of the ESA prohibits federal agencies from authorizing, funding, or carrying out actions that would jeopardize the continued existence of federally-listed species. Existing dams and other modifications to the Missouri River system, built before enactment of the ESA in 1973, have left the pallid sturgeon critically endangered throughout its range. The Fish and Wildlife Service has characterized a free-flowing lower Yellowstone River as the last best chance to recover the pallid sturgeon. The 2007 Water Resources Development Act (WRDA) included an appropriation for ecosystem restoration on the Lower Yellowstone River under which the Corps of Engineers (Corps) is authorized to assist the Bureau of Reclamation (Reclamation) in the design and construction of the Lower Yellowstone project “for the purpose of ecosystem restoration.” Authorities granted to both the Corps and Reclamation in the ESA and WRDA and restrictions on both agencies in the ESA inform the range of alternatives Reclamation should consider in its Intake Diversion Dam fish passage project.

II. 2007 Water Resources Development Act

Section 3109 of the WRDA states that:

“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.”

Ecosystem restoration is normally understood to mean restoring an ecosystem to a favorable state that existed at some time in the past from a current degraded state. Congress chose the term restoration as opposed to the distinct terms remediation, normally meaning to reverse some but not all identified degradation to an ecosystem, and mitigation, normally meaning to replace degraded parts of an ecosystem with artificially constructed analogs, to clarify its intent for restoration of the lower Yellowstone River project administered by Reclamation.

Section 3110 of the WRDA goes on to clarify that *“the term ‘restoration project’ means a project that will produce, in accordance with other Federal programs, projects, and activities, substantial ecosystem restoration and related benefits,”* and *“the Secretary shall carry out, in accordance with other Federal programs, projects, and activities, restoration projects in the watershed of the Yellowstone River and tributaries in Montana, and in North Dakota, to produce immediate and substantial ecosystem restoration and recreation benefits.”* The purpose of the appropriation and the clear guidance from Congress is to restore the lower Yellowstone River.

III. Project Purpose and Need

Reclamation’s purpose in this draft Environmental Impact Statement (EIS) and the prior Intake Diversion Dam Modification Lower Yellowstone Project Environmental Assessment (EA) is to “improve fish passage at Intake Diversion Dam.” This purpose and need is consistent with the letter and intent of the WRDA and the ESA. Improved fish passage on the lower Yellowstone River would further conservation of the pallid sturgeon, an obligation of both Reclamation and the Corps, and would provide the ecosystem restoration required in the WRDA.

IV. Alternatives

Reclamation developed several alternatives in the EA to achieve the project purpose and need, mostly consisting of modifications to the existing rock weir that

obstructs fish passage. Two alternatives proposed replacement of the rock weir with a concrete dam and construction of a bypass channel with substantial headworks to resist erosion. Additional alternatives, some not considered in the EA were presented in *the “Lower Yellowstone Fish Passage Alternatives Planning Study”* (Study).

The Rock Ramp and Bypass Channel Alternatives and Alternatives B (Original Rock Ramp), C (Rock Ramp with Reduced Weir Elevation), and D (Combination Rock Ramp and Weir) in the Study do not meet the ecosystem restoration requirement of the WRDA, nor do they meet the agencies’ obligations under section 7(a)(1) or section 7(a)(2) of the ESA. Section 3110 of the WRDA states that “*the Secretary shall carry out*” restoration on the lower Yellowstone River “*to produce immediate and substantial ecosystem restoration.*” Leaving the existing rock weir in the river does not restore the Yellowstone River ecosystem under any reasonable interpretation of the WRDA, and enlarging the rock weir positively flouts the intent of Congress in both the WRDA and ESA. These three alternatives and any similar alternatives under development in the draft EIS should be removed from consideration as not meeting the project purpose and need or the mandates of the governing laws.

Alternatives E (Realigned By-pass Channel with Modified Weir) and F (Island with Extended Canal) in the Study also do not meet the ecosystem restoration requirement of WRDA. At no point in the recent geologic history of the lower Yellowstone River were concrete and riprap characteristic of the ecosystem being restored, and emplacement of a concrete and riprap structure spanning the river cannot reasonable be construed as a “substantial ecosystem restoration” or enhancing fish passage. The associated construction or enhancement of a bypass channel for fish passage may allow for some fish passage, but is not a restoration action. Further, reliance on a constructed or enhanced bypass channel does not meet the agencies’ obligations under section 7(a)(1) or section 7(a)(2) of the ESA. Alternatives E and F do not demonstrate pallid sturgeon passage is in fact occurring before completely obstructing fish passage in the main channel of the Yellowstone River. Should pallid sturgeon not use the bypass channel, Reclamation and the Corps will have failed to meet their section 7(a)(1) obligations and violated section 7(a)(2) of the ESA. These two alternatives and any similar alternatives under development in the draft EIS should be removed from consideration as not meeting the project purpose and need or the mandates of the governing laws.

Among the alternatives in the EA, the only one that meets the requirements of the WRDA is alternative A (Open Channel with Multiple Ranney Wells). This is the only alternative to mention ecological restoration of the lower Yellowstone River and is the only alternative that would functionally restore natural passage of pallid sturgeon and other fish species in the reach of the Yellowstone River described in the WRDA. As noted above, Section 3110 of the WRDA states that “*the Secretary shall carry out*” restoration on the lower Yellowstone River “*to produce immediate and substantial ecosystem restoration.*” Congress did not allow room for discretion here; Reclamation and the Corps have an affirmative mandate to restore the Yellowstone River ecosystem.

Reclamation and the Corps have an obligation under section 7(a)(1) of the ESA to use their authorities to conserve and recover the pallid sturgeon, and a complimentary obligation under section 7(a)(2) of the ESA to avoid authorizing, funding, or carrying out actions that would jeopardize the pallid sturgeon; Alternative A is also the only alternative that meets the requirements of both section 7(a)(1) and 7(a)(2) of the ESA. The Service has determined that a free-flowing lower Yellowstone River is necessary to achieve recovery of the pallid sturgeon, both to allow environmental cues encouraging adult sturgeon to spawn and to allow for long reaches of free-flowing river current enabling larval sturgeon to complete development and settle to the river bottom. Flow controls on the mainstem Missouri River dams eliminate the environmental cues necessary to trigger pallid sturgeon spawning and create slack water reservoirs that suffocate larval sturgeon before recruitment into the population. Within the species historic range, the Service has identified restoration of passage at Intake Diversion Dam as both enhancing spawning opportunities for wild adult pallid sturgeon and greatly lengthening the possible drift time for larval sturgeon spawned upstream of the Intake Diversion Dam site.

