Fort Peck Test Release Draft Environmental Impact Statement

Comment Analysis

August 2021

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Acronyms

AM	adaptive management
AM Plan	Science and Adaptive Management Plan
BA	biological assessment
BiOp	Biological Opinion
BSNP	Missouri River Bank Stabilization and Navigation Project
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
cfs	cubic feet per second
EIS	environmental impact statement
ESA	Endangered Species Act
ESH	emergent sandbar habitat
FR	Federal Register
FPTR-EIS	Fort Peck Test Release Environmental Impact Statement
HEC-RAS	Hydrologic Engineering Center – River Analysis System
HEC-ResSim	Hydrologic Engineering Center – Reservoir Simulation
ISAP	Independent Science Advisory Panel
kcfs	thousands of cubic feet per second
Master Manual	Missouri River Basin Mainstem Reservoir System Master Water Control Manual
MRRIC	Missouri River Recovery Implementation Committee
MRRMP-EIS	Missouri River Recovery Management Plan and Environmental Impact Statement
MRRP	Missouri River Recovery Program
NEPA	National Environmental Policy Act
NHPA	National Historical Preservation Act of 1966
NOI	Notice of Intent
P.L.	Public Law
POR	period of record
ResSim	Reservoir System Simulation
SHPO	State Historic Preservation Officer
SWH	shallow water habitat
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USFWS	U.S. Fish and Wildlife Service
WAPA	Western Area Power Administration
WRDA	Water Resource Development Act

Introduction and Guide

Introduction

A Notice of Availability (NOA) for the public release of the Draft Fort Peck Dam Test Releases Environmental Impact Statement (FPTR-EIS) was published in the *Federal Register* on March 26, 2021. The NOA began a public review and comment period that extended from March 26, 2021 until May 25, 2021. Meetings were held virtually with the public via the internet on May 4, 2021 and May 6, 2021. These meetings provided the public an opportunity to ask questions, make comments, and encourage public involvement and community feedback on the draft FPTR-EIS.

The public was encouraged to submit comments during the meetings via spoken comment, online at CENWO-Planning@usace.army.mil, or by mailing letters and/or comment forms to the USACE Omaha District, 1616 Capitol Avenue, Omaha, Nebraska 68102.

During the comment period, 69 pieces of written correspondence were received. Each piece of correspondence was read, and specific comments within each piece of correspondence were identified. A total of 10 speakers gave verbal comments between the two online public meetings. A total of 362 comments were derived from the correspondence and verbal comments.

The Comment Analysis Process

Comment analysis is a process used to compile and correlate similar public comments into a format that can be used by decision makers and the draft FPTR-EIS planning team. Comment analysis assists the team in organizing, clarifying, and addressing technical information pursuant to National Environmental Policy Act (NEPA) regulations. It also aids in identifying the topics and issues to be evaluated and considered throughout the planning process.

The process includes seven main components:

- Developing a coding structure
- Reading and coding of public comments
- Interpreting and analyzing the comments to identify issues and themes
- Drafting concern statements
- Preparing a comment summary

A coding structure was developed to help sort comments into logical groups by topics and issues. The coding structure was derived from an analysis of the range of topics discussed during public scoping, and the comments themselves. The coding structure was designed to capture all comment content rather than to restrict or exclude any ideas.

Analysis of the public comments involved assigning codes to statements made by the public in their correspondences. All comments were read and analyzed, including those of a technical nature; opinions, feelings, and preferences of one element or one potential alternative over another; and comments of a personal or philosophical nature.

Although the analysis process attempts to capture the full range of public concerns, this content analysis report should be used with caution. Comments from people who chose to respond do not necessarily represent the sentiments of the entire public. Furthermore, this was not a vote-counting process, and the emphasis was on the content of the comment rather than the number of times a comment was received.

Definition of Terms

Primary terms used in this document are defined below.

Correspondence — A correspondence is the entire document received from a commenter.

Comment — A comment is a portion of the text within a correspondence that addresses a single subject. It could include such information as an expression of support or opposition to the use of a potential management measure, additional data regarding the existing condition, or an opinion debating the adequacy of analysis.

Code — A code is a grouping based on a common subject. The codes were developed during the scoping process and are used to track major subjects throughout the planning process.

Concern Statement — A concern statement summarizes the issues identified in each code. For each code, concern statements were developed to better categorize the content of the comments received. Some codes required multiple concern statements because the comments within them represented different ideas. Other codes had only one concern statement because the comments within them presented similar ideas.

Guide to this Document

This document is organized as follows.

Content Analysis Report — This section provides information on the numbers and types of comments received, organized by topic area.

Concern Response Report — This section summarizes the substantive comments received during the public review comment process. These comments are organized by topic area and further consolidated into concern statements. The USACE provides a response for each concern statement.

Appendix 1: Index by Organization — This is an index of organizations that provided comments during the comment period. The index includes a list of the topic areas associated with each organization and the codes that were used to categorize comments within the correspondence.

Appendix 2: All Correspondence — This appendix contains copies of all correspondence received during the public comment period.

Comment Analysis Report

Correspondence Distribution by Code – Substantive Comments

Note: Each correspondence has multiple comments and multiple codes. As a result, the total number of comments in this table is higher than the actual correspondence totals.

Description	Total Number of Comments
Flood Risk Management	13
Dam Safety	11
Water Rights and Water Supply	7
Irrigation and Pump Sites	123
Pallid Sturgeon and other ESA	49
Alternatives	33
Erosion	23
Socio/Economic Effects	49
Tribal Concerns	18
Outreach	20
Hydropower	8
Other Topics	8
Total	**362**

Concern Response Report

Flood Risk Management

Concern Statement FRM 1: There is a concern about the precedent a test release from Fort Peck Dam could set for the future test flow releases from other Missouri River mainstem dams.

Correspondence ID: 7 ,43 **Comment ID**: 7b, 43a

Response FRM1: The proposed test flow releases from Fort Peck Dam are specific to conditions and hypotheses in the reach of the Missouri River between Fort Peck Dam and Lake Sakakawea. Conditions below other Missouri River Dams (e.g. Gavins Point) are different and would require a separate analysis prior to any flow action for pallid sturgeon.

Concern Statement FRM 2: The test flows are not in compliance under the Master Manual

Correspondence ID: 7, 43 **Comment ID**: 7c, 43a

Response FRM2: Implementation of the test flow would occur through a Master Manual deviation request that would be coordinated with the public and other stakeholders through the Annual Operating Plan (AOP) process. This ensures that the test flow is incorporated into the AOP and stakeholders are informed ahead of time. The Fort Peck Dam Test Release EIS serves as the National Environmental Policy Act (NEPA) compliance process for this potential Master Manual Deviation.

Concern Statement FRM 3: The test flows should be added to the Master Manual

Correspondence ID: 43 **Comment ID**: 43a

Response FRM3: Implementation of the test flow would occur through a Master Manual deviation request that would be coordinated with the public and other stakeholders through the Annual Operating Plan (AOP) process. This ensures that the test flow is incorporated into the AOP and stakeholders are informed ahead of time. The Fort Peck Dam Test Release EIS serves as the National Environmental Policy Act (NEPA) compliance process for this potential Master Manual Deviation. If the flows were to be implemented as part of regular operation of the Missouri River Reservoir System they would need to be added to the Master Manual and an additional NEPA process would be needed.

Concern Statement FRM 4: Where the Milk River converges with the Missouri River, spring flooding is a regular occurrence along the Milk River in Valley County, no evaluation in the DEIS describes the impact to land, homes, business and infrastructure in the area.

Correspondence ID: 22, 43 **Comment ID:** 22g, 43a

Response FRM4: The Flood Risk Management Section of the EIS (Section 3.4) analyzes the population at risk and residential and non-residential structures by reach of the Missouri River. The Milk River confluence area is included in the reach from Fort Peck Dam to Lake Sakakawea reach in Section 3.4 of the EIS.

Concern Statement FRM 5: to avoid induced seepage, forecasted stages at Williston ND cannot reach flood stage (22.0 ft); the forecasted water surface elevation cannot exceed 1853.5 ft at the downstream portion of the Williston levee.

Correspondence ID: 31, 43 **Comment ID**: 31e, 43a

Response FRM 5: To address concerns raised during scoping, maximum flow and/or stage limits were set at various locations downstream of Fort Peck Dam to avoid potentially increasing flood damages during periods of high flows of a test release. Two flood targets were specified near Williston, ND: an upstream and downstream flood target. A maximum stage of 22.0 feet, which is equal to the National Weather Service flood stage at Williston, ND was used for the upstream flood target. The downstream flood target was a water surface elevation of 1853.5 feet above mean sea level (msl), which is based on a water surface elevation that would not increase seepage risk for the Williston Levee. Section 1.4.2 of the EIS describes constraints that would be followed in determining if a test-flow would run each year.

Concern Statement FRM 6: Elevation datum should be stated in the DEIS.

Correspondence ID: 31, 43 **Comment ID**: 31f, 43a

Response FRM 6: Section 3.2.2.2 of the EIS describes datums employed.

Concern Statement FRM 7: Forecasted Lake Sakakawea pool elevation must remain below 1850.0 ft for the duration of the test flow. It is recommended to incorporate two feet of freeboard to reduce the chance of Lake Sakakawea entering the exclusive flood control zone.

Correspondence ID: 31, 43 **Comment ID**: 31g, 43a

Response FRM 7: Constraints related to high runoff or high stages at Williston serve to restrict flows from getting too high in Lake Sakakawea. Section 1.4.2 of the EIS describes constraints that would be followed in determining if a test-flow would run each year.

Concern Statement FRM 8: Section 1.4.2 states a 14 day forecast would lead to exceeding any of the flood targets that would trigger a decision process; it is not stated who is involved in the decision process and under what conditions would a flow test be continued.

Correspondence ID: 31, 43 **Comment ID**: 31i, 43a

Response FRM 8: The Final EIS clarifies that this decision would be a Missouri River Basin Water Management decision. The decision would be based on the degree to which the 14 day forecast predicts exceedances.

Concern Statement FRM 9: Because the proposed flow alterations (tests) constitute intra-system operations occurring from Fort Peck Dam to Garrison Dam, it is imperative that the USACE does not impact downstream flow support or flood control below Gavins Point Dam. By approaching the formulation and implementation of these test flows as simply an intra-system operation, the USACE can ensure Fort Peck Draft EIS Comments that the flow alterations are sized and timed such that the reservoir system is able to absorb them without causing downstream impacts

Correspondence ID: 43, 60 **Comment ID**: 43a, 60A

Response FRM 9: The modeling for the EIS includes flow modeling for the Missouri River System. The effects of implementing test flows were evaluated from Fort Peck Dam in Montana downstream to Gavins Point Dam in South Dakota. Below Gavins Point Dam, the hydrology modeling shows negligible changes compared to the No Action Alternative.

Concern Statement FRM 10: Dramatic increases to flow rates below Gavins Point Dam could impact navigation structures, imperiling safe navigation and flood control on the Missouri River. The DEIS does not adequately address effects to flood control, navigation and utility members and human life and safety.

Correspondence ID: 7, 43 **Comment ID**: 7d, 43a

Response FRM 10: Below Gavins Point Dam, the hydrology modeling shows negligible changes compared to the No Action Alternative. The test flows are not anticipated to cause any impacts to flood control, navigation, utilities, or human life and safety below Gavins Point Dam.

Concern Statement FRM 11: The test releases will cause flooding because of the high volume of releases.

Correspondence ID: 26, 43 **Comment ID**: 26b, 43a

Response FRM 11: The EIS analyzed flood risk reduction impacts in Section 3.4. The test-flows would include higher flows than the No Action Alternative, but overall impacts to flood risk reduction are anticipated to be small. Flows under the test flow alternatives would be within the range of historic flows and operations. Modeling shows that the test flows would be similar to those experienced in 2018.

Concern Statement FRM 12: Additional explanation should be provided regarding the 14-day forecast including confidence in the forecast used.

Correspondence ID: 31 **Comment ID**: 31h

Response FRM 12: Additional information on forecasts has been added to the Final EIS. Forecast information is available from the Missouri River Water Management Division website at nwd.usace.army.mil/MRWM/Forecast/.

Concern Statement FRM 13: The test flow release poses a risk to dam safety and downstream flood risk; however, the DEIS does not quantify or fully explore this risk and instead relies on future flood risk evaluation separate from this Draft EIS.

Correspondence ID: 56 **Comment ID**: 56a

Response FRM 13: The EIS analyzed flood risk reduction impacts in Section 3.4. The test-flows would include higher flows than the No Action Alternative, but overall impacts to flood risk reduction are anticipated to be small. Flows under the test flow alternatives would be within the range of historic flows and operations. Modeling shows that the test flows would be similar to those experienced in 2018. Physical monitoring of the Dam spillway will take place to detect any issues. Monitoring will also include water surface elevation profiles to detect changes in water surface elevation within the reach below Fort Peck Dam.

Concern Statement FRM 14: I am in opposition to this plan. I have battled flooding on some farmland I own from high water for the past years. With the amount of water you are planning to release I'm afraid it will flood some of the land I farm. With annual spring thaw coming down the Yellowstone River and the increase of flow from the dam it would flood my land.

Correspondence ID: 43 **Comment ID**: 43a

Response FRM 14: The EIS analyzed flood risk reduction impacts in Section 3.4. The test-flows would include higher flows than the No Action Alternative, but overall impacts to flood risk reduction are anticipated to be small. Flows under the test flow alternatives would be within the range of historic flows and operations. Modeling shows that the test flows would be similar to those experienced in 2018.

Dam Safety

Concern Statement DS1: The test flows will have an adverse effect on the structural integrity of the spillway, which is still unrepaired. Dam Safety was not adequately assessed in the DEIS.

Correspondence ID: 7, 12, 22, 52, 56 **Comment ID**: 7e, 12k, 22f, 56h, 52c, 56f

Response DS1 : Subsequent release of the Draft EIS, a team of dam safety engineers from the USACE Risk Management Center and Omaha District evaluated dam safety risk to the Fort Peck spillway due to proposed test flows. The team found that the proposed changes did not increase dam safety risk substantially and that the risk portrayal from the 2014 Periodic Assessment (PA) for Fort Peck Dam would not change appreciably due to the proposed change in operations. Physical monitoring of the Dam spillway during a test flow release would take place to detect any issues.

Concern Statement DS2: Repairs to the Spillway should be completed before test flows are permitted.

Correspondence ID: 34 **Comment ID** : 34b

Response DS2: The dam spillway would be monitored for issues during the test flow if implemented. If issues with the spillway are detected the test flow could be stopped by closing the spillway gates and any necessary repairs could be made before attempting another test flow.

Concern Statement DS3: The Fort Peck spillway is designed only to be used during extreme flood events. Activating the spillway more frequently than designed can cause erosion of the spillway infrastructure causing dam safety issues. If the Corps proceeds with the test flow releases, there must be funding to inspect the dam and spillway for damage and make all the necessary repairs before the following runoff season.

Correspondence ID: 64 **Comment ID**: 64b

Response DS3: The dam spillway would be monitored for issues during a test flow release. If issues with the spillway are detected the test flow could be stopped by closing the spillway gates and any necessary repairs could be made before attempting another test flow. Test flow releases would peak at approximately 28,000-33,000 cfs for 3 days in June. There would be an approximately two-week period in late-May to June when flows would be higher than the Fort Peck powerhouse capacity (14,000 cfs) and releases would occur through the spillway. For comparison the spillway was operated for 140 days in 2011, 175 days in 2018, and 150 days in 2019.

Concern Statement DS4: Flow tests should not be implemented unless the best estimate of data support a full test can be performed. Partial flow test years should only be the result of conditions contrary to the projections and forecasting.

Correspondence ID: 61 **Comment ID**: 61t

Response DS4: It is possible that a test flow could be stopped at some point during the test if constraints described in Section 1.4.2 are met; however, a test flow would only be started if anticipated conditions would allow a full test.

Concern Statement DS5: potential use and damage of the Fort Peck Dam spillway puts downstream water users, such as irrigators, at risk. The cost of repairing any spillway damages, estimated to be in the range of $20-40 million in the DEIS, may ultimately be passed down to ratepayers, such as irrigators who will already be facing undue financial hardship following a test flow.

Correspondence ID: 61 **Comment ID**: 61s

Response DS5: The test flows have the potential to cause spillway damage; however The team found that the proposed changes did not increase dam safety risk substantially and that the risk portrayal from the 2014 Periodic Assessment (PA) for Fort Peck Dam would not change appreciably due to the proposed change in operations. Physical monitoring of the Dam spillway would take place to detect any issues.

Concern Statement DS6: The estimated repair costs of the test releases are between $20M and $40M. Merely monitoring dam safety and spillway reliability during the test releases will cost between $500,000 and 1 million. Furthermore, recommended repairs and operational improvements from the recent 2019 inspection of the spillway do not have an estimated or targeted implementation or completion date. It makes little financial or safety sense to add additional repair and maintenance costs to Fort peck Dam when the USACE does not have a timetable to complete currently scheduled necessary repairs and improvements.

Correspondence ID: 56 **Comment ID**: 56g

Response DS6: The test-flows are part of USACE compliance with the Endangered Species Act. Compliance with the Endangered Species Act is required to continue to operate the System for its authorized purposes. Additional monitoring and observation would occur during a test flow release. If damage is observed, the spillway gates could be closed relatively quickly (e.g., within an hour or hours) preventing further damage.

Concern Statement DS7: In light of the fact, that the operating priority for the Missouri River NWD is to protect “Life and Safety”, that: the emergency spillway at Fort Peck was not designed to be used for regular releases, test flow releases would increase the likelihood repairs would be needed, repairs to the spillway can take years to complete, the identified preferred alternative poses the greatest risk to spillway damage, the lack of safety redundancy, due to inability to utilize flood tunnels, , the emergency spillway at Fort Peck is the last line of defense in preventing catastrophic failure with extremely high life and economic loss of national significance and increased variability in rain events due to climate change which may lead to increased flood events. The EIS needs to complete a more detailed investigation of the alternatives impact on Dam safety, identify and secure funding for possible damages, and the possible recommendation the alternative should not be implemented until the gates on the flood tunnels are useable.

Correspondence ID: 52 **Comment ID**: 52c

Response DS7: The test-flows are part of USACE compliance with the Endangered Species Act. Compliance with the Endangered Species Act is required to continue to operate the System for its authorized purposes. Additional monitoring and observation would occur during a test flow release. If damage is observed, the spillway gates could be closed almost immediately (e.g., within an hour or hours) preventing further damage. Any necessary repairs could be made before attempting another test flow.

Water Rights and Water Supply

Concern Statement WRWS1: My water rights are based on first come-first serve (and supersede the Endangered Species Act).

Correspondence ID: 5, 28, 56 **Comment ID**: 5c, 28a, 56i

Response WRWS1: The test-flows do not establish, regulate, determine, quantify, or impact consumptive water rights for any State, Tribe, or individual. USACE operates the Mainstem System in accordance with federal legislation that Congress has enacted. In accordance with Congressional intent, USACE endeavors to operate its projects for their authorized purposes in a manner that does not interfere with lawful uses pursuant to State and Tribal water right authorities. USACE develops water control plans and manuals through a public process, affording all interested parties the opportunity to present information regarding uses that may be affected by USACE operations for authorized purposes of its projects.

Concern Statement WRWS 2: State and Federal law provide a legal manner to condemn land for public usage, but requires that landowners be compensated.

Correspondence ID: 5, 56 **Comment ID**: 5d, 56i

Response WRWS 2: The test-flows would not condemn land for public usage.

Concern Statement WRWS3: The USACE lacks the legal authority to implement the proposed alternative. Specifically, the USACE holds no water rights in Fort Peck or the Missouri River, let alone a water right that would allow flow manipulation for fish and wildlife.

Correspondence ID: 56, 59 **Comment ID**: 59b, 56i

Response WRWS3: The test-flows do not establish, regulate, determine, quantify, or impact consumptive water rights for any State, Tribe, or individual. USACE operates the Mainstem System in accordance with federal legislation that Congress has enacted. In accordance with Congressional intent, USACE endeavors to operate its projects for their authorized purposes in a manner that does not interfere with lawful uses pursuant to State and Tribal water right authorities. USACE develops water control plans and manuals through a public process, affording all interested parties the opportunity to present information regarding uses that may be affected by USACE operations for authorized purposes of its projects.

Concern Statement WRWS4: The State of Montana is in the midst of its statewide water rights adjudication, and there has been no final decree of water rights below the Fort Peck Dam. As such, any analysis of potential impacts to downstream water users, or their water rights, is speculative. Absent accurate identification and careful consideration of downstream water rights, the USACE's proposed flow manipulations could flood water users in late spring and deprive water users during the hot summer months when moisture is most critical.

Correspondence ID: 56 **Comment ID**: 56c, 56i

Response WRWS4: The test-flows do not establish, regulate, determine, quantify, or impact consumptive water rights for any State, Tribe, or individual. USACE operates the Mainstem System in accordance with federal legislation that Congress has enacted. In accordance with Congressional intent, USACE endeavors to operate its projects for their authorized purposes in a manner that does not interfere with lawful uses pursuant to State and Tribal water right authorities. USACE develops water control plans and manuals through a public process, affording all interested parties the opportunity to present information regarding uses that may be affected by USACE operations for authorized purposes of its projects.

Irrigation & Pump Sites

Concern Statement IR1: Irrigating will become adversely impacted from the proposed flow test; irrigators need a reliable source of water supply, and the cost burden would be more expensive than most could afford and business would be unsustainable.

Correspondence ID: 1, 2, 3, 4, 6, 9, 14, 16, 19, 20, 22, 24, 26, 28, 29, 35, 37, 38, 39, 41, 46, 47, 48, 58, 68, 71, 72, 75 **Comment ID**: 1b, 2a, 3a, 4, 6f, 9b, 14b, 16d, 19a, 20b, 22c, 24a, 26a, 28b, 29d, 35c, 68a, 58a, 48a, 47a, 46b, 42b, 41a, 41b, 41c, 37a, 38a, 39a, 71c, 72a, 75a

Response IR1: The irrigation section in the EIS evaluated the potential adverse impacts associated with the test flows on irrigation intakes. These impacts include increases in costs associated damages to irrigation intake, increases in O&M costs and reductions in crop productivity. There is uncertainty on how each intake will be impacted by the test flows so a range of impacts were provided in the EIS.

Concern Statement IR2: The test flows will interfere with the ability to produce crops. The test flows would cause financial damage to irrigators, no discussion for mitigation of these losses is discussed within the DEIS. Crop insurance will not cover man-made causes.

Correspondence ID: 4, 5, 6, 9, 11, 13, 16, 17, 18, 19, 20, 24, 25, 27, 28, 29, 30, 32, 33, 37, 38, 39, 41, 68, 71, 74, 75, 76 **Comment ID**: 4f, 5g, 6f, 9c, 11d, 13a, 16b, 17d, 18d, 19b, 20d, 24b, 26h, 27d, 28d, 29b, 30d, 32d, 33d, 68a, 41a, 41b, 41c, 37a, 38a, 39a, 71c, 71d, 74b, 75a, 76a

Response IR2: The irrigation section in the EIS evaluated the potential adverse impacts associated with the test flows on irrigation intakes. These impacts include increases in costs associated damages to irrigation intake, increases in O&M costs and reductions in crop productivity. There is uncertainty on how each intake will be impacted by the test flows so a range of impacts were provided in the EIS.

Concern Statement IR3: The proposed changing flows would make pump sites difficult to impossible to operate and maintain. We would have to redesign or relocate our pumps and this is a cost irrigators cannot bear.

Correspondence ID: 1, 2, 4, 5, 6, 9, 11, 21, 22, 26, 28, 29, 35, 39, 48, 68

Comment ID: 1a, 2b, 4a, 5f, 6b, 9d, 11a, 21a, 22d, 26e, 28c, 29a, 35a, 68a, 48a, 39a

Response IR3: The irrigation section of the EIS states that "Irrigators noted their operations may be impacted because of increased erosion of riverbanks, damage to pump infrastructure, and costs to relocate irrigation pumps, among other impacts". The analysis estimates some of these costs which were included in the NED and RED analysis. In other places we qualitatively describe the potential for test flows to impact irrigation intakes.

Concern Statement IR4: USACE's pump site analysis did not include any of my pump sites.

Correspondence ID: 5, 39 **Comment ID**: 5e, 39a

Response IR4: The irrigation analysis used the most up to date data provided by the State of Montana and the irrigation districts to identify the location and number of irrigation intakes that may be impacted by the test flows. It is possible that additional intakes are located along the river that we do not currently have accurate information for and were not included in the analysis. The irrigation intakes that were included in the analysis are assumed to provide a reasonable sample of intakes in the study area and would experience similar types and magnitude of impacts.

Concern Statement IR5: Crop rotation is necessitated for multiple reasons including plant pathology and disease control/ aggregate nutrient levels, nutrient tie-up, biomass management, and soil moisture profiles. To lose or severely diminish a crop from interruption of irrigation by flooding irrigation works, sedimentation after-effects, or low water throws a monkey wrench into rotation. Disjointing the rotation causes loss effects that flow from one year to another.

Correspondence ID: 17, 18, 27, 30, 32, 33, 39, 44 **Comment ID**: 17c, 18c, 27c, 30c, 32c, 33c, 44g, 39a

Response IR5: The economic models that were used to estimate changes in net farm income considered a mix of crops that are grown in Montana with irrigation from the Missouri River. The analysis was unable to quantitatively evaluate the potential impacts of the test flows on future year crop rotations. The narrative in the FEIS includes a qualitative discussion of this potential impact.

Concern Statement IR6: I have side channels that will require additional dredging as a result of the test flows.

Correspondence ID: 4, 6, 16, 35, 39 **Comment ID**: 4d, 6a, 16c, 35b, 39a

Response IR6: The analysis of side channel intakes in the EIS considers the increase in costs associated with dredging channels after test flow occurrences.

Concern Statement IR7: High flows will cause increased debris/trash accumulation, sedimentation near equipment, sand and tree growth. Mitigation for sedimentation after-effects has not been appropriately discussed in the DEIS.

Correspondence ID: 4, 5, 6, 11, 23, 26, 39, 50, 68 **Comment ID**: 4c, 5g, 6d, 11b, 23d, 26d, 68a, 50b, 39a

Response IR7: The irrigation analysis did consider increases in O&M costs associated with increases in sedimentation. The FEIS includes some discussion regarding the impacts of debris/trash accumulation with test flows.

Concern Statement IR8: DEIS claims temporary and short-term impacts to irrigators, which is not considered a short-term or temporary impact by irrigators. It is true that the proposed fluctuations are short-term; however they will cause longer term impacts to many irrigators.

Correspondence ID: 11, 20, 39, 44, 49, 50, 71 **Comment ID:** 11d, 20c, 50d, 49d, 49b, 44a, 44b, 71e, 44e, 39a

Response IR8: The Irrigation Section of the EIS (Section 3.6) describes both short-term and long-term impacts associated with test flow releases.

Concern Statement IR9: Initial test flows are projected to take place in 2022; this is poor timing, given the historic drought and recovering operations affected by the global pandemic. The test flows would encompass nearly all the irrigation season and within irrigation, an interruption or reduction of irrigation at one time does not have the same impact as at another time. A rush to make 2022 the first year of test releases it too sudden for irrigators to adjust.

Correspondence ID: 11, 15, 17, 18, 21, 26, 27, 30, 32, 33, 39, 44 **Comment ID**: 11f, 15a, 17e, 18e, 21c, 26g, 27d, 30e, 32e, 33e, 39a, 44i

Response IR9: The test flows would not occur in 2022 unless conditions are met as described in Section 1.4.2 of the EIS. The conditions include criteria designed to ensure that the test-flows are run only when there is enough water in the System.

Concern Statement IR10: USACE did not appropriately discuss sedimentation after-effects within the DEIS. Irrigation cannot resume immediately as infrastructure may require dredging following high flows, particularly those with side channel intakes. Accumulating sediment is hampering access at some boat ramps and impacting fish spawning and rearing habitat. Sediment also affects water quality, neighboring lands, and hydropower generation. As sediment accumulates the reservoirs lose storage capacity which impacts all authorized purposes. USACE should develop a sediment management plan for each reservoir along the mainstem System.

Correspondence ID: 8, 12, 16, 17, 18, 27, 30, 32, 33 **Comment ID**: 8i, 12g, 16a, 17b, 18b, 27b, 30b, 32b, 33b, 39a

Response IR10: The irrigation section of the EIS specifically considers the lasting impacts of dredging/sediment issues throughout the irrigation season. The recreation evaluation summarizes the potential impacts to boat ramps from sediment issues from the test flows alternative.

Concern Statement IR11: The high flow rates will jeopardize water quality due to increased turbidity. This increase in sediment in the water declines the quality of the water, which comes at a cost to the irrigator. Excess sediment running through irrigation pumps and pipes will shorten the lifespan of the equipment. This sediment will then be deposited onto irrigated fields. This may equate to a decline in soil quality and will require additional inputs and fieldwork overtime to moderate the effects.

Correspondence ID: 5, 39, 59 **Comment ID**: 5g, 59f, 39a

Response IR11: The irrigation analysis in the EIS considers the potential increase in O&M costs associated with the test flows. Some of these costs would include those do deal with increased sedimentation around the intakes. Because of the uncertainty on the number and timing of test flows that will occur, it is not possible to estimate the long-term impacts of changes in sedimentation and water quality due to the test flows.

Concern Statement IR12: Sensitive crops like sugar beets have to have water on a timely manner. Four or five hot days with no water is devastating to these crops. There is no way an irrigator can sign contracts with beet or soy bean producers when we cannot depend on normal river levels.

Correspondence ID: 4 **Comment ID**: 4g

Response IR12: The irrigation analysis considers the sensitivity of sugar beets to water availability. The analysis assumed that if an intake lost access to water for any length of time, the production of sugar beets would fall to zero and the crop would be lost. The NED and RED analysis carry this assumption through and it is represented in the results.

Concern Statement IR13: The drought monitor for the region needs to be considered in the list of necessary conditions to implement a test flow. If the region is already experiencing a drought, their crops cannot afford to risk a loss of irrigation that year.

Correspondence ID: 61 **Comment ID**: 61u

Response IR13: Drought conditions in the basin are monitored as part of regular operations and would continue to be a consideration in determining whether to run a test flow in a given year.

Concern Statement IR14: The test flow should not be implemented back-to-back years. The year after a test flow could equate to additional impacts on its own due to less water in the Reservoir after high releases. Moreover, if an irrigator can bounce back after a test flow, they may not be able to bounce back after another one.

Correspondence ID: 61 **Comment ID**: 61v:

Response iR14: The H&H modeling indicated that it is possible for conditions to be favorable to run the test flows in back-to-back years. However, the likelihood of that happening is very low. In addition, USACE will monitor the impacts of any test flow and evaluate whether or not any future test flows would be necessary given outcomes and the presence of adverse impacts.

Concern Statement IR15: Our irrigation windows are days, not weeks or months. Your proposed drift flow will make irrigation impossible for the entire year forcing us to lose valuable crops that the entire operation depends on. Making it difficult to continue employing the above mentioned families. We ask that you consider a much lower drift flow on the high end. Without knowing what the overall destruction of the high drift flows we are unable to anticipate and redesign our infrastructure to meet possible problems.

Correspondence ID: 69 **Comment ID**: 69a:

Response iR15: The irrigation section in the EIS evaluated the potential adverse impacts associated with the test flows on irrigation intakes. These impacts include increases in costs associated damages to irrigation intake, increases in O&M costs and reductions in crop productivity.

Concern Statement IR16: High flow impacts were assessed in two different categories – side channel intakes and mainstem intakes. The DEIS assumes that intakes located on a side channel will lose the ability to irrigate for the remainder of the season. This is an accurate assumption; however, it only accounts for 20% of the intakes located on the

River. Impacts to mainstem intakes should also consider losses to crop production. While the sedimentation issues may not be as dire as those found on side channel intakes, there will still be a loss in crop production due to an inability to irrigate after high flows recede.

Correspondence ID: 59 **Comment ID**: 59k

Response iR16: The EIS did evaluate side channel intakes separately from the mainstem intakes based on the results of the field survey conducted in June and July of 2020. The results of the survey indicated that intakes located on the mainstem would incur an increase in O&M costs associated with high flows but on average would not lose access to water like those located on side channels. It is possible that some mainstem intakes would lose access to water and the adverse impacts would be higher for those individual intakes than described in the EIS.

Concern Statement IR17: Labor and equipment resources to get irrigation intakes back up and running after a tier 1 or tier 2 event are quite limited on this stretch of the River. If all 111 mainstem irrigation intakes need operation and maintenance, most will sit idle during prime irrigation season waiting for a contractor. There is only one dredge and a few excavators run by a single agricultural equipment company in the four-county region. The electric cooperatives in the area have indicated that they do not have the capacity to move the many electrical panels that power these floating irrigation pumps. Furthermore, the stability of the riverbed after the high flow event (as mentioned previously) may render a contractor unwilling to work in the area due to safety concerns, while some mainstem pump sites may not be accessible in the first place.

Correspondence ID: 44, 59 **Comment ID**: 59l, 44f

Response IR17: Limits in resources in the study area to repair and maintain irrigation intakes is noted in the irrigation section under the side channel analysis. The narrative will be expanded to note this issue in other subsections as also is relevant (e.g. mainstem intakes).

Concern Statement IR18: The River changes substantially from year to year, especially when the flow releases differ from standard management practices. What was a mainstem intake one year may be a side channel intake the next due to a new sandbar forming in the middle of the river.

Correspondence ID: 59 **Comment ID:** 59m

Response IR18: The analysis completed for the EIS tried to take in account the complex channel dynamics in the upper Missouri. The EIS discloses to the best of our abilities the potential impacts the test flows will have on intakes. This includes increases in costs associated damages to intakes, increases in O&M costs and reductions in crop productivity if access to water is lost. The analysis also evaluated the impacts that potentially could occur to intakes located on the mainstem and on side channels.

While it is possible for the river to move and change status of an intake (e.g. mainstem versus side channel), the EIS discloses the potential impacts to both types of locations as a result of the test flows.

Concern Statement IR19: The analysis specific to low flow impacts is unclear. The DEIS does not indicate what low flow threshold the models begin assuming equates to a loss of access to water for irrigation. Given the low estimated decrease in net farm income that the models conclude will occur (Alt 1: 2.9-4%; Alt 2: 2.4-6.7%), this "no access" indicator appears to differ greatly from the on-the-ground perspective of an irrigator. In the rare event that the high flow and subsequent drop in river flow has not already hindered a farmer's ability to irrigate, the 8,000 cfs low flow certainly will. This will result in a loss to crop yields (net farm income) far greater than the DEIS estimates. Additionally, this loss in crop production due to low flows will bear costs to the entire region.

Correspondence ID: 59 **Comment ID**: 59o

Response IR19: The low flow analysis in the DEIS included a low flow threshold of 6,000 cfs for intakes located in Montana and between 6,000 cfs and 12,000 cfs for intakes located in North Dakota. These thresholds were developed during the MRRMP-EIS process based on interviews with irrigators and are noted in the Irrigation Technical Report. The analysis evaluated a reduction in crop productivity if flows fall below the low-flow threshold which are included in the NED and RED analysis. Because we don't have threshold data for individual intakes, the project team estimated to the best of their ability, an average threshold for intakes located in this stretch of the river. The narrative in the FEIS includes some narrative that some intakes may have low-flow thresholds above the thresholds used in the model and would realize crop losses more often than those evaluated in the EIS.

Concern Statement IR20: The test flows would rip established cottonwood trees and other riparian vegetation from riverbanks. The roots of these plants naturally assist in preventing the sloughing and erosion of riverbank. Removing them from the bank will leave the area at greater risk of erosion. Furthermore, these large logs will then move down the river at high speeds and tear through floating irrigation pumps, causing irreplaceable damage.

Correspondence ID: 59 **Comment ID**: 59d

Response IR20: The analysis of high flow impacts included two separate evaluations. One that evaluated the impacts to intakes located on the mainstem of the river and a separate analysis of intakes located on side channels. It was determined that the intakes on the mainstem would incur different impacts than those located on side channels and thus required a separate approach. Both approaches evaluated irrigation intakes in the four counties in eastern Montana, which include Richland, Roosevelt, McCone, and Valley Counties, while the mainstem analysis included McKenzie and Williams Counties in western North Dakota. This analysis was undertaken to assess the possible impacts to irrigation operations and maintenance costs for intakes on the mainstem intakes and changes in crop yields for side channel

intakes from high river flows. Irrigators noted their operations may be impacted because of increased erosion of riverbanks, increase in trash and debris in the river, damage to pump infrastructure, and costs to relocate irrigation pumps, among other impacts. Potential impacts from an increase in debris, cottonwoods, or other eroded material in the river was considered in the analysis.

Concern Statement IR21: The proposed changes to the river flow would affect the electrical power supply needed to operate pumps for those irrigator's using electricity. Connections from transformers to the pump will need to be altered and then resized due to the added length and then resizing the service again when the river changes. All of this would be at a cost to the irrigator. The resources needed by the irrigator and the cooperative would be above what we are equipped with right now, and would not have the ability to change the services quickly.