Modifications of the Open Channel with Multiple Ranney Wells should also be considered. Floating pumps with self-cleaning screens have proven effective for irrigation needs along the lower Yellowstone and Missouri Rivers. A short weir (concrete or inflatable) at the current new intake could prolong the ability to passively take irrigation water through the current intake. The cost of running pumps can be supplied by several means; setting aside funds in trust and using the interest to pay for the cost of electricity for preferred customers.

Retractable or inflatable gates should be re-evaluated as a means to keep the river open most of the year. There are many designs of gated weirs that may work at Intake.

These alternatives and any similar alternatives under development in the draft EIS should be enhanced and carried forward in the NEPA analysis as meeting the project purpose and need and mandates of the governing laws. Reclamation should also be transparent in its analysis of alternatives, fully disclosing the cost and feasibility.

V. Conclusion

It is my hope that Reclamation will fully develop alternatives for the draft EIS that meet the project purpose and need and all applicable laws informing the Lower Yellowstone Irrigation Project (LYIP). While I understand that NEPA does not require Reclamation to choose the environmentally preferable alternative in this or any other decision making process, ESA and other laws place firm restrictions on just how environmentally damaging the selected alternative can be. Room exists in this EIS to incorporate other environmental enhancements within LYIP. Notably, my comments do not specifically address myriad opportunities for greater water efficiency in the LYIP not directly connected to the project purpose and need. Reclamation should investigate efficiency measures as complements to off or in-channel pumping to meet the needs of LYIP, direction from Congress, and responsibilities of Reclamation.

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Thursday, February 18, 2016 7:00 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: Comment on Intake Diversion Dam

-----Original Message-----

From: Travis Heater [mailto:tr_heater@hotmail.com]
Sent: Wednesday, February 17, 2016 4:19 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Comment on Intake Diversion Dam

Hello,

The following is my comment on the Intake Diversion Dam Fish Passage Project.

I believe that there is a way to accommodate both the irrigators as well as the fishery including the endangered pallid sturgeon in the Yellowstone River without a low-head dam or diversion structure. Any dam or diversion structure will result in the same negative situation that is currently found with the Intake dam. Most fish species including the Pallid Sturgeon will follow the main flow of water when migrating up river. A diversion canal around a dam will not be the main flow, thus resulting in few fish using the canal as a means of traversing the dam.

The best course of action for both irrigators and the fishery is to combine using the current irrigation headgate with gravity flow when the river discharge is high, and then switch to using pumps during lower flows. It would also be economical to invest in water conservation measures to reduce leakage in canals and ditches, thereby reducing pumping needs and costs.

Thanks,

Travis Heater

406-360-6135

Trout Creek, MT

Vanosdall, Tiffany K NWO

From: Trimpe, David <dtrimpe@usbr.gov>
Sent: Wednesday, February 17, 2016 8:46 AM
To: Vanosdall, Tiffany K NWO
Subject: [EXTERNAL] Fwd: Lower Yellowstone Irrigation Project

----- Forwarded message -----

From: Mark & Kathy Iversen <mkinc@midrivers.com <mailto:mkinc@midrivers.com> >
Date: Tue, Feb 16, 2016 at 5:35 PM
Subject: Lower Yellowstone Irrigation Project
To: dtrimpe@usbr.gov <mailto:dtrimpe@usbr.gov>

To Whom it May Concern for the welfare of the Irrigators in District 1 and District 2:

Pumping Alternative:

The new discharge lines from the pump stations will require easements, and/or purchased right-of-way from the river to the main canal. This will impact private property rights to owners who will refuse to sell, thus prompting potential eminent domain concerns that will impact the entire community. The new discharge lines may also be within identified Sage Grouse habitat area.

Peak Evap Transpiration for our 55,000 plus acres of crop requires 1,350 cfs delivered directly to the farms.

Water conservation on a mass scale within the Lower Yellowstone Irrigation Project will have negative effects on the underlying groundwater aquifer. Many landowners within the area depend on groundwater as a source for both drinking water and irrigation. Mass scale water conservation efforts within the LYIP system will limit the use of this groundwater system, and provide a hardship to many of the land owners as well as the City of Sidney.

Waste spills from the LYIP system support wildlife, wetlands and an entire ecosystem. This system has been ongoing for 107 years supporting this ecosystem, and mass scale water conservation efforts will eliminate the water that supports this ecosystem.

Thank you for taking these comments into consideration.

Mark W. Iversen, Chairman
LYIP District 1

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Wednesday, February 17, 2016 1:43 PM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Intake diversion dam

-----Original Message-----

From: Ray Johnson [mailto:rayjohnson@midrivers.com]
Sent: Wednesday, February 17, 2016 11:56 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Intake diversion dam

I am writing this email to once again express my support for the replacement of the intake diversion dam with the weir and fish bypass. As a business owner in Sidney I know how vital that project is to our agriculture, and therefore to our entire communities economics. This solution is a well-designed option that clearly meets the needs of our community while also providing a solution that will ensure the future of the Pallid Sturgeon. It is possible to have a solution that truly meets everyone's concerns.

Ray Johnson.

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Friday, February 19, 2016 8:56 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Intake EIS Scoping Comments

-----Original Message-----

From: Justin Kucera [mailto:jfkucera@gmail.com]
Sent: Thursday, February 18, 2016 11:03 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Intake EIS Scoping Comments

With all due respect I submit the following comments on the Notice of Intent to Prepare a Draft Environmental Impact Statement for the Intake Diversion Dam Fish Passage Project.

The Joe's Island side channel, locally known as the Slough, is a prairie lifeline and a Montana treasure. Please eliminate all alternatives that impact this irreplaceable link in the river. This connection provides seasonal connectivity for the host of native and non-native fish in the river, including the pallid sturgeon. A harbor from the raging spring Yellowstone on the migration up and slow down for the young on the way down. The Slough is a very valuable place, with a sagebrush swath down the middle. Seasonal wetland values exist throughout the Slough. Old cottonwood trees are full of cavity nesters, weasels and the like. Irrigated ground downstream. The biodiversity, connection and the support provided to the souls of humans inspired by such things are priceless. Please consider alternatives that do not impact this connection of life, of our wild river, the Yellowstone, pretty amazing. The future will appreciate you.

My first memory of the Slough hails from my 7th season. My dad was working oil rigs out of Glendive during my first oil boom. When he wasn't working we were fishing, hiking, hunting, or exploring. One of my most vivid early memories was my dad handing me off to a beer smelling fella on the banks below the diversion saying "hold his belt while I get this fish". 62 pounds, sore arms, couldn't sleep. I have since been back to Intake and the Joe's Island side channel hundreds of times. Never learning more than that first trip, keep the tip up. I caught turtles in pools long after the channel had stopped taking water from the river, hunted whitetails through the channel with the cottonwood leaves yellowed and rotting around the edges storing nutrients for spring growth, picked ticks for hours after calling turkeys, jumped from buzzing rattlesnakes, and sat and watched a bull snake hunting yellow warblers. The ecological values of the side channel are undeniable. The stars and the seasons are amazing too.

Science. There are several studies supporting the value of Yellowstone River side channels including work done by the USGS, Montana State University, Idaho State University, and many others. The Corps of Engineers has funded much of this work. I will cite it if you need it.

Please eliminate from future consideration any and all proposed alternatives that will raise the water into the side channel or alter the course of the side channel. Please accept the existing win for the pallid sturgeon, which you are charged to protect.

Please consider supplementing the natural flows of the Yellowstone and to the Slough by supplementing flows with storage seemingly available in the Bighorn Reservoir. The Crow Tribe is a potential source of water for this purpose. The Crow Tribe Water Rights Settlement Act of 2010, Section 408, Storage Allocation From Bighorn Lake (C)(1) ... the Tribe may enter into a service contract, lease, exchange or other agreement providing for the temporary delivery, use or transfer of not more than 50,000 acre-feet of water... for use of reservation. Pretty simple really. The Crow Tribe receives compensation for their water, and move the world to a more natural place. Last I checked the Bighorn was a major tributary to the Yellowstone and water still flows down hill. Release the 50,000 acre-feet over 2-3 weeks at the peak of the Yellowstone hydrograph and support the existing pallid sturgeon passageway around Intake Diversion Dam.

My contention is that this lifeline support diversity, wild, connection, freedom, America, and beyond. It is far more valuable to the Yellowstone River and all that depend upon it than your engineering attempts will ever be. From floodplain connectivity, wetland and riparian maintenance, and important habitat for fish and wildlife, include moving adult and drifting larval fish during high flows. There has been a net loss of side channels in the Yellowstone River in my lifetime, due to the construction and protection of dams, dikes, bridges, railroad grades, highways, and private property; and the associated rip rap needed to hold it all together. The side channel and the resources provided should be protected and not destroyed. The side channel should also be considered cumulatively in context with the net loss of side channels on the Yellowstone River and beyond. Pallid sturgeon successfully spawning above Intake will appreciate that quite important slower water habitat. The side channel is working now.

My feelings for the Yellowstone River cannot be quantified, I drink the water, and I live nearby actively pursuing outdoor activities in or near the river from top to bottom with friends and family. I love that the river is connected and alive by the Joes Island side channel. Blocking, backfilling, or otherwise engineering the side channel will destroy natural values.

Please use plain writing as prescribed in the Plain Writing Act of 2010, simply meaning writing that is clear, concise, well organized, and follows other best practices appropriate to the subject or field and intended audience. I would argue that the Yellowstone River is an American treasure; as such the public with limited time are your audience.

One public meeting for an EIS is inadequate for the Yellowstone River.

Please send me a hard copy of draft documents to:

Justin Kucera

226 Avenues D

Billings, MT 59101

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Thursday, February 18, 2016 8:50 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Protect sturgeon, remove the Intake Diversion Dam -- Environmental Impact Statements; Availability, etc.: Intake Diversion Dam Fish Passage Project, Dawson County, MT (Docket ID: COE-2016-0001-0001)

-----Original Message-----

From: Chris Lish [mailto:lishchris@yahoo.com]
Sent: Thursday, February 18, 2016 8:39 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Protect sturgeon, remove the Intake Diversion Dam -- Environmental Impact Statements; Availability, etc.: Intake Diversion Dam Fish Passage Project, Dawson County, MT (Docket ID: COE-2016-0001-0001)

Thursday, February 18, 2016

U.S. Army Corps of Engineers Omaha District
ATTN: CENWO-PM-AA
1616 Capitol Ave.
Omaha, NE 68102

Subject: Protect sturgeon, remove the Intake Diversion Dam -- Environmental Impact Statements; Availability, etc.: Intake Diversion Dam Fish Passage Project, Dawson County, MT (Docket ID: COE-2016-0001-0001)

Dear U.S. Army Corps of Engineers and Bureau of Reclamation,

Thank you for the opportunity to comment on your Notice of Intent to prepare a draft Environmental Impact Statement (EIS) for the Intake Diversion Dam fish passage project in Dawson County, Montana.

“Our duty to the whole, including to the unborn generations, bids us to restrain an unprincipled present-day minority from wasting the heritage of these unborn generations. The movement for the conservation of wildlife and the larger movement for the conservation of all our natural resources are essentially democratic in spirit, purpose and method.”
-- Theodore Roosevelt

I support development of one or more dam-free open river alternatives in this EIS. The most likely way to guarantee pallid sturgeon and other fish passage on the lower Yellowstone River is to remove the outdated diversion dam structure at Intake, Montana, and replace it with more modern and efficient water delivery methods for irrigators that also keep the main river channel undammed and free flowing.

“Nothing is more priceless and more worthy of preservation than the rich array of animal life with which our country has been blessed.”
-- Richard Nixon, on signing the Endangered Species Act on December 28, 1973

In addition to blocking fish passage and risking extinction of the pallid sturgeon, the current diversion dam and irrigation infrastructure wastes a tremendous amount of water that never reaches the intended crops. All alternatives should also include more efficient water delivery methods.

“Every man who appreciates the majesty and beauty of the wilderness and of wild life, should strike hands with the farsighted men who wish to preserve our material resources, in the effort to keep our forests and our game beasts, game-birds, and game-fish—indeed, all the living creatures of prairie and woodland and seashore—from wanton destruction. Above all, we should realize that the effort toward this end is essentially a democratic movement.”