Correspondence ID: 58 **Comment ID**: 58b

Response IR21: The economic analysis does look at average impacts over the Period of Record as well as annual impacts that occur during the test flow years (full and partial test flows) as well as in years after the test flows for some resources (e.g. recreation). The goal is to report impacts over different time periods to provide an understanding of the impacts to each individual resource.

Concern Statement IR22: Much of the flooded equipment and property will be permanently lost, costs may exceed $100,000 per site. These losses will not be covered by insurance, and it expected that USACE will not mitigate these costs. A losses at this level will certainly put the areas small farmers out of business.

Correspondence ID: 51 **Comment ID**: 51a

Response IR22: The irrigation section of the EIS considers the potential costs to irrigators to replace equipment, make repairs and the increase in O&M costs that would occur from the test flows. The NED and RED analysis includes these impacts.

Concern Statement IR23: USACE river operations are so variable that an irrigator can experience as little as inches of water to as much as tens of feet of water. While the floating pump cannot pump in inches of water it does do well at shallower depths and is able to, in many cases, automatically adjust to rising water levels. Relocating a pump for shallow water can cost as much as $20,000 and take up to four weeks.

Correspondence ID: 50 **Comment ID**: 50a

Response IR23: The irrigation section of the EIS considers the potential costs to irrigators to replace equipment, make repairs and the increase in O&M costs that would occur from the test flows. The NED and RED analysis include these impacts.

Concern Statement IR24: each spring a great number of our irrigators face challenges caused by USACE winter operations of the river. If the river is running at high levels bank erosion is witnessed and irrigators must find a way to move their pump site back away from new cut banks and to redevelop pump ramps. These high flows at other sites transport large amounts of sediment and leave some irrigators unable to reach the water because a new deposit of swampy, saturated silt has been placed between them and the river. If the river is low during operations Agri Industries has witnessed irrigators being unable to reach the water because of the swampy silt described above or because of larger dry sand bars formed between them and their water supply. We estimate that these repairs can cost upwards to $50,000 and can take months to implement. All of the above scenarios will be encounter once, twice, or more times as a result of the test flows. Riverbanks will erode, pump sites will silt in, logs will come down the river, trash will incorporate into the flow profile. There will be greats costs of time and money to the irrigator.

Correspondence ID: 50 **Comment ID**: 50c

Response IR24: The irrigation section of the EIS considers the potential costs to irrigators to replace equipment, make repairs and the increase in O&M costs that would occur from the test flows. The NED and RED analysis include these impacts.

Concern Statement IR25: just as quickly as the river rises and the irrigator has been able to adjust and resume pumping the river is set to fall drastically. This will be more devastating than the rise. The rise will erode land and laden the river with silt. This silt will be deposited indiscriminately by the river and in many cases, it will be laid where the original pump site was located. Once the water levels recede the irrigator will be left with a quagmire of saturated silt. This silt does not drain and it is unpassable by the heavy equipment needed to relocate the pump to the now nearly nonexistent river flow. The irrigator will have no option but to wait it out until they can safely move equipment onto the swampy silt. This could take weeks or in many cases may not be possible until the next spring. At best the “temporary” flood will have cost the irrigator two weeks of irrigating in the rise and four weeks of irrigating in the recession. This loss of ability to irrigate in our northern, arid climate and short growing season will be devastating. Most crops will be lost.

Correspondence ID: 48, 50 **Comment ID**: 50e, 49c

Response IR25: The irrigation section of the EIS considers the potential costs to irrigators to replace equipment, make repairs and the increase in O&M costs that would occur from the test flows for intakes on both side channels and the mainstem. The NED and RED analysis include these impacts. In addition, the analysis of intakes located on side channels includes a reduction in crop productivity because it is assumed there would be a delay in getting the channel cleared due to wet conditions or lack of contractor resources in the area. The same assumption was not applied to the mainstem intakes

because these types of impacts would not occur as frequently for mainstem intakes. This assumption was based on the results of the field survey conducted in the summer of 2020.

Concern Statement IR26: The DEIS and attachments to not contain an agronomic or agricultural assessment of the critical irrigation timing effects. The DEIS fails to take into account the timing of when moisture depravation would occur in terms of cultivar response to moisture timing.

Correspondence ID: 44 **Comment ID**: 44c, 44d

Response IR26: The low flow analysis in the irrigation section of the EIS does consider a reduction in crop productivity with a restriction in access to water. For example, yields will fall if irrigators are unable to access the river for a certain period of time. The high flow analysis that is specific to the side channel intakes also takes into account the potential for reductions in crop productivity with restrictions in access to water from the high flows.

Concern Statement IR27*:* The Spawning Cue Release(s) and 35,000 cfs flood target are too high. Raising the river to such a level will flood irrigation pumps, electrical boxes, the roads to access pumps, and in some cases, flood cropland itself. These damages were made evident during the irrigation pump site surveys in which surveyors were able to point to the estimated high-water mark of a 35,000 cfs high flow event. Increases to this high flow have an exponentially negative impact to irrigation intakes.

Correspondence ID: 71 **Comment ID:**

Response IR27: The irrigation analysis included in the DEIS utilized data and information collected during the field survey of intakes completed in the summer of 2020. The irrigation section of the EIS considers the potential costs to irrigators to replace equipment, make repairs and the increase in O&M costs that would occur from the test flows. The NED and RED analysis include these impacts.

Concern Statement IR27: The DEIS indicates a desire to implement the first flow test in 2022. If the flow test is indeed implemented, irrigators will need time to prepare their irrigation intakes, pump sites and cropping plans. If irrigators pursue alternative funding sources to retrofit irrigation intake structures (which we are unsure is even possible under the proposed flow targets), a minimum of 2 years will be required prior to the first test. Additionally, many farmers operate on a rotational planting schedule with crop selections occurring 2 years or more in advance. Oftentimes, farmers will contract their crop a year in advance to take advantage of higher commodity prices. A failure to deliver a contracted crop hurts both the agricultural business purchasing the crop as well as the farmer who is unable to fulfill their contract. If the test flow absolutely must occur, the irrigation community will need far more time than the current schedule provides.

Correspondence ID: 71 **Comment ID:**

Response IR27: The test flows would not occur in 2022 unless conditions are met as described in Section 1.4.2 of the EIS. The conditions include criteria designed to ensure that the test-flows are run only when there is enough water in the System.

Concern Statement IR28: The flow targets and timing specified in Alternative 1 and 2 do not adequately consider the needs of irrigation, except for the Attraction Flow of approximately 14,000-16,000 cfs which would not likely hinder a farmer or rancher's ability to irrigate. The remaining flow targets cause substantial problems, which will leave many irrigation pumps inoperable.

Correspondence ID: 71 **Comment ID:**

Response IR28: The irrigation analysis included in the DEIS utilized data and information collected during the field survey of intakes completed in the summer of 2020. The irrigation section of the EIS considers the potential costs to irrigators to replace equipment, make repairs and the increase in O&M costs that would occur from the test flows. The NED and RED analysis include these impacts.

Concern Statement IR29: I want to thank the Corps for the amount of time they put into this draft EIS. I would like to specifically thank you for the effort that was made to survey irrigation pump sites this summer. And truthfully, while the irrigation community has a lot of concerns, I think we would be worse off had those surveys not taken place.

Correspondence ID: 71 **Comment ID: 71b**

Response IR29: Thank you for the comment.

Pallid Sturgeon & other ESA

Concern Statement PS1: Pallid sturgeon may hybridize with shovelnose sturgeon; this possibility was not adequately discussed in the DEIS.

Correspondence ID: 1,39 **Comment ID**: 1c, 39b

Response PS1: Scaphirhynchus spp. appear to hybridize throughout their overlapping range, therefore it would be natural for hybridization to occur in the study area if conditions were appropriate. The focus of the study is to determine whether or not flows from Fort Peck Dam can be managed to modify behavior of pallid sturgeon to improve reproductive success.

Concern Statement PS2: The DEIS and in other venues that the Pallid Sturgeon was not considered endangered or unable to survive the spawning process until Lake Sakakawea was completed. This shortened the length of free-flowing water below Fort Peck Dam and is the root cause for larval pallid dying in the toxic headwaters of Lake Sakakawea. Nowhere in the DEIS does the USACE mention draining part of Lake Sakakawea as an alternative. This would lengthen the river below Fort Peck Dam to the length pre-Lake Sakakawea. How can the source of pallid mortality in the toxic back waters of Lake Sakakawea not be recognized through a proposed alternative to drain Lake Sakakawea to the extent that would provide enough free flowing river miles?

Correspondence ID: 3, 29, 39 **Comment ID**: 3d, 29e, 39b

Response PS2: Alternatives were developed per the NEPA standard of a reasonable range of alternatives. These were based on the current state of pallid sturgeon science, technical expert input, and public input through the scoping process described in the DEIS. As part of the scoping process, alternative development considers comments from the public; as such, the scoping comment elicitation effort resulted in comments that the State of North Dakota was opposed to any intentional drawdown of Lake Sakakawea, and concerns that a drawdown would significantly adversely affect recreation and public use. Therefore, drawdown of Lake Sakakawea was not carried forward in this alternative development process for this DEIS.

Concern Statement PS3: Adequate demonstration of the benefit of the flow test on pallid sturgeon has not been assessed in the DEIS. USACE has not identified what constitutes pallid sturgeon retention success or failure. The DEIS is not very clear on what measurable targets will be used for determining success, aside from that implied in modeling discussed in Appendix E. In fact, it appears that at this point no measurable objectives for spawning cues, aggregation of adult fish in spawning areas, actual spawning and embryo emergence have been determined. And, that the only objective to be evaluated will be a model evaluating whether a certain percentage of free-swimming larvae settle before reaching the head of Lake Sakakewa. It's unclear what data will inform the model, aside perhaps from the few larvae that might be captured. Given the difficulty of netting post-hatch embryos and larvae in a river the size of the Missouri, it's possible modeled determinations of success will be made on not a lot of empirical information. Further, nothing in the DEIS discusses post age-1 recruitment, which can be limited by other impacts of flow regulation, such as reducing the availability of food resources. I urge the Corps to work closely with the Missouri River Recovery Technical Team to continually increase and refine the sensitivity of the monitoring that will help determine success. It is presumed this is part of the adoptive management that will occur, but that is not clear.

Correspondence ID: 2, 5, 7, 25, 34, 39 **Comment ID**: 2c, 5a, 7f, 25b, 34a, 39b

Response PS3: The purpose of the DEIS is to test the capacity of flows out of Fort Peck Dam to modify behavior of pallid sturgeon that could improve reproductive success. To date, there has been no documented reproductive success in the study area since Garrison Dam was closed. Therefore, significant uncertainty exists and the Adaptive Management process was developed to improve the science knowledgebase. Report revisions will include a description of ongoing scenario

exercises with experts to determine monitoring and assessment strategies for evaluating the effectiveness of test flows.

Concern Statement PS4: Pallid sturgeon are successfully propagated and stocked in the Missouri River, why can't the species just be raised in a hatchery?

Correspondence ID: 22, 28, 39, 64 **Comment ID:** 22h, 28g, 39b, 64a

Response PS4: The January 19, 2018 amendment to the October 30, 2017 Biological Assessment (BA) for the Operation of the Missouri River Mainstem Reservoir System, the Operation and Maintenance of the Bank Stabilization and Navigation Project (BSNP), the Operation of the Kansas River Reservoir System, and the implementation of the Missouri River Recovery Management Plan (MRRMP) the U.S. Army Corps of Engineers (USACE) proposed to work with the USFWS and the Missouri River Recovery Implementation Committee to "review previous information and information generated since the Effects Analysis formulate test flow releases from Fort Peck Dam and an adaptive management (AM) framework for their implementation. This commitment was relied on by the USFWS in its 2018 Biological Opinion (BiOp) finding that the USACEs proposed action is "not likely to jeopardize" pallid sturgeon. A finding of no jeopardy means that the proposed action is in compliance with the Endangered Species Act and can continue to operate the Missouri River Reservoir System for its authorized purposes. This commitment is part of the USACE's compliance with the ESA regardless of other factors that may have benefitted the pallid sturgeon.

Concern Statement PS5: USACE should consider taking a "system approach" for pallid sturgeon recovery considering the Missouri and Mississippi Rivers similar to how the Yellowstone and Upper Missouri are considered as a system.

Correspondence ID: 7, 39 **Comment ID**: 7a, 39b

Response PS5: Thank you for the comment, the USACE recognizes the anastomotic relationship between the Missouri River and Mississippi River in the context of pallid sturgeon. The scope of the this DEIS is focused on the Upper Missouri River system and the effect of flows from Fort Peck Dam.

Concern Statement PS6: The Final EIS should provide more information on the role water temperature plays in pallid attraction, retention, spawning, and larval drift. Is data available between surface water and water from tunnel outlets in April? What is the desired/target river temperature downstream? How critical is it for the selected alternative to meet hypothesis 5 and the temperature component of the April attraction flow?

Correspondence ID: 12, 31, 39 **Comment ID;** 12o, 31c, 39b

Response PS6: The Fort Peck Adaptive Management Framework (AM Framework) includes hypotheses related to factors other than flow such as temperature, turbidity, and habitat. These hypotheses will be prioritized and addressed following the process described in the AM Framework. Report revisions will include a description of ongoing scenario exercises with experts to determine monitoring and assessment strategies for evaluating the effectiveness of test flows at addressing objectives.

Concern Statement PS7: Increased releases may attract pallids below Fort Peck, but there's no evidence in the DEIS that the added releases will retain adult pallids or induce spawning activity. Our main concern is the lack of drift distance between Fort Peck Dam and the headwaters of Lake Sakakawea. The amount of river miles simply isn't sufficient to facilitate up to 14 days of drift, and the time needed, for full development of most larval pallids before they settle, and most likely die, in the anoxic zone in the upper end of Lake Sakakawea. Rather than exploring test releases that may or may not benefit pallids, but will adversely impact many stakeholders, could a method to intercept larval pallids be developed? The BiOp recommends exploring methods to maximize larval drift and provide the time needed for successful growth and survival before the young pallids reach Lake Sakakawea. Can something be done to slow some of the pallid embryos and allow full development?

Correspondence ID: 12, 39 **Comment ID**: 12p, 39b

Response PS7: The purpose of the DEIS is to test the capacity of flows out of Fort Peck Dam to modify behavior of pallid sturgeon that could improve reproductive success. To date, there has been no documented reproductive success in the study area since Garrison Dam was closed. Therefore, significant uncertainty exists and the Adaptive Management process was developed to improve the science knowledgebase. Report revisions will include a description of ongoing scenario exercises with experts to determine monitoring and assessment strategies for evaluating the effectiveness of test flows. The science knowledge gained from the DEIS will be used to power the next cycle of the AM process, and further reduce uncertainty around pallid sturgeon reproductive success in the study area.

Concern Statement PS8: Research shows upper basin pallids spawn from mid-June to early July. Given that, why are the proposed attraction releases beginning in mid-April? There's no evidence in the DEIS that shows adult pallids can be retained in an area for weeks prior to spawning. We ask that this topic be better explained in the Final EIS. It is unclear in the DEIS what percentage of flow during the attraction spill will come from the spillway vs. the powerhouse tunnels.

Correspondence ID: 12, 31, 39 **Comment ID**: 12m, 31d, 39b

Response PS8: The following clarifying language will be added: "Data for 12 documented spawning events on the Yellowstone River and UMR have shown that PS spawned on the descending limb of the runoff hydrograph 11 times. For the EIS, spawning is assumed to occur 3 days after the hydrograph peak, which is sooner than for the Yellowstone River (med = 11 days post peak), but is consistent with

the median reduction in flow (35%) from the peak until spawning." To further clarify, will edit Figures 2-3 and 2-4 to combine Aggregate with Spawn to avoid confusion and improve consistency with Figures 1-3 and 2-2.

Concern Statement PS9: The Corps must ensure that these flow tests and their potential positive outcomes continue to be considered additive to other activities in the upper basin, including and especially whatever results from the new experimental bypass and diversion dam on the lower Yellowstone River at Intake. Both projects are experimental. It should be noted that even if the Intake Project meets its stated objective accommodating upstream passage of 85 percent of all adult pallid sturgeon motivated to move upstream during the pre-spawning period, this, according to telemetry monitoring, will result in just a small amount of overall potential spawning necessary to meet overall recovery goals in the upper basin recovery unit. And that's assuming spawning is successful, and that recruitment occurs to age-1, of which no evidence has been produced to this point. Basically, to meet recovery goals the pallid sturgeon program must succeed in both the Lower Yellowstone and upper Missouri River. They comprise one system and efforts in one shouldn't be abandoned over those in the other.

Correspondence ID: 25, 39 **Comment ID:** 25a, 39b

Response PS9: The January 19, 2018 amendment to the October 30, 2017 Biological Assessment (BA) for the Operation of the Missouri River Mainstem Reservoir System, the Operation and Maintenance of the Bank Stabilization and Navigation Project (BSNP), the Operation of the Kansas River Reservoir System, and the implementation of the Missouri River Recovery Management Plan (MRRMP) the U.S. Army Corps of Engineers (USACE) proposed to work with the USFWS and the Missouri River Recovery Implementation Committee to "review previous information and information generated since the Effects Analysis formulate test flow releases from Fort Peck Dam and an adaptive management (AM) framework for their implementation. This commitment was relied on by the USFWS in its 2018 Biological Opinion (BiOp) finding that the USACEs proposed action is "not likely to jeopardize" pallid sturgeon. A finding of no jeopardy means that the proposed action is in compliance with the Endangered Species Act and can continue to operate the Missouri River Reservoir System for its authorized purposes. This commitment is part of the USACE's compliance with the ESA regardless of other factors that may have benefitted the pallid sturgeon. Actions are ongoing or planned in both the Missouri and Yellowstone Rivers, and the commitment from the BA demonstrates that the outcomes of each will be considered in the context of both, because the two Rivers represent an anastomotic relationship with respect to pallid sturgeon.

Concern Statement PS10: We are pleased to see that test release experiments will occur concurrently with the implementation of the new bypass at Intake. If approved, the test releases would be conducted in conjunction with Yellowstone River efforts including the Intake bypass channel. The bypass is hoped to provide pallids access to over 160 added river miles for potential spawning and larval drift.

Correspondence ID: 12, 23 **Comment ID**: 12b, 23a

Response PS10: Thank you for the comment.

Concern Statement PS11: The EIS does not properly address the effects of the high flows on other endangered species such as the piping plover and least tern

Correspondence ID: 3, 31, 39, 49, 50 **Comment ID**: 3c, 31b, 50j, 49f, 39b

Response PS11: The Fort Peck alternatives were evaluated for birds by comparing the 50-year quasi-extinction risk between alternatives. The quasi-extinction risk refers to the likelihood of falling below 50 adults at any time during the 50-year timeframe for the northern and southern region separately. The USFWS set the 50-year quasi-extinction risk at <5%; with a 95% probability of persistence which represented a tolerable risk of security and uncertainty. A 5% probability of extinction is widely applied in academic population viability analyses and other recovery plans to guide measurable criteria. The 50-year timeframe was selected by the USFWS to balance security (lower risk) and the potential for an altered environmental regime. Because plover habitat, and thus the plover population, is largely driven by long-term wet and dry climatic cycles, the USFWS determined the 50-year timeframe was long enough to cover an entire cycle.

This metric is the plover objective criteria used to calculate the ESH target numbers, by determining how much ESH is necessary (created by flow or construction) to meet that target. Because of the greater ESH acreage needs for piping plovers which defend territories for nesting and foraging, compared to colonially-nesting least terns, USFWS has determined that meeting the plover habitat targets will also fulfill habitat needs for least terns on the Missouri River. Therefore, habitat targets for least terns have not been specified at this time.

Concern Statement PS12: The DEIS does not adequately address the effect non-native fish species such as walleyes have on pallid sturgeon.

Correspondence ID: 39, 49, 50, 53 **Comment ID**: 53b, 50g, 49e, 39b

Response PS12: The Science and Adaptive Management Plan (SAMP), and Fort Peck AM Framework, comprise a comprehensive suite of hypotheses on pallid sturgeon ecology, including the effects of predation on pallid sturgeon life cycle. The SAMP and Fort Peck AM Framework describe the detailed processes (e.g., expert elicitation, existing literature and study results) used to determine what factors were most likely limiting pallid sturgeon reproductive success in the study area, and provide the appropriate scope for this DEIS. The AM process is sensitive to heterospecific species interactions, such as predation or competition, and have the ability to be elevated for AM action if science driven decisions supports such action.

Concern Statement PS13: USACE should 1) Monitor effectiveness of Intake Project for a reasonable length of time before implementing action at Fort Peck. 2) Consider lowering criteria for implementing test flow from lower than upper quartile runoff on the Yellowstone, to lower than

10% above median. This would lower the number of partial flow test years and decrease the magnitude of flow needed for attraction of fish to the Missouri. 3) Provide substantive information on how the Fort Peck test flow will be complementary to the Intake fish passage project. 4) Specify how recruitment success will be attributed to which management action, Fort Peck or Intake, and with what degree of certainty.

Correspondence ID: 39, 49, 50, 53 **Comment ID:**

Response PS13: The January 19, 2018 amendment to the October 30, 2017 Biological Assessment (BA) for the Operation of the Missouri River Mainstem Reservoir System, the Operation and Maintenance of the Bank Stabilization and Navigation Project (BSNP), the Operation of the Kansas River Reservoir System, and the implementation of the Missouri River Recovery Management Plan (MRRMP) the U.S. Army Corps of Engineers (USACE) proposed to work with the USFWS and the Missouri River Recovery Implementation Committee to "review previous information and information generated since the Effects Analysis formulate test flow releases from Fort Peck Dam and an adaptive management (AM) framework for their implementation. This commitment was relied on by the USFWS in its 2018 Biological Opinion (BiOp) finding that the USACEs proposed action is "not likely to jeopardize" pallid sturgeon. A finding of no jeopardy means that the proposed action is in compliance with the Endangered Species Act and can continue to operate the Missouri River Reservoir System for its authorized purposes. The USACE recognizes that fish passage at Intake Dam on the Yellowstone River is imminent, and that management actions at Fort Peck Dam should complement, but not detract from, potential for successful recruitment from passage at Intake Dam.

Concern Statement PS14: The EIS fails to consider fish that are not native to the Missouri River such as the walleye that is an aggressive, introduced fish that will consume most other fish. The comments I have received from the fishery people is that they have never seen a walleye with a juvenile palled sturgeon in its stomach. A study must be made to prove that the fish not native to the Missouri river do not eat and consume young pallid sturgeon. I believe they do and if so, those nonnative fish must be removed from the Missouri River below Fort Peck Dam. Please provide documentation and proof that the walleye does not eat pallid sturgeon. Do pallid sturgeon survive in the Yellowstone River and develop and do they survive above Fort Peck Dam up to the Great Falls? Please provide your studies recognizing the pallid sturgeon in the Yellowstone River and above Fort Peck Dam.

Correspondence ID: 39, 49, 50, 53 **Comment ID**:

Response PS14: The Science and Adaptive Management Plan, and Fort Peck AM Framework, comprise hypotheses on the effects of predation on pallid sturgeon life cycle, and describe the processes (e.g., expert elicitation, existing literature and study results) used to determine what factors were most likely limiting pallid sturgeon reproductive success in the study area, and provide the appropriate scope for the DEIS. Existing research on predation of pallid sturgeon suggests it is not a significant source of mortality.

Concern Statement PS15: The DEIS states rapidly decreasing releases could result in stream bank erosion. This would impact municipal, industrial, and irrigation intakes, pumps and other infrastructure including recreational access sites. The maximum release reduction rate of change is limited to 3,000 cfs a day to try to avoid bank erosion and other impacts. The limit on flow rate of change would be crucial when, and if, test releases are run and then recede during larval drift. We ask the Final EIS to provide more information on this.

Correspondence ID: 12 **Comment ID**: 12n

Response PS15: Noted. Fish monitoring crews will be monitoring during the drift phase to determine how river flow rate impacts larval drift of pallid sturgeon.

Concern Statement PS16: We recommend that the Corp include actions within alternatives to increase drift time other than just reduced flow to 8000 cfs as planned in alternatives one and two. Are there options for reconnecting more of the river's floodplain to increase drift time in parts of the more easterly stretch of this river section? Would a more braided river increase drift time? Are there feasible low flows between 8000 and 4000cfs which could enhance success?

Correspondence ID: 34 **Comment ID**: 34c

Response PS16: Thank you for the comment and suggestion. The Adaptive Management process provides the opportunity to learn and improve from the actions proposed in the DEIS, and has a mechanism for incorporating new ideas and suggestions into the action development process. Ideas such as the one provided in the comment could receive consideration and be elevated, depending on the results from the study described in the DEIS. However, its possible an additional NEPA process (e.g., EIS or EA) would be necessary for the comment suggested.

Concern Statement PS17: At the outset, the USACE's modeling is not supported by field observations. For instance, in support of Alternatives 1 and 2, the USACE states that no natural recruitment has occurred in the Upper Missouri River Basin. DEIS at 3-90. The USACE's No Action Alternative modeling states that spawning could have occurred during two years in the study period. DEIS at 3-104 (1975 and 2011). If the latter is correct, then the former overstates the lack of recruitment. If the USACE is uncertain whether natural flooding has encouraged spawning and recruitment, that demonstrates the purely hypothetical nature of the proposed test releases. This uncertainty is apparent in the USACE's lack of confidence in its modeling. See DEIS at 3-105 ("The model may be overestimating retention and survival to first exogenous feeding during the 1975 flow year because no wild pallid sturgeon from the 1975 year class are known to exist in the study area."). Even if therefore the modeling accurately states the lack of natural recruitment, the solution is more observation to better understand the implications of flood years such as 2011.

Correspondence ID: 56 **Comment ID**: 56m, 56e, 56c

Response PS17: The purpose of the DEIS is to test the capacity of flows out of Fort Peck Dam to modify behavior of pallid sturgeon that could improve reproductive success. To date, there has been no documented reproductive success in the study area since Garrison Dam was closed. Therefore, significant uncertainty exists and the Adaptive Management process was developed to improve the science knowledgebase. However, the hypotheses driving the DEIS represent the best available science and expert opinion. Report revisions will include a description of ongoing scenario exercises with experts to determine monitoring and assessment strategies for evaluating the effectiveness of test flows. Significant research and study on altered river systems (like the Missouri River) across the globe since the 1980s supports the paradigm that naturalizing the flow regime, or even subcomponents of the flow regime, is beneficial for native fishes in a river system that migrate during periods of reproduction. Therefore, we anticipate naturalizing the flow regime in this DEIS will benefit other fish species. Text will be added to further clarify in the DEIS.

Concern Statement PS18: Looking back at the 81-year study period, the No Action Alternative assumes a 1.1 % spawn retention rate. Id. at 3-103, Table 3-23. Alternatives 1 and 2 predict a spawn retention rate of between 1.2%-3.9%. Given the acknowledged discrepancy between observation records and modeling data, this is a marginal difference in outcomes. It is not a large enough difference to have an appreciable impact on the likelihood of species recovery in the management area. And notably, the DEIS does not even venture a guess as to what spawning retention rate is sufficient for species recovery. These test releases are just that, tests. And the USACE should be transparent to Montanans about what measures are actually required for species recovery. If this program-with all its attendant risks and costs-is insufficient to more than "incrementally]" benefit the species, what sorts of measures would be sufficient?

Correspondence ID: 56 **Comment ID**: 56n

Response PS18: The Adaptive Management process is designed and intended to reduce uncertainty in management of the Missouri River for pallid sturgeon to avoid jeopardizing their continued existence. The January 19, 2018 amendment to the October 30, 2017 Biological Assessment (BA) for the Operation of the Missouri River Mainstem Reservoir System, the Operation and Maintenance of the Bank Stabilization and Navigation Project (BSNP), the Operation of the Kansas River Reservoir System, and the implementation of the Missouri River Recovery Management Plan (MRRMP) the U.S. Army Corps of Engineers (USACE) proposed to work with the USFWS and the Missouri River Recovery Implementation Committee to “review previous information and information generated since the Effects Analysis formulate test flow releases from Fort Peck Dam and an adaptive management (AM) framework for their implementation. This commitment was relied on by the USFWS in its 2018 Biological Opinion (BiOp) finding that the USACEs proposed action is “not likely to jeopardize” pallid sturgeon. A finding of no jeopardy means that the proposed action is in compliance with the Endangered Species Act and can continue to operate the Missouri River Reservoir System for its authorized purposes.

Concern Statement PS19: The marginal-if any-benefits to the pallid sturgeon do not outweigh social and economic risks to Montanans.

Correspondence ID: 55, 56 **Comment ID**: 56c, 55c

Response PS19: The Adaptive Management process is designed and intended to reduce uncertainty in management of the Missouri River for pallid sturgeon, and considers weighing the balance of human considerations with pallid sturgeon ESA compliance. The January 19, 2018 amendment to the October 30, 2017 Biological Assessment (BA) for the Operation of the Missouri River Mainstem Reservoir System, the Operation and Maintenance of the Bank Stabilization and Navigation Project (BSNP), the Operation of the Kansas River Reservoir System, and the implementation of the Missouri River Recovery Management Plan (MRRMP) the U.S. Army Corps of Engineers (USACE) proposed to work with the USFWS and the Missouri River Recovery Implementation Committee to "review previous information and information generated since the Effects Analysis formulate test flow releases from Fort Peck Dam and an adaptive management (AM) framework for their implementation. This commitment was relied on by the USFWS in its 2018 Biological Opinion (BiOp) finding that the USACEs proposed action is "not likely to jeopardize" pallid sturgeon. A finding of no jeopardy means that the proposed action is in compliance with the Endangered Species Act and can continue to operate the Missouri River Reservoir System for its authorized purposes.

Concern Statement PS20: The draft provided does not provide empirical evidence of successful implementation of the pallid sturgeon; scientific evidence has not been presented that implementing these catastrophic measures will help the pallid sturgeon in any way, nor does it take into consideration the impact of other migratory species and how these effects could influence the spawning of other species of fishes.

Correspondence ID: 55 **Comment ID**: 55a

Response PS20: The purpose of the DEIS is to test the capacity of flows out of Fort Peck Dam to modify behavior of pallid sturgeon that could improve reproductive success. To date, there has been no documented reproductive success in the study area since Garrison Dam was closed. Therefore, significant uncertainty exists and the Adaptive Management process was developed to improve the science knowledgebase. However, the hypotheses driving the DEIS represent the best available science and expert opinion. Report revisions will include a description of ongoing scenario exercises with experts to determine monitoring and assessment strategies for evaluating the effectiveness of test flows. Significant research and study on altered river systems (like the Missouri River) across the globe since the 1980s supports the paradigm that naturalizing the flow regime, or even subcomponents of the flow regime, is beneficial for native fishes in a river system that migrate during periods of reproduction. Therefore, we anticipate naturalizing the flow regime in this DEIS will benefit other fish species. Text will be added to further clarify in the DEIS.

Concern Statement PS21: Piping plover and least tern birds that are on the endangered species list nest on sand and gravel bars below Fort Peck Dam. The spring flows in June of the proposed plan will decimate these nesting habitats. How can this proposal that will destroy all nesting habitat below Fort Peck Dam for any bird along the Missouri River be considered? Please explain how this devasting man made act will benefit waterfowl and birds that nest on the sand bars and are protected from most natural predators due to being on the sand bars. How can you protect one endangered species and destroy another? Please address this concern.

Correspondence ID: 53, 76 **Comment ID**: 53d, 76b

Response PS21:

The impacts to piping plovers and least terns were modeled and the results are presented in Section 3.10.2.6. Modeling results indicate there would be a negligible effect to these species from implementing the test flow alternatives.

Concern Statement PS22: The EIS does not properly address the suitability of the Milk River for pallid sturgeon preservation.

Correspondence ID: 49, 50 **Comment ID**: 50i, 49g

Response PS22: Flow magnitude constraints are measured at the Wolf Point gage in the hydrology and hydraulics modeling which is downstream of the Milk River confluence. Measuring at the Wolf Point gage rather than at Fort Peck Dam takes into account flows from the Milk River to provide more precision in determining how much water to release from Fort Peck Dam. The DEIS recognizes associated inputs from the Milk River, such as sediment and turbidity contributions to the study area. During test flow events, fish monitoring efforts will be able to determine how adult pallid sturgeon use the Milk River, for example, during the attract, retain, or aggregate and spawn phase.

Concern Statement PS23: the Missouri River is no longer the same environmental habitat that the pallid sturgeon had in the past. Over the last one hundred years, dams have been constructed and, unfortunately, non-native predatory species of fish have been introduced. As I understand, pallid sturgeon grow slowly and the time they are vulnerable to predation is longer than that of their non-native predators. Could pallid sturgeon be successfully raised in a fish hatchery and then be released into the river once they reach the size at which they would no longer be vulnerable to non-native species predation?

Correspondence ID: 48 **Comment ID**: 48b

Response PS23: Thank you for your question. The existing pallid sturgeon propagation program raises pallid sturgeon in hatcheries then releases them in to the wild, including in the study area. This

DEIS is focused on determining if flow from Fort Peck Dam can in fluence adult pallid sturgeon behavior in the wild to improve reproductive success in the wild.

Concern Statement PS 24: Why would USACE conduct test flows that have adverse effects on irrigators when there is no real guarantee it will benefit the pallid sturgeon

Correspondence ID: 39 **Comment ID**: 39b

Response PS24: The January 19, 2018 amendment to the October 30, 2017 Biological Assessment (BA) for the Operation of the Missouri River Mainstem Reservoir System, the Operation and Maintenance of the Bank Stabilization and Navigation Project (BSNP), the Operation of the Kansas River Reservoir System, and the implementation of the Missouri River Recovery Management Plan (MRRMP) the U.S. Army Corps of Engineers (USACE) proposed to work with the USFWS and the Missouri River Recovery Implementation Committee to "review previous information and information generated since the Effects Analysis formulate test flow releases from Fort Peck Dam and an adaptive management (AM) framework for their implementation. This commitment was relied on by the USFWS in its 2018 Biological Opinion (BiOp) finding that the USACEs proposed action is "not likely to jeopardize" pallid sturgeon. A finding of no jeopardy means that the proposed action is in compliance with the Endangered Species Act and can continue to operate the Missouri River Reservoir System for its authorized purposes.

Concern Statement PS 25: Recommendation: Additional larval drift studies should be conducted at proposed low release levels (8kcfs) to determine optimal low flow larval drift levels before implementation of full tests. The USACE in their presentations of the DEIS has stated that the low flow after the spawning que at a level of 8kcfs is a concession to irrigators, not entirely true. The original level of 4kcfs was not supported by Montana Fish Wildlife and Parks, as it actually increased the speed of larval drift by dewatering the side channels and placing most of the flow into the thalweg. The optimal flow for maximizing larval drift time is not known, the drift studies were conducted at whatever the Fort Peck releases were at the time of the drift study (10kcfs).

Correspondence ID: 52 **Comment ID**: 52l

Response PS25: Thank you for the recommendation. The recommendation will be discussed as detailed monitoring protocols are further developed and refined in the AM process. Further, opportunities for additional experimental drift studies exist in years with no flow action, or partial flow action. These opportunities would follow the AM process.

Concern Statement PS26: Recommendation: If no pallid sturgeon are attracted up the Missouri, close to the confluence with the Milk River the test is terminated before the spawning que is initiated. At one of the MRRIC meeting the question was asked "if no pallid sturgeon is attracted by the proposed attraction flow que will the test be terminated before the spawning que?". The question was not addressed in the DEIS. Biologists have stated that enough of the fish have telemetry that they can tell by the genetics of the embryos if the fish spawned in the Missouri or

the Yellowstone. The high flows of the spawning que have adverse impacts to downstream stakeholders.

Correspondence ID: 52 **Comment ID**: 52k

Response PS26" The decision process for test flow implementation considers pallid sturgeon in the Yellowstone River relative to intake passage structure. Telemetered sturgeon response to attraction flows is not currently included as part of the test flow shut off criteria. The AM process would provide the pathway consider modifying test flow criteria.

Concern Statement PS 27: Much has been learned about the life cycle of the pallid sturgeon since its' listing as endangered in the early 1990s. Two of the most important, that pallid sturgeon are spawning in the wild, and that lack of adequate drift distance for pallid embryos is a limiting factor in recruitment. Spawning has been documented near Fairview Montana where the hatching embryos drift into the hypoxic head waters of Lake Sakakawea and die. This is consistent with the observation that recruitment ended with the filling of Lake Sakakawea. Instead of addressing the lack of drift distance from a known, spawning site the USACE has proposed two action alternatives that attempt to encourage the fish to spawn near Fort Peck Dam with the hope that there is enough drift distance for recruitment. It's important to note that the remaining wild adult fish are of an age that shows that there was recruitment after construction of the initial Intake project on the Yellowstone River circa 1910 and closure of Fort Peck Dam in 1938. The USACE has not fulfilled their duty under Executive Order 12898, in their evaluation of a range alternatives to avoid jeopardy

Correspondence ID: 52 **Comment ID**: 52d

Response PS27: Compliance with Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) is demonstrated in Section 3.12 (page 3-412 through page 3-433), and Section 6.6 (page 6-6) of the DEIS. USACE would take all appropriate measures to ensure that management actions described in the FPDTR-EIS would not disproportionately adversely impact minority or low-income communities. The alternatives development process is detailed in Chapter 2, and demonstrates development of alternatives in light of the Purpose and Need, and Constraints and Opportunities, of the study.

Alternatives

Concern Statement ALT1: The No Action Alternative protects the pallid sturgeon population, Montana irrigators, and the continued operational safety of Fort Peck Dam. While labeled "no action/' the No Action Alternative will continue existing actions under those policies and programs that have stabilized the pallid sturgeon population. The USACE

and USFWS should continue to engage in artificial propagation and stocking efforts, as well as contribute efforts to construct and finish the bypass at the Yellowstone Intake.

Correspondence ID: 45, 56 **Comment ID**: 56d, 45a

Response ALT1: The test-flows are part of USACE compliance with the Endangered Species Act. Compliance with the Endangered Species Act is required to continue to operate the System for its authorized purposes. The No Action Alternative does not meet the purpose and need of the EIS as described in Chapter 1.

Concern Statement ALT2: Has the Milk River been considered as an alternative to assist the Pallid Sturgeon? Can fish ladders be installed in the Milk River to help the pallid sturgeon swim and spawn 100 miles upstream from the mouth of the Milk River.

Correspondence ID: 53 **Comment ID**: 53c

Response ALT2: Alternatives were developed per the NEPA standard of a reasonable range of alternatives. These were based on the current state of pallid sturgeon science, technical expert input, and public input through the scoping process described in the DEIS.

The purpose of the DEIS is to test the capacity of flows out of Fort Peck Dam to modify behavior of pallid sturgeon that could improve reproductive success. To date, there has been no documented reproductive success in the study area since Garrison Dam was closed. Therefore, significant uncertainty exists and the Adaptive Management process was developed to improve the science knowledgebase. Report revisions will include a description of ongoing scenario exercises with experts to determine monitoring and assessment strategies for evaluating the effectiveness of test flows. The science knowledge gained from the DEIS will be used to power the next cycle of the AM process, and further reduce uncertainty around pallid sturgeon reproductive success in the study area.

Concern Statement ALT3: According to Montana State University Led research dated Jan 23, 2015, on the pallid sturgeon in the Missouri River below Fort Peck Dam the embryonic pallid sturgeon hatch and then die in the sediment laden area south of Williston, ND. The sediment area is a result of silt, clay, and sand from the Missouri and Yellowstone Rivers aggradation. The EIS does not address dredging the area to improve habitat for the pallid sturgeon to fully develop. This alternative should be addressed and considered.

Correspondence ID: 53 **Comment ID**: 53a

Response ALT3: The purpose of the DEIS is to test the capacity of flows out of Fort Peck Dam to modify behavior of pallid sturgeon that could improve reproductive success. To date, there has been no documented reproductive success in the study area since Garrison Dam was closed. Therefore, significant uncertainty exists and the Adaptive Management process was developed to improve the science knowledgebase. Report revisions will include a description of ongoing scenario exercises with experts to determine monitoring and assessment strategies for evaluating the effectiveness of test

flows. The science knowledge gained from the DEIS will be used to power the next cycle of the AM process, and further reduce uncertainty around pallid sturgeon reproductive success in the study area.

Concern Statement ALT4: the USACE should adopt the No Action Alternative. The No Action Alternative poses the fewest risks to dam safety, economic vitality, and community well-being, while still benefitting the pallid sturgeon through stocking, artificial propagation, and the construction of the Yellowstone Intake.

Correspondence ID: 56 **Comment ID**: 56o

Response ALT4: The No Action Alternative does not meet the Purpose and Need of the EIS which is to test the capacity of flows out of Fort Peck Dam to modify behavior of pallid sturgeon that could improve reproductive success. To date, there has been no documented reproductive success in the study area since Garrison Dam was closed. Therefore, significant uncertainty exists and the Adaptive Management process was developed to improve the science knowledgebase. Report revisions will include a description of ongoing scenario exercises with experts to determine monitoring and assessment strategies for evaluating the effectiveness of test flows. The science knowledge gained from the DEIS will be used to power the next cycle of the AM process, and further reduce uncertainty around pallid sturgeon reproductive success in the study area.

Concern Statement ALT5: The USFWS' 2018 Biological Opinion based its determination that the UASCE actions under the direction of the MRRMP were not likely to jeopardize the pallid sturgeon due in part to the development of this project. In our April 20, 2017 letter, the EPA supported the restoration efforts of the MRRMP. As such, our review of this project finds that its Preferred Alternative 1 to test designed water releases at Fort Peck Dam aligns with our continued support of the MRRMP and efforts to reestablish pallid sturgeon in the Missouri River system.

Correspondence ID: 66 **Comment ID**: 66a

Response ALT5: Thank you for the comment.

Concern Statement ALT6: The proposed action jeopardizes an important congressionally authorized purpose of the Fort Peck Dam and puts the USACE at risk of a regulatory taking. We are all losers in this game, except for potentially the pallid sturgeon. The ends do not justify the means and for this reason, we hope the USACE will pursue the No Action Alternative.

Correspondence ID: 61 **Comment ID**: 61y

Response ALT6: The test-flows are part of USACE compliance with the Endangered Species Act. Compliance with the Endangered Species Act is required to continue to operate the System for

its authorized purposes. The No Action Alternative does not meet the purpose and need of the EIS as described in Chapter 1.

Concern Statement Alt7: While it is true that flows of in the magnitude have occurred, historical data from the Culbertson gauge show that they usually occur in March or April during the plains runoff when ice jams occur. Only 4-5 times including the 500-year event in 2011, have flows been over 30KCFS during the May-September irrigation season. Irrigators have adapted to an anticipated range, based on historical records, of flows through use of floating pumps and suctions. 35KCFS falls outside of range that we have prepared for. 52J; Recommendation: Consider lower threshold than 35kcfs for termination of test.

Correspondence ID: 52 **Comment ID**: 52J

Response ALT7: Alternatives were informed by the current state of pallid sturgeon science as descried in the MRRP Science and Adaptive Management Plan, the associated 2018 Biological Opinion, and by the MRRP Pallid sturgeon Technical Team. Alternatives were also shaped by input received through the scoping process for the EIS and through MRRIC engagements. The alternatives in the EIS represent the best available science related to potential flow actions from Fort Peck Dam.

Concern Statement Alt8: Recommendation: Evaluate, no test if National Weather Service designation of D1-D4 (moderate drought- exceptional drought) in four county area below Fort Peck dam. Much of the impacted area below Fort Peck is currently experiencing extreme drought conditions. Impacts to stakeholder are exacerbated by drought.

Correspondence ID: 52 **Comment ID**: 52J

Response ALT8: The test flows would not occur in 2022 unless conditions are met as described in Section 1.4.2 of the EIS. The conditions include criteria designed to ensure that the test-flows are run only when there is enough water in the System.

Concern Statement ALT9: The DEIS predicts that during the 82-year period of record alternative one would be initiated 22 times resulting 11 full tests and 11 partial tests. The major reason for terminating the test flows in the partial test years are stage and flows that are too high at Williston. This is due to the combination of the contribution of the Missouri test flow and the Yellowstone flow. It's predictable that by setting the criteria to initiate a test at below upper quartile on the Yellowstone, that test flows would from Fort Peck would need to be terminated due to high water levels at Williston. The test is proposed to be run 3-5 times; my assumption is this range is due to one half of the tests-initiated result in partial test. Three full tests should yield more than enough data to determine if the fish is attracted up the Missouri and spawn, hatch occurs, larval drift is adequate. Three tests instead of 5 would greatly reduce the impact to stakeholders. Recommendation: Evaluate, no test if Yellowstone predicted runoff is 10% above median and/or Yellowstone (Fort Peck to Garrison reach) is upper quartile

Correspondence ID: 52 **Comment ID**: 52h

Response ALT9: If enough information is received from three test flows (or less) it may not be necessary to run additional test flows.

Concern Statement ALT10: When the lack of availability of larval drift distance was identified as a major lacking factor in pallid sturgeon recruitment, a fish by-pass at the Intake project on the Yellowstone River was proposed and approved. A letter between the US Fish and Wildlife Service and the USACE, stated that if the USACE built the by-pass at Intake there would be a moratorium, for ten years, on any actions at Fort Peck to evaluate the impact of the by-pass at Intake. There is a sizeable investment of dollars and political capital in the Intake project. The Yellowstone has a mostly natural hydrograph and other than a few low-level diversion dams similar to the one at Intake, is free flowing. In fact, the majority of pallid sturgeon move from the Missouri into the Yellowstone to spawn. While the Fort Peck AM Framework is designed to be complementary to the Intake fish passage project, the two actions will be competing to attract the same population of fish. While many of the fish are telemetered it may be difficult to determine with a high degree of confidence which action, Intake or Fort Peck, is responsible for any observed success. Scientific method typically does not change more than one variable at one time. Recommendation: .1 Monitor effectiveness of Intake Project for a reasonable length of time before implementing action at Fort Peck. 2. Consider lowering criteria for implementing test flow from lower than upper quartile runoff on the Yellowstone, to lower than 10% above median. This would lower the number of partial flow test years and decrease the magnitude of flow needed for attraction of fish to the Missouri. 3. Provide substantive information on how the Fort Peck test flow will be complementary to the Intake fish passage project. 4. Specify how recruitment success will be attributed to which management action, Fort Peck or Intake, and with what degree of certainty.

Correspondence ID: 52 **Comment ID**: 52G

Response ALT10: The test-flows are part of USACE compliance with the Endangered Species Act. Compliance with the Endangered Species Act is required to continue to operate the System for its authorized purposes. The No Action Alternative does not meet the purpose and need of the EIS as described in Chapter 1. Alternatives were informed by the current state of pallid sturgeon science as descried in the MRRP Science and Adaptive Management Plan, the associated 2018 Biological Opinion, and by the MRRP Pallid sturgeon Technical Team. Alternatives were also shaped by input received through the scoping process for the EIS and through MRRIC engagements. The alternatives in the EIS represent the best available science related to potential flow actions from Fort Peck Dam. The Adaptive Management process provides the opportunity to learn and improve from the actions proposed in the DEIS, and has a mechanism for incorporating new ideas and suggestions into the action development process. Ideas such as the one provided in the comment could receive consideration and be elevated, depending on the results from the study described in the DEIS.

Concern Statement ALT11: Drought conditions should be a factor in deciding whether to implement a test flow. If the region is already experiencing a drought, the corps cannot afford to risk a loss of irrigation income.

Correspondence ID: 61 **Comment ID**: 61u

Response ALT11: The test flows would not occur in 2022 unless conditions are met as described in Section 1.4.2 of the EIS. The conditions include criteria designed to ensure that the test-flows are run only when there is enough water in the System.

Concern Statement ALT12: Neither alternative should be considered, a new, moderate alternative should be proposed.

Correspondence ID: 3, 21 **Comment ID**: 3e, 21e

Response ALT12: Alternatives were informed by the current state of pallid sturgeon science as descried in the MRRP Science and Adaptive Management Plan, the associated 2018 Biological Opinion, and by the MRRP Pallid sturgeon Technical Team. Alternatives were also shaped by input received through the scoping process for the EIS and through MRRIC engagements. The alternatives in the EIS represent the best available science related to potential flow actions from Fort Peck Dam. The Adaptive Management process provides the opportunity to learn and improve from the actions proposed in the DEIS, and has a mechanism for incorporating new ideas and suggestions into the action development process. Ideas such as the one provided in the comment could receive consideration and be elevated, depending on the results from the study described in the DEIS.

Concern Statement ALT13: The DEIS should be modified to limit maximum flow tests to 28,000 CFS or lower. This is not an endorsement of either alternative, rather driven by our understanding that the impact on the spillway and downstream irrigators with increased flows is not lineal, rather more exponential as flow volumes increase. It is our understanding that flows well below levels in the DEIS have been believed to achieve the desired results for the fish.

Correspondence ID: 10 **Comment ID**: 10h

Response ALT 13: Alternatives were informed by the current state of pallid sturgeon science as descried in the MRRP Science and Adaptive Management Plan, the associated 2018 Biological Opinion, and by the MRRP Pallid sturgeon Technical Team. Alternatives were also shaped by input received through the scoping process for the EIS and through MRRIC engagements. The alternatives in the EIS represent the best available science related to potential flow actions from Fort Peck Dam. The Adaptive Management process provides the opportunity to learn and improve from the actions proposed in the DEIS, and has a mechanism for incorporating new ideas and suggestions into the action development process. Ideas such as the one provided in the comment could receive consideration and be elevated, depending on the results from the study described in the DEIS.

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Concern Statement ALT14: No flow tests should be implemented in a given year unless the best estimate of climatical and hydrological conditions support conclusion the full tests can be performed. Partial flow test years should only be the result of conditions contrary to the projections and forecasting. This may be the intent of the criteria listed on page 38 of the DEIS, but assurance, especially for Co-op members who are irrigators down steam from Fort Peck would be important.

Correspondence ID: 10 **Comment ID**: 10i

Response ALT14: A flow test would not be started unless it is anticipated that a full test could run based on observed and predicted conditions. It is possible; however that a test flow could be stopped if certain conditions occur as described in Section 1.4.2 of the EIS.

Concern Statement ALT15: No flow tests should be initiated in April. It is our understanding that there is likely limited benefit of the April flows to the species.

Correspondence ID: 10 **Comment ID**: 10j

Response ALT 15: Alternatives were informed by the current state of pallid sturgeon science as descried in the MRRP Science and Adaptive Management Plan, the associated 2018 Biological Opinion, and by the MRRP Pallid sturgeon Technical Team. The initial "spike" in April is intended to serve as an initial attraction flow for pallid sturgeon.

Concern Statement ALT16: Flow tests at Fort Peck should be discontinued if bypass and other future improvements for species on the Yellowstone are successful in terms of achieving recruitment at a level adequate to stabilize or increase Pallid Sturgeon population in the upper river region.

Correspondence ID: 10 **Comment ID**: 10k

Response ALT16: Information gained from implementation of the Yellowstone bypass project would be factored into the ongoing adaptive management process.

Concern Statement ALT17: It is our hope that efforts on the Yellowstone River and its tributaries with the bypass which is nearly complete, lead to successful recovery. We greatly appreciate the statement in the Yellowstone River Fish Passage section of the DEIS stating that "the Fort Peck Framework is to design test flow releases to be complimentary to the Intake Fish Passage project". Success on the Yellowstone will be win-win for the species and for impacted stakeholders including tribal and irrigators as well as rate payers who have little or no negative impact from recovery on the Yellowstone. Lack of HC impacts would have us supportive of the no action alternative, however recognize that Pallid recovery is not guaranteed on the Yellowstone and therefore ask for additional sideboards as part of the record of decision.

Correspondence ID: 10 **Comment ID**: 10d

Response ALT17: Information gained from implementation of the Yellowstone bypass project would be factored into the ongoing adaptive management process. The test-flows are part of USACE

compliance with the Endangered Species Act. Compliance with the Endangered Species Act is required to continue to operate the System for its authorized purposes. The No Action Alternative does not meet the purpose and need of the EIS as described in Chapter 1.

Concern Statement ALT18: Climate models predict increased temperatures with periods of both intense drought and increased precipitation in future years. Climate change could result in decreased snowpack and an earlier snowmelt. USACE should fully consider climate change impacts when deciding whether to implement a test release. A thorough evaluation on what added flows, coupled with increased runoff from major rains, would have on downstream stakeholders is needed.

Correspondence ID: 12 **Comment ID:** 12f

Response ALT18: Annual decisions on whether to run the test flow or not will be taken into account snowpack and runoff forecasts.

Concern Statement ALT19: If releases are conducted, USACE should conduct a large monitoring effort which would require vigorous coordination between many state and federal agencies to thoroughly evaluate impacts to riverbanks, flooding, water intakes, hydropower, the Fort Peck spillway, and to fish and wildlife. USACE and the BoR should develop a monitoring and adaptive management plan that ensures sufficient data will be available to judge the success of the project. Monitoring would investigate the potential benefits the releases could have in attracting, retaining, aggregating, spawning, and improving drift conditions to increase survival of larval pallids in the upper Missouri River.

Correspondence ID: 12, 23 **Comment ID**: 12c, 23c

Response ALT19: Monitoring of test flows will include both physical and biological monitoring as described in the EIS. Monitoring activities would occur as part of the Fort Peck Adaptive Management Framework (Appendix G).

Concern Statement ALT20: Alternative 2 does not discuss spawning cue flow regime.

Correspondence ID: 31 **Comment ID**: 31a

Response ALT20: Both Alternatives 1 and 2 (and variants) include attract, retain, aggregate, spawn, and drift portions of the hydrograph as described in Chapter 2.

Concern Statement ALT21: The Corps has established specific conditions under which a flow test regimen, or part of a regimen, would be completed. The Corps has reviewed the prior 82-year period to assess the likelihood of the occurrence of all or some of the specified conditions. The influences of climate change make that past record a less reliable predictor of the future. The

Corps estimates 3 to 5 flow test runs would be required to evaluate results and consider moving to the next level of implementation. And that, due to the required parameters, it is likely to take 15 years or more to complete this initial step. That is a long time to achieve benefits to the PS population. This difficult time frame makes it more important that the Corps consider other options also, taking the bluff-to-bluff view.

Correspondence ID: 34 **Comment ID**: 34d

Response ALT21: The alternatives in the EIS represent the best available science related to potential flow actions from Fort Peck Dam. The Adaptive Management process provides the opportunity to learn and improve from the actions proposed in the DEIS, and has a mechanism for incorporating new ideas and suggestions into the action development process. Ideas such as the one provided in the comment could receive consideration and be elevated, depending on the results from the study described in the DEIS.

Concern Statement ALT22: The test flow should not be implemented back-to-back years. The year after a test flow could equate to additional impacts on its own due to less water in the Reservoir after high releases. Moreover, if an irrigator can bounce back after a test flow, they may not be able to bounce back after another one. I feel using the CFS readings from Wolf Point station is misleading to the public and everyone involved as it about 50 miles downriver from the Milk River and Fort Peck Spillway. This is very misleading to everyone reading it, but we will not get much water in the area above the spillway! There should be a river CFS reading just below the Milk River at Frazer! The figure 3-52 map could be misleading and wrong as it shows inundation for the 9 miles above the spillway location, and directly below the tunnels. The chart shows water flowing at 20k CFS and 30k CFS. This has to be flows from the spillway. The tunnels can only put out 14,000 CFS so this much inundation is not possible.

Correspondence ID: 68 **Comment ID:** 68d

Response ALT22: Depending on the results of monitoring erosion, intakes, and the dam spillway, it is possible that test flows would not be run in back to back years, even if conditions for a test flow are favorable in back to back years.

Concern Statement ALT23: Flows should be specified if they are coming from the flood tunnels or the spillway. This information is critical for irrigated farmers that have pump sites on the river above the Fort Peck Spillway.

Correspondence ID: 65 **Comment ID**: 65c

Response ALT23: Chapter 2 of the EIS explains that flows above the powerhouse capacity (14,000 cfs) would have to go through the dam spillway rather than flood tunnels.

Concern Statement ALT24: Research on larval pallid drift and dispersal and what pallid embryos need to survive continues. With young pallids requiring up to 14 days of drift to fully develop, the river miles needed for that is crucial. If newly hatched pallids reach the upper end of Lake Sakakawea before developing fully, they die in the reservoir's hypoxic zone. Lowering Sakakawea's pool level, to increase drift distance, has been ruled out. Sakakawea is the largest storage reservoir in the Missouri River system. The League agrees that reducing Sakakawea storage capacity would severely impact all eight of the river's authorized purposes.

Correspondence ID: 12 **Comment ID**: 12a

Response ALT24: Thank you for the comment.

Concern Statement ALT25: If a test release is approved and conducted, the League supports that it should not interfere with the potential passage of pallids in the Yellowstone River. And the League also supports the decision to run a test release must be made on a year to year basis. That decision needs to be based on existing hydrological conditions, anticipated runoff, and the detailed criteria defined within the DEIS.

Correspondence ID: 12 **Comment ID**: 12d

Response ALT25: Thank you for the comment.

Concern Statement ALT26: The DEIS states some upper basin locations could benefit from increased visitation from higher water levels from the proposed test releases. If test releases are approved and conducted, the League encourages the Corps to work with resource specialists and state fishery biologists to develop methods that minimize any adverse impacts to the fisheries and upper basin Missouri River visitation.

Correspondence ID: 12 **Comment ID**: 12e

Response ALT26: Concur, the USACE would continue to work with state fishery biologists if the test flow is implemented.

Concern Statement ALT27: The League has concerns about potential impacts to multiple stakeholders, recreation, cultural resources, hydropower, wildlife, riverbanks, water intakes, and other existing infrastructure. We ask that the Final EIS fully evaluate impacts of test releases when combined with rapidly rising inflows from the Missouri's tributaries.

Correspondence ID: 12 **Comment ID**: 12l

Response ALT27: Tributary inflow is captured as part of the 82 year period of record used to model flows in the EIS.

Concern Statement ALT28: If this plan is so critical I believe FWP should provide funds to repair and develop infrastructure to allow downstream users to continue with their operations. The severe

bank erosion will result in a significant loss of land (an asset we as producers have paid for) and how are we to be compensated for that? It is much easier to implement a plan with no cost to issuing agency. Why do we as producers have to be subjected to such damages by this plan with no recourse.

Correspondence ID: 21 **Comment ID**: 21f

Response ALT28: The test-flows are part of USACE compliance with the Endangered Species Act. Compliance with the Endangered Species Act is required to continue to operate the System for its authorized purposes including irrigation. The No Action Alternative does not meet the purpose and need of the EIS as described in Chapter 1.

Concern Statement ALT29: We urge the Corps as part of its adaptive approach to the flow tests to seek to refine its predictive capabilities for runoff to enable earlier forecasts. Fourteen days for planning a test seems abbreviated. This is an area that increased collaboration among partners such as NRCS, Montana DNRC and U.S.G.S. might prove helpful. It also might allow for more than a maximum of five test years, and perhaps better ensure the probability of full tests. It's unclear if the 82-year historical window has been bracketed in a fashion to determine if the majority of the years reflecting proposed test flow regimes occurred in the recent 30-year period, or, whether they were randomly spread over the full 8-plus- decade period. It might be that the shifting climate could allow for more – or perhaps fewer -- test flows in a shorter period than, say, occurred before the 1990s. We believe the more tests, with adoptive tweaks, the more scientific certainty we'll have on whether flow modifications from Fort Peck Dam will improve pallid sturgeon survival and recruitment enough to meet recovery goals

Correspondence ID: 23 **Comment ID**: 23e

Response ALT29: Years where full test flows could occur are spread throughout the period of record. If test flows are successful and the USACE intends to adopt them as part of regular operations in the future, another more-detailed process would occur to add the flows to the Master Manual. This process would include more detailed modeling and additional tools such as climate modeling.

Concern Statement ALT30: AWO remains concerned about the precedent Fort Peck test flow releases could set for future management actions on the Missouri River. If the test releases proposed under Alternative 1 are implemented, the Corps should assure stakeholders that this type of action will be limited to Fort Peck.

Correspondence ID: 64 **Comment ID**: 64c

Response ALT30: The Fort Peck test flows are specific to hypotheses related to pallid sturgeon below Fort Peck Dam.

Concern Statement ALT31*:* About 20 years ago we went through a similar scenario called the Spring Rise and when it was over, we thought all sides of this subject kind of came to an understanding that the Glendive Intake project would allow the Pallids to go around the Glendive intake dam and up the Yellowstone River to spawn. This project is almost finished and would have been completed and Pallid Sturgeon going up the Yellowstone River to spawn naturally. I believe the project was delayed by some environmental groups! This project is almost finished for the betterment of all fish species! We irrigators thought the Glendive fish ladder would stop the spring rise and not have to be bothered with future spillway tests. If the spillway needs to be spilled because of high water in the lake, so be it!

Correspondence ID: 68 **Comment ID**: 68e

Response ALT31: The test-flows are part of USACE compliance with the Endangered Species Act. Compliance with the Endangered Species Act is required to continue to operate the System for its authorized purposes including irrigation. The No Action Alternative does not meet the purpose and need of the EIS as described in Chapter 1.

Concern Statement ALT 32: I believe the Milk River watershed through the Saint Mary siphons into the Milk River and flowing into the Missouri River just below the Fort Peck spillway, is very important for all fish species and has helped the fisheries very much. I also believe that Pallids will go up the Milk in years of big spring flows. The biologists have observed this! If the Saint Mary project could all be finished, the flow down the Milk River could almost be doubled and the long curvy Milk River could be very beneficial for the Pallds. This river could allow pallid larval time to float down this warm turbid water to deposit into the Missouri River if the Saint Mary system was at full flow. It seems that the EPA has a lot of money in its budget so the Milk River projects could go forward for the benefit of all fish species. There has been talk of a fish ladder at Vandalia Dam which would increase the amount of river miles for all fish species

Correspondence ID: 68 **Comment ID**: 68f

Response ALT32: The test-flows from Fort Peck Dam are part of USACE compliance with the Endangered Species Act. Compliance with the Endangered Species Act is required to continue to operate the System for its authorized purposes including irrigation. The No Action Alternative does not meet the purpose and need of the EIS as described in Chapter 1. The alternatives in the EIS represent the best available science related to potential flow actions from Fort Peck Dam. The Adaptive Management process provides the opportunity to learn and improve from the actions proposed in the DEIS, and has a mechanism for incorporating new ideas and suggestions into the action development process. Ideas such as the one provided in the comment could receive consideration and be elevated, depending on the results from the study described in the DEIS.

Erosion

Concern Statement ER1*:* The flow release rate of change following this high-flow event occurs too rapidly and will lead to massive erosion of riverbank. Erosion is already occurring on

this stretch of the River under controlled management of the Dam. A 20,000-27,000 cfs reduction in releases over the short span of two weeks will expedite erosion beyond an adaptable level. This is a loss of property that can never be replaced – a loss of income for a farmer or rancher whose livelihood relies on the land and a loss of cultural and historical resources for the Fort Peck Assiniboine & Sioux Tribes.

Correspondence ID: 59 **Comment ID**: 59g

Response ER1: The descending limb of the test flow hydrographs are limited to no more than a 3,000cfs per day reduction to reduce the potential for erosion below Fort Peck Dam. Physical monitoring of the test flow would also include erosion monitoring in order to detect unforeseen impacts related to erosion.

Concern Statement ER2: Changing flows will cause bankline erosion, adverse impacts to bankline stability and bankline vegetation, erosion on private landowners property and decreased property value, and threatens adjacent infrastructure, minimizes access to the water and interferes with crop production and equipment used for crop production. Erosion will cause increased turbidity which increases the amount of pump maintenance required.

Correspondence ID: 4, 5, 6, 8, 11, 22, 26, 35, 39, 50, 51, 53, 55, 75
Comment ID: 4b, 5b, 6c, 6e, 8a, 11a, 22e, 26c, 28e, 35d, 39F, 55b, 53f, 53e, 51b, 50h, 75b

Response ER2: The irrigation analysis included in the DEIS utilized data and information collected during the field survey of intakes completed in the summer of 2020. The irrigation section of the EIS considers the impacts of the test flows on irrigation intakes including the potential costs to replace equipment, make repairs and the increase in O&M costs that would occur from the test flows. The NED and RED analysis include these impacts. In addition, the FEIS includes additional narrative that discusses other types of impacts from the test flows (e.g. debris in the river).

Concern Statement ER3: USACE should plan to implement bank stabilization, protect irrigation, and municipal pump sites must be incorporated and installed before any man made June rise below Fort Peck Dam. Labor resources are limited in rural Montana, finding help to address irrigation equipment to fix erosion issues all at once will present a problem.

Correspondence ID: 11 **Comment ID**: 11e

Response ER3: The irrigation analysis included in the DEIS utilized data and information collected during the field survey of intakes completed in the summer of 2020. The irrigation section of the EIS considers the impacts of the test flows on irrigation intakes including the potential costs to replace equipment, make repairs and the increase in O&M costs that would occur from the test flows. The NED and RED analysis include these impacts. Some of the increased costs consider the availability of resources to address impacts to pumps and intakes from the high flows.

Concern Statement ER4: When the river levels are manipulated as the proposed study indicates we will experience a greater level of bank erosion. This results in a loss of land and riparian areas containing trees brush and grass which will enter river channel causing damage to downstream facilities. We are an active participant in the Montana Block management program providing habitat for big game and many species of birds which attracts hunters from many states. Ruining this habitat will have an adverse effect on game populations along the river.

Correspondence ID: 21 **Comment ID**: 21b

Response ER4: The descending limb of the test flow hydrographs are limited to no more than a 3,000cfs per day reduction to reduce the potential for erosion below Fort Peck Dam. Physical monitoring of the test flow would also include erosion monitoring in order to detect unforeseen impacts related to erosion.

Concern Statement ER5: I feel strongly that the EIS does not properly address the damage that the high flows will do to my property through erosion of the bank, loss of irrigated land, and need to relocate irrigation infrastructure. The EIS is insufficient in stating the loss of property I will have to erosion or in providing a means in which I can protect my property from such.

Correspondence ID: 49 **Comment ID:** 49a

Response ER5: The irrigation analysis included in the DEIS utilized data and information collected during the field survey of intakes completed in the summer of 2020. The irrigation section of the EIS considers the impacts of the test flows on irrigation intakes including the potential costs to replace equipment, make repairs and the increase in O&M costs that would occur from the test flows. The NED and RED analysis include these impacts.

Concern Statement ER6: Increasing the river flows to 2x and 3.5x the spring average will cause irreparable harm and loss of acreage along our almost 1 mile of river bank. Every square inch of that ground is vital to our operation and I guarantee that this planned flow increase will erode ground and take away from us and this consequently puts the viability of our operation in question.

Correspondence ID: 42 **Comment ID**: 42a

Response ER6: The descending limb of the test flow hydrographs are limited to no more than a 3,000cfs per day reduction to reduce the potential for erosion below Fort Peck Dam. Physical monitoring of the test flow would also include erosion monitoring in order to detect unforeseen impacts related to erosion.

Concern Statement ER7: Every change in flow and stage encourage the river to seek an equilibrium and results in changes to the channel. Higher flows result in more erosion. A sediment study measured the sediment transport of the Missouri River below Fort Peck at 7 million tons per year compared to the unregulated flow of Yellowstone which deposits 35 million tons per year into the Missouri River system. High flows flowed by a rapid drawdown will threaten infrastructure, bank stability, and deposit sediment and debris in side channels.

Recommendation:.1 Reduce the rate of drawdown below 3000 cfs per day. 2. Lower the maximum flow below 35,000 cfs. 3. Use existing USACE authority under past WRDAs to protect streambanks and offer sloughing easements to landowners with high rates of erosion. 4. Work with local stakeholders to identify and increase monitoring sites from proposed 20 cross sections, only about one for every 10 miles of river.

Correspondence ID: 52 **Comment ID:** 52f

Response ER7: The descending limb of the test flow hydrographs are limited to no more than a 3,000cfs per day reduction to reduce the potential for erosion below Fort Peck Dam. Physical monitoring of the test flow would also include erosion monitoring in order to detect unforeseen impacts related to erosion.

Socio/Economic Effects

Concern Statement ECON1: The economic analysis in the DEIS is difficult to comprehend, USACE should present the economic analysis in a more clear and concise manner

Correspondence ID: 7 **Comment ID**: 7g, 74c, 74a

Response ECON1: The USACE follows economic guidance when preparing feasibility and environmental compliance evaluations (Engineering Regulation 1105-2-100: Planning Guidance Notebook; National Economic Development Procedures Manual: Primer; National Economic Development Procedure Manuals, and others). The USACE has provided details on the economic approach in the technical reports in Appendix F, Environmental Consequences Technical Reports. The EIS summarizes the results of the economic analyses detailed in the technical reports. Additional discussion is included in the FEIS to help explain the approach and results of the economic analysis.

Concern Statement ECON 2: The economic losses presented in the DEIS are understated and should be reviewed by MRRIC ISAP.

Correspondence ID: 7, 56 **Comment ID**: 7h, 56j

Response ECON2: The EIS was reviewed by the MRRIC ISAP as part of the Independent External Peer Review process.

Concern Statement ECON3: The period of record utilized provides skewed information for projecting impacts; when USACE makes a decision the probability and economic impacts of those missing

years should be added. Any averaging of impacts over 81 years of the last 90 years is troubling as those feeling the negative economic impact in any given year would take no solace that it may be a relatively small if averaged over multiple generations of time.

Correspondence ID: 10, 26 **Comment ID**: 10g, 26k

Response ECON3: The economic analysis does look at average impacts over the Period of Record as well as annual impacts that occur during the test flow years (full and partial test flows) as well as in years after the test flows for some resources (e.g. recreation). The goal is to report impacts over different time periods to provide an understanding of the impacts to each individual resource.

Concern Statement ECON4: The electric infrastructure that exists to provide rural communities with power is extensive. The test flows would have an adverse impact that would affect the electrical supply needed to operate pumps as connections from transformers to the pump would require alteration and resizing.

Correspondence ID: 10 **Comment ID**: 10a

Response ECON4: The EIS evaluated the impacts to electricity generation under the hydropower and thermal power resource sections. In addition, under the irrigation section, the analysis considered the impacts to irrigation pumps from high and low flows including impacts to electrical systems that supply the pumps.

Concern Statement ECON5: The time of year the flow tests are needed will cause lower priced market times, providing less value of the higher generation during flow tests and later increased costs due to less generation in higher priced times of the year. This increased seasonal price volatility has the potential to increase the economic impacts on generation than indicated in the DEIS analysis. The analysis was comprehensive and was based on very different market (generation mix and greater seasonal variability) than we see in 2021 and beyond. This point is not a criticism of the analysis, it is reality of a rapidly changing power market as we experienced in February of 2021 when significant MW's of generation with on-site fuel storage has been retired and fuel supply via pipelines interrupted at a time wind in the region was at times only 2 MPH, too low to provide any generation. The electric market is rapidly changing and is already includes a very different generation mix than when the economic analysis was completed for the DEIS.

Correspondence ID: 10 **Comment ID**: 10e

Response ECON5: Comment noted. The USACE believes the hydropower modeling was comprehensive and allowed for a reasonable comparison of alternatives and their potential impacts.

Concern Statement ECON6: Test flows would have adverse effect on hydropower, USACE's assessment of minor and short-term impacts are misleading. The costs from the test flows on power suppliers may carry over into multiple years. Although we have reached out to some involved in

the analysis and have not received a definitive answer, it does not appear the complete economic impact is stated in a test flow year. Unless the economic period and reservoir system storage period match, the analysis is misleading. While this miss-match may be unintentional or an explanation buried in the 2500+ page document, we continue to look for clarification. We are unsure if economic analysis considers a generation year for economic analysis either from October 1 to September 30 of the following year or at a full calendar year. Neither is likely to begin and end with the same amount of storage and elevations. Clarification is needed here or the economic impact in a stated year may understate the economic impact on hydro generation of a flow test. These considerations may change which alternative's economics have the greater cost to hydropower.

Correspondence ID: 10 **Comment ID**: 10c

Response ECON6: The text in the Final EIS clarifies that effects may carry into multiple years.

Concern Statement ECON7: Any action that raises the cost of hydropower is passed on to the ratepayer and may make power unaffordable to Montanans that depend on it for electricity.

Correspondence ID: 10 **Comment ID**: 10b

Response ECON7: The test flows are similar in timing and magnitude to those experienced in 2018. The EIS analysis does not predict a change in hydropower to the extent that ratepayers would be impacted.

Concern Statement ECON8: The statement on page 26 that "hydropower would have relatively small, short-term adverse impacts" is from our perspective, very misleading. At Fort Peck $7,000,000 in a given year, add to that the potential hydropower share of the spillway repair costs which are estimated (Page 26) to be in the $20,000,000 to $40,000,000 million dollars, is not a small or short-term impact. Hydropower historically is expected to fund 40 to 50% of such repair cost. The soils under the Fort Peck spillway challenging as they are, are not solid bedrock like the spillways at some dams which are built on granite or other hard bedrock. With increased likelihood of very high-cost spillway repairs, provisions should include a prohibition against assessing any percentage of spillway repair costs to hydro that are due to flow tests, as all WAPA incurred costs are ultimately paid by electric ratepayers.

Correspondence ID: 10, 63 **Comment ID**: 10f, 63a, 63b

Response ECON8: The test flows are similar in timing and magnitude to those experienced in 2018. The EIS analysis does not predict a change in hydropower to the extent that ratepayers would be impacted.

Concern Statement ECON9: The test flows would have an adverse impact that is greater effect than that of "short term" and "temporary" as described in the DEIS. Specifically, employment and operations impacts for the Sidney Sugars Inc facility, loss of income and livelihood for private

irrigators and regional economic impacts from entities that rely on irrigation. The DEIS repeatedly measures impacts chronographically rather than agronomically and agriculturally. The DEIS and attachments do not contain an agronomic or agricultural assessment of the critical irrigation timing effects. The "List of Preparers" of the DEIS does not make clear who among the preparers, if anyone, is qualified as an agronomist or agriculturalist to assess the timing impacts. (General Concern Being Economic Devastation)

Correspondence ID: 4, 13, 17, 18, 26, 27, 30, 32, 33, 56, 59 **Comment ID**: 4h, 13c, 17a, 18a, 26f, 27a, 30a, 32a, 33a, 59q, 56k

Response ECON9: The irrigation analysis includes an assessment of regional economic impacts from a reduction in crop productivity if the test flows adversely impacted irrigation intakes. The analysis includes the direct and indirect impacts to jobs and income from a loss in production of sugar beets. The irrigation analysis includes assumptions regarding the timing of the test flows, occurring in the middle of the growing season, and the impact this timing will have on crop productivity. Because the regional economic model is a backward linked model, downstream effects of a reduction in sugar beet production are not evaluated (e.g. processing facilities). The FEIS includes additional qualitative discussion that reductions in crop production caused by the test flows may have additional adverse impacts on the regional economy than are measured by the model. The project team includes economists that have evaluated agricultural impacts in Montana and other areas for the USACE and other federal agencies.