-- Theodore Roosevelt

It's time to remove this dam and restore a free-flowing lower Yellowstone River. Please include and analyze a dam-free alternative in your EIS to give pallid sturgeon the only real chance they have to recover. Remove the dam; protect the fish.

“A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.”

-- Aldo Leopold

Thank you for your consideration of my comments. Please do NOT add my name to your mailing list. I will learn about future developments on this issue from other sources.

Sincerely,
Christopher Lish
San Rafael, CA

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Thursday, February 18, 2016 7:01 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: Intake Dam Diversion comments

-----Original Message-----

From: John R. Mercer [mailto:john@mercerfarm.com]
Sent: Wednesday, February 17, 2016 6:06 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] re: Intake Dam Diversion comments

2-16-2016

From:
John Mercer
11807 HWY 261
Sidney MT 59270

To:
US Army Corps of Engineers
Attn: CENWO-PM-AA
1616 Capitol Ave.
Omaha NE 68102
Email: cenwo-planning@usace.army.mil

RE: Comment on the Intake Diversion Dam Fish Passage Project

It appears departments of the United States government may continue to place the interests of endangered species above the interests of the people of this country. In our case, the livelihood of thousands of farmers and ranchers and the food supply for tens of thousands of Americans are in jeopardy because of the threat to eliminate this use of irrigation water from the Yellowstone River.

The 'people' dwellers in this valley are not arguing to destroy the habitat of our 'sturgeon' dwellers, but we would definitely like to have our existence acknowledged and have consideration for what we annually produce. We would also like it to be known we want to assist in the health of the 'sturgeon' dwellers in our river, as evidenced by the cooperation with the by-pass channel.

Though there are feigned attempts at creating viable alternatives to the improvements to the Intake Diversion Dam, a little pencil pushing shows some of these ideas to be economically impractical and utterly ridiculous.

Past experience with pumping water from the Yellowstone has proven to be extremely challenging, extremely expensive, and prone to extremely high O&M costs. Please - total the fiscal, physical, and environmental costs of what the environmentalists pose as an option:

- the logistics of locating dozens of pumping structures along the river's edge
- the cost of those structures and their very expensive O&M over the years
- the cost and environmental disruption caused by the removing and relocating those same pumps as the river continues its erosive meandering

- the disruption caused by the miles of pipelines buried through established wetlands and ecosystems to reach the 55,000+ acres of farmland
- the millions of yards of silt turned loose by the removal of the 11' diversion dam and that attendant damage to the aquatic life downstream
- the damage caused by the dam removal, the resulting 11' drop in elevation of the river, the damage caused to the many drainages and their micro-ecosystems that have been established upstream from the dam
- the prohibitive cost of the proposed, unreliable, alternative-energy wind farm (i.e. not just their initial cost but their downtime, their O&M, and their replacement after their limited lifespan of 15 years, + or -)
- and environmental damage caused by that same windfarm with its visual pollution of our Big Sky horizons, as well as the commonly cited frequent killing of migratory and endangered birds

It is interesting, that in the name of preserving endangered species and lessening damage to the environment, the environmentalist would pose we do just the opposite. Not only will we be forced to spend a fortune to access use of our water rights from the river (not an economically feasible option), but they would have the quiet rapids produced by the Intake Diversion Dam removed to unleash a torrent of trash and silt to disturb or destroy much of the long-established aquatic life that has been benefiting from the dam.

It seems senseless. A by-pass could serve as the avenue for sturgeon travel upstream. The improved, cemented structure could reduce the need for annual rock replacement, and our Yellowstone Valley could remain the fertile producer of millions of tons of food for people and livestock.

Or you could act on the wisdom of McCrystie Adams, attorney for Defenders of Wildlife, who so eloquently stated – “There’s no reason for that dam. You take out the dam, and you fix the problem.

And I thought humans were supposed to be the “thinking” species.

Thank you for your time.

Sincerely ~

John R. Mercer
(406) 489-1776

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Thursday, February 18, 2016 2:39 PM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Intake Diversion Dam Fish Passage Project

-----Original Message-----

From:
Sent: Thursday, February 18, 2016 1:49 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Intake Diversion Dam Fish Passage Project

I would like to submit my comments, that it's time to remove the outdated dam blocking the sturgeon's -- and other fish -- river passage. Need to replace it with a more modern and efficient water delivery system to reach the crop irrigation.

Please withhold from public review my name and other personal information. Thank you!

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Thursday, February 18, 2016 12:27 PM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Remove Intake Dam Lower Yellowstone River

-----Original Message-----

From: RPM [mailto:wingandfin@gmail.com]
Sent: Thursday, February 18, 2016 12:14 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Remove Intake Dam Lower Yellowstone River

Remove Intake Dam Lower Yellowstone River

Hello.

Remove the outdated dam and replace it with more modern and efficient water delivery system for irrigators.

In addition to blocking fish passage and ensuring the future extinction of the Pallid Sturgeon, the current intake diversion dam and irrigation structure wastes tremendous amounts of water that never reaches the intended crops

Robert P. Mitzner
517 N 10th St
PO Box 662
Livingston, MT 59047
wingandfin@gmail.com <mailto:wingandfin@gmail.com> <mailto:wingandfin@gmail.com>
406-220-2466

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Thursday, February 18, 2016 7:04 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Intake diversion dam fish passage project

-----Original Message-----

From: Kim Nollmeyer [mailto:kim_nollmeyer@hotmail.com]
Sent: Wednesday, February 17, 2016 11:06 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Intake diversion dam fish passage project

I am writing in regards to the intake diversion dam fish passage project. I am in support of the concrete weir and fish bypass. Thank you.

Kim Nollmeyer
34461 County Rd 112
Savage, MT 59262
406-798-3376

Sent from my iPad

Feb. 18, 2016

To: cenwo-planning@ usace.army.mil
U.S. Army Corps of Engineers Omaha District, ATTN: CENWO-PM- AA
1616 Capitol Ave., Omaha, NE 68102

From:

Name Thomas A. Ball

Organization Missouri River Grass Roots Network—Sierra Club

Address 1477 Crossbrook Drive, Webster Groves MO 63119

Phone (314) 962-1241 Fax () same, by arrangement

Email thomas.ball@sbcglobal.net

RE: Yellowstone Intake Project (YIP) USACE/ BoR joint agency EIS scoping phase comments due for submission to USACE by close of business Feb 18, 2016, by email as the post is too slow to insure delivery by that date.