Concern Statement ECON10: Test flows will negatively impact recreation, and the ability to access the river and recreation sites.

Correspondence ID: 19 **Comment ID**: 19c

Response ECON10: Thank you for your comment. The recreation resources section provides an evaluation of how the test flows, specifically water surface elevations in the river and Fort Peck Lake, would impact boat ramp access and visitation. In addition, a boat ramp analysis has been added to the EIS to show how the changes in boat ramp access in the river and reservoir would be affected under the test flow alternatives and compared to the no action alternative. The evaluation shows that the test flows do adversely affect recreational access and fishing success as well as visitation in some of the years in which the test flow occurs and the year after the test flow occurs.

Concern Statement ECON 11: My land has important family heritage and sentiment associated with it. I want to ensure I have the ability to keep it in the family and pass it down to the next generation.

Correspondence ID: 9 **Comment ID**: 9a

Response ECON 11: Thank you for your comment. We have tried to evaluate the potential adverse impacts of the test flows and design them in a way to avoid those impacts to farm operations along the river.

Concern Statement ECON12: Sidney Sugars provided Abt Associates, contracted by the USACE, a detailed report of the affected acres, payments to growers, lost revenues and economic impact estimates, but that information is missing in the DEIS. For Sidney Sugars, approximately 22% of our contracted acres will be directly affected; growers may choose not to contract sugar beets if they are unsure what the flow impacts will be. A loss of 22% equates to 25 million per year in loss of revenue. The conservative local economic impact of our facility closing is around 80+ million per year. Sidney Sugars employs 118 full time employees with an additional 160 employed during our five to six month processing campaign and another 200 during sugar beet harvest season.

Correspondence ID: 13, 14, 59 **Comment ID**: 13b, 14a, 59p

Response ECON 12: The information that was provided by Sidney Sugars was considered when developing the NED and RED analysis associated with the irrigation section. Additional discussion was added to the FEIS that emphasizes the importance of sugar beet production to the regional economy including the production plant in Sydney.

Concern Statement ECON13: Employees living in and around Sidney area would probably lose their jobs and houses due to the loss of work at the factory and it would be devastating to the local community.

Correspondence ID: 14, 41 **Comment ID**: 14b, 41d

Response ECON13: The RED analysis of irrigation operations considers the indirect economic impacts of a reduction in sugar beet production tied to the test flows. Additional language was added to the FEIS to emphasize the importance of this production to the local economy.

Concern Statemen ECON14: The DEIS fails to illustrate the impact to irrigation and the corresponding impact to the economy of the region that relies largely on agriculture.

Correspondence ID: 47, 59, 65 **Comment ID**: 59i, 65a, 47b

Response ECON14: The RED analysis of irrigation operations considers the impacts of a reduction in crop production resulting from the test flows. Additional language was added to the FEIS to emphasize the importance of this production to the local economy.

Concern Statement ECON15: The EIS does not properly address the effects on the irrigator, their costs, or their loss of income.

Correspondence ID: 36, 39, 42, 46, 49, 50 **Comment ID**: 50f, 49h, 46a, 42c, 39e, 36a

Response ECON15: The NED and RED analysis of irrigation operations considers the impacts of a reduction in crop productivity and increases in costs resulting from the test flows. The analysis includes an estimate of changes in net income and jobs resulting from the test flows.

Concern Statement ECON16: There is no description of how the USACE will mitigate economic loss to irrigators and other affected by the test flows.

Correspondence ID: 39, 40, 44, 54, 59 **Comment ID** 40a, 59e, 54a, 44h, 39d

1. Response ECON 16: The alternatives were designed with a series of planning constraints that are intended to avoid and minimize impacts to the extent possible while still following the best available science on pallid sturgeon flow needs. The main constraints include:
    a. Maximum flow/stage limits were set at various locations downstream of Fort Peck to avoid potentially increasing potential flood impacts during periods of high flow of a test release. Limits were set at the Wolf Point, and Culbertson gage stations and a high stage criteria at Williston, ND. A 14 day forecast that could lead to exceeding any of these limits would trigger a decision process for determining whether to continue with the test flow.
    b. Flow rate of change was set at a maximum of 3,000 cfs per day to avoid potential bank erosion and potential impacts to water intakes that could occur with faster flow changes.
    c. Minimum flow release was set at 8,000 cfs as measured at the Wolf Point, MT gage (51 miles downstream of the Milk River confluence) in years where a test flow is implemented in order to avoid potential impacts for M&I and irrigation water intakes.

    Any remaining impacts attributable to access to Missouri River water would be the responsibility of the water user to rectify if they choose. Varying patterns of basin runoff and System operation for a variety of purposes cause fluctuations in river levels and sediment patterns and it is the responsibility of the user to maintain access to water during these fluctuations.

Concern Statement ECON 17: Farmers and Ranchers are the main support system in the community. The entire small communities in our area would be impacted. Without irrigation, we would not yield enough crop to feed cattle in our operation.

Correspondence ID: 29, 39, 56 **Comment ID**: 29G, 39C, 56i

Response ECON17: The NED, RED and OSE analysis of irrigation operations considers the impacts of a reduction in crop production and increases in costs resulting from the test flows. The analysis includes an estimate of changes in net income and jobs resulting from the test flows.

Concern Statement ECON18: Through Central Montana we receive a large amount of power from Western Area Power Administration (W AP A) that is both affordable and reliable which allows rates to be relatively affordable even with high costs of delivering the

electricity in such a rural area. Agricultural makes up a large amount of our surface territory as well as our sales. We currently have 60 current memberships using irrigation, primarily in northern Blaine County. If W APA were to raise rates, Big Flat Electric Cooperative could very easily struggle financially. Many of our members are currently on federal financial assistance or fixed incomes and we receive roughly $4,500 per month from Tribal LIEAP. Our rates would more than likely have to raise to accommodate any potential increase. Some members already have difficulties paying month to month especially in our cold winter months.

Correspondence ID: 56, 57 **Comment ID**: 57a, 56b

Response ECON18: The test flows are similar in timing and magnitude to flows experienced in 2018. The EIS analysis does not predict a change in hydropower to the extent that ratepayers would be impacted.

Tribal Concerns

Concern Statement TC1: Environmental Justice Executive Order 12898, issued in 1994, directs federal agencies to incorporate environmental justice as part of their mission by identifying and addressing the effects of programs, policies, and activities on minority and low-income populations. Roosevelt County Montana ranks 2546 in median household income 3,142 counties data from 2013-2017 The proposed actions of Fort Peck Test Flows have shifted most of the impacts from stakeholders of Lake Sakakawea to the four-county area below Fort Peck Dam. Roosevelt county as noted below ranks 2546 of 3142 U.S. counties in median household income for the years 2013-2017. The draft EIS shows Roosevelt County experiencing more negative impacts than any other county. The Fort Peck Indian reservation borders the right bank of the river for much of the impacted area. The USACE has not fulfilled its responsibility in identifying and addressing the effects of the selected alternatives to low-income and minority populations.

Correspondence ID: 52 **Comment ID:** 52m, 52e

Response TC1: The EIS evaluated the impacts of the test flows on low income and minority populations from the test flows. This includes potential impacts to water supply and irrigation intakes and increases in the potential for flooding downstream of Fort Peck Dam. The specific impacts to low income and minority populations are discussed in Section 3.12 of the FEIS.

Concern Statement TC2: Both Alternatives would decrease bank stability and promote lateral shifting of the Missouri River.

Correspondence ID: 8 **Comment ID**: 8a

Response TC2: The test flows are similar in timing and magnitude to those experienced in 2018. The EIS analysis does not predict significant impacts in terms of bank stability and shifting of the channel. Physical monitoring during a test flow would include erosion monitoring.

Concern Statement TC3: Both Alternatives would guarantee flood events each year, this would alter the physical location of the southern boundary of the Reservation. The DEIS does not analyze how the test flow would affect Fort Peck Tribes' Reservation boundaries.

Correspondence ID: 8 **Comment ID**: 8b

Response TC3: The test flows are similar in timing and magnitude to those experienced in 2018. The EIS analysis does not predict a change in flows to the extent that the reservation boundary would be affected.

Concern Statement TC4: Accretion can lead to quite title actions, where the Tribes could lose part of their Reservation and result in costly litigation.

Correspondence ID: 8 **Comment ID**: 8c

Response TC4: The test flows are similar in timing and magnitude to those experienced in 2018. The EIS analysis does not predict a change in flows to the extent that the reservation boundary would be affected.

Concern Statement TC5: Why has the Fort Peck Tribe not been engaged by USACE and USFWS?

Correspondence ID: 28 **Comment ID**: 28h

Response TC5: Appendix B of the DEIS details Tribal Coordination to date. Scoping was initiated with Tribes signatory to the Programmatic Agreement which includes the Assiniboine and Sioux Tribes of Fort Peck, in a letter dated 6 Feb 2019. Government-to-Government consultation was offered to signatories of the Programmatic Agreement, to include the Assiniboine and Sioux Tribes of Fort Peck in a letter dated 17 July 2019. A formal consultation meeting was held between the Fort Peck Tribes and the USACE on August 13, 2021.

Concern Statement TC7: The Tribes possess one of the oldest water rights on the Missouri River, May 1888, inadequate discussion of how the test flow will impact tribal water rights is in the DEIS.

Correspondence ID: 8 **Comment ID**: 8e

Response TC7: The Final EIS clarifies that test-flows do not establish, regulate, determine, quantify, or impact consumptive water rights for any State, Tribe, or individual. USACE operates the Mainstem System in accordance with federal legislation that Congress has enacted. In accordance with Congressional intent, USACE endeavors to operate its projects for their authorized purposes in a manner that does not interfere with lawful uses pursuant to State and Tribal water right authorities. USACE develops water control plans and manuals through a public process, affording all interested parties the opportunity to present information regarding uses that may be affected by USACE operations for authorized purposes of its projects.

Concern Statement TC8: USACE has failed to consider that the Tribes' water quality standards to protect sacred and cultural uses.

Correspondence ID: 8 **Comment ID**: 8f

Response TC8: Temperature was modeled as part of the impacts analysis because it is likely the parameter that would be most affected by the test flows. Modeling results are presented in Chapter 3 of the Draft EIS. Based on the magnitude and duration of flows it is not anticipated that the test flows would cause more than a negligible impact in terms of turbidity, pH, hardness, alkalinity, and common contaminants although these parameters are also discussed in Chapter 3.

Concern Statement TC9: Irrigated water is the only reliable source of fresh water for the reservation, there is no other reliable fresh water for tribal members and supports a substantial portion of the Reservations economic activity.

Correspondence ID: 8 **Comment ID**: 8g

Response TC9: The test flows are not anticipated to affect the reliability of fresh water. Impacts from test flows to water supply and irrigation intakes for the Fort Peck Tribe are discussed in Sections 3.6.2.10, 3.7.2.12 and 3.12.2 of the EIS.

Concern Statement TC10: USACE must consider how the test flow will protect the Tribes' agricultural land.

Correspondence ID: 8 **Comment ID**: 8h

Response TC10: Impacts from test flows to water supply and irrigation intakes for the Fort Peck Tribe are discussed in Sections 3.6.2.10, 3.7.2.12 and 3.12.2 of the EIS.

Concern Statement TC11: USACE should consult with BIA and BoR and the Tribes to ensure that the ASRWSS and the Irrigation Project are not adversely affected from the test flows.

Correspondence ID: 8 **Comment ID**: 8j

Response TC11: The test flows are not anticipated to affect the ASRWSS and Irrigation project. Impacts from test flows to water supply and irrigation intakes for the Fort Peck Tribe are discussed in Sections 3.6.2.10, 3.7.2.12 and 3.12.2 of the EIS.

Concern Statement TC12: The change in flows will adversely affect the Fort Peck Tribes' water intakes.

Correspondence ID: 8 **Comment ID**: 8i

Response TC12: The test flows are not anticipated to adversely affect the Fort Peck Tribes' water intakes. Impacts from test flows to water supply for the Fort Peck Tribe are discussed in Sections 3.6.2.10 and 3.12.2 of the EIS.

Concern Statement TC13: The USACE will need to consult with the Fort Peck Assiniboine and Sioux Tribes. We have worked closely with their leadership during this process, and it is apparent that the government-to-government consultation with the Tribes and the USACE has not occurred. They stand to lose just as much as the private irrigators downstream of the Dam, and they have not been afforded their opportunity to express this concern.

Correspondence ID: 61, 78, 79 **Comment ID**: 61x, 78b, 79c

Response TC13: The USACE conducted a formal consultation with the Fort Peck Tribes on August 13, 2021 in addition to working with tribal members on water intakes and cultural resources at different points throughout the project.

Concern Statement TC14: Our concerns are for the cultural resources that are along the Missouri River on the southern part of the reservation borders and our ancestral homelands on the Badlands on the southern part of the Missouri River

Correspondence ID: 79 **Comment ID**: 79a

Response TC14: The modeling in the EIS shows o significant overall change in risk to the modeled cultural resources sites as compared to No Action. The modeling isn't detailed enough to pinpoint exact impacts to each known site, but it does allow for a relative comparison of the alternatives. The USACE has shared inundation mapping with the Fort Peck Tribes for use in identifying potential impacts to other cultural sites the Tribes are aware of. The USACE remains open to discussions with the Tribes regarding site monitoring of cultural sites during years when a test flow would occur. Particularly during the hydrograph peak and descending limb portions of the hydrograph.

Concern Statement TC15: The test flows would be a paradigm shift in traditional cultural practices which existed far before the Dam was created. Water is a natural element and it is a tough thing to watch when we have people who are fluid in interacting with these elements and there is no control over these things other than an agency doing it.

Correspondence ID: 79b **Comment ID**: 79b

Response TC15: The USACE conducted a formal consultation with the Fort Peck Tribes on August 13, 2021 in addition to working with tribal members on water intakes and cultural resources at different points throughout the project. The USACE recognizes and takes seriously the Tribes' unique and deep relationship to the Missouri River. The

USACE is open to continued discussions with the Tribes' on how to best meet endangered species act responsibilities while minimizing disruptions to cultural sites and practices.

Outreach

Concern Statement OUT1: I am a landowner/operator that would be impacted by test flows, up until this date, I have never received any notices regarding this proposal.

Correspondence ID: 20 **Comment ID**: 20a

Response OUT1: The USACE worked with stakeholders to update pump site information leading up to release of the Draft EIS. The analysis and data relied on are described in Chapter 3 of the Draft EIS

Concern Statement OUT2: The two virtual public meetings failed to adequately provide bottom-line impacts to citizens.

Correspondence ID: 22, 26 **Comment ID**: 22b, 26j

Response OUT2: The virtual public meetings were only one means of providing and receiving information. The virtual public meeting presentation provided a summary of potential impacts and referred the audience to the Draft EIS for a more-detailed explanation of potential impacts.

Concern Statement OUT3: We ask that the Corps continue to conduct public outreach and engagement on this ongoing project, and we appreciate the complexity of the topic and multiple interests involved. However, the Corps needs to make sure its outreach efforts are readily accessible, widely distributed and reach stakeholders, including the Tribes and the broader public.

Correspondence ID: 12, 34, 70, 71, 72 **Comment ID**: 12j, 34e, 70a, 71a, 72a

Response OUT3: Thank you for the comment. The USACE is committed to continue informing the public about the potential for test flow releases each year through the Annual Operating Plan process, press releases, website updates and other means.

Concern Statement OUT4: Please report annually to the public, including affected landowners, recreationists, conservationists and local government, on the progress of the test flow experiments. This would go a long way to building public ownership in the project and its objectives.

Correspondence ID: 25 **Comment ID**: 25c

Response OUT4: Thank you for the comment. The USACE is committed to continue informing the public about the potential for test flow releases each year through the Annual Operating Plan process, press releases, website updates and other means.

Concern Statement OUT5: It is important for the public to understand that the test flow activities are not recovery actions; nor should the development of the experimental bypass and new diversion dam at Intake be construed as a recovery action as they are both experiments.

Correspondence ID: 23 **Comment ID**: 23b

Response OUT5: Thank you for the comment. Uncertainties related to the Fort Peck test flow releases are described in Chapters 1 and 2. In future communications on both projects the USACE/USFWS will be clear about the uncertainties associated with both projects.

Concern Statement OUT6: Hydraulic modeling notes no discernable flow changes downstream of Gavins Point Dam, this information should be broadly disseminated.

Correspondence ID: 12 **Comment ID**: 12i

Response OUT6: The Final EIS Executive summary makes clear that flow modeling showed no discernable change below Gavins Point Dam.

Concern Statement OUT7: The DEIS is too long and technical, and insufficient time has been provided for public comment. The DEIS was released during planting season.

Correspondence ID: 22, 26 **Comment ID**: 22a, 26i

Response OUT7: The analysis conducted for the test flow release stretched from 2018 to 2021. The analysis is technical and involved a major multi-year effort to model and quantify potential impacts from the test flows. The executive summary was modified for the Final EIS to provide an explanation of impacts more easily understood by the average reader. The USACE made a commitment during the 2018 Endangered Species Act consultation to conduct a study of test flows in a reasonable timeframe and ability to potentially implement by 2022. The EIS schedule was delayed several times to accommodate stakeholder (e.g., irrigation) concerns.

Concern Statement OUT8: This huge EIS should have come out in the winter months as we as irrigated farmers are crazy busy seeding our crops, ditching, spraying our crops and irrigating to save these crops as we are in a drought! I believe this deadline on this EIS should be delayed so that we farmers and other people can comment that haven't been able too!

Correspondence ID: 68 **Comment ID**: 68H

Response OUT8: The analysis conducted for the test flow release stretched from 2018 to 2021. The analysis is technical and involved a major multi-year effort to model and quantify potential impacts from the test flows. The executive summary was modified for the Final EIS to provide an explanation of impacts more easily understood by the average reader. The USACE made a commitment during the 2018 Endangered Species Act consultation to conduct a study of test flows in a reasonable timeframe and ability to potentially implement by 2022. The EIS schedule was delayed several times to accommodate stakeholder (e.g., irrigation) concerns.

Concern Statement OUT9*:* The USACE needs to improve their public participation strategy when the Final EIS is released for comment. The DEIS is a complex, 600-page document without accounting for the corresponding supplemental information. Amid a drought and busy planting season, the irrigation community cannot be expected to fully understand the consequences of the proposed action by joining poorly advertised virtual public meetings; notably, one of which did not even include an accurate link to join. The next round of public comments necessitates well-advertised, in-person public meetings.

Correspondence ID: 61 **Comment ID**: 61w

Response OUT9: The USACE advertised public scoping and the public comment period through press releases, direct email to stakeholder email lists, MRRIC announcements, and Federal Register notifications. We understand there is a great deal of stakeholder interest in the potential test-flow and we do not construe the number of comments received during the virtual meetings as a lack of interest. We have been actively engaged with the stakeholder community (including the irrigation community) since the beginning of the Fort Peck EIS effort in 2019. We received comments during scoping that helped shape portions of the alternatives we evaluated. In addition, we delayed the EIS effort in 2020 so we could gather more on the ground survey information on irrigation intakes. When we analyze and respond to comments, we will be responding to the substance of the comments rather than numbers of comments. The public meetings were intended to be one way through which interested parties could submit comments. Other ways include email and through regular mail.

Concern Statement OUT10*:* MRCDC understands the vast amount of time and resources the USACE has expended in developing this DEIS. We also recognize the efforts the USACE has made to listen to the concerns of irrigators. While the document acknowledges some of these concerns raised by the irrigation community, the USACE proposed alternatives fail to properly address the colossal impact for farmers and ranchers (irrigators), agricultural businesses, and the four rural counties in the region. We appreciate the opportunity to comment on the Fort Peck Dam DEIS to highlight these concerns.

Correspondence ID: 61 **Comment ID**: 61a

Response OUT10: The test-flows are part of USACE compliance with the Endangered Species Act. Compliance with the Endangered Species Act is required to continue to operate the System for its authorized purposes. The No Action Alternative does not meet the purpose and need of the EIS as described in Chapter 1. Alternatives were developed per the NEPA standard of a reasonable range of alternatives. These were based on the current state of pallid sturgeon science, technical expert input, and public input through the scoping process described in the DEIS.

Concern Statement OUT11: The public engagement to date, as detailed in Chapter 5 of the DEIS, occurred over two years ago. In light of current drought conditions in Montana, as well as additional changes on the ground that have occurred since the last opportunity to participate in the National Environmental Policy Act (NEPA) process, Montanans have not had a sufficient opportunity to provide the USACE with the latest information to inform its decision-making. A proposal of this nature must not be done in a vacuum, and I would encourage a renewed effort to communicate and coordinate with affected communities, tribes, state government agencies, conservation districts, and interest groups.

Correspondence ID: 59 **Comment ID**: 59d

Response OUT11: The USACE advertised public scoping and the public comment period through press releases, direct email to stakeholder email lists, MRRIC announcements, and Federal Register notifications. We understand there is a great deal of stakeholder interest in the potential test-flow and we do not construe the number of comments received during the virtual meetings as a lack of interest. We have been actively engaged with the stakeholder community (including the irrigation community) since the beginning of the Fort Peck EIS effort in 2019. We received comments during scoping that helped shape portions of the alternatives we evaluated. In addition, we delayed the EIS effort in 2020 so we could gather more on the ground survey information on irrigation intakes. When we analyze and respond to comments, we will be responding to the substance of the comments rather than numbers of comments. The public meetings were intended to be one way through which interested parties could submit comments. Other ways include email and through regular mail. The Final EIS describes additional public comment opportunities that occurred subsequent the 2019 scoping period referenced in the concern statement.

Concern Statement OUT12*:* as a preliminary matter, the State of Montana formally requests a 120-day extension of the comment period. As part of the extension, the State requests that the USACE hold in-person public hearings, in the affected communities, to ensure that Montanans have an opportunity to meaningfully engage on this matter. Given the significance of this proposal to tribal nations and communities downstream of the dam,

an extension of the comment period and public hearings will ensure robust and thorough public participation occurs.

Correspondence ID: 59 **Comment ID**: 59a

Response OUT12: We understand there is a great deal of stakeholder interest in the potential test-flow and we do not construe the number of comments received during the virtual meetings as a lack of interest. We have been actively engaged with the stakeholder community (including the irrigation community) since the beginning of the Fort Peck EIS effort in 2019. We received comments during scoping that helped shape portions of the alternatives we evaluated. In addition, we delayed the EIS effort in 2020 so we could gather more on the ground survey information on irrigation intakes. When we analyze and respond to comments, we will be responding to the substance of the comments rather than numbers of comments. The public meetings were intended to be one way through which interested parties could submit comments. Other ways include email and through regular mail. The Final EIS describes additional public comment opportunities that occurred subsequent the 2019 scoping period referenced in the concern statement.

Concern Statement OUT13*:* The USACE has not scheduled or conducted a public in person meeting in the Montana four-county region below Fort Peck since release of the DEIS in March. Stakeholders deserve better.

Correspondence ID: 52 **Comment ID**: 52b

Response OUT 13: We understand there is a great deal of stakeholder interest in the potential test-flow and we do not construe the number of comments received during the virtual meetings as a lack of interest. We have been actively engaged with the stakeholder community (including the irrigation community) since the beginning of the Fort Peck EIS effort in 2019. We received comments during scoping that helped shape portions of the alternatives we evaluated. In addition, we delayed the EIS effort in 2020 so we could gather more on the ground survey information on irrigation intakes. When we analyze and respond to comments, we will be responding to the substance of the comments rather than numbers of comments. The public meetings were intended to be one way through which interested parties could submit comments. Other ways include email and through regular mail. The Final EIS describes additional public comment opportunities that occurred subsequent the 2019 scoping period referenced in the concern statement.

Concern Statement OUT14**:** I believe it would be foolish of the Army Corps of Engineers to allow the test flows on the Missouri River to begin in the spring of 2022 without further study and comment. After all, the mission of the Army Corps of Engineers is to "Deliver vital engineering solutions, in collaboration with our partners, to secure our Nation,

energize our economy, and reduce disaster risk." Please, take more time to consider the potential disaster these test flows will have on families and communities that depend on the Missouri River for their livelihoods.

Correspondence ID: 47 **Comment ID** 47a:

Response OUT 14: The test flows would only be implemented if the conditions described in Section 1.4.2 of the EIS are met in 2022. We understand there is a great deal of stakeholder interest in the potential test-flow and we do not construe the number of comments received during the virtual meetings as a lack of interest. We have been actively engaged with the stakeholder community (including the irrigation community) since the beginning of the Fort Peck EIS effort in 2019. We received comments during scoping that helped shape portions of the alternatives we evaluated. In addition, we delayed the EIS effort in 2020 so we could gather more on the ground survey information on irrigation intakes. When we analyze and respond to comments, we will be responding to the substance of the comments rather than numbers of comments. The public meetings were intended to be one way through which interested parties could submit comments. Other ways include email and through regular mail. The Final EIS describes additional public comment opportunities that occurred subsequent the 2019 scoping period referenced in the concern statement.

Concern Statement OUT15**:** During the public meeting presentations the Corps should have been clearer about what parameters would need to be met to implement a test flow and give a general assessment of when/how often the test flow might be run.

Correspondence ID: 73 **Comment ID** 73a:

Response OUT 15: The Draft EIS presentation described constraints that must be met for a test flow to be run. The presentation also referred listeners to the Draft EIS Section 1.4.2 and Chapter 2 for a more-detailed description of constraints and potential flows.

Hydropower

Concern Statement HYD1: The Big Flat Electric Cooperative service area adjoins the Missouri River and the Milk River flows through East to West. Big Flat Electric definitely understands the attempts to recover the Pallid Sturgeon and hope that it can be successful. However, we just want you to understand how important our power system is to many Montanans and specifically our rural cooperative members rates and sustainability. Please limit the scope of the DEIS to the least cost to Hydro power option as possible while considering needs for the Pallid Sturgeon.

Correspondence ID: 57 **Comment ID** 57b

Response HYD1: Thank you for the comment. The EIS alternatives were designed with a series of constraints that are intended to minimize impacts to other river uses including Hydropower. The USACE believes the alternatives are the least impactful option that is consistent with the current state of pallid sturgeon science.

Concern Statement HYD2: The DEIS estimates hydropower generation impact by assuming the cost of replacement energy and capacity. Baseload thermal resources were used to create a "mix of least cost alternative sources" of energy and capacity. These estimates are already a few years old and based on assumptions that have not held up as additional renewable non-dispatchable resources replace baseload power in the market.

Correspondence ID: 63 **Comment ID** 63a:

Response HYD 2: Thank you for the comment. The USACE believes the hydropower modeling was comprehensive and allowed for a reasonable comparison of alternatives and their potential impacts. The USACE would work closely with WAPA if the test flow were to be implemented and test flows could be stopped if within- test flow year discussions between WAPA and the USACE indicate that extensive hydropower impacts are occurring or anticipated to occur.

Concern Statement HYD3: The regional electric grid risk will increase with the energy transition and so will energy prices during certain times of the year. In regard to the preferred test flow alternatives, wind capacity in the Upper Plains is high in the spring while dropping by half during the summer months. As more wind generation is brought into the wholesale power market prices will adjust to the availability of energy and capacity. Power customers in the region could see negative wholesale wind prices in the early spring months. The opposite could be true in the warmer summer months when energy and capacity will be needed in the regional markets to respond to extreme weather events (i.e. California rolling blackouts).

Correspondence ID: 63 **Comment ID**: 63b

Response HYD 3: Thank you for the comment. The USACE believes the hydropower modeling was comprehensive and allowed for a reasonable comparison of alternatives and their potential impacts. The USACE would work closely with WAPA if the test flow were to be implemented and test flows could be stopped if within- test flow year discussions between WAPA and the USACE indicate that extensive hydropower impacts are occurring or anticipated to occur.

Concern Statement HYD4: The USACE should revisit the hydropower cost impacts with an eye to the rapidly changing energy market in the region. In making any flow decisions, the USACE should

consider the forecasted impact of wholesale market power prices on customer utilities. Working with hydropower stakeholders and the Western Area Power Administration (WAPA), the USACE can better develop sideboards to control hydropower cost impacts.

Correspondence ID: 63 **Comment ID**: 63c

Response HYD 4: Thank you for the comment. The USACE would work closely with WAPA if the test flow were to be implemented and test flows could be stopped if within- test flow year discussions between WAPA and the USACE indicate that extensive hydropower impacts are occurring or anticipated to occur.

Concern Statement HYD5: Mid-West encourages the United States Army Corps of Engineers (USACE) to consider the aggregate cumulative impacts across resource topics when making flow decisions. While the Fort Peck DEIS provides some analysis on cumulative impacts within a resource topic, the DEIS does not address the aggregate of those cumulative impacts on the Upper Missouri River System communities. The resource topic impacts do not occur in vacuum; the cost of the impacts will be multiplied for many in our communities. For example, a farmer in Eastern Montana will have to endure the cumulative test flow impacts on irrigation, water supply, hydropower generation and thermal power generation. The farmer's access to water both for household use and irrigation may be limited or at the very least will be more expensive. In addition, the price the farmer pays in electric utility rates will increase with the cost impacts on hydropower and thermal generation. Mid-West suggests the USACE extend their analysis to aggregate cumulative impacts on communities before making flow decisions. We also join with our customer-owners, the Missouri River Conservation Districts Council, in asking the USACE to provide advanced notification of flow decisions. Advanced notification would allow hydropower customers and WAPA to better prepare for power supply and power purchase impacts.

Correspondence ID: 63 **Comment ID** 63d:

Response HYD5: Thank you for the comment. The USACE believes the hydropower modeling was comprehensive and allowed for a reasonable comparison of alternatives and their potential impacts. The USACE would work closely with WAPA if the test flow were to be implemented and test flows could be stopped if within- test flow year discussions between WAPA and the USACE indicate that extensive hydropower impacts are occurring or anticipated to occur.

Concern Statement HYD6: Mid-West appreciates the opportunity to provide comments on the Fort Peck Dam DEIS. While we have concerns about the preferred alternative, the USACE staff must be commended for their efforts to work with and understand impacted stakeholders. Mid-West looks forward to continuing to engage with the USACE and USFWS on Fort Peck test flows and the overall recovery efforts for the pallid sturgeon. Through MRRIC and other stakeholder opportunities, Mid-West will advocate for customer utilities and their consumer-owners. The

reliable and renewable hydropower generated at Fort Peck is essential to the overall community health of our region. Affordable and dispatchable hydropower will be increasingly important as the country undergoes an energy transition.

Correspondence ID: 63 **Comment ID** 63e

Response HYD 6: Thank you for the comment.

Concern Statement HYD7: Mid-West does not have a preferred alternative and instead requests the USACE incorporate the following additional sideboards to reduce the impact on human considerations across the region:

1. Any needed spillway repairs should be non-reimbursable by hydropower customers. Forcing hydropower customers to pay an additional $10,000,000 to $20,000,000 (potential customer share) on top of an annual $7,000,000 cost will significantly impact energy affordability in the region.
2. The DEIS should be modified to limit maximum flow tests to 28,000 cfs.
3. The USACE should be every effort to avoid partial flow test years.
4. No flow tests should be initiated in April.
5. Flow tests should not be held in back to back years.
6. Careful review and consideration should be given to flow decisions after the completion of the Yellowstone intake and diversion

Correspondence ID: 63 **Comment ID** 63f

Response HYD 7: Thank you for the comment. The USACE believes the hydropower modeling was comprehensive and allowed for a reasonable comparison of alternatives and their potential impacts. The USACE would work closely with WAPA if the test flow were to be implemented and test flows could be stopped if within- test flow year discussions between WAPA and the USACE indicate that extensive hydropower impacts are occurring or anticipated to occur. The flow tests represent the best available science related to the potential benefits of Fort Peck flows for pallid sturgeon. The test flow alternatives were designed with a series of constraints (Section 1.4.2 of the EIS) designed to minimize impacts including hydropower stakeholders.

Concern Statement HYD8: The word “small” in reference to hydropower impacts is relative. The $7million impact that could occur in some years would be in addition to any spillway repairs that could be required if the spillway at Fort Peck Dam is damaged.

Correspondence ID: 77 **Comment ID** 77c:

Response HYD8: The word "small" is a subjective term defined in Chapter 3 of the EIS. Use of these terms is intended to summarize potential impacts. The Final EIS clarifies that while impacts to Hydropower as an authorized purpose could be "small" in the broader sense, there could be years where larger impacts to hydropower at Fort Peck are experienced.

Other Topics

Concern Statement OTH1: A separate pump site on our farm is for a water right permitted for Hydraulic Fracking for gas and oil development. The DEIS does not consider for how the test flow will affect the ability to complete a Frac job of an oil and gas well. If a Frac job is not completed on schedule, it can destroy a 5–7-milliondollar oil and gas well process, not to mention the loss of millions of dollars of revenue over a period exceeding 20 yrs. We feel until oil and gas development considerations are acknowledged in the DEIS, the No Action approach should be taken.

Correspondence ID: 3, 29 **Comment ID**: 29c, 3b

Response OTH1: The alternatives were designed with a series of planning constraints that are intended to avoid and minimize impacts to the extent possible while still following the best available science on pallid sturgeon flow needs. The main constraints include:

d. Maximum flow/stage limits were set at various locations downstream of Fort Peck to avoid potentially increasing potential flood impacts during periods of high flow of a test release. Limits were set at the Wolf Point, and Culbertson gage stations and a high stage criteria at Williston, ND. A 14 day forecast that could lead to exceeding any of these limits would trigger a decision process for determining whether to continue with the test flow.
e. Flow rate of change was set at a maximum of 3,000 cfs per day to avoid potential bank erosion and potential impacts to water intakes that could occur with faster flow changes.
f. Minimum flow release was set at 8,000 cfs as measured at the Wolf Point, MT gage (51 miles downstream of the Milk River confluence) in years where a test flow is implemented in order to avoid potential impacts for M&I and irrigation water intakes.

Any remaining impacts attributable to access to Missouri River water would be the responsibility of the water user to rectify if they choose. Varying patterns of basin runoff and System operation for a variety of purposes cause fluctuations in river levels and sediment patterns and it is the responsibility of the user to maintain access to water during these fluctuations.

Concern Statement OTH2: I am the groundskeeper at School Section Fishing Access Site (FAS) located at river mile 1764 which is one mile upriver of the Fort Peck Spillway. This is a favored spot for access to the Missouri River for fishing to get to the Milk River and spillway area. This FAS launch site is a Favored take-out spot for kayakers and canoers that float and fish from a put in spot from several sites below Fort Peck Dam. This FAS had to be closed during the 2011 High water event when the water backed up the river from the releases from the spillway. The toilet was

inundated from the Missouri River water backing up from the spillway releases and the turn around might not be usable during high water from the test.

Correspondence ID: 68 **Comment ID**: 68d

Response OTH2: Thank you for the comment. The test flow releases are of a much less duration and magnitude than flows experienced in 2011. The test flow releases are most similar to flows experienced in 2018.

Concern Statement OTH4: Also I believe if we have global climate change, we will have warmer weather and the result will be lower runoff from the mountains so that Fort Peck Lake will be lower and will have warmer water coming down through the tunnels to help the fisheries and save a lot of money from lost generation income. Valley County and Montana can't afford to lose lost lake recreation and generation!

Correspondence ID: 68 **Comment ID**: 68g

Response OTH3: The alternatives were designed with a series of planning constraints that are intended to avoid and minimize impacts to the extent possible while still following the best available science on pallid sturgeon flow needs. The main constraints include:

a. Maximum flow/stage limits were set at various locations downstream of Fort Peck to avoid potentially increasing potential flood impacts during periods of high flow of a test release. Limits were set at the Wolf Point, and Culbertson gage stations and a high stage criteria at Williston, ND. A 14 day forecast that could lead to exceeding any of these limits would trigger a decision process for determining whether to continue with the test flow.
b. Flow rate of change was set at a maximum of 3,000 cfs per day to avoid potential bank erosion and potential impacts to water intakes that could occur with faster flow changes.
c. Minimum flow release was set at 8,000 cfs as measured at the Wolf Point, MT gage (51 miles downstream of the Milk River confluence) in years where a test flow is implemented in order to avoid potential impacts for M&I and irrigation water intakes.

Concern Statement OTH6: Section 2.4 states that a test flow can be innated at 2225.0 feet, but there is a minimum constraint of 2227.0 feet, please clarify.

Correspondence ID: 31 **Comment ID**: 31k

Response: Section 2.4 describes early (preliminary) alternatives that were considered. Section 1.4.2 describes the conditions that must be met related to the two test flow alternatives that were caried forward for detailed analysis.

Concern Statement OTH8: The test flows could further increase establishment of leafy spurge, and other invasive species; to which irrigators and USACE alike have invested significant dollars in invasive species management. We are concerned invasive species may spread from test flows, affecting fish and wildlife habitat and operation and maintenance of irrigation pumps.

Correspondence ID: 4, 12 **Comment ID**: 4e, 12h

Response OTH8: It is possible that higher flows could result in additional areas of invasive species establishment. It is also likely that higher flows would be beneficial to native species that are adapted to periodic years of higher flows (e.g. riparian wetlands, cottonwoods).

Appendix 1: Index by Organization

This index is listed by organizations or Individuals that provided comments during the public comment period. Under each organization is a list of the correspondence numbers (shown in blue) associated with the organization, followed by the codes that were used to categorize comments within the correspondence.

Anderson
1, Irrigation & Pump Sites, Pallid Sturgeon & other ESA

Anderson (2)
2, Irrigation & Pump Sites, Pallid Sturgeon & other ESA

Berwick
3, Irrigation & Pump Sites, Pallid Sturgeon & other ESA, Alternatives, Other Topics

Garman
4, Irrigation & Pump Sites, Erosion, Socio/Economic Effects, Other Topics

Carlisle
5, Water Rights & Water Supply, Irrigation & Pump Sites, Pallid Sturgeon & other ESA, Erosion

Bidegaray
6, Irrigation & Pump Sites, Erosion

Coalition to Protect the Missouri River
7, Flood Risk Management, Dam Safety, Pallid Sturgeon & other ESA, Socio/Economic Effects

Fort Peck Tribes Assiniboine & Sioux
8, Irrigation & Pump Sites, Erosion, Tribal Concerns

Harmon
9, Irrigation & Pump Sites, Socio/Economic Effects

Hardy
10, Alternatives, Socio/Economic Effects

Becker
11, Irrigation & Pump Sites, Erosion

Izaack Walton League
12, Dam Safety, Irrigation & Pump Sites, Pallid Sturgeon & other ESA, Alternatives, Outreach, Other Topics

Sidney Sugars
13, Socio/Economic Effects

Roosevelt County
30, Irrigation & Pump Sites, Socio/Economic Effects

North Dakota State Water Commission
31, Flood Risk Management, Pallid Sturgeon & other ESA, Alternatives, Other Topics

Richland County, Board of Commissioners
32, Irrigation & Pump Sites, Socio/Economic Effects

Nichols
33, Irrigation & Pump Sites, Socio/Economic Effects

Pufalt
34, Dam Safety, Pallid Sturgeon & other ESA, Alternatives, Outreach

Remuda Creek Ranch
35, Irrigation & Pump Sites, Erosion

Reynolds
36, Socio/Economic Effects

Towes
37, Irrigation & Pump Sites

Norton
38, Irrigation & Pump Sites

Twitchell & Hintz
39, Irrigation & Pump Sites, Pallid Sturgeon & other ESA, Erosion, Socio/Economic Effects

McCone Conservation District
40, Socio/Economic Effects
Bieber
41, Irrigation & Pump Sites, Socio/Economic Effects

Lambert
42, Irrigation & Pump Sites, Erosion, Socio/Economic Effects

Bauxbaum
43, Flood Risk Management

Marmon
44, Irrigation & Pump Sites, Socio/Economic Effects

Cayko
45, Alternatives

Tihista
46, Irrigation & Pump Sites, Socio/Economic Effects

McGowan
47, Irrigation & Pump Sites, Socio/Economic Effects, Outreach

Olson
48, Irrigation & Pump Sites, Pallid Sturgeon & other ESA

Iversen (3)
49, Irrigation & Pump Sites, Pallid Sturgeon & other ESA, Erosion, Socio/Economic Effects

Agra Industries
50, Irrigation & Pump Sites, Pallid Sturgeon & other ESA, Erosion, Socio/Economic Effects

Knudsen, Montana House District 34
51, Irrigation & Pump Sites, Erosion

Mattelin
52, Dam Safety, Pallid Sturgeon & other ESA, Alternatives, Erosion, Tribal Concerns, Outreach

YDOC Land and Livestock LLC
53, Pallid Sturgeon & other ESA, Alternatives, Erosion

Bauxbaum (2)
54, Socio/Economic Effects

Wheeler
55, Pallid Sturgeon & other ESA, Erosion

Attorney General State of Montana
56, Flood Risk Management, Dam Safety, Water Rights & Water Supply, Pallid Sturgeon & other ESA, Alternatives, Socio/Economic Effects

Big Flat Electric Cooperative
57, Socio/Economic Effects, Hydropower

Lower Yellowstone Rural Electric Cooperative
58, Irrigation & Pump Sites

Governor, State of Montana
59, Water Rights & Water Supply, Irrigation & Pump Sites, Erosion, Socio/Economic Effects, Outreach

Missouri Department of Natural Resources
60, Flood Risk Management

Missouri River Conservation Districts Council
61, Dam Safety, Irrigation & Pump Sites, Alternatives, Tribal Concerns, Outreach

Youpee, Dyan
79, Tribal Concerns

From: Salak, Jennifer L CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: [Non-DoD Source] Fort Peck Dam Test Flow comment
Date: Tuesday, May 25, 2021 1:53:21 PM

From: David Anderson <andersondiamondranch@yahoo.com>
Sent: Tuesday, May 25, 2021 11:13 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>; Charlene_Reddig@daines.senate.gov; Thomas_Culver@tester.senate.gov; Melissa.Dean@mail.house.gov
Subject: [Non-DoD Source] Fort Peck Dam Test Flow comment

I am an irrigator and outdoorsman with concerns over the proposed test flows from Fort Peck Dam.

Irrigating out of the Missouri River below Fort Peck Dam can be challenging under normal circumstances but will likely become near impossible with the proposed flows. Typically high flows (over 20,000 cfs), and the bank erosion that accompanies those flows, will cause silting into backwater and irrigation inlets once those flows are reduced, leaving irrigation pumps without water during a time of high crop demand for water. Keeping flows as stable as possible is necessary for best irrigation management. Irrigators will be put into a bad situation and left scrambling to assess their sites and get water following the rapid drop from higher flows. Higher maintenance and operations costs along with the uncertainty of cropping is the last thing any irrigated farmer needs.

I am also concerned with the possibility of pallid sturgeon hybridizing with the shovelnose sturgeon. It is my understanding that the reason this stretch of river has pure strains of both sturgeon is because the pallid have not had successful recruitment. Isn't it true that successful recruitment will also "successfully" begin a hybridization event in this stretch of the Missouri, which has already happened in other stretches where the pallid sturgeon are spawning with positive recruitment? I am unaware of this concern being addressed.

Thank you for your time,

David Anderson

Culbertson, MT

RE: Fort Peck Test Release DEIS

I agree with the comments of the Missouri River Conservation District concerning the proposed Fort Peck Test Releases DEIS. This proposal could have devastating impact for the irrigators downstream of Fort Peck Dam.

On our operation, Anderson Diamond Ranch, we have one opportunity each year to raise our own crops of sugar beets, barley, and wheat. The cattle feed required for our own cattle operation and the cattle operations of those to whom we sell feed is also dependent on timely irrigation practice. We cannot survive even one year without a cash crop income or cattle feed.

Irrigating from the Missouri is precarious at best. The proposed high/low flows would make pump sites impossible to maintain properly during the most critical times of the growing season.

I think the water releases are an experiment, or opinion, which may or may not have a positive effect on the pallid sturgeon. This proposal will, most certainly, have a negative effect for the irrigators and the people who depend on production from irrigation.

Sincerely,
Bob Anderson
Culbertson, MT

From: Salak, Jennifer L CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: [Non-DoD Source] Fort peck test flows public comment
Date: Tuesday, May 25, 2021 9:37:25 AM

-----Original Message-----
From: Dana Berwick <hayrgrower@gmail.com>
Sent: Tuesday, May 25, 2021 9:12 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Cc: Charlene_Reddig@daines.senate.gov; Melissa.Dean@mail.house.gov; Thomas_Culver@tester.senate.gov; citizensadvocate@mt.gov; contactdoj@mt.gov; mrcdc@macdnet.org
Subject: [Non-DoD Source] Fort peck test flows public comment

Good morning,

I am a fourth generation farmer from Bainville Montana and my family and I farm and ranch on both sides of the Missouri River in Richland and Roosevelt Counties. I have used the economic analysis from the pump site studies done last year and determined using corps of engineers numbers that my family could end up short $750,000 every year the test flows are ran. That would make our business unsustainable and ensure my children don't become the fifth generation farming and ranching here. Irrigators have big investments into infrastructure for irrigation that usually exceed the value of the land and without irrigated crops serving the debt against that equipment is impossible.
There are several oil well locations in close proximity of the river and I could not find in the eis any mention of bank erosion cutting into oil locations and polluting the river. Irrigators have at times had difficulty accessing water at low flows due to nesting birds on the islands on the river, now under the test flow alternatives we are just going to flood the birds off these islands? I feel as though the proposed test flows are just a unthought out over reaction to a mandate to make the sturgeon naturally sustainable. The sturgeon die in the hypocsic waters of garrison, perhaps the change would be more effective there? I am disappointed that there has not been an alternative put forward that is more sensible, why not try 16-18000 cfs hi water and 10,000 low flow, that would be an alternative that everyone could work with and would cause much less damage. I feel strongly that neither proposed alternative should be considered as they are just theories of what could work, and a new alternative that is more moderate be considered instead.

Thank you for your attention

Dana Berwick

US Army Core of Engineers, 5-17-21

I would like you to address my concerns on how this river test will affect my farming & ranching operations.

1. This river test will make irrigating nearly impossible. How can we set our pumps and safely pump water when USACE are raising water levels so high that we have to pull our pumps out of the river & then lower it so low we can't even get water to our suctions? The river needs to stay at a normal level, around 12,000 cfs, to accommodate good irrigation levels. When the Core raises the river to high levels it causes severe damage to pump sites from bank & river channel erosion. It also brings in a lot of silt, old logs, and trees. All damage has to be cleaned up each time before pumps can be reset. This is expensive. My back-channel site costs $6,000.00 to &10,000.00 each time to dredge out depending on how much silt & debris washes in each time.

2. I am also very concerned about the loss of leafy spurge beetles that we have spent thousands of dollars on, over the last 30 years, getting them established on the river banks & bottoms. Does the USACE have a plan to reimburse irrigators, or at least cost share these expenses?

3. What about crop insurance not paying for loss of crops due to not being able to irrigate crops when needed? Crop insurance only covers natural causes, not man-made failures like this test will cause. Does the USACE have a plan to cover these losses? Sensitive crops like sugar beets have to have water on a timely manner. Four or five hot days with no water is devastating to these crops. There is no way an irrigator can sign contracts with beet or soy bean producers when we cannot depend on normal river levels.

I would appreciate it if the core will take into consideration these needs of irrigators up & down the river & the negative economic impact this test will have on the local agricultural economy.

Sincerely,
Shane & Jill Garman

PO Box 410
Culbertson, Mt. 59218
May 21, 2021

U.S. Army Corps of Engineers, Omaha District
CENWO-PMA-C Attn: Fort Peck Draft EIS Comments
1616 Capitol Avenue
Omaha, NE 58102-4901

RE: Comment on Fort Peck Test Releases Draft Environmental Impact Statement

My ranch lies south of Culbertson, Montana along the Missouri River and I own and operate 350 acres of irrigated land producing alfalfa, corn, sugar beets and grain crops. In perusing your environmental statement I find several problems with your draft.

An environmental statement should contain data supporting its value to wildlife. I know of two years that the river flushed brim full which would have supported/or not supported the positive aspects of flushing the river helping endangered species. The State Fish and Game Department runs multiple studies each year which were not included in your report. Yet your report states the increased value for fishing, wildlife, recreation, and government electrical sales. For the farmers it is stated that the damage will be minimal. What is minimal expense to the US government is not **minimal** damage to individual farmers. Farmers believe it is much more cost effective for Fish, Wildlife, and Parks to raise these endangered species in a hatchery.

Another statement was that major erosion is caused by the river undercutting frozen banks. Farmers find that high river flows cause most of the erosion. The last time you flushed, I stood along the river and listened to the continual sounds of land splashing into the river. The lost of this land affects property values, threatens infrastructure, minimizes the access to the water, and interferes with crop production.

The Endangered Species Act was not intended to place the expense on individual land owners along the river. Congress gave $800,000 to the National Fish and Wildlife to implement the Act indicating their willingness to spread the cost. I find it ironic that a public organization reimbursed themselves and never asked Congress for the funds to cover and prevent excessive damages caused by their own actions to private property and labor expenses. The purpose of government is to aid and protect their citizens.

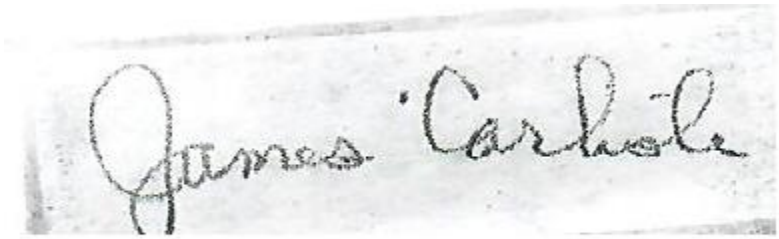
The basis of the Endangered Species Act regarding fish is a 1973 water right giving the State of Montana Fish, Wildlife, and Parks half the flow of the Missouri River. My primary water right is based on the principal of first come, first served and a water right dated 1928. There is nothing in the Endangered Species act condemning private property or the use thereof of an individual to prosper and enjoy his privacy. State and Federal law provides a legal manner to condemn land for public usage, but requires that landowners be reimbursed.

Your study of the various pumping sites did not include any of my three sites, yet you visited all of the tribal sites. This gives an indication that I as an individual mean nothing nothing to your proposal. Earlier I corresponded with your offices in Omaha and listed in excess of $100,000 in damages. This cost involved the moving of pumps, electrical supplies, and the installment of dry wells. I believe the sum of damages you listed amounted to something like $50,000 for the stretch of the river from Ft. Peck to the North Dakota border.

Clearly the algorithms (2) you used to determine damages must have been based on damages to property and investments owned by Fish, Wildlife, and Parks.

The high flow rates interfere with irrigating my crops and cause increased turbidity. The floating trees will require constant management to prevent damaging pumps. Increased turbidity will increase the amount of flushing required to keep pivots from constant flushing and the cleaning of plugged tips. These are not normal issues unless you flush the river. The impact to the general public is grossly understated.

It is my hope that you pursue the “No Action Alternative.”



James D. Carlisle
2carl@nemont.net
Fax: 406 787-5203
Phone 406 787-5203

May 19, 2021

U.S. Army Corps of Engineers, Omaha District
CENWO-PMA-C Attn: Fort Peck Draft EIS Comments
1616 Capitol Avenue
Omaha, NE 68102-4901

RE: Comment on Fort Peck Test Releases Draft Environmental Impact Statement

We are Claude and Tammi Bidegaray and we farm and graze along the Missouri River in Richland County MT. We use the River as our source of water to irrigate the fields and water the cattle. We are the second generation to be farming this land, we have been doing this for 30 plus years.

The Test Releases are effecting us by:

1) We have a side channel that needs to be dug out because the level of the water was 6800CFS (CFS when picture was taken) from Wolf Point Station, it was too low to place our pumps (pictures attached). Our pumps need at least 4 feet of water in channel in order not to damage the suction screens on the pump. We have 2 pumps that go into the same location.
2) Once the water level is to be raised, we will have to pull our pumps in the middle of irrigation season and then try and get them back in the water on fully saturated ground
3) New sand bars are creating a different flow that is eroding the bank in different spots. Our land consists of bentonite clay on top of sand. This causes a lot of slumping and erosion on a much faster pace than 'natural flow of water' (pictures attached)
4) With it being low level of water a lot of debris is exposed and with a high volume of water it will move this said debris down river that will likely get our pumps that can cause damage and cost money to repair.
5) Without proper access to the River we cannot irrigate or graze so this effects our bottom line for income.
6) If we lose our Pump site, that took many years to design, it will take a lot of money to redesign and relocate our pumps so that we can continue irrigating the following season. This is money that we don't have.
7) The way we have the pumps, it is not an option to just extend the pump into the main channel of the river.

Thanks for your time on this matter.

Claude and Tammi Bidegaray

Pump Site, this channel is less than 2 feet deep, looking down stream

Same pump site, side channel, looking across the river

Same Pump site, Channel, looking up stream.

This on our grazing area, circled are 2 new sand bars that have showed since the low flow.

Normal irrigating levels, picture was taken May 2020

This is the slumping that we are dealing with currently on our grazing pasture along the Missouri.

This barbwire fence was put up in the summer of 2020 around the slumping but is now part of the slumping.

COALITION TO PROTECT THE MISSOURI RIVER

519 W. 9th Street, Hermann, Missouri 65041 (573) 690-2324

May 25, 2021

Brigadier General Peter D. Helmlinger, P.E.
Commander, Northwestern Division
U.S. Army Corps of Engineers
P.O. Box 2870
Portland, Oregon 97208-2870

RE: Ft. Peck Dam Test Releases Draft EIS Comments

Dear General Helmlinger:

On behalf of the Coalition to Protect the Missouri River (CPMR), thank you for the opportunity to provide comments regarding the Ft. Peck Dam Test Releases Draft Environmental Impact Statement (DEIS). CPMR, established in 2001, represents the interests of nearly 30 members in six states in the Missouri and Mississippi River basins and supports the maintenance and enhancement of congressionally authorized purposes of the Missouri River, with flood control, navigation and water supply being of utmost importance. We also support science-based habitat restoration for endangered or threatened species, provided that management actions do not interfere with other congressionally authorized purposes that are critical for the citizens in the basin.

In our previously submitted scoping comments, we stressed the importance of using a "system approach" in regard to pallid sturgeon recovery. We want to reiterate the importance of expanding efforts beyond the Missouri River in terms of our learning about pallid sturgeon and we are looking forward to advances in recovery from efforts on the Yellowstone and the Mississippi Rivers as well.

In our scoping comments, we also voiced concern about the precedent that a test flow release from Ft. Peck could set for future test flow releases from other Missouri River mainstem dams. We stand by that concern and again stress that any Missouri River Recovery Program (MRRP) management action at Ft. Peck or elsewhere should be in compliance with the Master Manual. MRRP actions should not compromise lower basin flood control or flow support for navigation and other water supply needs.

In our review of the DEIS, we have major outstanding concerns with this proposed Ft. Peck flow experiment to determine if larval pallid sturgeon can be retained before drifting into Garrison Reservoir:

Impacts to Structural Integrity of Ft. Peck Dam Spillway

While the DEIS claims the test flow exercise will have no impact below Gavins Point Dam, CPMR remains concerned about the potential effects to the rest of the mainstem reservoir system if the Ft. Peck Dam spillway, which still has unrepaired damages from 2011 flooding, were to fail.

The DEIS contains several troublesome statements on this topic:

1) *"The USACE has concerns with spillway slab performance that could be exacerbated with sustained spillway flow."*[1]
2) *"Compared to no action, the number of years with spillway operation are about double for each alternative."*[2]
3) *"Comparing the alternatives, it is not clear that any are preferred to reduce spillway operation damage risk."*[3]
4) *"...using ranked order alternative 1 does appear to have the greatest potential to increase spillway damage risk."*[4]
5) *"Depending on damage extent and allowable repair time period, repair cost is estimated to be in the range of $20 to $40M."*[5]

Despite these statements made by USACE in regard to alternative 1, it has surprisingly chosen this same alternative as its preferred alternative. In our previous scoping comments, we stressed that USACE must not abandon its primary flood control and navigation missions in the Ft. Peck EIS process. In our review of the DEIS, it appears that the concerns of our flood control, navigation and utility members, and most importantly - human life and safety, have been ignored.

Larval Pallid Sturgeon Retention

Once more referring back to our scoping comments, we asked USACE to identify what constitutes pallid sturgeon retention success or failure in respect to management actions. The DEIS states that base alternatives 1 and 2 retain 13 and 12 percent of larvae in full or partial flow years, as compared to the no action alternative. When looking at the "variants" for the

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[1] DEIS, Page xxii, March 2021.
[2] Ibid.
[3] Ibid.
[4] Ibid.
[5] DEIS, Page xxiii, March 2021.

alternatives, this retention percentage drops to 6 and 7 percent for alternatives 1a and 1b, and 6 and 11 percent for alternatives 2a and 2b.[6]

Despite this analysis, we are still left with the question of what the goal or stated benchmark is for retention success in the Ft. Peck to Garrison reach, which we call on USACE to clearly define. While we recognize that efforts to increase retention are required under the Endangered Species Act, USACE should explain if it deems proper the use of up to $40 million in taxpayer funds to repair the flood-damaged Ft. Peck Dam spillway for such a small estimated retention increase. We are not convinced that the end justifies the means in this exercise.

Need for Additional Economic Analysis

The economic analysis contained in the DEIS is confusing, contradictory and likely cumbersome for most stakeholders to comprehend, and we call on USACE to relay this critically important economic information in a much more clear and concise fashion.

For example, the DEIS cites only $279,000 as the full value of the adverse impact of this exercise to oilseeds & grain farming,[7] resulting in less than one direct job affected and less than two total jobs affected. It goes on to state: *"therefore it was determined that a full quantitative RED analysis was not needed."*[8]

Elsewhere, the DEIS cites losses on average of $245,000 per side channel intake under a high flow analysis for alternatives 1 & 2.[9] Further, it displays ranges of $3.4 million to $7.5 million in agricultural losses in the affected reach,[10] making us question the validity of the economic analysis. Time and time again, it appears as if economic analyses from USACE attempt to diminish real and lasting economic harm that can be caused by management actions for a variety of stakeholders.

In this instance, the stakeholders most affected are upper basin irrigators who are asking themselves how many crops they will lose through these proposed alternatives, and we are relatively confident this exercise involves more than the loss of two total jobs. We are certain that the economic estimates to the upper river region are understated, and should be reviewed by MRRIC's Independent Science Advisory Panel (ISAP).

Again, thank you for the opportunity to provide comments on the Ft. Peck Test Releases Draft EIS. We trust that you will take our thoughts and concerns into consideration as you craft a Final EIS and we look forward to continued dialogue through MRRIC & ISAP engagements.

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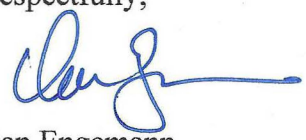
[6] DEIS, Page xxviii, March 2021.
[7] DEIS, Page 3-121, March 2021.
[8] Ibid.
[9] DEIS, Page 3-190, March 2021.
[10] DEIS, Pages 3-190, 3-199, March 2021.

Please do not hesitate to contact me at (573) 690-2324 or danengemann05@gmail.com should you have any questions.

Respectfully,



Dan Engemann
Executive Director

FORT PECK TRIBES
Assiniboine & Sioux

May 25, 2021

Aaron Quinn, Environmental Resources Specialist
U.S. Army Corps of Engineers, Omaha District
CENWO-PMA-C
ATTN: Fort Peck Draft EIS Comments
1616 Capitol Avenue
Omaha, NE 68102-4901

RE: Draft Environmental Impact Statement for Fort Peck Dam Test Releases
86 Fed. Reg. 16207; Agency Docket No. ER-FRL-9055-8; Doc. No. 2021-06280

Dear Mr. Quinn:

The Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation ("Tribes") submit the following comments regarding the United States Army Corps of Engineers' ("Corps") Draft Environmental Impact Statement for Fort Peck Dam Test Releases ("DEIS"). While the Tribes support the restoration of the pallid sturgeon, the Tribes are also concerned about how the proposed actions will affect the Fort Peck Reservation's ("Reservation") boundaries, the Tribes' water rights, tribal water supply and irrigation systems, and tribal inclusion in the planning process.

I. Fort Peck Reservation Boundaries

By the Act of April 15, 1874 ("1874 Act") [1], Congress set aside a 20-million-acre reservation for "the use and occupation of" a number of Indian tribes, including the Plaintiff Tribes, in what is now Montana north of the Missouri River, east of the Continental Divide, and south of the Canadian border. The Tribes continued to reside on this Reservation after it was established,

By the Act of May 15, 1886[2], Congress directed the Secretary of the Interior to negotiate with the tribes occupying the Reservation created by the 1874 Act to secure a substantial land cession from those tribes prior to admission of Montana as a state. By virtually identical agreements entered into in 1886 and 1887, the various tribes ceded major portions of the 1874 Act Reservation to the United States, retaining three smaller and separate reservations—the present-day Fort Peck, Fort Belknap, and Blackfeet Indian Reservations.

Congress ratified these agreements by the Act of May 1, 1888 ("1888 Act")[3]. In those congressionally ratified agreements, the United States agreed that the Reservations would be "permanent homes" for the Indians that would provide them with "the means to enable them to become self-supporting . . . ."[4]

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[1] 18 Stat. 28, 28-29.

[2] 24 Stat. 29, 44.

[3] 25 Stat. 113

Poplar, Montana 59255 P.O. Box 1027 (406) 768-2300

The 1888 Act established the southern boundary of the separate Fort Peck Indian Reservation in northeastern Montana as follows: "[b]eginning at a point in the middle of the main channel of the Missouri River opposite the mouth of Big Muddy Creek; thence up the Missouri River, in the middle of the main channel thereof, to a point opposite the mouth of Milk River; thence up the middle of the main channel of Milk River . . . ."[5] These boundaries established a Reservation that includes a substantial part of the bed and waters of the Missouri River between the Big Muddy Creek and Milk River. Congress has never altered or diminished these boundaries.

Within the Fort Peck Reach, "[t]he channel . . . exhibits a meandering pattern with occasional straight reaches."[6] The DEIS states "the Fort Peck Dam to Lake Sakakawea reach has little to no bank stabilization."[7] Additionally, that area is subject to degradation which "extends from the [Fort Peck Dam] downstream until tapering off between Brockton and Culbertson, MT."[8] "Degradation reaches located downstream of each dam are subject to scour, bank failure, and channel widening with generally lowering river stages over time."[9] The DEIS states "the effects of an elevated flow release followed by a period of low flow is likely to have a detrimental effect on bank stability."[10] Historically, changes in channel geometry "occurred during flood events."[11]

Alternative 2 calls for a change in flow from 28,000 cfs on June 10-13 to 8,000 cfs on June 28.[12] Alternative 1 will have similar effects depending on the spring release. Such rapid changes would increase stream bank destabilization, and therefore, promote lateral shifting of the Missouri River. Both Alternatives would guarantee flood events each year. Thus, the Alternatives would encourage channel-bed shifting. This would alter the physical location of the southern boundary of the Reservation.

The legal ramifications of these actions are unclear. Shifts in the Missouri River channel due to test releases could be classified as either accretion or avulsion. Accretion is the slow movement of a river over time and results in one property owner gaining land taking title from the property owner losing land.[13] Avulsion is the rapid shift of "in the location of the banks of a waterway"

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[4] 25 Stat. at 113.

[5] 25 Stat. at 116.

[6] DEIS at 3-20.

[7] *Id.* at 3-19.

[8] *Id.* at 3-22.

[9] *Id.* at 3-17.

[10] *Id.* at 3-28.

[11] *Id.* at 3-17.

[12] DEIS Executive Summary at x – xv; 2-11; 2-16 – 2-20.

[13] A. Dan Tarlock, et al., *Water Resources Management*, Foundation Press, 54 (7th Ed. 2009)

and results in no change of ownership—the boundaries remain as described in their original location.[14]

Accretion events can lead to quite title actions; whereby, the Tribes could lose part of their Reservation and result in costly litigation. Avulsion events would require ignoring the current boundary and require continuous relation to the original boundary—if that boundary did not change by accretion. "In most jurisdictions, changes are presumed to be by accretion."[15] The law is also unclear what happens to the land when the changes in the river course is due to a governmental program.[16] Finally, there is uncertainty about what would happen to the mineral interests in the accreted lands (i.e., whether they would be severed from the surface estate).[17]

There is no mention of this issue in the DEIS. The Corps must consider how these artificial flood events will affect the Fort Peck Tribes' Reservation boundaries. The United States agreed to set this boundary in federal legislation that should not and cannot be altered by agency action.

II. The Tribes' Water Right

The United States reserved all the water needed for the Tribes to make their Reservation productive.[18] In 1985, the Tribes, assisted by the U.S. Departments of Justice and the Interior, negotiated the Fort Peck-Montana Water Compact ("Compact") with the State of Montana to settle water rights adjudications of the Tribes' water rights that were then pending in state and federal courts and to quantify the water rights reserved to the Tribes. The Compact was approved by the U.S. Departments of Justice and the Interior, ratified in 1985 by the Fort Peck Tribal Executive Board and the State of Montana[19], and approved and confirmed by the Montana Water Court in 2001[20]. This water right "is held in trust by the United States for the benefit of the Tribes."[21]

Article III(A) of the Compact quantifies the Tribes' reserved water rights as the right to divert annually from the Missouri River "950,000 acre-feet per year."[22] The Tribes' "[d]iversions of water for use within or outside the Reservation may be made in the exercise of the Tribal Water Right from . . . the mainstem of the Missouri River . . . in the following amounts:

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[14] *Id.*

[15] Tarlock at 55.

[16] *Id.*

[17] *Id.*

[18] *Winters v. U.S.*, 207 U.S. 564, 577 (1908).

[19] Mont. Code Ann. § 85-20-201 (2019).

[20] *In re Adjudication of Existing & Reserved Rights to the Use of Water*, No. WC-92-1, 2001 WL 36525512 (Mont. Water Ct. Aug. 10, 2001).

[21] Mont. Code Ann. § 85-20-201.

[22] *Id.* art. F(1).

(a) during the months of November, December, January, February and March, not to exceed 40,000 acre-feet per month;
(b) during the months of April and October, not to exceed 50,000 acre-feet per month;
(c) during the months of May and September, not to exceed 105,000 acre-feet per month;
(d) during the month of June, not to exceed 145,000 acre-feet;
(e) during the month of July, not to exceed 215,000 acre-feet;
(f) during the month of August, not to exceed 180,000 acre-feet.[23]

The Tribes' priority date is May 1, 1888—the date of creation of the Reservation—making it one of the oldest water rights on the Missouri River.

The Montana Department of Natural Resources and Conservation ("DNRC") has stated that water is not legally available during the month of July from the Missouri River and only 879 cfs available during the month of August.[24] The DNRC uses "the median of the mean monthly flow rates and volumes for the stream gaging station" to determine water availability.[25] The U.S. Geological Survey stream gage No. 06132000 is located on the Missouri River below Fort Peck Dam.[26] According to that gage, there are only 8,554 cfs physically available in the month of July and 9,072 cfs available in the month of August.[27]

The DEIS plans to keep dam releases at 8,000 cfs from June 28 to September 1.[28] This means there will be no water legally available in the months of July and August. While the Corps has stated it must protect the Tribes' water right[29], such low flows, combined with the Tribes' senior water right, would require the Tribes to make "calls" on junior appropriators to preserve the Tribes' water right. This would increase expenses for the Tribes. The Corps states it did not consider water rights in making drafting the DEIS[30], but the Corps should consider these issues when making its final decision.

The DEIS acknowledges that the Tribes have created their own water quality standards for the Missouri River.[31] However, the Tribes water quality standards differ from the Montana's

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[23] Mont. Code Ann. § 85-20-201, art. F(1).

[24] *In the Matter of Application for Beneficial Water Use Permit No. 40S-30119937*, Mont. Dept. Nat. Resources and Conserv., Final Or. at 10 (Mar. 16, 2021).

[25] Admin. R. Mont. 36.12.1702.

[26] USGS, *National Weather Information System*, available at: https://waterdata.usgs.gov/mt/nwis/uv?site_no=06132000 (last accessed May 21, 2021).

[27] Final Or. at 10.

[28] DEIS Executive Summary at x – xv; 2-11; 2-16 – 2-20.

[29] *Id.* at 6-6.

[30] *Id.*

standards. The Tribes require the water have a quality that will protect its sacred and cultural uses. The Corps fails to consider these important cultural impacts to the Tribes.

III. Tribal Water Supply and Irrigation Systems

The Missouri River water pumped through the Fort Peck Irrigation Project ("Irrigation Project") and the Assiniboine and Sioux Rural Water Supply System ("ASRWSS") is the only reliable source of fresh water on the Reservation. Due to the pollution of groundwater and other sources of surface water on and near the Reservation by prior oil and gas development, there is no other reliable source of fresh water for tribal members.

A. Fort Peck Irrigation Project

In 1908, Congress authorized construction of the Irrigation Project.[32] Congress authorized the Irrigation Project to allow for irrigated agriculture by members of the Tribes on the Reservation to make the Reservation lands more valuable. Congress thereafter appropriated funds for construction of the Irrigation Project.[33] The Irrigation Project's basic infrastructure has been in operation for over a century, with periodic modifications to pumping equipment to reflect advances in technology. The Irrigation Project covers an irrigable area of approximately 32,000 acres.[34]

The Irrigation Project diverts all its water for irrigation from the Missouri River at two intakes located on the Reservation at Wiota and Frazer, which are only ten and fourteen miles, respectively, downstream from the Fort Peck Dam. The Irrigation Project uses a flood irrigation technique, under which the Project pumps water from the Missouri River through pipes to croplands, where the water is distributed over the soil by force of gravity. The Irrigation Project is the sole source of irrigation water for tribal members on the Reservation and supports a substantial portion of the Reservation's economic activity.

In the DEIS, the Corps mistakenly compare the intakes of the Irrigation Project with other intakes.[35] However, the Irrigation Project intakes are different than other intakes because "the United States has a trust responsibility to protect, conserve, utilize, and manage Indian agricultural lands consistent with its fiduciary obligation and its unique relationship with Indian tribes . . . ."[36] Therefore, the Corps must consider how changes in the release flows will protect the Tribes agricultural land.[37]

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[31] *Id.* at 3-286.

[32] Act of May 30, 1908, ch. 237, § 2, 35 Stat. 558, 558 ("1908 Act").

[33] *E.g.*, Act of Aug. 24, 1912, ch. 388, § 10, 37 Stat. 518, 526; Act of June 30, 1913, ch. 4, § 10, 38 Stat. 77, 90.

[34] Garrit Voggesser, *Fort Peck Project*, Bureau of Reclamation, 2 (2001).

[35] DEIS at 3-245 to 246.

[36] 25 U.S.C. § 3701.

B. Assiniboine and Sioux Rural Water Supply System

In 2000, Congress passed the Fort Peck Reservation Rural Water System Act of 2000[38] utilizing a portion of the Tribes' reserved water rights quantified in the Compact. A purpose of the 2000 Act is "to ensure a safe and adequate municipal, rural, and industrial water supply for the residents of the Fort Peck Indian Reservation."[39] The 2000 Act provides that the Secretary of the Interior "shall plan, design, construct, operate, maintain, and replace a municipal, rural, and industrial water system, to be known as the 'Assiniboine and Sioux Rural Water System.'"[40] As authorized by Congress, the ASRWSS provides water to users on the Reservation.[41]

The ASRWSS consists of:

> (1) pumping and treatment facilities located along the Missouri River within the boundaries of the Fort Peck Indian Reservation;
> (2) pipelines extending from the water treatment plant throughout the Fort Peck Indian Reservation;
> (3) distribution and treatment facilities to serve the needs of the Fort Peck Indian Reservation, including—
> (A) public water systems in existence on the date of the enactment of this Act that may be purchased, improved, and repaired in accordance with the cooperative agreement entered into under subsection (c); and
> (B) water systems owned by individual tribal members and other residents of the Fort Peck Indian Reservation; . . .
> (4) appurtenant buildings and access roads;
> (5) all property and property rights necessary for the facilities described in this subsection; . . . and
> (7) such other pipelines, pumping plants, and facilities as the Secretary determines to be appropriate to meet the water supply, economic, public health, and environmental needs of the Fort Peck Indian Reservation, including water storage tanks, water lines, and other facilities for the Fort Peck Tribes and the villages, towns, and municipalities in the Fort Peck Indian Reservation.[42]

The 2000 Act acknowledges that the operation and maintenance of the ASRWSS must meet conditions "that are adequate to fulfill the obligations of the United States to the Fort Peck

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[37] The DEIS notes "the smaller of the two intakes does have some tier 1 impacts during some, but not all, of the full or partial flow years depending on the alternative or variation relative to the No Action Alternative." DEIS at 3-246. This analysis is insufficient under the Corps fiduciary obligations to the Tribes.

[38] Pub. L. No. 106-382, 114 Stat. 1451 ("2000 Act").

[39] *Id.* at § 2, 114 Stat. at 1451.

[40] *Id.* at § 4(a), 114 Stat. at 1452.

[41] *Id.* at § 4(d), 114 Stat. at 1453.

[42] *Id.* at § 4(b), 114 Stat. at 1452.

Tribes."[43] Title to the ASRWSS "shall be held in trust by the United States for the Fort Peck Tribes and shall not be transferred unless a transfer is authorized by an Act of Congress enacted after the date of the enactment of [the 2000 Act]."[44] Congress has never retreated from its commitment to meet its trust responsibilities to provide water to the Tribes nor has it authorized the transfer of title to the ASRWSS to any other entity.

The ASRWSS diverts water from the Missouri River under the Tribes' water right guaranteed by the Compact. Operating under the terms of the 2000 Act, the ASRWSS delivers potable water for municipal, residential, commercial, and industrial purposes on the Reservation, providing clean, safe drinking water to homes, schools, religious and cultural institutions, hospitals, and businesses on the Reservation. It also provides water for the operation of tribal governmental services and tribal enterprises, as well as to the county and municipal governments that provide services to tribal members and non-Indians on the Reservation.