Project web page: <http://www.usbr.gov/gp/mtao/loweryellowstone/>

Notice of Intent, pdf of Fed Register notice:

<http://www.usbr.gov/gp/mtao/loweryellowstone/EIS/noi.pdf>

A priori list of (Corps? BoR?) suggested alternatives:

http://www.usbr.gov/gp/mtao/loweryellowstone/EIS/alternative_handout.pdf

Narrative Comments:

Thank you for the opportunity to comment.

The decision support system for this EIS needs to rely on “best available scientific information” leading to a “best practicable technology” leading to the reduction of threats to endangered species and a greatest biological benefit in this ecosystem recovery effort—scientists and engineers are best when they adhere to professional standards within the competency of their training.

We are a nation of laws, authorities and prioritized appropriations. As a nation, the Endangered Species Act and other public laws, reflect an aspect of our concern and care that governmental actions “shall not” contribute to the extinction of species. To that end, our country has expended, and is expending, considerable resources and national economic development. State laws support and affirm these values by incorporation and reference.

In some previous Yellowstone Intake Project environmental analysis iterations, best available science data collection & analysis was minimal to include just a pallid sturgeon swimming strength assessment to avoid entrainment in the Phase 1 rock ramp and new screened headworks. There was also some ad hoc US Fish and Wildlife analysis produced subsequent, I think, to the decision documents for the 2010 studies.

The USFWS letter to the Corps found in Appendix O http://www.usbr.gov/gp/mtao/loweryellowstone/EIS/2015_app_o.pdf includes an assessment that the fish bypass with new weir dam represents “best available science” at that time. Reliance on that letter’s assessment begs the question of what new science data collection & analysis needs to occur to convert the previous EA (with FoNSI) into a full EIS with all environmental concerns quantified, analyzed and valued for comparative merit.

To prioritize a list of goals for this EIS: first, federal action that avoids jeopardy for all threatened and endangered species, including state listed species of conservation concern; second, federal action in support of recovery for T & E species; third, “and the ecosystems they depend on”. Following this, agency actions in support of efficient water right supply as public benefit is an end to be achieved.

The goals are separable from one another.

The existing 100 year old rock weir dam is a blocking impediment to pallid sturgeon reproduction, and recruitment.

Irrigators have a quantified and apportioned water right in support of the public benefit.

General Science Data Collection and Analysis—Level 1 and Level 2:

New science data (not considered in the previous EA) gathers support for the hypotheses that anoxic zones in Lake Sakakawea and insufficient pallid larval drift distance are the dominant threat limiting recruitment of larval pallid sturgeon into juvenile classes. In previous project considerations, reservoir anoxia was one hypothesis among many. This hypothesis now has greater scientific evidence,

giving the implications for fish passage added importance.

“Lake Sakakawea is currently considered to be an impediment to larval pallid sturgeon survival by truncating riverine habitat necessary for wild pallid sturgeon larvae to complete their drifting transition from free embryos to larvae (Guy et al. 2015)”. (FWS letter, appendix O, pg 10 to 2nd paragraph pg 11)

Guy, C. S., H. B. Treanor, K.M. Kappenman, E. A. SchoU, J. E. ligen, and M.A. H. Webb. 2015 Broadening the Regulated-River Management Paradigm: A Case Study of the Forgotten Dead Zone Hindering Pallid Sturgeon Recovery, *Fisheries*, 40: 1 :6-14.

Previous considerations in the existing EA provided no scientific data collection or analysis lending rational evidence to the conclusion that the fish bypass channel alternative would actually produce a positive benefit for increasing this larval drift distance. If pallid sturgeon avoided or did not use the new 15% flow channel, then the existing rock weir impediment remained. There were no Level 1 or Level 2 experiments conducted to insure that upward and downward migrating pallid sturgeon would use the fish passage channel.

A Level 1 experiment is research from existing data. It could be to look at existing pallid sturgeon movement tracking data and determine the number or percentage of times pallids move through a 15% flow back channel as preferred to main channel flows. If the historic record of movement tracking shows that pallids do, on occasion, favor a 15% flow back channel migration over benthic main channel flows, then a Level 2 experiment is justified. It could, also, be a meta-analysis study quantifying “attraction flow” or other qualities of efficient and successful fish passage projects. If the 15% fish passage is considered in this EIS, then Level 1 science research should be performed.

A Level 2 experiment could capture upwardly migrating pallid sturgeon below the Intake dam, remove them to the point envisioned as the upstream exit of the fish passage, release them and track their movements—again, noting how often they prefer a 15% back channel flow over the main channel. If pallids choose a 15% back channel a statistically significant number of times, construction of the 15% flow fish passage would have some scientific support. Absent an empirical experiment, assertions or predictions that pallid sturgeon would choose to use the fish passage constitute a “belief”—possibly, an expert belief which, nonetheless or even more so, requires some form of rational evidence or support.

For the fish passage to be effective as an intervention, a sufficient number of sturgeon would need to choose to move 165 miles upstream before spawning. If they choose to spawn, for instance, just above Intake or Glendive, the entire effort will likely yield little change or improvement—larval drift distance is not increased by enough to avoid the same anoxic fate. In the past, spawning has been documented below Intake dam. Given that removal of the 100 year old blockage at Intake is but one link in a connected chain, it is very probably a good one. If fish passage is sufficiently “attractive” and used, a percentage of fish will choose to use, and another percentage of that group will likely choose to travel further upstream—some of these may return year after year, demonstrating a preference for previous spawning habitat choices sometimes seen for individuals. What quantitative percentages may be assigned to terms such as “likely” or “probably” should be studied in Level 1 and Level 2 formats, and the experiments performed.

The only, unqualified, most “attractive” alternatives for fish passage are those that feature complete and 100% removal of the existing rock weir dam, without replacement. Remove the rock weir impediment and do not replace it. The wide open Yellowstone River, devoid of dams, is the only sure way to promote naturally occurring fish passage upstream with certainty—and we very much need to insure 100% success with the preferred alternative selected.

Writers of the draft EIS should make it abundantly clear that the “Rock Ramp” proposal suggested in this iteration of the EIS does not remove the rock weir but adds a new concrete weir on top of the old one. It is not the same proposal as the “Rock Ramp” proposal considered, approved and then dismissed in the 2010 EIS on economic grounds; though it currently carries the same name.