The ASRWSS intake is in the Missouri River, fifty-seven river miles downstream from the Pipeline's proposed Missouri River crossing. The water is piped through ASRWSS pipelines throughout the Reservation. Those pipelines also connect to the Dry Prairie Rural Water System, which provides water to a service area outside of the Reservation.[45] When fully completed in the early 2020s, these water systems will have been funded by Congress in the amount of approximately $302 million and will supply water to 31,200 people in Daniels, Roosevelt, Sheridan, and Valley Counties and on the Reservation.

The Tribes are concerned that changes to the water releases at the Fort Peck Dam will adversely affect the Tribes' water intakes. Changes to the flows from the Fort Peck Dam have the potential to increase the sediment load and drop the water level of the River. The DEIS acknowledges that suspended sediment can clog intake screens and impede the withdrawal of water through the intakes.[46] Additionally, sediment that moves through intake screens must be removed from the ASRWSS before the water can be delivered to residents and businesses on the Reservation. Increased sediment from high test flows will only increase the cost of removing sediment.

The Irrigation Project and ASRWSS are held in trust by the United States for the benefit of the Tribes. Thus, the Corps has a duty to protect these water infrastructures. The Irrigation Project is overseen by the Bureau of Indian Affairs ("BIA")[47] and the Bureau of Reclamation is responsible for construction of the ASRWSS while BIA oversees operations, maintenance, and repairs. The Corps should consult with these agencies and the Tribes to ensure these tribal water projects are not harmed from the test release flows.

IV. Tribal Consultation

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[43] *Id.* at § 4(c)(4)(B), 114 Stat. at 1453.

[44] *Id.* at § 4(f), 114 Stat. at 1453.

[45] Pub. L. No. 106-382 § 5(d)(2), 114 Stat. at 1455.

[46] DEIS at 3-252 to 253.

[47] 25 U.S.C. ch. 11.

According to Appendix B, the Corps has only sent a form letter to the Tribes regarding the DEIS.

While the Tribes support the restoration of the pallid sturgeon, the Tribes are also concerned about how the proposed actions will affect the Fort Peck Reservation's boundaries, the Tribes' water rights, tribal water supply and irrigation systems, and tribal inclusion in the planning process.

Thus, the Tribes request formal consultation with the Corps to discuss these important issues.

Thank you for your consideration.

Sincerely,

Floyd Azure, Chairman
Fort Peck Tribal Executive Board

From: Salak, Jennifer L CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: [Non-DoD Source] Comments on test flow of affecting my Montana property on the Missouri River
Date: Friday, May 21, 2021 6:40:14 AM

Aaron,

Please see below comments on the Fort Peck Test Flow.

Jennifer

From: Wagner & Jill Harmon <mtrivrch@nemont.net>
Sent: Thursday, May 20, 2021 9:26 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] Comments on test flow of affecting my Montana property on the Missouri River

My name is Wagner Harmon and my family has a farm along the Missouri River that will be affected by the spring rise and fall that is for a test flow plan.

I have commented and have been interviewed about the effects that it would have on our operation. I am not going to rehash how devastating it will be to our ranch but I am going to comment that this is a takings of our property and our lively hood that will have effects on my family that may lead to the demise of our 116 year old homestead ranch.

We have had many hardships to say the least in keeping our ranch in our family and to pass it down for the next generations.

Agriculture is tough as it is and we have put a lot of money into developing irrigation so that we can have a way to help control our success. But this test flow will no doubt in my mind create me to loose my ability to have a profitable year in our operation.

Please understand that this creates a trickle down effect on our local businesses and it will cost our family unwanted additional expenses to see if we can salvage the crops that will be affected.

We have over 2000 acres of irrigated crops and it isn't easy to make things work under our current commodity prices as it is.

Crop loss is one major affect please understand that this can significantly hurt our pump sites and our equipment let alone the risk of life trying to keep things going.

We need 10,000 cfs flowing by our ranch to have a reasonable pump site. 35,000 cfs will prevent me from pumping in three of my main sites as it will submerge my underground. 8000 cfs is to low and we will not be able to go out to the water without risking life in our attempts to irrigate after the rise portion of the test.

I appreciate the chance to comment on this test and I hope my comments will help in understanding what will happen to my families lives.

Regards,

Wagner Harmon

TO: United State Army Corps of Engineers
Omaha District CENWO-PMA-C
Attn: Fort Peck Draft EIS Comments
1616 Capitol Avenue
Omaha, NE 68102-4901

FROM: Doug Hardy
Central Montana Electric Power Cooperative Inc
501 Bay Drive
Great Falls, MT 50404
doug@cmepc.org

RE: Comments on the Fort Peck Dam Draft Environmental Impact Statement

DATE: May 25th, 2021

SUBMITTED VIA EMAIL TO: cenwo-planning@usace.army.mil

INTRODUCTION

Central Montana Electric Power Cooperative, Central, provides electric supply and contracted transmission service to eight of Montana's 25 distribution, load serving electric cooperatives. Six of these Co-ops either adjoin Fort Peck Lake or the Missouri River and its tributaries; the Yellowstone River runs through the service territories of Central's other co-ops. Central purchases a significant amount of power it supplies to its distribution cooperatives from the Western Area Power Administration, WAPA. These Co-ops serve some of the most rural, nearly frontier areas in the United States. Four of the Co-ops along the Missouri River serve a geographic area larger than the combined geographic areas of Rhode Island, Connecticut, Massachusetts, Delaware and New Jersey. These Co-ops need 10,731 miles of power line to serve their 7,791 members, which generally equates to residential households. Stated another way they have had to build, pay for and maintain enough power line miles that if placed end to end would be nearly nine times the distance between New York City and Los Angeles Calif. The relevant point here is that it takes an incredible amount of investment in infrastructure to provide electrical service to these members, mostly farmers, and including multiple tribal members and lands with few people to pay for the systems. Any increases in wholesale power costs are stacked on top of their other costs which are significant.

Power from WAPA which is cost-based power, although near market price, is lower cost than other generating sources for all in costs which include the cost of providing capacity as needed around the clock. Affordable power from WAPA is a major contributor allowing costs to be relatively affordable for the Montanan's who depend on us for their electrical supply and who all live in the Missouri River drainages including its tributaries.

Ratepayers ultimately pay with interest, for all the hydroelectric generation facilities at the dams as well as 40 to 50% of the costs of the dams and related faculties. The costs which are passed through to WAPA are part of our WAPA power bill. Any actions that raise the cost of WAPA power, including spilling water rather than running it through generators or potential repair cost of a spillway, are meaningful.

Central understands the importance of the recovery efforts for the Pallid Sturgeon, both the learning and hopefully repeated successful recruitment. We also commend the Corp on a comprehensive effort represented by the DEIS and some protections embedded in the "Attributes common to all action alternatives" beginning on page 14 of the DEIS. Central understands the procedural requirement to look at the period of record when assessing probable impacts, but think it is misleading as the climate is not as it was. Even the period of record would have had significantly different results if more recent years were included as they were good water years likely to have allowed repeated tests. We appreciate that the summary information for years 13~20 was not available but request in decision making the difference in probability and economic impacts would be different with those years added. Frankly looking at impacts in a given year of flow tests is our focus and we believe the period of record used provides skewed information for projecting impacts.

I am the General Manager of Central but also a Stakeholder of the Missouri River Recovery and Implementation Committee (MRRIC) representing Hydropower. I appreciate the understanding I have gained about the Pallid Sturgeon through volunteering for MRRIC and do have a passion for recovery efforts. I also have a passion to keep power affordable for the thousands of Montana ratepayers who depend on our efforts to keep their electricity affordable in this area of challenged economics. It is with consideration of the balance of impacts on our affected rate payers and the species that we take the positions we note in our comments.

I am also a Board member of Mid-West Electric Consumers Association and we fully support the comments submitted by Jim Horan on behalf of Mid-West.

It is our hope that efforts on the Yellowstone River and its tributaries with the bypass which is nearly complete, lead to successful recovery. We greatly appreciate the statement in the Yellowstone River Fish Passage section of the DEIS stating that "the Fort Peck Framework is to design test flow releases to be complimentary to the Intake Fish Passage project". Success on the Yellowstone will be win-win for the species and for impacted stakeholders including tribal and irrigators as well as rate payers who have little or no negative impact from recovery on the Yellowstone. Lack of HC impacts would have us supportive of the no action alternative, however recognize that Pallid recovery is not guaranteed on the Yellowstone and therefore ask for additional sideboards as part of the record of decision.

CHANGING GENERATION MIX - FINANCIAL IMPACT ON HYDROPOWER CUSTOMERS

Central appreciates the work done to assess economic impacts on hydropower. The analysis was done with information available at the time, which was only a couple years ago. Markets have already changed since then in ways that lead to greater volatility in price, especially in the Spring. In mid-April of 2021 there were 48 continuous hours of negative pricing. Negative pricing happens when generation exceeds loads. It is counterintuitive that anyone producing electricity would have to pay to put their power onto the lines. As a result of tax incentives of up to 2 ½ cents per kilowatt hour for wind generation, wind with production tax credits can continue to make money so long as the cost of paying to put their generation into the market exceeds the per kWh amount of the tax credits. low electric load times occur with moderate weather when heating or cooling loads are minimal. Unfortunately, the available wind throughout the year does not match the high load times. April is a high wind month and low load month. Later in the summer loads are very high, there is far less wind. In the past year 5,000 MWs of wind were installed in the Southwest Power Pool (SPP), roughly a 22% increase. SPP is the market most of Fort Peck's generation flows into. There are many more MWs of wind and solar under construction and planning. In 2021 during low load - high wind hours wind at times has supplied 80% of the load yet during other times there are high loads with little or no wind producing increasing price volitivity and season price variability. With more baseload generators closing and more wind generation scheduled to be installed it is probable price volatility and seasonal variability will continue to increase.

The time of year the flow tests are needed we believe will become even lower priced market times providing less value of the higher generation during flow tests and later increased costs due to less generation in higher priced times of year. There will be less water in Fort Peck's reservoir for generation in higher priced times such as July and August. This increased seasonal price volatility has the potential to increase the economic impacts on generation than indicated in the DEIS analysis. The analysis was comprehensive and was based on very different market (generation mix and greater seasonal variability) than we see in 2021 and beyond. This point is not a criticism of the analysis, it is reality of a rapidly changing power market as we experienced in February of 2021 when significant MW's of generation with on-site fuel storage has been retired and fuel supply via pipelines interrupted at a time wind in the region was at times only 2 MPH, too low to provide any generation.

On page 25 it is noted that "alternative 1 does appear to have the greatest potential to increase spillway damage risk" considering that alternative 1 could flow nearly 36% more CFS over the spillway than alternative 2. Alternative 2 being near 14,000 CFS over the spillway (28,000-14,000 through the turbines) and alternative 1 being near 19,000 CFS over the spillway if the Milk river is not a significant amount of the flow.

The statement on page 26 that "hydropower would have relatively small, short-term adverse impacts" is from our perspective, very misleading. At Fort Peck $7,000,000 in a given year, add to that the potential hydropower share of the spillway repair costs which are estimated (Page 26) to be in the $20,000,000 to $40,000,000 million dollars, is not a small or short-term impact.

Hydropower historically is expected to fund 40 to 50% of such repair cost. The soils under the Fort Peck spillway challenging as they are, are not solid bedrock like the spillways at some dams which are built on granite or other hard bedrock.

While we appreciate inclusion of the statement that "during some years, Fort Peck may experience large, adverse, short-term impacts" we dispute the inclusion of "short term" as this is not projected to be a one-year impact and costs may carry over into multiple years.

Any averaging of impacts over 81 years of the last 90 years is troubling as those feeling the negative economic impact in any given year would take no solace that it may be a relatively small if averaged over multiple generations of time.

UNCERTAINTY OVER WATER IN STORAGE VS ECONOMIC ANALYSIS

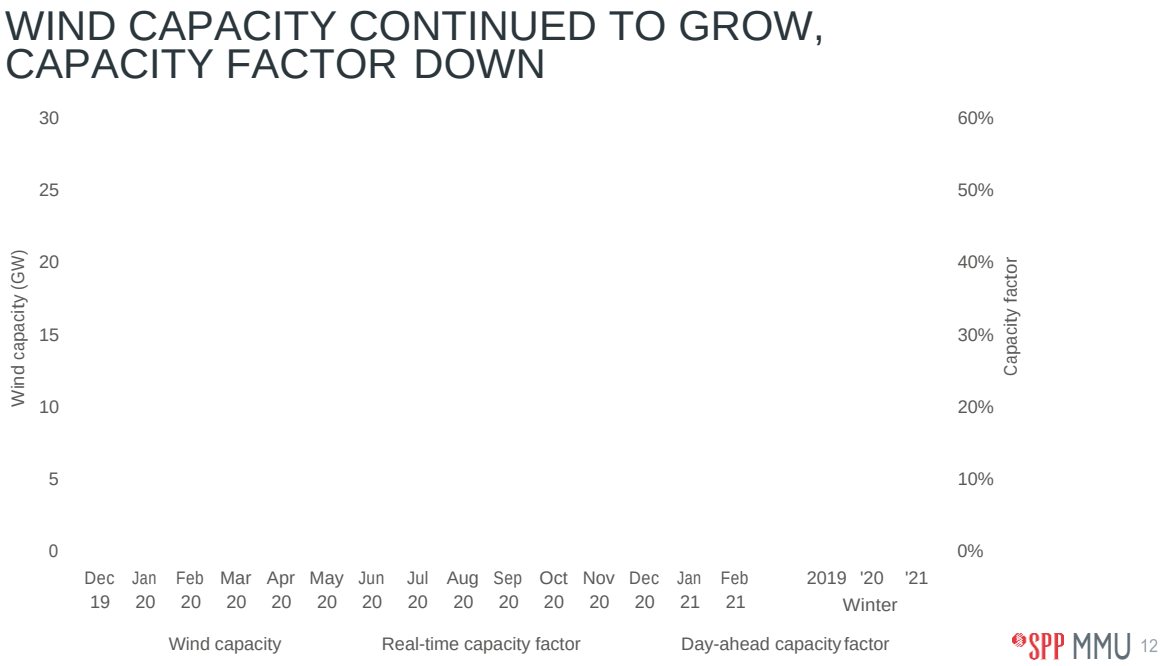
Although we have reached out to some involved in the analysis and have not received a definitive answer, it does not appear the complete economic impact is stated in a test flow year. Unless the economic period and reservoir system storage period match, the analysis is misleading. While this miss-match may be unintentional or an explanation buried in the 2500+ page document, we continue to look for clarification. Multiple inputs are considered by the Corp when determining the levels of each reservoir throughout the year. By considering water volume and total dynamic head (THD) to be the fuel for hydro generation it helps understanding of our concern and the impact on economics. The levels of a reservoir affect total dynamic head which affects the volume of water needed to generate a given amount of electricity, as total dynamic head is reduced the volume of water has to increase to generate the same volume. Both the volume of water through generators and the TDH changes with test flows over the spillway. The economic impact of a flow test in a year would only be fully stated if a starting point prior to the flow and ending point of the same date 12 months later had the same volume of water and reservoir elevations. From a practical perspective that would best be measured after the water is rebalanced and evacuated as the Corp readies the system for Spring runoff. We are unsure if economic analysis considers a generation year for economic analysis either from October 1 to September 30 of the following year or at a full calendar year. Neither is likely to begin and end with the same amount of storage and elevations. Clarification is needed here or the economic impact in a stated year may understate the economic impact on hydro generation of a flow test. These considerations may change which alternative's economics have the greater cost to hydropower.

Charts with wind and negative pricing from HTTPS://www.spp.org

The electric market is rapidly changing and is already includes a very different generation mix than when the economic analysis was completed for the DEIS. It appears the seasonal price

volatility could increase the seasonal price differential between the time of year the flows would take place which are in lower cost months versus other higher cost times of year when the generation would be needed more.

Please note two things on the chart following. 1) The approximant 5,000 MW growth of wind generation, a 22% increase from February 2020 to February 2021 is shown on the green bars. May 8th at 4:34 of 2021 for a short period wind supplied 84% of the load in market. 2) The lines in the chart shows variability of wind production each month. Some months are windier than others. The high wind months producing the most energy in low load months drive prices down and inversely resulting in higher prices in low wind generation/production months which is exacerbated with low wind - high load periods in the summer.



The following chart, Negative Pricing, shows negative pricing times. Please note that 20% of the time in April there was negative pricing in the real time market, nearly 10% in the day ahead market, and In May and June 14% of the hours experienced negative pricing in the real time market and over 5% in the day ahead market.

Of special interest is the far right-hand side of the graph showing the comparison of winter hours of negative pricing in 2019 and 2020 compared to 2021. The roughly doubling of the number of hours with negative pricing is affected by weather and other factors but demonstrates the changing market from the time the analysis of economic impact was completed to the current time. Central believes the volatility that has increased will continue to increase as more baseload generation is retired and more renewables are added. As more hours become negative priced, other hours have the potential of becoming very expensive in peak months. Again, the result of decreased value of generation in the months of the flow events and increased value in other months will result higher costs as months of greater load and needed generation become higher cost due to lost low-cost thermal generation being replaced by higher cost generation and potential storage are needed to meet load.

CONCLUSION
REQUESTED ADDITIONAL SIDEBOARDS

Due to changing market generation mix and conditions leading to greater volatility including greater market costs in specific months the economic impact to Hydropower is likely significantly understated and due to the magnitude of economic impact on hydropower and other human considerations, the following additional sideboards should be incorporated:

1. With increased likelihood of very high-cost spillway repairs, provisions should include a prohibition against assessing any percentage of spillway repair costs to hydro that are due to flow tests, as all WAPA incurred costs are ultimately paid by electric ratepayers.
2. The DEIS should be modified to limit maximum flow tests to 28,000 CFS or lower. This is not an endorsement of either alternative, rather driven by our understanding that the impact on the spillway and downstream irrigators with increased flows is not lineal, rather more exponential as flow volumes increase. It is our understanding that flows well below levels in the DEIS have been believed to achieve the desired results for the fish.
3. No flow tests should be implemented in a given year unless the best estimate of climatical and hydrological conditions support conclusion the full tests can be performed. Partial flow test years should only be the result of conditions contrary to the projections and forecasting. This may be the intent of the criteria listed on page 38 of the DEIS, but assurance, especially for Co-op members who are irrigators down steam from Fort Peck would be important.
4. No flow tests should be initiated in April. It is our understanding that there is likely limited benefit of the April flows to the species.
5. Flow tests at Fort Peck should be discontinued if bypass and other future improvements for the species on the Yellowstone are successful in terms of achieving recruitment at a level adequate to stabilize or increase Pallid Sturgeon population in the upper river region.

Thank you again for the opportunity to provide comments on the Fort Peck DEIS. Central Montana Electric Power Cooperative appreciates the USACE staff, their very positive

contributions to this nation and their willingness to listen and work with stakeholders. We look forward to many more years of working together in a continued positive manner.

Kevin and Wendy Becker
31682 County Road 154
Brockton, MT 59213
406-774-3435
wendybecker406@gmail.com

May 19, 2021

U.S. Army Corps of Engineers, Omaha District
CENWO-PMA-C
Attn: Fort Peck Drat EIS Comments
1616 Capitol Avenue
Omaha, NE 68102-4901

RE: Comment on Fort Peck Test Flow Draft Environmental Impact Statement

We are farmers and ranchers in Northeastern Montana and irrigate along the Missouri River, near the Charley Creek tributary in Richland County. We are a young family with 3 boys under the age of 11. We have just graduated from the beginning farmer and rancher program and irrigate our lands for cash crops as well as hay for our cattle.

In reviewing the Draft EIS, we are concerned with the flows being presented. The flood target level of 35,000 cfs is far too high. We have three pump sites all with varying levels of concern. We would not be able to access our pump sites were the river to reach this flow elevation. We would have to move electrical boxes AND a diesel-powered pump engine, the roads would need to be repaired, and one of our fields would most likely flood - effectively ruining that cropland for the season and possibly for future seasons. In the prior historic flooding, there were also issues with sand and tree growth in addition to the beforementioned flooding problems. We expect to experience these same issues at both the proposed 28,000 and 35,000 cfs river levels.

Additionally, both DEIS alternatives plan to drastically lower the river to 8,000 cfs, which is an incredibly low number we have rarely, if ever seen during prime irrigation season. Most concerning to us though, is how we would be able to get our pumps back into the river. When the river level drops again, the riverbank will not be able very stable for some time, and I am sure there will be erosion issues to navigate, not to mention safety concerns. This erosion problem will persist just as it has following the historic flood of 2011. We were under the impression that the USACE were not allowed to use a plan that would create erosion.

The DEIS claims that impacts are “temporary” or “short-term.” This is not a temporary or short-term impact for us. We will lose an entire growing season, and crop insurance won’t cover the losses and as we understand it, the USACE will not mitigate damages. We will have to incur additional costs to recover roads, access sites, and other equipment. Labor resources are limited in rural NE Montana as well, so finding help to mitigate this problem won’t be easy, and everyone will need the same equipment to fix these erosion issues at the same time. As I stated before, we have just gotten through our beginning farmer and rancher phase, but that doesn’t mean we are flush with money or resources; we operate on a very tight margin. This will be a loss of revenue for the community, county, schools, and we will have to be in search of

hay again, which is essentially impossible following a drought that we are currently in. We also just had fire that ravaged half our pastures so finding hay is something we are familiar with not being a very successful plan.

Lastly, the current plan is set to take place in 2022. As I mentioned before we are in the middle of a historic drought. The entire region will be affected. In my community several neighbors were affected by the fires. We are currently being affected by a global pandemic. I don't know how we can even begin to prepare for a test flow on the Missouri that will undoubtedly, economically set back or end several farmers and ranchers' operations in our region, all because of the *potential theory that the pallid sturgeon might* be relieved.

Kevin and Wendy Becker

May 19, 2021

U.S. Army Corps of Engineers
Aaron Quinn
Environmental Resources Specialist Omaha District
1616 Capitol Avenue
Omaha, Nebraska 68102-4901

Dear Mr. Quinn,

The Izaak Walton League of America (League) appreciates the opportunity to comment on the Fort Peck Draft Test Release Environmental Impact Statement (DEIS). The League, a conservation organization with more than 42,000 members in over 200 chapters, has many members within the Missouri River basin that enjoy spending time on and along the river.

The League supports viable recovery efforts that restore habitat, benefit fish and wildlife, improve water quality, reduce flood risk, and increase recreational opportunities along the river. The League supports recovering the upper basin pallid sturgeon as the population is larger and more genetically pure than the pallid population in the lower basin.

This DEIS intends to conduct an evaluation of potential benefits of proposed test releases from Fort Peck Dam. The goal is to increase survival of the larval stage of the endangered pallid sturgeon. The pallid, listed in 1990, has seen a slight increase in numbers due to intensive upper basin propagation and stocking. The proposed action alternatives would assess whether test releases from Fort Peck Dam increase growth and the survival of juvenile pallids before they enter Lake Sakakawea. Test releases would be conducted in conjunction with ongoing pallid recovery efforts on the Yellowstone River.

It's believed the upper basin pallid population consists of a few very old fish that pre-date dam construction and the young hatchery-raised, stocked fish. Currently, the pallid is not self-sustaining, there is no documented recruitment in the upper or lower basin, despite evidence of spawning. If propagation and stocking ended, the pallid would face extirpation in the Missouri River.

The DEIS has three alternatives, a No Action, and Alternative 1, and 2, each with variations. Alternatives 1 and 2 include the Yellowstone River Intake fish bypass, continued propagation and stocking, and science and monitoring activities.

Alternative 1 (with variants 1A and 1B) is the stated preferred alternative. Alternative 2 (with variants) has similar characteristics to Alternative 1, but with different test flow dates and caps test releases to the capacity of the Fort Peck powerhouse (14-16K cfs).

The League asks the Corps to consider our comments on the following topics:

Pallid Sturgeon
The League supports the Fish and Wildlife Service's (FWS) goal to reclassify the pallid to threatened when recovery efforts produce a self-sustaining, genetically diverse population. This goal includes having at least 5,000 adult pallids in each of four Missouri River management units for at least two generations.

Research on larval pallid drift and dispersal and what pallid embryos need to survive continues. With young pallids requiring up to 14 days of drift to fully develop, the river miles needed for that is crucial. If newly hatched pallids reach the upper end of Lake Sakakawea before developing fully, they die in the reservoir's hypoxic zone. Lowering Sakakawea's pool level, to increase drift distance, has been ruled out. Sakakawea is the largest storage reservoir in the Missouri River system. The League agrees that reducing Sak's storage capacity would severely impact all eight of the river's authorized purposes.

Endangered Species Act

The Endangered Species Act requires that the operation and maintenance of the Missouri River System does not *"jeopardize the continued existence of endangered species or result in the destruction or adverse modification of designated critical habitat"*.

The Missouri is one of the nation's most altered rivers. Man-made changes to the river have resulted in the loss of more than one million acres of aquatic and terrestrial habitat. That habitat loss led to the federal listing of the pallid sturgeon and piping plover and 51 of 67 native fish species currently listed as rare or declining. The League supports habitat restoration efforts including the Fish and Wildlife Mitigation Project, and the Fish and Wildlife Coordination Act to improve habitat for listed species and all fish and wildlife in and along the river.

The northern great plains piping plover was listed as threatened in 1986. The interior least tern was listed as endangered in 1985, it was delisted by the FWS in February of 2021. Both species utilize areas along the Missouri River. According to the DEIS, impacts to these species from the proposed alternatives would be negligible.

The 2018 Missouri River Biological Opinion calls for the examination of Fort Peck test releases to determine benefits to pallid survival and recruitment. This includes exploring methods to maximize larval drift and provide the time for successful growth and survival before young pallids reach Lake Sakakawea. If approved, the test releases would be conducted in conjunction with Yellowstone River efforts including the Intake bypass channel. The bypass is hoped to provide pallids access to over 160 added river miles for potential spawning and larval drift.

Test Flows

Research shows increased flows draw adult pallids upstream. It's hypothesized test releases would retain and prompt spawning, then reduced releases would carry embryos downstream as they develop and grow. If test releases are approved and conducted, monitoring would investigate the potential benefits the releases could have in attracting, retaining, aggregating, spawning, and improving drift conditions to increase survival of larval pallids in the upper Missouri River.

If a test release is approved and conducted, the League supports that it should not interfere with the potential passage of pallids in the Yellowstone River. And the League also supports the decision to run a test release must be made on a year to year basis. That decision needs to be based on existing hydrological conditions, anticipated runoff, and the detailed criteria defined within the DEIS.

Recreation

The three upper Missouri River reservoirs, Fort Peck, Sakakawea and Oahe are renown for the world-class angling opportunities they provide for walleye, northern pike, smallmouth bass, and many other species. Recreation is a key economic driver, accounting for hundreds of millions of dollars in annual spending. Recreation has a major impact on the local, regional, and national economies.

All Missouri River reservoirs provide unique recreational experiences including fishing, hunting, boating, sailing, and other water-based activities. The Federal Water Project Recreation Act requires federal agencies to fully consider outdoor recreation and fish and wildlife enhancement in all federal water

resource projects. Projects must be constructed and operated to provide recreational opportunities that coincide with the project's purpose.

The DEIS states the proposed alternatives would adversely impact recreation on Fort Peck Lake. This would result from a reduced pool elevation if releases were conducted. A lower reservoir elevation could affect game and forage fish spawning, recreational access, and angling opportunities.

Recreational use on the entire Missouri River is heavily influenced by the viability of boat ramps that provide water access. This applies to both high and low water levels and is needed year-round as many ramp sites are also used for ice fishing access.

The DEIS states some upper basin locations could benefit from increased visitation from higher water levels from the proposed test releases. If test releases are approved and conducted, the League encourages the Corps to work with resource specialists and state fishery biologists to develop methods that minimize any adverse impacts to the fisheries and upper basin Missouri River visitation.

Climate Change

The Missouri River basin is incredibly dynamic. Annual precipitation ranges from a scant 8 inches in the northern basin to more than five times that amount in portions of the Rockies and in the southeastern basin. This huge fluctuation greatly complicates both short and long-term water management. The basin's climate continues to change, further exacerbating this situation.

Climate models predict increased temperatures with periods of both intense drought and increased precipitation in future years. Climate change could result in decreased snowpack and an earlier snowmelt. The League strongly urges the Corps to fully consider climate change impacts when deciding whether to implement a test release. We also ask for a thorough evaluation on what added flows, coupled with increased runoff from major rains, would have on downstream stakeholders.

Sedimentation

Large deltas have formed in the Missouri River reservoirs. The life expectancy of Fort Peck, Garrison, and Oahe, is estimated at several hundred years due to their substantial capacity. However, increasing deltas are creating problems including rising surface and groundwater elevations in Sakakawea, Oahe, and Lewis and Clark Lake. Higher bed levels are shifting the thalweg leading to additional erosion.

Accumulating sediment is hampering access at some boat ramps and impacting fish spawning and rearing habitat. Sediment also affects water quality, neighboring lands, and hydropower generation. As sediment accumulates the reservoirs lose storage capacity which impacts all authorized purposes.

Historically the Missouri annually transported millions of metric tons of sediment to the Gulf of Mexico. Mainstem dams prevent sediment transport from occurring. The lower Missouri River is also facing bed degradation from the Bank Stabilization and Navigation Project and ongoing sand and gravel mining.

The DEIS says test releases may cause additional bed degradation, bank erosion, and sediment transport below Fort Peck. If releases are approved and conducted, additional water intake maintenance would be required. Added aggradation is expected in the headwaters of Sakakawea and Oahe.

Regardless of the Record of Decision on this proposal, the League encourages the Corps to develop sediment management plans for each reservoir as is being done for Lewis and Clark Lake to address current and future sedimentation issues.

Invasive Species

The League is very concerned about the threat invasive species pose to the health of the Missouri River. Zebra mussels and Asian carp are present in the Missouri River however, those species have not been

found below Fort Peck Dam. Exact impacts from invasive species to the pallid sturgeon are still unknown. The League urges additional research on this topic.

If Fort Peck test releases are approved and implemented and the increased releases scour the upper river's banks and sandbars, we're concerned invasive plants could spread, impacting fish and wildlife habitat. The League urges the Corps to take every viable measure available to prevent invasive species from spreading to other locations along the Missouri River.

Monitoring

If test releases are approved and implemented from Fort Peck, the League supports extensive monitoring of the upper river. This should include tracking movement and spawning of pallids and embryo and larval drift. The League agrees with the DEIS that monitoring must occur across the entire upper river system including the Yellowstone River.

This would be a massive monitoring effort and it would require vigorous coordination between many state and federal agencies. If releases are conducted, the League supports monitoring of the affected areas to thoroughly evaluate impacts to riverbanks, flooding, water intakes, hydropower, the Fort Peck spillway, and to fish and wildlife.

Navigation

Hydrological modeling shows no discernable flow changes below Gavins Point Dam from a test release from Fort Peck. As a result, a detailed analysis of navigation impacts was not conducted. The League urges the Corps to broadly disseminate this information.

Cultural Resources

The DEIS indicates many cultural resource sites would continue to be at risk under all the alternatives due to changing water levels. The League asks the Corps to work with Tribal governments on methods to protect cultural resources and sites.

Public Outreach and Engagement

Implementation of any approved test releases would be coordinated through the Missouri River's Annual Operating Plan (AOP) and include public involvement. The League strongly urges the Corps to fully involve the public, Tribes, stakeholders, the Missouri River Recovery Implementation Committee (MRRIC), the Independent Science Advisory Panel (ISAP), and other federal and state agencies in the process.

This engagement must be done before a Fort Peck test release is contemplated and/or conducted. A crucial component of the public process must include a timeline for refilling Fort Peck Lake if test releases are approved and implemented. The League believes this is critically important for the future of the reservoir's recreation industry, the health of the fishery, and future operations of the reservoir system.

Summary and Conclusion

If test releases are approved and implemented, it's hypothesized they will influence attraction, retention, spawning, hatching, and the drift of larval pallids compared to no action. There is uncertainty the test releases will provide any benefit to the pallid. The DEIS states comments received will be considered when drafting the Final EIS and the preferred alternative could change based on public feedback.

The League supports viable recovery actions that will enable successful pallid reproduction and recruitment. We want to have a genetically diverse, self-sustaining, pallid population in all four of the Missouri River's management units. However, the League has concerns about the described test releases from Fort Peck Dam. We ask for additional clarification on the following topics in the Final EIS.

Dam Safety
This is a major concern for the League as Fort Peck's spillway is not designed for regular releases. The powerplant's maximum capacity is 14,000 to 16,000 cfs. Fort Peck has four flood tunnels, but due to extreme cavitation and vibration when used, the tunnels are not considered reliable for flow releases. Experience has shown that using Fort Peck's spillway or flood tunnels for prolonged releases requires additional maintenance and increases operational costs of the system.

Fort Peck is the oldest dam on the Missouri River reservoir system. Questions have been raised about the dam's long-term viability due to lack of maintenance and its overall condition. Areas of the dam need major repair, but costs have not been quantified. Although a spillway failure and resulting uncontrolled release is extremely unlikely, if it were to occur, it would be disastrous from Montana to Louisiana. The League asks that this topic be thoroughly explained in much more detail in the Final EIS.

Flood Risk Reduction
The Missouri River Master Manual does not contain flood limit targets below Fort Peck Dam. The League thanks the Corps for addressing some of the flood risk reduction questions and concerns relating to test releases from the scoping process in this DEIS. According to the DEIS adverse impacts could occur from test releases and areas of the upper basin may experience possible ice-jam related flooding.

The League shares the concerns of other stakeholders regarding the proposed test release regimes. The planned attraction flow would be twice as large as the average Fort Peck spring release. Retention flows would be 1.5 times the early spring release. Under Alternative 1, spawning flows would be 3.5 times the spring release or approximately 28,000 cfs. That amount is nearly twice the capacity of Fort Peck's powerhouse and it would require releasing water over the spillway. According to the DEIS, test releases would be run a total of 3 to 5 times, and only when the predetermined criteria are met.

The League has concerns about potential impacts to multiple stakeholders, recreation, cultural resources, hydropower, wildlife, riverbanks, water intakes, and other existing infrastructure. We ask that the Final EIS fully evaluate impacts of test releases when combined with rapidly rising inflows from the Missouri's tributaries.

Timing of Releases
Research shows upper basin pallids spawn from mid-June to early July. Given that, why are the proposed attraction releases beginning in mid-April? There's no evidence in the DEIS that shows adult pallids can be retained in an area for weeks prior to spawning. We ask that this topic be better explained in the Final EIS.

Flow Rate of Change
The DEIS states rapidly decreasing releases could result in stream bank erosion. This would impact municipal, industrial, and irrigation intakes, pumps and other infrastructure including recreational access sites. The maximum release reduction rate of change is limited to 3,000 cfs a day to try to avoid bank erosion and other impacts. The limit on flow rate of change would be crucial when, and if, test releases are run and then recede during larval drift. We ask the Final EIS to provide more information on this.

Water Temperature
The League is concerned releases from Fort Peck would be too cold to trigger pallid migration and/or spawning, especially if conducted in mid-April. Alternative 1 and its variants may include slightly warmer water than Alternative 2 releases because some of the Alternative 1 release would be surface water released down the spillway (please also see our spillway and dam concerns above). The League asks the Final EIS provide more information on the role water temperature plays in pallid attraction, retention, spawning, and larval drift.

Conclusions

As previously stated, the League supports viable efforts to recover upper and lower basin pallid sturgeon. We agree with the goal of self-sustaining, genetically diverse populations of at least 5,000 adult pallids in each of the four Missouri River Management Units.

After thoroughly reviewing this DEIS the League does not believe Alternative 1 or Alternative 2, and their variants, will achieve that goal below Fort Peck Dam. Increased releases may attract pallids below Fort Peck, but there's no evidence in the DEIS that the added releases will retain adult pallids or induce spawning activity.

Our main concern is the lack of drift distance between Fort Peck Dam and the headwaters of Lake Sakakawea. The amount of river miles simply isn't sufficient to facilitate up to 14 days of drift, and the time needed, for full development of most larval pallids before they settle, and most likely die, in the anoxic zone in the upper end of Lake Sakakawea.

Rather than exploring test releases that may or may not benefit pallids, but will adversely impact many stakeholders, could a method to intercept larval pallids be developed? The BiOp recommends exploring methods to maximize larval drift and provide the time needed for successful growth and survival before the young pallids reach Lake Sakakawea.

Can something be done to slow some of the pallid embryos and allow full development? This type of experiment could be conducted with average Fort Peck releases, greatly lessening impacts to stakeholders. The League encourages research into this as a potential option for pallid recovery.

Finally, the tremendous expenditure of Missouri River Recovery Program funds in the Yellowstone River for the Intake irrigation weir and fish bypass channel necessitates giving that recovery option every chance to succeed. The level of uncertainty and the multitude of potential adverse stakeholder impacts of the two proposed action alternatives and their variants are just too high for the League to support.

The Izaak Walton League of America appreciates the opportunity to comment on the Fort Peck Draft Test Release Environmental Impact Statement. We ask to be kept informed on all future updates and information regarding this effort. We thank you for your time and consideration.