The issues of fish passage and irrigation water supply right are separable. The Irrigation Districts’ water rights should be fulfilled in a timely manner, as they are now. However, there is a biological imperative for needed fish passage. If the impediment to fish passage is not removed soon, the issue may become moot for the endangered pallid sturgeon. Dam removal should begin as quickly as federal regulatory agencies can act. Below, we suggest some never-before-considered, inexpensive, sustainable, and best practicable pumping technology alternatives for fulfilling the water right for possible inclusion in the study.

There are also new, specific data sources not considered because unavailable in the previous environmental studies:

USGS has now published “Jacobson, R.B., Parsley, M.J., Annis, M.L., Colvin, M.E.,

Welker, T.L., and James, D.A., 2015, Science information to support Missouri River *Scaphirhynchus albus* (pallid sturgeon) effects analysis: U.S. Geological Survey Open-File Report 2015–1226, 78 p., <http://dx.doi.org/10.3133/ofr20151226>. ISSN: 2331-1258 (online)

This effects analysis was previously in draft form and unavailable for citation in environmental study efforts. It is now published science. It contains many references to pallid sturgeon habitat use on the Yellowstone River, and should be consulted in this effort.

At present, there are no known Habitat Suitability Index (HSI) studies specifically for pallid sturgeon that can be utilized in a Habitat Evaluation Procedures (HEP) protocol format standardized by the US Fish & Wildlife Service. The above referenced Effects Analysis is a best available science effort which might, either, stand as surrogate proxy, or lend itself in support of the creation of an HSI/HEP analysis in the EIS currently being scoped. There are HSI studies in existence for other sturgeon species, Lake Sturgeon, for instance,-- and though different in species, these are of the same taxonomic family and may be of use in the current effort.

The Phase 1 fish exclusion screens and headworks have now been in operation for a few years, with construction completed in 2012. We would like to see a Before-After, Control- Impact (BACI) study analysis detailing the effectiveness of the exclusion screens in reducing or eliminating unintentional “take” of the various species of fish that, previously, were collateral mortalities in the irrigation channel or sluice canal.

Such a study should include analysis of the maintenance records for the Yellowstone Intake Project as previously agreed to in Memorandums of Understanding (MOUs) between the agencies and stakeholder groups. Though preliminary due to few years of operation, this data is essential for understanding whether or not the Phase 1 fish exclusion screens have been effective in attaining project goals; or ascertaining whether more or different modifications and actions need to be included in the project moving forward.

If fish mortality in the irrigation channel has not been reduced to acceptable or specified numbers; then, the presumed added expense of electric sourced pumping may be justified—or some other modification considered and studied. In any case, the existing state of the project should be analyzed and described, as this is the

basis of “Adaptive Management” described in previous environmental assessment efforts. If no such maintenance assessment or evaluation is currently available, we must ask “Why not? What went wrong?” but, also, “what data is available to stand as surrogate moving forward”?

In any case, the economic cost of the present Headworks and fish exclusion screens are no longer an estimate with uncertainties to be considered in valuating alternatives, they are now a constructed and “as built” part of the YIP system. If modifications are still required, then those costs would be estimates; but, otherwise, they represent a prior investment to be reflected in the “future without project” alternative and, perhaps, other agency action alternatives.

Specific Alternative Action Suggestions for Scoping:

It is daunting to try to imagine some viable or practicable alternatives that have not been previously considered and dismissed in a structured decision system evidenced at the Bureau of Reclamation project website. And yet,...

And yet, previous considerations of the “dam removal” and “pumping” alternatives do not contain study or reference to what we consider to be the “best practicable technology” at the Yellowstone Intake Project canal—**inexpensive, simple, and durable “Hydraulic Ram Pumps” that require very low hydraulic head pressure, no expensive electrical supply, and minimal maintenance on the part of irrigators.**

Previous considerations of dam removal options began with assumptions such as “If funding sources are unlimited, then a dam removal option should be considered”.

We assert this assumption is incorrect.

In 2008, the Biological Review Team summarized the structured decision process in the following way:

“The three options for passage included: (1) removing the dam and moving the canal intake upstream, (2) removing the dam and installing a large pump facility, and (3)

developing a full channel width rock ramp. Later meetings of the MOU Team determined that option (2) was not a viable alternative since anticipated operation and maintenance of a pumping facility were considered too burdensome for irrigators. The MOU Team requested that the two remaining upstream passage alternatives, as well as the in-canal fish screen be developed to a ten percent design level so that they could be evaluated in greater detail.”

http://www.usbr.gov/gp/mtao/loweryellowstone/summary_of_biological_review_teams_comments_of_fish_screening_preliminary_design_march_2008.pdf pg 3)

However, in 2005 the Valuation Report,

http://www.usbr.gov/gp/mtao/loweryellowstone/lower_yellowstone_fish_passage_alternatives_value_planning_study_august_2005.pdf) considering the Collapsible Gate option stated: “With moderate costs, the Corps of Engineers recommends a dam removal option.”

And, under the Rock Ramp consideration described an efficiency cost avoidance or reduction to an aspect of dam removal:

“Utilizing rock salvaged from the removal of the existing dam would provide cost avoidance by foregoing purchasing rock for the new rock ramp.” And elsewhere, (2002 YIP Annual Report,

http://www.usbr.gov/gp/mtao/loweryellowstone/lower_yellowstone_river_intake_report.pdf, pg 62) it is observed that if dam removal option were selected the yearly operations and maintenance and 25 year major repair, costs would no longer be incurred.

Again, in 2005, the estimate for dam removal, itself, was \$ 1,394,000.00.

The cost of dam removal is separable from the cost of supplying irrigation flows sufficient to meet the quantified and apportioned water rights, and should be evaluated as a separate line item as these separable costs may have changed.

We can find no place in the historic record where pumping was considered an alternative; but where it was not, also, encumbered by analysis of high corollary, construction, electrical and maintenance expense estimates, the currently

suggested Ranney Pump option is a similar example.

For example, see Proposal #9, in the above referenced 2005 document. If such an alternative idea has been openly considered and dismissed and we have just not found it, the rational basis for this dismissal should be discussed in the EIS text.

A BoR document referenced at the project website, entitled “Power Demand and Consumption for a Power Plant Alternative, Bureau, November 2008” could not be found at the website, was a dead link; but has since been repaired and provided by the Reclamation website media POC, after we reported. We are thankful for that prompt action.

http://www.usbr.gov/gp/mtao/loweryellowstone/power_demand_and_consumption_nov_08.pdf shows the hydraulic curve by elevation above and below intake.

If the issue of “head” is removed as a feature incurred for the entire river width, and variable for length, but is transferred as a feature to the inside diameter of a suction (supply) pipe in a pumping system—then, pumping location is not confined to the present geographic footprint near the headworks, but may be distributed or moved to locations upstream and/ or downstream. Diameter, length, and material durability are subject to the laws of physics and nature and specifiable by engineering teams. If a sluice ditch is proposed to provide head for the existing head works, the supply pipe could be buried in the berm.

In the 2008 valuation study, Proposal #9 detailed the following project elements:

“The pumping station itself was designed for 11 active pumps with a delivery capacity of 133 cfs each with four standby pumps for backup. The total power load for the pumping station would be approximately 2.8 MW. Power could be supplied from existing power supplies and potentially could be supplemented by project-specific sources such as a wind farm or solar generation, but these options were not investigated due to time constraints. Implementation of the proposed pumping plant would include the following elements: (1) removal/disposal of the existing diversion dam and restoration of dam site; (2) construct new pumping plant with site work for

roads, parking, and infrastructure; (3) removal and replacement of the existing headworks structure with inlet pipes lowered 7 feet to allow open channel diversion under low flows and excavate the Main Canal from the headworks structure downstream approximately 1,000 feet to the location of the pumping station; (4) construct fish screen structure from baseline plan; and (5) construct new high power transmission line to route power to the pumping station and auxiliary/backup power generation capability in the event of power outages...”

As Dam Removal was ruled out as “infeasible” by the 2005 Valuation team report, it was subsequently removed from further consideration as a study alternative in 2008. (see http://www.usbr.gov/gp/mtao/loweryellowstone/EIS/2015_app_a1.pdf) Fish screen and headworks are now a prior investment decisions of the previous baseline plan

The Rock Ramp proposal entailed existing dam deconstruction and reuse of the materials, no pumping supplementation, and was approved as being supported by best available science; but then was removed for further consideration on new information regarding transportation economics from distant quarries.

http://www.usbr.gov/gp/mtao/loweryellowstone/science_review_final.pdf (Nov 30, 2009) It is back as a Corps suggested alternative for study in this EIS, b concrete weir dam cap and no dam removal.

The Ranney Pump alternative, currently suggested by the Corps for the was previously examined under the cost benefit assumption that adequ the irrigators would require 17 megawatts of power, and attending elect infrastructure construction. *“This alternative was dropped because of th to install the Ranney Well System and the high energy costs that would be placed upon the district. Concerns with service reliability, brownouts, and power outages were also discussed. These issues could cause disruption in canal flows and affect operation of the whole system. It was determined that there were cheaper, potentially more effective alternatives remaining”*.

To resubmit the Ranney pump alternative, after it has previously been eliminated on an economic comparative basis would require some change in the economic equations. Otherwise, it is a straw man with no new benefits and a generic proxy for other pumping alternatives to say that pumping alternatives were considered.

Pumping alternatives were previously described as requiring 700,000 kilowatts of electrical energy and were dismissed, after valuation on this basis, as uneconomical. We assert that utilizing hydraulic flow energy currently available in the Yellowstone River may not require conversion into electrical energy for subsequent conversion into pumping work energy, with the efficiency losses these procedures entail.

Hydraulic Ram Pumps are now a “mature” technology with 200 years of development. They require 0 (zero) electrical energy for pump operation, utilizing head within a suction supply pipe, and a transmission of compressive volumes for pumping action. Their invention and use predate the electrification of farms. There have been recent improvements in materials and design that provide even greater reliability and higher drive flows.

(<https://www2.warwick.ac.uk/fac/sci/eng/research/civil/dtu/pubs/tr/lift/rptr13/tr13.pdf>)

(http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_041913.pdf)

(https://en.wikipedia.org/wiki/Hydraulic_ram)

We suggest that the Project Proposal # 9 from the 2005 Valuation study be reexamined with the substitution of Hydraulic Ram Pumps operating in parallel to supply required capacity, rather than the 11 electrically supplied pumps then considered. Fish screens for intake pipes are described in that proposal, which seemed to have survived scrutiny on a strictly engineering feasibility basis. Details of Ram Pump design, numbers deployed, whether purchased from contractors or constructed by the Corps, etc. are best evaluated by Civil and Mechanical engineers.

We know that the Yellowstone River is a harsh and unforgiving environment during icy winters. Suction supply pipes may need to be armored and overbuilt, replaced when crushed by ice, or removed annually as part of maintenance and replaced in spring. However, with the exception of a short section detail situated in the River to supply intake, much of the supply pipe could be buried on shore and armored to the pumphouse; not, “in the river”.

If this technology is still ruled out, after consideration in a structured decision system, then an alternative with renewable energy sources-- which was previously not undertaken for lack of time—should be reconsidered in the current EIS. In another place, it was described as “beyond the scope of the project”. What has changed? If electrical energy is not necessary at this remote location, or isn’t competitive with traditional energy infrastructure, then it is probably a distraction. At one point it seemed that the distance from the headworks site to traditional energy infrastructure was a factor. It is not required for dam removal, but for water supply.

Renewable energy sources could be studied as an alternative to traditional infrastructure only if they are cheaper and faster to install. Such a study would be consistent with various federal agency policy directives. A pump house equipped with solar photovoltaic panels could provide sufficient electrical energy if inspections of hydraulic ram pumps were required at night; for computerized data logging and transmission; or for remote monitoring and command of electronically controlled valves on supply pipes via satellite dish. Such a pump house could, conceivably, be designed as “off grid” and locatable out of the flood zone or made resilient to flood conditions. Hydraulic ram pumps can be sealed systems, and could still be designed to work when submersed by floods. If electricity is easily available through wires, then, it is likely optical cable or phone lines would be as well. By design, hydraulic ram pumps operate continuously and are not remotely shut off. This kind of control would have to be engineered in, if wanted.

Water Rights and Responsibilities:

I'm concerned that the quantified irrigation need has crept upward over time. Former limits on irrigated acres per family have either changed or are not enforced. Pumping requirement estimations began as something like 300 cfs, moved to 600cfs and now 1300 cfs to supply 54000 acres. What is the quantified, apportioned water right? This should be ascertained and made clear in the EIS.