Sincerely,

Paul Lepisto
Regional Conservation Coordinator
Izaak Walton League of America
1115 South Cleveland Avenue
Pierre, SD 57501-4456
plepisto@iwla.org
605-224-1770 or 605-220-1219

Sidney Sugars
INCORPORATED
35140 County Road 125 • Sidney, Montana 59270
Agriculture: 406-433-3309 • Operations: 406-433-3303
Accounting: 406-433-3301

May 21, 2021

United States Army Corps of Engineers, Omaha District
CENWO-PMA-C Attn: Fort Peck Dam Draft EIS Comments
1616 Capitol Avenue
Omaha, NE 68102-4901

RE: Comment on Fort Peck Test Releases Draft Environmental Impact Statement (DEIS)

I am David Garland, General Manager for Sidney Sugars Incorporated, a sugar beet processing facility located in Sidney, Montana. Sidney Sugars is a wholly owned subsidiary of American Crystal Sugar Company, Moorhead, MN. Our facility was constructed in 1925 and has been processing sugar beets grown in the Yellowstone and Missouri River basins into sugar and related by-products since then. We are the only facility capable of processing sugar beets in the northeast corner of Montana.

The threat of the proposed alternative flows to our growers along the Missouri River is potentially devastating both to them and to Sidney Sugars. The timing of the releases, both high and low, pose significant threats to our growers' ability to irrigate their crops in a timely and "farming best practices" manner. The entire crop will be affected as the impacts of the two alternatives will occur during prime irrigation season.

The DEIS understates the economic impacts for growers, Sidney Sugars, and the surrounding communities. In July of 2020 Sidney Sugars provided Abt Associates, contracted by the USACE, a detailed report of the affected acres, payments to growers, lost revenues, and economic impact estimates, but that information is missing in the DEIS.

Affected Sugar Beet Acres

6 Year Average	Acres	Tons Per Acre	Net Tons Harvested	Net Tons Sugar	Payments to Growers
Company Totals	31,730	31.47	998,669	180,459	$ 50,309,141
Acres Affected:					
Culbertson 1	1,381	31.34	43,292	7,920	$ 2,126,418
Culbertson 2	1,401	31.16	43,640	8,122	$ 2,300,024
Dore 1	678	34.86	23,615	4,293	$ 1,227,688
Marley 1	1,811	30.20	54,702	9,951	$ 2,836,822
Marley 2	1,674	30.46	50,981	9,278	$ 2,653,587
Totals	6,944		216,230	39,563	$ 11,144,538
Percent of Company Total	21.89%		21.65%	21.92%	22.15%

For Sidney Sugars, approximately 22% of our contracted acres will be directly affected by these test flows. Growers may choose not to contract sugar beets if they are unsure of what the flow impacts will be on their crop land or find themselves not able to irrigate during the prime irrigation season. At risk are grower payments averaging $11.1 M for the last five years.

For Sidney Sugars, a loss of 22% of our contracted acres equates to $25 million per year in loss of revenue from Sugar, Molasses, Pellets and Pressed Pulp.

Crop Year	Lost Sugar Production	Lost Sugar Revenue	Lost Pellet Revenue	Lost Molasses Revenue	Lost Pressed Pulp Revenue	Total Lost Revenue
2020	23.80%	$ 26,002,555	$ 614,205	$ 1,166,760	$ 155,553	$ 27,939,072
2019	21.64%	$ 21,439,195	$ 651,293	$ 1,672,770	$ 195,292	$ 23,958,550
2018	20.85%	$ 22,934,950	$ 631,061	$ 1,087,083	$ 247,451	$ 24,900,544
2017	21.71%	$ 22,972,463	$ 403,590	$ 1,074,588	$ 263,774	$ 24,714,416
2016	21.93%	$ 24,346,005	$ 591,481	$ 1,245,390	$ 190,526	$ 26,373,402
2015	21.69%	$ 23,319,904	$ 630,785	$ 1,059,503	$ 221,125	$ 25,231,317
Average	21.94%	$ 23,502,512	$ 587,069	$ 1,217,682	$ 212,287	$ 25,035,646

Potential loss in Revenue for Sidney Sugars Incorporated if 100% of acres affected by Missouri River flow changes are lost for beet production.

With the loss of 22 % of our business, the potential to close the plant is **real**. This is in direct contrast to the impacts being described in the DEIS as "temporary" or "short-term". The conservative local economic impact of our facility closing is around $ 80+ million per year. This includes:

- Payments to Growers - $50.8 million
- Wages and Benefits to Employees - $16.3 million
- Temporary Personnel Services - $1.5 million
- Beet Transportation to the Factory – $3.1 million
- Major Operating Supplies such as Coal from the Savage Mine - $1.9 million
- Natural Gas - $1.7 million
- Purchased Electricity from MDU - $1.6 million
- Lime Rock - $2.2 million
- Local Purchases for Maintenance Parts, Supplies, and Contracted Outside Services - $3.1 million
- Property Taxes - $375,000

These amounts don't include the number of times that a dollar turns over in a community.

Sidney Sugars employs 118 full time employees with an additional 160 employed during our five to six-month processing campaign and another 200 during the sugar beet harvest season. About a quarter of our campaign employees reside on the Fort Peck Reservation and commute daily to work in Sidney.

These flow tests have real effects on a significant number of people, more than those located directly on the river. A loss of a job is painful to the employee and family. A loss of our factory will be devastating to our entire region.

The closing of Sidney Sugars factory is anything but "temporary" or "short-term". I respectfully urge the Corps to consider the threat that these flow tests pose to the viability of Sidney Sugars and the impact it will have on the surrounding communities. Our hope is that the USACE will pursue the No Action Alternative.

Please do not hesitate to reach out to us with any question you may have.

Sincerely,

David H. Garland
General Manager
Sidney Sugars Incorporated
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406-433-9333

Duane Peters
Agriculture Manager
Sidney Sugars Incorporated
dpeters@crystalsugar.com
406-433-9310

May 23rd, 2021

United States Army Corps of Engineer, Omaha NE
CENWO - PMA - C Attn: Fort Peck Dam Draft EIS comments
1616 Capitol Avenue
Omaha, Nebraska 68102- 4901

RE: Comment on Fort Peck test releases draft environmental impact statement (DEIS)

I am Marty Ross union president of the Bakery, Confectionery, Tobacco Workers and Grain Millers International Union local 285 G. Myself and many others full and part time employees are employed by Sidney Sugars Incorporated a sugar beet processing facility located in Sidney, MT.

The threat of the proposed Alternative 1 and Alternative 2 test flows would threaten the livelihood of the employees that work for Sidney Sugars. The damages to our growers along the Missouri River would be devastating to both employees and Sidney Sugars factory, due to the timing of the release that is during the irrigation season for raising sugar beets and other crops. All the crops along the Missouri would be impacted by the two alternatives which will occur during prime irrigation seasons. Employees living in and around the Sidney area would probably lose their jobs and houses due to the loss of work at the factory and it would be devastating on the local community. Employees of the factory spend a lot of money in and around the area of Sidney which would be lost.

Many of us employed at Sidney Sugars enjoy the great outdoors of hunting and fishing. In recent floods I have noticed a lot of lost to wildlife along the riverbanks fish get into low lying fields where they normally are not found when the water goes down the fish do not get back into the River and die. Migrant birds like geese and ducks lay eggs along the River. Flooding these areas will harm a lot of wildlife with no real guarantee that it will help the Palette Sturgeon.

The test flows Alternative 1 and Alternative 2 have real effects on a significant number of people and wildlife along the Missouri River and in Sidney and the surrounding area. I would ask the USACE to pursue the no action alternative.

Sincerely,

Marty A Ross

Marty a Ross
Union president
Local 285 G BCTGM
marty.ross 13@ gmail.com
406-480- 7545

From: Salak, Jennifer L CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: [Non-DoD Source] Fort Peck Draft EIS
Date: Monday, May 24, 2021 7:59:47 AM

Aaron,

Please see comment below.

Jennifer

From: Gary Schoepp <action@midrivers.com>
Sent: Friday, May 21, 2021 3:45 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] Fort Peck Draft EIS

RE Fort Peck Test Releases EIS

With the current drought conditions, USACE Missouri River Water Management Division itself, issued news release no. 21-020 on May 6, 2021, headed "drought conditions driving lowered runoff forecast" the release says: very dry conditions in April resulted in very low runoff in the upper Missouri River Basin. The upper Basin runoff was 44% of average, which was the 9th driest April in 123 years of record. The updated 2021 upper basin runoff forecast is 17.8 million acre-feet, 69% of average, which, if realized would rank as the 22nd lowest calendar year runoff volume. "the extremely dry April, current drought conditions and below-normal mountain snowpack has led our office to significantly lower the 2021 calendar year runoff forecast" said John Remus, chief of the U.S. Army Corps of Engineers, Missouri River Basin Water Management Division. " Based on this forecast, the May reservoir monthly studies indicate reduced flow support for navigation during the second half of the navigation season and a 12,000-cfs Gavin's Point winter release rate. I urge all water users, particularly intake owners, to begin preparing for the possibility of lower river levels later this summer and during the fall and winter." To make 2022 the first year of test releases is ill-timed both for irrigation and for the pallid sturgeon. This would be my first reason not to do the test release next year. Thank you gary c. schoepp

May 21, 2021

U.S. Army Corps of Engineers; Omaha District
CENWO-PMA-C Attn: Fort Peck Draft EIS Comments
1616 Capitol Avenue
Omaha, NE 68102-4901

RE: Comment on Fort Peck Test Release Draft Environmental Impact Statement

To whom it may concern:

I am an irrigator on the Missouri River in Richland County, Montana. I have grave concerns about the proposed Fort Peck Release as is pertains to my irrigated cropland. I feel I would be ok during the scheduled high flow event but once the river is dropped for the low flow drifting, I would be in trouble. I would be unable to irrigate due to the sediment left by the high flow when the water goes back down. The ground will be too saturated after the high flow to clean out the site using a trackhoe, if I am unable to irrigate for several weeks the production on my hay, wheat and oats will suffer.

The concerns identified by the irrigators were not all addressed in the DEIS. The target flows are too high, the drifting flow is too low and the flow release of change from high to low is occurs to rapidly. The impacts to both the mainstream and the side channel should be analyzed equally, both will suffer crop production losses due to untimely irrigation. Conducting this release several times in a few years is a burden my operation may not be able to sustain.

As Chairman of the Richland County Conservation District I would like to thank you for coming to Montana in July of 2020 to visit the pumpsites and irrigators who will be impacted by this proposed release.

It is my personal recommendation that the No Action Alternative is the best choice for this DEIS.

Thank you for your time,

Sincerely,

Dan Young

Fort Peck Water Users Association

P.O. Box 401 ~ 602 6th Ave. N.
Wolf Point, MT 59201
(406)653-2250 or (406)650-5454

May 22, 2021

U.S Army Corps of Engineers, Omaha District
CENWO-PMA-C Attn: Fort Peck Draft EIS Comments
116 Capital A venue
Omaha, NE 68102-4901

RE: Comment on Fort Peck Test Releases Draft EIS

I ___Jim DeWitt_____, an irrigator from Wolf Point _____, MT, 59201, comment on the Fort
Peck Dam Test Releases Draft Environmental Impact Statement March 2021 as follows:

1. "Temporary" and "Short-Term" Miscalculation Timing Effects.

A failure to appreciate timing effects causes the DEIS to miscalculate irrigation impacts as "temporary" and "short-term."

The "Irrigation Pump Survey Report" identifies a concern that "warrants consideration within the EIS modeling." The concern is "that the proposed test occurs during critical crop irrigation periods."

Despite identifying this concern, the DEIS repeatedly characterizes impacts to irrigation as "temporary" and "short-term." It does so by measuring the impacts chronographically rather than agronomically and agriculturally. This is a failure to consider the concern about timing because what makes the timing critical is agronomic and agricultural factors, not chronological ones. Irrigation is agronomic and agricultural.

The issue of timing has two main aspects: (1) The timing of the proposed test flows embraces nearly the whole irrigation season; and (2) Within the irrigation season, an interruption or reduction of irrigation at one time does not have the same impact as at another time.

(A) Whole Season.

The proposed:

• attraction flow begins April 16.
• retention flow is held until May 28.
• spawning cue flow begins May 28.
• drifting flow is held until September 1.

On a chronograph, that is a fraction of a year. Measured that way, it sounds "temporary" or "short-term." Agronomically, however, this nearly is the entire irrigation season. The DEIS itself notes that "the irrigation season lasts approximately from May through September." Agriculturally speaking, the proposed test flows impact the whole year. In Montana, there is only one irrigation season and only one crop per year.

During critical time, the spawning cue flow level and the flood target are too high. They will flood pumps, electrical boxes, road access to pumps, and even crops themselves. That is a year-long, permanent, non-temporary, non-short-term impact.

During critical time, the drift flow of only 8,000-cfs is marginal under otherwise ideal conditions. In the practical world, many irrigators require 10,500-cfs, or they cannot take in water. Under agricultural operating conditions, those will not be "temporary" or "short-term" losses. That will impact the entire year.

(B) Timing Within the Season.

Many non-irrigated farmers say things like, "My best crops were raised on two thunderstorms that came at the right times." That is the result of cultivar response to moisture timing. Like the pallid sturgeon, agricultural cultivars have life cycles and cycle-stage-sensitive responses. The cultivars and their responses do not change when going from non-irrigated to irrigated farming. The timing of irrigation has an effect like the timing of natural precipitation.

To compute, for example, 15 added days of water level below operable for irrigation intake as having a 10 percent impact because 15 days is 10 percent of the irrigation season is a statement in neglect of agronomy and agriculture. It fails to take account of when this deprivation of moisture occurs.

The DEIS and attachments do not contain an agronomic or agricultural assessment of the critical irrigation timing effects. The "List of Preparers" of the DEIS does not make clear who among the preparers, if anyone, is qualified as an agronomist or agriculturalist to assess the timing impacts.

2. "Temporary" and "Short-Term" Miscalculation Sedimentation, Contracted Crops, and Crop Rotation.

A failure to appreciate sedimentation after-effects, contracted crops, and crop rotation causes the DEIS to miscalculate irrigation impacts as "temporary" and "short-term."

(A) Sedimentation After-Effects.

High flow events cause sedimentation. Irrigation does not and cannot resume immediately simply because a high flow event no longer is flooding irrigation infrastructure. Dredge

operators will not put a dredge into that environment soon after the water recedes. The practical effect could be abolition of irrigation for the year, especially for side channel intakes. The DEIS expresses no appreciation of this delay in the resumption of irrigation.

(B) Crop Rotation.

With the advent of advanced continuous cropping cultures and technology in the early 1990s (which is superior for soil health, the environment, and farm economics), agronomically sound crop rotation became indispensable. Rotation is necessitated for multiple reasons including plant pathology and disease control/ aggregate nutrient levels, nutrient tie-up, biomass management, and soil moisture profiles. To lose or severely diminish a crop from interruption of irrigation by flooding irrigation works, sedimentation after-effects, or low water throws a monkey wrench into rotation. Disjointing the rotation causes loss effects that flow from one year to another.

3. Lack of Safety Net.

There is no safety net for this. Crop insurance will not cover the losses. The U.S. Army Corps of Engineers (USACE) will not mitigate costs or indemnify losses. The uninsured, indemnified, uncompensated loss of one crop can put many a farmer out business. Three such losses from three miscalculated test flows would ruin most farms. That is not temporary. That is not short-term. That is the farm.

4. Initial Test Year Ill-Timed.

The target of 2022 for the initial test year is ill-timed.

(A) Too soon for farmers.

To decide these test flows one year and implement them the next is too sudden and stampeded for farmers to be able to make whatever adjustments might be feasible to maintain crop viability.

(B) Current and projected drought.

Already by April 8, 2021, the U.S. Drought Monitor rated Roosevelt County as suffering from category "D3 - Extreme Drought" with "Major crop/pasture losses" and 'Widespread water shortages or restrictions."

The National Weather Service Climate Prediction Center "Three-Month Outlook" for "Temperature Probability" for June-July-August of 2021 forecasts higher than normal temperatures. The Service's "Precipitation outlook" for the same period forecasts lower than normal precipitation.

USACE Missouri River Water Management Division itself issued News Release No. 21-020 on May 6, 2021 headed "Drought conditions driving lowered runoff forecast." The release says:

“Very dry conditions in April resulted in very low runoff in the upper Missouri River Basin.

The upper Basin runoff was 44% of average, which was the 9th driest April in 123 years of record. The updated 2021 upper Basin runoff forecast is 17 .8 million acre-feet (MAF), 69% of average, which, if realized, would rank as the 22nd lowest calendar year runoff volume.

“The extremely dry April, current drought conditions, and below-normal mountain snowpack has led our office to significantly lower the 2021 calendar year runoff forecast," said John Remus, chief of the U.S. Army Corps of Engineers', Missouri River Basin Water Management Division. "Based on this forecast, the May reservoir monthly studies indicate reduced flow support for navigation during the second half of the navigation season and a 12,000-cfs Gavins Point winter release rate. I urge all water users, particularly intake owners, to begin preparing for the possibility of lower river levels later this summer and during the fall and winter."

A rush to make 2022 the first year of test releases is ill-timed both for irrigation and for the pallid sturgeon. A drought year is a particularly bad year not to have reliable irrigation. For the sturgeon, the released water needs to be warmer than what is provided from the bottom of the reservoir. The release should be from the spillway using shallower and warmer water. This easily might not be available in the looming drought conditions.

Thank you for your time and attention.

Sincerely,

___Jim DeWitt_____

Fort Peck Water Users Association

P.O. Box 401 ~ 602 6th Ave. N.
Wolf Point, MT 59201
(406)653-2250 or (406)650-5454

May 22, 2021

U.S Army Corps of Engineers, Omaha District
CENWO-PMA-C Attn: Fort Peck Draft EIS Comments
116 Capital A venue
Omaha, NE 68102-4901

RE: Comment on Fort Peck Test Releases Draft EIS

The Fort Peck Irrigation Project (FPIP) is located along the Milk and Missouri Rivers in Roosevelt and Valley Counties. The FPIP lies within the southwest corner of the Fort Peck Indian Reservation. The FPIP consists of two district irrigation units, the Wiota Unit and the Frazer- Wolf Point Unit.

- The Wiota Unit is located along the Missouri and Milk River banks southeast of Nashua and serves approximately 6000 irrigated acres.
- The Frazer-Wolf Point Unit serves approximately 13,000 irrigated acres and begins at the Frazer Plant Station south of Frazer, runs approximately 25 miles along the north bank of the Missouri River, and terminates south of Wolf Point.
- The Fort Peck Water Users Assoc. operates these two Projects for the U.S. Department of the Interior, Bureau of Indian Affairs. The FPWUA represents about 80 water users.
-

The Board of the Fort Peck Water Users Assoc, of Wolf Point, Montana comments on the Fort Peck Dam Test Releases Draft Environmental Impact Statement March 2021 as follows:

1. **"Temporary" and "Short-Term" Miscalculation Timing Effects.**

A failure to appreciate timing effects causes the DEIS to miscalculate irrigation impacts as "temporary" and "short-term."

The "Irrigation Pump Survey Report" identifies a concern that "warrants consideration within the EIS modeling." The concern is "that the proposed test occurs during critical crop irrigation periods."

Despite identifying this concern, the DEIS repeatedly characterizes impacts to irrigation as "temporary" and "short-term." It does so by measuring the impacts chronographically rather than agronomically and agriculturally. This is a failure to consider the concern about

timing because what makes the timing critical is agronomic and agricultural factors, not chronological ones. Irrigation is agronomic and agricultural.

The issue of timing has two main aspects: (1) The timing of the proposed test flows embraces nearly the whole irrigation season; and (2) Within the irrigation season, an interruption or reduction of irrigation at one time does not have the same impact as at another time.

(A) Whole Season.

The proposed:
- attraction flow begins April 16.
- retention flow is held until May 28.
- spawning cue flow begins May 28.
- drifting flow is held until September 1.

On a chronograph, that is a fraction of a year. Measured that way, it sounds "temporary" or "short-term." Agronomically, however, this nearly is the entire irrigation season. The DEIS itself notes that "the irrigation season lasts approximately from May through September." Agriculturally speaking, the proposed test flows impact the whole year. In Montana, there is only one irrigation season and only one crop per year.

During critical time, the spawning cue flow level and the flood target are too high. They will flood pumps, electrical boxes, road access to pumps, and even crops themselves. That is a year-long, permanent, non-temporary, non-short-term impact.

During critical time, the drift flow of only 8,000-cfs is marginal under otherwise ideal conditions. In the practical world, many irrigators require 10,500-cfs, or they cannot take in water. Under agricultural operating conditions, those will not be "temporary" or "short-term" losses. That will impact the entire year.

(B) Timing Within the Season.

Many non-irrigated farmers say things like, "My best crops were raised on two thunderstorms that came at the right times." That is the result of cultivar response to moisture timing. Like the pallid sturgeon, agricultural cultivars have life cycles and cycle-stage-sensitive responses. The cultivars and their responses do not change when going from non-irrigated to irrigated farming. The timing of irrigation has an effect like the timing of natural precipitation.

To compute, for example, 15 added days of water level below operable for irrigation intake as having a 10 percent impact because 15 days is 10 percent of the irrigation season is a statement in neglect of agronomy and agriculture. It fails to take account of when this deprivation of moisture occurs.

The DEIS and attachments do not contain an agronomic or agricultural assessment of the critical irrigation timing effects. The "List of Preparers" of the DEIS does not make clear who among the preparers, if anyone, is qualified as an agronomist or agriculturalist to assess the timing impacts.

2. "Temporary" and "Short-Term" Miscalculation Sedimentation, Contracted Crops, and Crop Rotation.

A failure to appreciate sedimentation after-effects, contracted crops, and crop rotation causes the DEIS to miscalculate irrigation impacts as "temporary" and "short-term."

(A) Sedimentation After-Effects.

High flow events cause sedimentation. Irrigation does not and cannot resume immediately simply because a high flow event no longer is flooding irrigation infrastructure. Dredge operators will not put a dredge into that environment soon after the water recedes. The practical effect could be abolition of irrigation for the year, especially for side channel intakes. The DEIS expresses no appreciation of this delay in the resumption of irrigation.

(B) Crop Rotation.

With the advent of advanced continuous cropping cultures and technology in the early 1990s (which is superior for soil health, the environment, and farm economics), agronomically sound crop rotation became indispensable. Rotation is necessitated for multiple reasons including plant pathology and disease control/ aggregate nutrient levels, nutrient tie-up, biomass management, and soil moisture profiles. To lose or severely diminish a crop from interruption of irrigation by flooding irrigation works, sedimentation after-effects, or low water throws a monkey wrench into rotation. Disjointing the rotation causes loss effects that flow from one year to another.

3. Lack of Safety Net.

There is no safety net for this. Crop insurance will not cover the losses. The U.S. Army Corps of Engineers (USACE) will not mitigate costs or indemnify losses. The uninsured, indemnified, uncompensated loss of one crop can put many a farmer out business. Three such losses from three miscalculated test flows would ruin most farms. That is not temporary. That is not short-term. That is the farm.

4. Initial Test Year Ill-Timed.

The target of 2022 for the initial test year is ill-timed.

(A) Too soon for farmers.

To decide these test flows one year and implement them the next is too sudden and stampeded for farmers to be able to make whatever adjustments might be feasible to maintain crop viability.

(B) Current and projected drought.

Already by April 8, 2021, the U.S. Drought Monitor rated Roosevelt County as suffering from category "D3 - Extreme Drought" with "Major crop/pasture losses" and 'Widespread water shortages or restrictions."

The National Weather Service Climate Prediction Center "Three-Month Outlook" for "Temperature Probability" for June-July-August of 2021 forecasts higher than normal temperatures. The Service's "Precipitation outlook" for the same period forecasts lower than normal precipitation.

USACE Missouri River Water Management Division itself issued News Release No. 21-020 on May 6, 2021 headed "Drought conditions driving lowered runoff forecast." The release says:

"Very dry conditions in April resulted in very low runoff in the upper Missouri River Basin. The upper Basin runoff was 44% of average, which was the 9th driest April in 123 years of record. The updated 2021 upper Basin runoff forecast is 17 .8 million acre-feet (MAF), 69% of average, which, if realized, would rank as the 22nd lowest calendar year runoff volume.

"The extremely dry April, current drought conditions, and below-normal mountain snowpack has led our office to significantly lower the 2021 calendar year runoff forecast," said John Remus, chief of the U.S. Army Corps of Engineers', Missouri River Basin Water Management Division. "Based on this forecast, the May reservoir monthly studies indicate reduced flow support for navigation during the second half of the navigation season and a 12,000-cfs Gavins Point winter release rate. I urge all water users, particularly intake owners, to begin preparing for the possibility of lower river levels later this summer and during the fall and winter."

A rush to make 2022 the first year of test releases is ill-timed both for irrigation and for the pallid sturgeon. A drought year is a particularly bad year not to have reliable irrigation. For the sturgeon, the released water needs to be warmer than what is provided from the bottom of the reservoir. The release should be from the spillway using shallower and warmer water. This easily might not be available in the looming drought conditions.

Thank you for your time and attention.

Sincerely,

Fort Peck Water Users Assoc.

Thomas Q. Nichols, President

Kirk Sibley, Vice President

Lionel Flynn, Sec./Treasure

May 22, 2021

U.S. Army Corps of Engineers, Omaha District

CENWO-PMA-C ATTN: Fort Peck Draft EIS Comments

1616 Capitol Avenue

Omaha, NE 68102-4901

RE: Comment on the Fort Peck Test Release Draft Environmental Impact Statement

My name is Kirk Sibley, my family and I are irrigated farmers, sportsman and land owners on the Wiota Unit, Fort Peck Irrigation Project. I have objections to the purposed flow alternatives for the Pallid Sturgeon.

The flows would put a financial hardship on my family that we would not be able to recover from.

The interruption of a reasonable steady flow of water on the Missouri River causes our pumping plant many problems including premature wear on the pumps, bank erosion, silting in of the ditches and pump inlets, low production of water to the user, problems between water users, untimely water delivery, and incalculable financial hardships.

The interruption of irrigation to my farm could cause my family upwards of $250,000 in lost income each year and if the flows are annual will bankrupt us in as few as two years. The 6000-acre project we farm on has around 15 water users and each would be similarly affected. The financial fallout to our community would be devastating.

The crops we raise are not insurable for man-made disasters such as you are purposing, and as such the USACE should have to bear the cost of our losses.

The alternatives you are purposing are not acceptable, the maintenance and damage to our pumps and canals would also be an extreme amount of money. For our project alone it could cost tens of millions of dollars, we are only around four miles of river front. When you calculate that over the purposed area the burden of damage would be in the billions.

My family and I are also avid local sportsmen. The damage to recreational facilities and the inability to gain access to the river would cause us hardship both financially and physically.

We understand the USACE is caught in the process for these proposals and are fulfilling their obligations, but we feel the price is too high to continue on this path.

Kirk Sibley

Jennifer Sibley

Kirk Sibley

Jennifer Sibley

From: Dalbey, Susan E CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: Omaha District Contact Form: Fort Peck Draft EIS Comments
Date: Saturday, May 22, 2021 1:11:41 PM

Aaron - this message came in via the web page.
Can you please address this?
Thank you.
Sue

Sue Dalbey
Fort Peck Interpretive Center Director
US Army Corps of Engineers
PO Box 208
157 Yellowstone Road
Fort Peck, MT 59223

(406) 526-3493 or
(406) 526-3411 x3755
susan.e.dalbey@usace.army.mil

-----Original Message-----
From: noreply@dma.mil <noreply@dma.mil>
Sent: Saturday, May 22, 2021 12:08 PM
To: DLL-CENWO-WEB-ODPROJECT-FP <DLL-CENWO-WEB-ODPROJECT-FP@usace.army.mil>
Subject: Omaha District Contact Form: Fort Peck Draft EIS Comments

This message was sent from the Omaha District website.

Message From: Kathryn Wagner, Snowden Enterprises LLC, Manager

Email: gadgetguy@bresnan.net

Response requested: Yes

Message:

As a landowner/operator along the Missouri River in Richland County, I have never received any notices of this proposal. Deeply concerning as it would deal a fatal blow to our irrigation system and to the farm. The economic impact to the farmers, hence the taxes, businesses dependent upon the farmers along with our role in feeding people. This "temporary" proposal would be a permanent and devastating blow to our family. Why have I not received notices of this proposals?

HTTP_CMS_CLIENT_IP:
HTTP_X_ARR_LOG_ID: e7c0faef-7df8-43bb-9952-9b8606995f28
HTTP_ORIGIN: Blockedhttps://www.nwo.usace.army.mil
HTTP_TRUE_CLIENT_IP: 2600:6c67:487f:1ae0:2d3f:b047:b727:65fe

A7 Ranch Inc.
15277 co rd 321
Brockton, Mt. 59213 email; nturnbull2@gmail.com

U.S. ARMY CORPS of Engineers

CENWO-PMA-C ATTN Fort Peck DEIS study comments

1616 Capital Avenue

Omaha,Ne. 68102

May 23, 2021

Re; Comment on Pallid sturgeon releases from Fort Peck

We are a farm/ranch located on the Missouri river approx. 5 miles east of Brockton, Mt. Our family has irrigated from the Missouri river for approx. 65 years. We are sending this correspondence as we are very concerned about the effects of the proposed test flows outlined in the DEIS. We see potential damage to our operation due to a number of factors and I will attempt to summarize our concerns.

1. Loss of Irrigation Access. The high flows indicated will flood our pumpsite according to levels outlined in the DEIS, potentially destroying valuable infrastructure. (Electrical, road access, filling our side access channel, and possibly flooding our fields). We utilize a side access channel across a sandbar deposited during the last high water event in 2011 and when submerged for a time we will not be able to get back on that site to repair damage due to unstable ground. We know this as during the 2011 event we tried to cross this sandbar in 2012 (a year after submerged) and vehicles were sunk and stuck. In addition the low flows are TOO low as we have experienced poor pumpsite access this spring. Irrigation is critical to our operation and especially during June thru Sept. We experienced a loss of income during the 2011 flood that took years to recover.
2. Bank Erosion. When the river levels are manipulated as the proposed study indicates we will experience a greater level of bank erosion. This results in a loss of land and riparian areas containing trees brush and grass which will enter river channel causing damage to downstream facilities. We are an active participant in the Montana Block management program providing habitat for big game and many species of birds which attracts hunters from many states. Ruining this habitat will have an adverse effect on game populations along the river.
3. If the proposed flows are to be targeted for 2022 we will need to install infrastructure this year to be ready for next years season. Frankly how are we going to get this done at many pumpsites and more importantly how are we going to pay for it? We need more time to figure this out. I feel the study grossly underestimated the impacts producers will realize from this plan.
4. We are suspicious of the methodology of the study by FWP and it seems very self serving for that agency. Also who is to determine if the test has positive results for this species of fish? If it is FWP I can certainly guarantee a positive outcome regardless of real results. This fish has been around a long time and I believe it has adapted to current conditions. We as producers are being asked to take a significant reduction in income by this plan and I do not see other groups willing to “chip” in a like amount!

A7 Ranch Inc.
15277 co rd 321
Brockton, Mt. 59213 email; nturnbull2@gmail.com

We would like to submit three suggestions to mitigate damages as outlined. We believe this plan can be altered as it is being proposed by only one agency.

1. Moderate the test. We believe we can produce the same conditions by using 20000cfs high flow and 9-10000 for the low flow. That would be less prone to cause such severe damage ,
2. No Action. Continue to operate the flows as have been done in the past. This method will enable maximum use of generators and satisfy many downstream as well as reservoir users.
3. If this plan is so critical I believe FWP should provide funds to repair and develop infrastructure to allow downstream users to continue with their operations. The severe bank erosion will result in a significant loss of land (an asset we as producers have paid for) and how are we to be compensated for that? It is much easier to implement a plan with no cost to issuing agency. Why do we as producers have to be subjected to such damages by this plan with no recourse?

I thank you for the opportunity to comment on this DEIS and the overall plan/study. As I have indicated many times in this letter we see this action as a real threat to our livelihood and the future of our operation. WE ARE VERY CONCERNED!

Regards,

Neil Turnbull

A7 Ranch Inc.

Valley County
501 Court Square, #1
Glasgow, MT 59230

Phone: (406)228-6219
Fax: (406)228-9027
vccomm@valleycountymt.gov

Paul Tweten, Member
John Fahlgren Chairman
Mary Armstrong, Member

May 24, 2021

U.S. Army Corps of Engineers, Omaha District
CENWO-PMA-C Attn: fort Peck Draft EIS Comments
1616 Capitol Avenue
Omaha, NE 68102-4901

RE: Comment on Fort Peck Test Releases Draft Environmental Impact Statement

The Valley County Commission, representing the citizens of Valley County, Montana, offer the following comments to the referenced draft environmental impact statement (DEIS):

1. The DEIS is 600 pages long, with a 35-page executive summary and hundreds of pages of appendices. It is extremely technical and serves the needs of academics and scientists who are immersed in hydrology and fish biology daily. However, it is unacceptable to provide this level of detail with no adequate summary (in language that an average citizen can understand) of the impacts to residents and users of the Fort Peck Reservoir and the Missouri River downstream of the dam. The two virtual "public meetings" also failed to adequately provide bottom-line impacts to citizens. Furthermore, the DEIS was released on March 26, 2021 with an allowance of 60 days to provide comments due by May 25, 2021. This time period is inadequate to allow public response to such a significant and potentially long-term impact to affected citizens.

2. Valley County's economy, like the rest of northeastern Montana, is driven by agriculture. Water is the lifeblood of agriculture. The Missouri River flow rates identified in both alternatives 1 and 2 will greatly impact the irrigators downstream of the Fort Peck Dam during the most critical timespan for irrigating crops, resulting in the potential for significant damage to our economy. Specifically:
    a. The high flow rate to 35,000 cfs will severely damage irrigation systems and make access to them impassable in many cases.
    b. The low flow rate of 8,000 cfs proposed for drifting flow will likely make it impossible for many irrigators to irrigate cropland at the driest part of the season.
    c. The change of flow rate between high and low will cause extreme erosion of riverbanks and result in debris flowing downstream potentially damaging infrastructures in their path.

3. The DEIS identified potential damage to the Fort Peck Dam and spillway as a result of the flow requirements from the Fort Peck Reservoir. **Extensive damage has already occurred to the spillway in the 2011 flood event that resulted in $52 million in repair costs**. As noted in the DEIS:
    a. The emergency spillway at Fort Peck is the last line of defense in preventing catastrophic failure with extremely high life and economic loss of national significance. A proper functioning spillway sub-drain system is vital to the stability and performance of the spillway.
    b. The USACE has concerns with spillway slab performance that could be exacerbated with sustained spillway flow. The spillway slab and sub-drain system repairs would be difficult, expensive, and likely constrained by time in order to address dam safety due to loss of spillway operation as quickly as possible. Depending on damage extent and allowable repair time period, repair cost is estimated to be in the range of $20 to $40M. The test flow releases would increase the likelihood these repairs would be needed because they increase the use of the spillway.

4. The Milk River joins the Missouri River ten miles downstream of the Fort Peck Dam. Spring flooding is a regular occurrence along the Milk River in Valley County. As noted in the DEIS, **river flow levels and flood risk will be elevated during the higher flow period.** There is no evaluation in the DEIS of the impact to land, homes, businesses, bridges, roads, and other infrastructure along the Milk River, including the levy that protects the city of Glasgow and surrounding area from flood waters. Our regional medical center, Frances Mahon Deaconess Hospital, lies adjacent to the levy, along the Milk River, in Glasgow.

In conclusion, the pallid sturgeon is reproducing successfully in a hatchery environment. Given that the test flows **may** increase the larvae present from 1% to only 13% maximum, once every eight years, based on historical reservoir system data, we are alarmed that the USACE would risk so much potential damage to the river and reservoir system, the agricultural economy and properties along the Missouri and Milk River. We urge you to rescind your recommendation and select the no action alternative.

Sincerely,

John Fahlgren, Chairman
Board of County Commissioners

Paul Tweten, Member

Mary Armstrong, Chairman

CC:
Governor Gianforte
Senator Daines
Senator Tester
Representative Rosendale

MONTANA TROUT UNLIMITED

24 May 2021

U.S. Army Corps of Engineers
Omaha District CENWO-PMA-C
Attn: Fort Peck Draft EIS Comments
1616 Capitol Avenue
Omaha, NE 68102-4901
Email: cenwo-planning@usace.army.mil

Re: Comments on the DEIS for Fort Peck Dam Test Releases (FPDTR)

Folks:

Thank you for the opportunity to comment on the Draft Environmental Impact Statement (DEIS) for the proposed Fort Peck Dam Test Releases. Montana Trout Unlimited (MTU) represents more than 4,000 conservation-minded anglers organized among 13 volunteer Trout Unlimited chapters in the Big Sky State. Though MTU focuses primarily on salmonids, TU members in the state have an abiding interest in protection and conservation of all native fishes, including pallid sturgeon. We have demonstrated this interest through nearly 10 years of documented advocacy on behalf of pallid sturgeon and other native species during development of alternatives at Intake on the Yellowstone River.