End use seems to, now, include subdivision lawns as well as agricultural crops like sugar beets and beer grains. These are, mostly, local jurisdictional issues for deliberation and control. However, apportioned water rights should be, both, quantified and qualified. Irrigators, likely, do not need drinking water quality specifications provided by the Ranney pump system even if they reduce sediment maintenance issues at the cost of expensive electrical supply. Hydraulic ram pumps are durable, and can be capable of conveying sewage sludge.

Rights entail responsibilities, and it seems the burden for these responsibilities are economically shared by Reclamations and the irrigation districts. At present, they are, also, an unbearable burden for the endangered pallid sturgeon, which is declining as a result; and a considerable expense for both the Missouri River Recovery Program and the nation as a whole.

I would assert that the end users of the water have a responsibility to see that it is not wasted, or polluted by contaminants which then flow to the river and contribute to the very anoxic conditions sited as the dominant threat to the fish. I was pleased, then, to see water conservation as one of the alternatives suggested for consideration.

Given these quantitative and qualitative questions, I ask:

What proportion or apportion of Yellowstone River water is reserved as a right for the fish and other endemic species who have had prior use for millions of years? Low dissolved oxygen, or anoxia, gets worse during low flow events. If "the solution

to pollution is dilution” then, it follows that low flows concentrate pollutants.

If a protracted, multi-year, Mega-drought were to occur, what percentage of low river flows will not be demanded by irrigators but reserved for use by fish and wildlife?

What water quality monitoring and measurement of irrigation outfalls or returns to the Yellowstone River will be required by Reclamation and the irrigation districts for this EIS? If it is not monitored and measured, we cannot insure that it is not contributing to the threats endangering the species.

Consideration should be included in the conservation alternative for the creation of wetland buffer mitigation acreages to lie between agricultural or residential use and the Yellowstone River outfalls. Surplus water from the system should comply with all state and federal clean water act specifications. Wetlands clean both agricultural and urban runoff of various nutrients and pollutants. The impact to wetlands should be calculated for losses and gains in acreage and function for the various alternatives studied as part of this EIS.

Consideration of impacts are often constrained in the scoping phase by US Army Corps of Engineers to the immediate geographic footprint of the federal project. However, this is a joint Bureau of Reclamation EIS. The draft EIS text should make clear what and which agency policies determined constraint of the scale and scope of the project.

US Fish and Wildlife should be consulted for possible amendments to existing biological opinions, and to evaluate alternatives for threat to the species prior to a Record of Decision.

Thank you for the opportunity to comment on these issues.

Thomas A Ball,

1477 Crossbrook Drive, Webster Groves MO 63119

for Missouri River Grassroots Network—Sierra Club.

Intake Diversion Dam Fish Passage Project - Environmental Impact Statement

Scoping Process

Continuation of Comments – Gordon Wind, P.E.

irrigation diversion requirements of the Lower Yellowstone Irrigation Project (LYIP). I feel that the previously proposed concrete weir and bypass channel is a good alternative and design for enhancing fish passage for the Pallid Sturgeon and other fisheries while still maintaining a reliable means for the LYIP to divert their full irrigation water right through the Project's main canal headworks. In addition, this alternative matches up well with the recently constructed main canal intake structure and fish screens, which were also constructed with the purpose of enhancing the Pallid Sturgeon and other fisheries in the Yellowstone River.

In my opinion, the technical viability of any option that includes the construction and use of pumping stations to divert water into the existing irrigation canal should be questioned and greatly scrutinized. The lower reach of the Yellowstone River has historically experienced heavy ice flows and "ice jams" (that create temporary uncontrolled "dams" in the river channel) during winter/spring season. This leads to uncertainty as to whether or not the river channel and banks will remain constant and stable (for the next several centuries) for pumping plant options, especially if the existing diversion dam weir structure is removed. Should the channel conditions change over time, the constructed pumping facilities could fail in being able to provide the LYIP their full water right flow.

The "Non-weir Alternative" describes possible features including: pumping, alternative energy sources (?), and conservation measures. During peak crop water use periods the LYIP project facilities are not efficient enough to deliver the full water amount needed at the grower's farm turnouts to meet crop irrigation needs; this typically results in water "rationing" or "rotation" between growers. Accordingly, conservation measures that are constructed or implemented on the LYIP are needed for providing more of the existing water right supply to the farm turnouts so that growers can better apply needed water during peak crop water consumption periods.

Conservation measures may indeed improve the efficiency of the LYIP distribution facilities, but

the water “saved” from these measures will still be needed and beneficially applied to the farmlands within the Project; accordingly, the LYIP will still need to be able to divert their full water right to meet on-farm water needs.

From initial review of the alternatives considered, in my opinion a constructed weir, or similar permanent feature that maintains a continuous water level elevation sufficient for gravity flow diversion of water through the newly constructed fish screen intake structure of the LYIP main canal, is necessary to preserve the LYIP’s ability to divert their full irrigation water right for irrigation needs.

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Friday, February 19, 2016 8:49 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Yellowstone River Dam

-----Original Message-----

From: kristinarey@yahoo.com [mailto:kristinarey@yahoo.com]
Sent: Thursday, February 18, 2016 4:55 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Yellowstone River Dam

I strongly encourage you to stop the dam planned for the Yellowstone River. Being the longest undamed River in the lower 48 is a huge part of the tourist economy here in Livingston. The end of pallid sturgeon is also a great concern of mine. Please make long-term decisions that affect generations and the many instead of short term decisions acquiescing to a minority of the population. Thank you. Kris King

Vanosdall, Tiffany K NWO

From: Salak, Jennifer NWO
Sent: Thursday, February 18, 2016 11:30 AM
To: Vanosdall, Tiffany K NWO; Laux, Eric A NWO
Subject: FW: [EXTERNAL] Yellowstone river

-----Original Message-----

From: Scott Buxbaum [mailto:4bfarms1@gmail.com]
Sent: Thursday, February 18, 2016 11:07 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [EXTERNAL] Yellowstone river

To whom it may concern,

I am writing on behalf of the Yellowstone Township. Our township is located in the valley of the yellowstone river. The township is all irrigated land, which is supplied with water by the Lower Yellowstone Irrigation Project. The township is in favor of the alternative for the concrete weir and fish bypass. We feel that it will be the most economical alternative for the future than what we have now.

Scott Buxbaum,
Yellowstone Township Supervisor
16041 34th st nw Fairview, Mt 59221