We applaud the Corps for committing to implementing test flow releases at Fort Peck Dam. Since pallid sturgeon were listed as endangered, research has increasingly indicated that flow conditions from Fort Peck Dam are a likely pivotal limiting factor resulting in spawning and recruitment loss for this species in the upper Missouri River Basin. It is appropriate for the Corps to shape experimental releases that address four critical stages of spawning as well as the drift-timing and distance free-embryos and larvae need to survive in the regulated stretch of river above Lake Sakakewa. These include flows that cue spawning movement, ensure aggregation at spawning sites, trigger spawning and that provide appropriate timing and conditions for larval drift to better ensure development of age-0 pallids from embryos to free-swimming juveniles before reaching the head of Lake Sakakewa.

We are pleased to see that the test release experiments will occur concurrently with the implementation of the experimental new bypass at Intake on the lower Yellowstone River. Neither action should be considered in isolation. Success in meeting the objectives at both the Missouri River mainstem below Fort Peck and on the lower Yellowstone River will be critical to recovery of a wild pallid sturgeon population in the upper Missouri River Basin. Both reaches are arms of a connected ecological system.

It is important that the public should understand that these test-flow activities are not recovery actions. Nor should the development of the experimental bypass and new diversion dam at Intake on the Yellowstone be construed as a recovery action. They are both experiments. One based on the hypothesis that improved flow conditions can result in increased and successful spawning while improving survival and recruitment. The other experiment on the Yellowstone seeks to demonstrate that the majority of adult pallid sturgeon motivated to move upstream during the spawning period at Intake will successfully navigate the artificial bypass. And in turn, it is hypothesized, that this will result in successful spawning above Intake as well as survival of free-drifting embryos and larvae through the Intake project area. To date, no data are available indicating pallid sturgeon, adult or otherwise, will navigate a two-mile-long artificial bypass system, or, assuming successful spawning occurs upstream, that sufficient numbers of free-drifting embryos and larvae will skirt entrainment or impingement at the canal headworks and then survive injury while passing over the new diversion dam. We look forward to the U.S. Bureau of Reclamation and Corps developing monitoring and adoptive management that ensures sufficient data will be available to judge the success of this project.

Montana TU supports the Corps selection of Alternative 1 and variants (a) and (b) as the preferred alternative. We realize these test flows will occur in an adaptive fashion, however we lean more towards endorsing variant 1 (b), primarily because the later drift flows might allow for higher water temperatures, and therefore potentially increase the rate of juvenile pallid sturgeon growth. That might reduce the time period needed for larvae to develop into a free-swimming stage, perhaps reducing mortality at Lake Sakakewa.

We recognize that the Corps has been challenged in balancing the needs of pallid sturgeon with its obligations to maintain acceptable flood risk, hydroelectric production, reservoir recreation and minimizing impacts to downstream users, especially irrigators. We appreciate the agency's collaborative approach, and the ear it lent to all stakeholders, including federal and state agencies such as Montana FWP, the U.S. Fish and Wildlife Service and the U.S. Geological Survey. We have concluded, however, that there might be some added potential benefits to pallid sturgeon in Alternative 2. But because of the added potential impacts its implementation might have on some stakeholders, we understand why it hasn't been selected as the preferred option.

We note that the proposed hydrograph shape for Alternative 1 and its variants, diverges some from that of the median and 25th quartile historical flows, which presumably represent hydrographs accommodating successful pallid sturgeon spawning, survival and recruitment. For instance, it appears historical minimum drift flows were often lower than 8KCF. However, we recognize the proposed test minimum flow must now balance velocities and less potential drift distance because of the presence of Lake Sakakewa while also considering the interests of irrigators. It is abundantly clear that monitoring larval drift and survival at this minimum flow will be critical.

MONTANA TROUT UNLIMITED

In discussion of potential impacts for Alternatives 1 and 2, the DEIS recognizes that increased sediment transport and turbidity will likely occur, though it might be negligible given the duration of the test. Actually, increased sediment and turbidity might be beneficial for sturgeon, which evolved in far murkier waters and with sandier substrates than is often produced by discharges from Fort Peck. That said, any sediment increases that prove to be burdensome to irrigation pumps might be mitigated through some erosion control measures along the banks and within the irrigation systems along the Milk and Missouri Rivers.

We urge the Corps as part of its adaptive approach to the flow tests to seek to refine its predictive capabilities for runoff to enable earlier forecasts. Fourteen days for planning a test seems abbreviated. This is an area that increased collaboration among partners such as NRCS, Montana DNRC and U.S.G.S. might prove helpful. It also might allow for more than a maximum of five test years, and perhaps better ensure the probability of full tests. It's unclear if the 82-year historical window has been bracketed in a fashion to determine if the majority of the years reflecting proposed test flow regimes occurred in the recent 30-year period, or, whether they were randomly spread over the full 8-plus- decade period. It might be that the shifting climate could allow for more – or perhaps fewer -- test flows in a shorter period than, say, occurred before the 1990s. We believe the more tests, with adoptive tweaks, the more scientific certainty we'll have on whether flow modifications from Fort Peck Dam will improve pallid sturgeon survival and recruitment enough to meet recovery goals.

Again, thank you for the opportunity to comment on this important project.

Sincerely,

David Brooks
Executive Director

P.O. Box 7186 • Missoula, MT 59807 • www.montanatu.org • 406.543.0054

From: Salak, Jennifer L CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: [Non-DoD Source] Fort Peck Dam Test Flow EIS
Date: Monday, May 24, 2021 12:20:42 PM

From: Scott Buxbaum <4bfarms1@gmail.com>
Sent: Monday, May 24, 2021 11:26 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] Fort Peck Dam Test Flow EIS

USACE,

I am the president of the Montana- Dakota Beet Growers Association. Our Assoc. raises sugarbeets under contract for Sidney Sugars Inc. the factory is located in Sidney, Mt. We are opposed to the Fort Peck Test Flow Project.

The Fort Peck Dam test flow being proposed on the Missouri River would affect the ability to irrigate the sugar beets that are raised along the Missouri River. Sugar beets are very dependent on irrigation to achieve top production, with the increase and decrease of flows that are being proposed, production would be drastically affected. With the inability to irrigate the sugar beets due to the flow changes the production of the beets will be dramatically reduced making it infeasible to raise them.

21.9% of the sugar beets processed by Sidney Sugars would be affected by the test flows proposed. With the profit margins so tight on the sugar beet farm and the loss of production the acres of beets raised along the Missouri river would be dramatically reduced if not totally completely lost, which in turn would make it infeasible for the factory in Sidney to continue to operate.

There are around 100 sugar beet growers in 6 counties in eastern Mt. and western N.D. that raise approx. 31,000 acres of beets each year. This growing region would be severely devastated with the loss of the sugar beet factory in Sidney. This would result in a revenue loss to the area over $50 million in beet payments to growers and another $32 million of revenue that is generated by the operations of the factory. A dollar earned generates at least 7 times more revenue for an area, so the financial impact of the Fort Peck Dam Test Flow project would impact the area over $574 million annually. If this plan proceeds it would be devastating to the area and to our beet growers that might not survive to continue to farm.

Scott Buxbaum

President Montana-Dakota Beet Growers

Bruce Farling
232 West Sussex Avenue
Missoula, Montana 59801
brucefarling@gmail.com

24 May 2021

U.S. Army Corps of Engineers
Omaha District CENWO-PMA-C
Attn: Fort Peck Draft EIS Comments
1616 Capitol Avenue
Omaha, NE 68102-4901
Email: cenwo-planning@usace.army.mil

Re: Comments on the DEIS for Fort Peck Dam Test Releases (FPDTR)

To Whom It May Concern:

Please accept my comments on the draft EIS the Corps has prepared for the proposed flow releases from Fort Peck Dam ostensibly aimed at benefitting spawning, survival and recruitment of pallid sturgeon. I have more than 30-years of professional experience in fisheries conservation and water policy in Montana. An area of special interest for me has been conservation of Montana's native fishes, especially imperiled species such as pallid sturgeon.

I appreciate the Corps tackling these experimental test flows. The hypothesis that regulated discharges from Fort Peck Dam and the filling of Lake Sakakewa have significantly altered normative flow timing, volume, velocities sediment transport, turbidity, dissolved oxygen levels and water temperatures is compelling. And therefore these changed conditions have in turn squelched successful spawning and recruitment of pallid sturgeon in the upper Missouri River basin for decades. It's clear the flow tests are needed and overdue.

Please consider these recommendations and observations:

1. The Corps must ensure that these flow tests and their potential positive outcomes continue to be considered additive to other activities in the upper basin, including and especially whatever results from the new experimental bypass and diversion dam on the lower Yellowstone River at Intake. Both projects are experimental. Successful spawning and recruitment in both the lower Yellowstone and Missouri River below Fort Peck will be necessary in order to meet the recovery objectives stated in the Missouri River Recovery Management Plan and Bop (2018). It should be noted that even if the Intake Project meets its stated objective accommodating upstream passage of 85 percent of all adult pallid sturgeon motivated to move upstream during the pre-spawning period, this, according to telemetry monitoring, will result in just a small amount of overall potential spawning necessary to meet overall recovery goals in the upper basin recovery unit. And

that's assuming spawning is successful, and that recruitment occurs to age-1, of which no evidence has been produced to this point. Basically, to meet recovery goals the pallid sturgeon program must succeed in both the Lower Yellowstone and upper Missouri River. They comprise one system and efforts in one shouldn't be abandoned over those in the other.

2. It seems Alternative 1b best achieves a balance between providing potential successful spawning, adequate drift conditions and survival with the need to minimize impacts to local and regional stakeholders. Based on the alternative analyses in the DEIS, it appears impacts to hydro production would be negligible, increased erosion could be small and short-term (though the increase in turbidity potentially beneficial to sturgeon), the risk of increased flood damage small and short-term and not something that would occur every year the tests were implemented, and the potential for damage to the spillway not a huge concern given the infrequency and short-term duration of potential spills.

3. The DEIS is not very clear on what measurable targets will be used for determining success, aside from that implied in modeling discussed in Appendix E (Fischenich 4/2020). It is made clear in Appendix E that, "quantification of objectives is limited," and that the model that will be employed "does not provide a direct measure of recruitment to Age-1 on population demographics." In fact, it appears that at this point no measurable objectives for spawning cues, aggregation of adult fish in spawning areas, actual spawning and embryo emergence have been determined. And, that the only objective to be evaluated will be a model evaluating whether a certain percentage of free-swimming larvae settle before reaching the head of Lake Sakakewa. It's unclear what data will inform the model, aside perhaps from the few larvae that might be captured. Given the difficulty of netting post-hatch embryos and larvae in a river the size of the Missouri, it's possible modeled determinations of success will be made on not a lot of empirical information. Further, nothing in the DEIS discusses post age-1 recruitment, which can be limited by other impacts of flow regulation, such as reducing the availability of food resources. I urge the Corps to work closely with the Missouri River Recovery Technical Team to continually increase and refine the sensitivity of the monitoring that will help determine success. It is presumed this is part of the adoptive management that will occur, but that is not clear.

4. Please report annually to the public, including affected landowners, recreationists, conservationists and local government, on the progress of the test flow experiments. This would go a long way to building public ownership in the project and its objectives.

Thank you for the opportunity to weigh in on the DEIS for test flow releases at Fort Peck Dam.

Sincerely,

Bruce Farling

Richland County Conservation District
2745 W Holly ST
Sidney, MT 59270
406-433-2103x3001

May 24, 2021

U.S. Army Corps of Engineers; Omaha District
CENWO-PMA-C Attn: Fort Peck Draft EIS Comments
1616 Capitol Avenue
Omaha, NE 68102-4901

RE: Comment on Fort Peck Test Release Draft Environmental Impact Statement

The Richland County Conservation District aims to help citizens conserve their soil, water, and other natural resources by providing an array of services to the area. We work closely with the county's farmers and ranchers who responsibly steward our region's natural resources. The Missouri River is the northern border of Richland County and the Richland County Conservation District. For this reason, we are incredibly concerned by the Fort Peck Test Release Draft Environmental Impact Statement (DEIS). Producers in Richland County use the Missouri River to irrigate over 15,000 acres of cropland. This proposed test flow will have a devastating effect on the families that farm this acreage, the land itself, and the economic vitality of the entire region.

The proposed 35,000 cfs flood target will cause flooding and bank saturation that will lead to bank erosion and increased sedimentation issues in pumpsites and back channels. The later proposed drifting flow of 8,000 cfs after the high flow event will result in pumps needing to be reset, causing further pumpsite and river access problems. However, working on these pumpsites after a high flow event becomes problematic due to the saturated banks and fields. This will make it very difficult, if not impossible, to access the river in a timely matter to resume irrigating. The economic hardship resulting from an unstable irrigation season is a concern for most irrigators; many of which would not be able to financially recover from the impact caused by the proposed test flow.

The proposed 2022 implementation target date is also problematic due to the cyclical nature of farming operations which includes crop rotations and contracting crops. Also, back to back test flows could potentially destroy a family farm financially. At this time, crop insurance does not cover man made disasters, so loss of crop production due to this proposed test flow may not be recovered. Who will compensate the producers and the ag businesses who contract the irrigated crops? How much financial burden are the landowners and producers of ag crops expected to bear so the USACE and USFWS can potentially recover the Pallid Sturgeon. The cost burden is not just loss of crops, lower production, or poor-quality crops, it is also the

the cost of cleaning out pumpsites of debris and silt, moving pumps and power sources, replacing pumps due to damage from excess silt and/or debris. The proposed flow test that could possibly occur several times in a five to ten-year span is too great a cost to justify for the potential outcome of the test.

We would also ask the USACE to improve on their public participation methods; release of a 600-page DEIS during the planting season is less than ideal. Virtual public meetings with broken links to participate does not help the public participate in the comment process. Any future public comment meeting should be well advertised and held in person. If the virtual component continues to be a part of the public participation, the USACE needs to make sure that the public can participate without the frustration of not being able to join the advertised meeting due to technical difficulties that are not the public's fault.

We appreciate the work that was conducted to update the pump site survey and to gather accurate information to complete the Fort Peck Test Release Draft EIS. However, the Richland County Conservation District supervisors feel that the DEIS fails to fully address the impact the proposed alternatives would have on the landowners, producers, ag businesses, and the four Montana counties affected by this proposal. We also question the period of record not including the most recent 12 years of data when assessing impacts. In doing so, the DEIS does not consider how much the river has changed since the flooding that occurred on this stretch of the Missouri River in 2011.

Thank you for the opportunity to comment on this Fort Peck Test Release Draft EIS. It is our opinion that the USACE pursue the No Action Alternative.

Sincerely,

Dan Young

Dan Young, Chairman
Richland County Conservation District

Board of County Commissioners

Richland County
Montana

201 West Main, Sidney, MT 59270 | 406-433-1706
lyoung@richland.org | sgorder@richland.org | dmitchell@richland.org

May 12, 2021

U.S. Army Corps of Engineers, Omaha District
CENWO-PMA-C Attn: Fort Peck Draft EIS Comments
1616 Capitol Avenue
Omaha, NE 68102-4901

Via postal mail and email:
cenwo-planning@usace.army.mil

RE: Comment on Fort Peck Test Releases Draft EIS

The Board of County Commissioners of Richland County, Montana comments on the Fort Peck Dam Test Releases Draft Environmental Impact Statement March 2021 as follows:

1. "Temporary" and "Short-Term" Miscalculation Timing Effects

A failure to appreciate timing effects causes the DEIS to miscalculate irrigation impacts as "temporary" and "short-term."

The "Irrigation Pump Survey Report"[1] identifies a concern that "warrants consideration within the EIS modeling."[2] The concern is "that the proposed test occurs during critical crop irrigation periods."[3]

Despite identifying this concern, the DEIS repeatedly characterizes impacts to irrigation as "temporary" and "short-term." It does so by measuring the impacts chronographically rather than agronomically and agriculturally. This is a failure to consider the concern about timing because what makes the timing critical is agronomic and agricultural factors, not chronological ones. Irrigation is agronomic and agricultural.[4]

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[1] Appendix D, Draft Environmental Impact Statement, "Hydrology and Hydraulics Technical Reports," pp. 379-400.

[2] Irrigation Pump Survey Report, p. 8.

[3] *Ibid.*

[4] "Irrigation is a common practice in the Upper Basin, where low annual rainfall and a short growing season requires river and reservoir water to improve crop viability." DEIS, 3-180.

The issue of timing has two main aspects: (1) The timing of the proposed test flows embraces nearly the whole irrigation season; and (2) Within the irrigation season, an interruption or reduction of irrigation at one time does not have the same impact as at another time.

(A) Whole Season

The proposed:

- attraction flow begins April 16.
- retention flow is held until May 28.
- spawning cue flow begins May 28.
- drifting flow is held until September 1.

On a chronograph, that is a fraction of a year. Measured that way, it sounds "temporary" or "short-term." Agronomically, however, this nearly is the entire irrigation season. The DEIS itself notes that "the irrigation season lasts approximately from May through September."[5] Agriculturally speaking, the proposed test flows impact the whole year. In Montana, there is only one irrigation season and only one crop per year.

During critical time, the spawning cue flow level and the flood target are too high. They will flood pumps, electrical boxes, road access to pumps, and even crops themselves. That is a year-long, permanent, non-temporary, non-short-term impact.

During critical time, the drift flow of only 8,000 cfs is marginal under otherwise ideal conditions. In the practical world, many irrigators require 10,500 cfs, or they cannot take in water. Under agricultural operating conditions, those will not be "temporary" or "short-term" losses. That will impact the entire year.

(B) Timing Within the Season

Many non-irrigated farmers say things like, "My best crops were raised on two thunderstorms that came at the right times." That is the result of cultivar response to moisture timing. Like the pallid sturgeon, agricultural cultivars have life cycles and cycle-stage-sensitive responses. The cultivars and their responses do not change when going from non-irrigated to irrigated farming. The timing of irrigation has an effect like the timing of natural precipitation.

---

[5] "The irrigation season lasts approximately from May through September." DEIS, 3-180.

To compute, for example, 15 added days of water level below operable for irrigation intake as having a 10 percent impact because 15 days is 10 percent of the irrigation season is a statement in neglect of agronomy and agriculture. It fails to take account of *when* this deprivation of moisture occurs.

The DEIS and attachments do not contain an agronomic or agricultural assessment of the critical irrigation timing effects. The "List of Preparers" of the DEIS[6] does not make clear who among the preparers, if anyone, is qualified as an agronomist or agriculturalist to assess the timing impacts.

2. "Temporary" and "Short-Term" Miscalculation
Sedimentation, Contracted Crops, and Crop Rotation

A failure to appreciate sedimentation after-effects, contracted crops, and crop rotation causes the DEIS to miscalculate irrigation impacts as "temporary" and "short-term."

(A) Sedimentation After-Effects

High flow events cause sedimentation. Irrigation does not and cannot resume immediately simply because a high flow event no longer is flooding irrigation infrastructure. Dredge operators will not put a dredge into that environment soon after the water recedes. The practical effect could be abolition of irrigation for the year, especially for side channel intakes. The DEIS expresses no appreciation of this delay in the resumption of irrigation.

(B) Contracted Crops

Some of the affected crops are planted, raised, and marketed under advance contracts. For example, sugar beet acres are contracted in advance with the Sidney Sugars factory in Sidney, Montana. The DEIS expresses no appreciation of the effect of losses from high and low water interruptions of irrigation on the ability to continue contracting acres. A carry-over effect on contracting is not "temporary" or "short-term."

(C) Crop Rotation

With the advent of advanced continuous cropping cultures and technology in the early 1990s (which is superior for soil health, the environment, and farm economics), agronomically sound crop rotation became indispensable. Rotation is necessitated for

[6] Pp. 9-1 to 9-2.

multiple reasons including plant pathology and disease control,[7] aggregate nutrient levels, nutrient tie-up, biomass management, and soil moisture profiles. To lose or severely diminish a crop from interruption of irrigation by flooding irrigation works, sedimentation after-effects, or low water throws a monkey wrench into rotation. Disjointing the rotation causes loss effects that flow from one year to another.

3. Sidney Sugars Threatened and Ignored

For some crops, such as spring wheat, farmers have marketing options. There are multiple grain elevators and terminals where they can sell and haul wheat. For other crops, there is only one buyer in the market. For example, in eastern Montana and western North Dakota, sugar beets are purchased only by Sidney Sugars Incorporated, a wholly owned subsidiary of American Crystal Sugar Company.

Sidney Sugars provided a significant amount of information and financial data during the preparation of the DEIS showing the threat of the proposed releases to its sole factory in Sidney. The DEIS simply ignores this information.

The impacts could be lethal to the factory. This would foist devastating impacts upon an entirely different and additional set of 54,000 flood irrigated acres in the Lower Yellowstone Irrigation Project (LYIP) to which the DEIS is oblivious.

Close the factory and all the acres of the LYIP – along with those under sprinkler irrigation from the Missouri River – will have no market for sugar beets. Close the factory and count the loss of jobs, loss of business and personal incomes, impacts upon school districts, erosion of tax bases, closure of other businesses, etc. By ignoring Sidney Sugars, the DEIS ignores an elephant in the middle of the room.

4. Lack of Safety Net

There is no safety net for this. Crop insurance will not cover the losses. The U. S. Army Corps of Engineers (USACE) will not mitigate costs or indemnify losses. The uninsured, indemnified, uncompensated loss of one crop can put many a farmer out business. Three such losses from three miscalculated test flows would ruin most farms. That is not temporary. That is not short-term. That is the farm.

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[7] Planting durum on durum, spring wheat on spring wheat, peas on peas, beets on beets, etc. causes devastating losses from diseases.

5. Initial Test Year Ill-Timed

The target of 2022 for the initial test year is ill-timed.

(A) Too soon for farmers

To decide these test flows one year and implement them the next is too sudden and stampeded for farmers to be able to make whatever adjustments might be feasible to maintain crop viability.

(B) Current and projected drought

Based on current and developing conditions, the Board of County Commissioners sent a request to Montana Governor Greg Gianforte dated April 13, 2021 that he submit a request to the U. S. Secretary of Agriculture and the President of the United States for an agriculture-related disaster declaration for Richland County, Montana based on drought. Richland County already was designated a contiguous drought disaster county in December, 2020. Because of worsened conditions and meteorological forecasts, the Board seeks a designation of Richland County as a primary drought disaster county.

Already by April 8, 2021, the U. S. Drought Monitor rated Richland County as suffering from category "D3 – Extreme Drought" with "Major crop/pasture losses" and "Widespread water shortages or restrictions."

The National Weather Service Climate Prediction Center "Three-Month Outlook" for "Temperature Probability" for June-July-August of 2021 forecasts higher than normal temperatures.[1] The Service's "Precipitation Outlook" for the same period forecasts lower than normal precipitation.[2]

USACE Missouri River Water Management Division itself issued News Release No. 21-020 on May 6, 2021 headed "Drought conditions driving lowered runoff forecast."[8] The release says:

> Very dry conditions in April resulted in very low runoff in the upper Missouri River Basin.
>
> The upper Basin runoff was 44% of average, which was the 9th driest April in 123 years of record. The updated 2021 upper Basin runoff forecast is 17.8

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[8] https://www.nwd.usace.army.mil/Media/News-Releases/Article/2597809/drought-conditions-driving-lowered-runoff-forecast/ accessed May 10, 2021.

> million acre-feet (MAF), 69% of average, which, if realized, would rank as the 22nd lowest calendar year runoff volume.
>
> 'The extremely dry April, current drought conditions, and below-normal mountain snowpack has led our office to significantly lower the 2021 calendar year runoff forecast," said John Remus, chief of the U.S. Army Corps of Engineers', Missouri River Basin Water Management Division. "Based on this forecast, the May reservoir monthly studies indicate reduced flow support for navigation during the second half of the navigation season and a 12,000-cfs Gavins Point winter release rate. I urge all water users, particularly intake owners, to begin preparing for the possibility of lower river levels later this summer and during the fall and winter."

A rush to make 2022 the first year of test releases is ill-timed both for irrigation and for the pallid sturgeon. A drought year is a particularly bad year not to have reliable irrigation. For the sturgeon, the released water needs to be warmer than what is provided from the bottom of the reservoir. The release should be from the spillway using shallower and warmer water. This easily might not be available in the looming drought conditions.

Thank you for your time and attention.

Sincerely,

Duane Mitchell	Shane Gorder	Loren H. Young	Tom Halvorson
Chairman	Commissioner	Commissioner	Civil Attorney

TRH:mmi

CC: Attorney General Austin Knudsen
Governor Greg Gianforte
Director, Montana Department of Agriculture
U. S. Senator John Tester
U. S. Senator Steve Daines
U. S. Representative Matt Rosendale
Hon. Rick Norby, Mayor of the City of Sidney
Hon. Brian Bieber, Mayor of the Town of Fairview
Sidney Herald
The Roundup

Sidney Area Chamber of Commerce and Agriculture
Richland Economic Development Corp.
Attorney General Wayne Stenehjem
Governor Douglas Burgum
Commissioner of Agriculture Doug Goehring
U. S. Senator John Hoeven
U. S. Senator Kevin Kramer
U.S. Representative Kelly Armstrong
Williston Herald
McKenzie County Farmer

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[1] Three-Month Outlooks, Official Forecasts, National Weather Service, Climate Prediction Center, June-Jul-Aug 2021, https://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=3, accessed April 12, 2021.
[2] *Ibid.*

From: Salak, Jennifer L CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: [Non-DoD Source] Comments on Draft EIS Fort Peck test flow
Date: Monday, May 24, 2021 12:20:18 PM

From: Connie Iversen <nji@midrivers.com>
Sent: Monday, May 24, 2021 10:04 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] Comments on Draft EIS Fort Peck test flow

I vote for no action and below are the reasons why:

I am a Native American irrigated farmer in Richland county Montana along the Missouri River.I raise sugar beets, corn, grains, alfalfa, grass hay and irrigated pasture for grazing. My water rights allow me to irrigate but with the test flows the Corps is proposing I don't think I will be able to irrigate at either the high flows or the low flows and it may not be possible to fix my pump site. I had to fix my pump site this spring due to the low flow of about 7500 CFS at a cost of about $5000. I had to fix my pump site in 2011 due to the flood at a cost of about $100,000. Each time the flow of the river changes it changes the makeup of the river and makes it harder and maybe impossible to fix my pump sites. If I can't fix my pump sites to irrigate this takes away my ability to make a living and therefore my ability to make land payments along with pay my other bills!
1. Can the Corps offer any remedy for this such as money to cover the cost of the loss of income from crops and or pay for the cost of fixing my pump site?
2. The bank erosion is taking away my land. Each time the river goes up or down I lose a chunk of land. Not only due I lose crop production but I have had to shorten my Pivots which cost me money and production! Again limits my ability to make a living!

3. There seems to be water down stream for barge traffic. Why is it more important for them to have water to operate than it is for irrigators to have enough water to irrigate?

4. I have been told by the Fish and Wild Life Service the Sturgeon that are raised in Bismarck have the same genetics as the sturgeon you are trying to spawn naturally. Why are you trying to recreate something naturally that will not only put a lot of irrigators and whole communities out of business when the same fish can be raised and released into the river?

I recently attended a presentation on the Sturgeon and the test flow with the Fort Peck tribal council in Poplar MT. They were concerned that they had not been included in some of the discussions with the Corps on the test flows. They were very concerned about the effect this may have on their tribal people and on their community and also the surrounding communities on and off the reservation!

5. Why has the Corps and Fish and Wild Life Service not involved the Fort Peck Tribe?

I VOTE FOR NO ACTION!

Connie Iversen

Connie Iversen

13749 County Road 332
Culbertson, MT 59218
406-798-7770
Cell 406-489-0737
nji@midrivers.com <mailto:nji@midrivers.com>

From: Salak, Jennifer L CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: [Non-DoD Source] Comments on Draft EIS Ft Peck Test Flow
Date: Monday, May 24, 2021 10:22:25 AM

Aaron – please see below comments.

Jennifer

From: rji@midrivers.com <rji@midrivers.com>
Sent: Monday, May 24, 2021 10:00 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] Comments on Draft EIS Ft Peck Test Flow

TO the USACE

My name is Richard Iversen. I am an Associate Supervisor on the Richland County Conservation District, a Board member on the Missouri River Conservation Districts Council and a conservation representative on the Missouri River Recovery and Implementation Committee. My wife, Connie Iversen, is a member of the Fort Peck Assiniboine and Sioux Tribes. We farm and ranch and are partners in an oil and gas business along the Missouri River in Eastern Montana. Our irrigated lands are on the stretch of river that will be affected by the Draft EIS for the proposed test flows for Pallid Sturgeon Spawning. While I feel the DEIS has covered a lot of ground, it lacks in the following areas:

1. The pump site survey undertaken by the USACE in the summer of 2020 revealed that we would not be able to utilize two of our pump sites during parts of the flow test. In our case, these sites would be inoperable following the high flow event during the months of July, August, and Sept. This would cause complete crop losses in some instances, and very reduced yields in others. Since the USACE state they do not mitigate losses, we must request the No Action Alternative be pursued as it is the only proposal that would not cause undue harm to our family's livelihood.
2. A separate pump site on our farm is for a water right permitted for Hydraulic Fracking for gas and oil development. Nowhere in the DEIS do I see any consideration for how the test flow will affect the ability to complete a Frac job of an oil and gas well. If a Frac job is not completed on schedule, it can destroy a 5–7-million-dollar oil and gas well process, not to mention the loss of millions of dollars of revenue over a period exceeding 20 yrs. We feel until oil and gas development considerations are acknowledged in the DEIS, the No Action approach should be taken.
3. We are members of a community that have developed irrigation below Fort Peck Dam. This irrigation was one of the authorized purposes for building the Dam, along with the other dams on the mainstem of the Missouri River. This flow test will jeopardize this authorized purpose. Our community depends on crops and grazing to support many businesses in our region and across the nation. It will negatively affect our entire community. One of many examples of this is the impact to Sidney Sugars in Sidney, MT; they have indicated that this flow test could cause their business to close. There is nothing in the DEIS that shows a positive impact to our community, financially or socially. Hence, the No Action approach to the DEIS should be pursued.
4. The USACE has stated in the DEIS and in other venues that the Pallid Sturgeon was not considered endangered or unable to survive the spawning process until Lake Sakakawea was completed. This shortened the length of free-flowing water below Fort Peck Dam and is the root cause for larval pallid dying in the toxic headwaters of Lake Sakakawea. Nowhere in the DEIS does the USACE mention draining part of Lake Sakakawea as an alternative. This would lengthen the river below Fort Peck Dam to the length pre-Lake Sakakawea. How can the source of pallid mortality in the toxic back waters of Lake Sakakawea not be recognized through a proposed alternative to drain Lake Sakakawea to the extent that would provide enough free flowing river miles? Until this is addressed in a DEIS, I support the No Action alternative.

In conclusion, I feel a lot of progress has been made by the USACE because of help and suggestions from a lot of local individuals, businesses, the Missouri River Conservation Districts Council, Fort Peck Tribes, and many local government agencies to assist the USACE in preparing a quality DEIS. However, I feel the DEIS fails to recognize the real impact of the two proposed alternatives. The small part of the area economics that was truly analyzed in the DEIS, shows a negative social and financial impact to the region. I can only support a No Action alternative.

Richard Iversen

13749 Cr 332

Culbertson, MT, 59218

Phone 406-489-7770

Rcvd 24May21

Roosevelt County

Commissioners:

Gordon Oelkers – Presiding Officer
Duane Nygaard- Member
Gary Macdonald- Member

400 2nd Avenue South
Wolf Point, Mt. 59201
406-653-6246
Fax
406-653-6201

Office of County Commissioners

May 18, 2021

U.S Army Corps of Engineers, Omaha District
CENWO-PMA-C Attn: Fort Peck Draft EIS Comments
116 Capital Avenue
Omaha, NE 68102-4901

RE: Comment on Fort Peck Test Releases Draft EIS

The Board of County Commissioners of Roosevelt County, Montana comments on the Fort Peck Dam Test Releases Draft Environmental Impact Statement March 2021 as follows:

1. "Temporary" and "Short-Term" Miscalculation Timing Effects

A failure to appreciate timing effects causes the DEIS to miscalculate irrigation impacts as "temporary" and "short-term."

The "Irrigation Pump Survey Report" identifies a concern that "warrants consideration within the EIS modeling." The concern is "that the proposed test occurs during critical crop irrigation periods."

Despite identifying this concern, the DEIS repeatedly characterizes impacts to irrigation as "temporary" and "short-term." It does so by measuring the impacts chronographically rather than agronomically and agriculturally. This is a failure to consider the concern about timing because what makes the timing critical is agronomic and agricultural factors, not chronological ones. Irrigation is agronomic and agricultural.

The issue of timing has two main aspects: (1) The timing of the proposed test flows embraces nearly the whole irrigation season; and (2) Within the irrigation season, an interruption or reduction of irrigation at one time does not have the same impact as at another time.

(A) Whole Season

The proposed:

- attraction flow begins April 16.
- retention flow is held until May 28.
- spawning cue flow begins May 28.
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On a chronograph, that is a fraction of a year. Measured that way, it sounds "temporary" or "short-term." Agronomically, however, this nearly is the entire irrigation season. The DEIS itself notes that "the irrigation season lasts approximately from May through September." Agriculturally speaking, the proposed test flows impact the whole year. In Montana, there is only one irrigation season and only one crop per year.

During critical time, the spawning cue flow level and the flood target are too high. They will flood pumps, electrical boxes, road access to pumps, and even crops themselves. That is a year-long, permanent, non-temporary, non-short-term impact.

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(B) Timing Within the Season

Many non-irrigated farmers say things like, "My best crops were raised on two thunderstorms that came at the right times." That is the result of cultivar response to moisture timing. Like the pallid sturgeon, agricultural cultivars have life cycles and cycle-stage-sensitive responses. The cultivars and their responses do not change when going from non-irrigated to irrigated farming. The timing of irrigation has an effect like the timing of natural precipitation.

To compute, for example, 15 added days of water level below operable for irrigation intake as having a 10 percent impact because 15 days is 10 percent of the irrigation season is a statement in neglect of agronomy and agriculture. It fails to take account of when this deprivation of moisture occurs.

The DEIS and attachments do not contain an agronomic or agricultural assessment of the critical irrigation timing effects. The "List of Preparers" of the DEIS does not make clear who among the preparers, if anyone, is qualified as an agronomist or agriculturalist to assess the timing impacts.

2. "Temporary" and "Short-Term" Miscalculation Sedimentation, Contracted Crops, and Crop Rotation

A failure to appreciate sedimentation after-effects, contracted crops, and crop rotation causes the DEIS to miscalculate irrigation impacts as "temporary" and "short-term."

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High flow events cause sedimentation. Irrigation does not and cannot resume immediately simply because a high flow event no longer is flooding irrigation infrastructure. Dredge operators will not put a dredge into that environment soon after the water recedes. The practical effect could be abolition of irrigation for the year, especially for side channel intakes. The DEIS expresses no appreciation of this delay in the resumption of irrigation.

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The impacts could be lethal to the factory. This would foist devastating impacts upon an entirely different and additional set of 54,000 flood irrigated acres in the Lower Yellowstone Irrigation Project (LYIP) to which the DEIS is oblivious.

Close the factory and all the acres of the LYIP - along with those under sprinkler irrigation from the Missouri River - will have no market for sugar beets. Close the factory and count the loss of jobs, loss of business and personal incomes, impacts upon school districts,

erosion of tax bases, closure of other businesses, etc. By ignoring Sidney Sugars, the DEIS ignores an elephant in the middle of the room.

4. Lack of Safety Net

There is no safety net for this. Crop insurance will not cover the losses. The U. S. Army Corps of Engineers (USACE) will not mitigate costs or indemnify losses. The uninsured, indemnified, uncompensated loss of one crop can put many a farmer out business. Three such losses from three miscalculated test flows would ruin most farms. That is not temporary. That is not short-term. That is the farm.

5. Initial Test Year ID-Timed

The target of 2022 for the initial test year is ill-timed.

(A) Too soon for farmers

To decide these test flows one year and implement them the next is too sudden and stampeded for farmers to be able to make whatever adjustments might be feasible to maintain crop viability.

(B) Current and projected drought

Already by April 8, 2021, the U.S. Drought Monitor rated Roosevelt County as suffering from category "D3 - Extreme Drought" with "Major crop/pasture losses" and 'Widespread water shortages or restrictions."

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Very dry conditions in April resulted in very low runoff in the upper Missouri River Basin. The upper Basin runoff was 44% of average, which was the 9th driest April in 123 years of record. The updated 2021 upper Basin runoff forecast is 17.8 million acre-feet (MAF), 69% of average, which, if realized, would rank as the 22nd lowest calendar year runoff volume.

'The extremely dry April, current drought conditions, and below-normal mountain snowpack has led our office to significantly lower the 2021 calendar year runoff forecast," said John Remus, chief of the U.S. Army Corps of Engineers', Missouri River Basin Water Management Division. "Based on this forecast, the May reservoir monthly studies indicate

reduced flow support for navigation during the second half of the navigation season and a 12,000-cfs Gavins Point winter release rate. I urge all water users, particularly intake owners, to begin preparing for the possibility of lower river levels later this summer and during the fall and winter."

A rush to make 2022 the first year of test releases is ill-timed both for irrigation and for the pallid sturgeon. A drought year is a particularly bad year not to have reliable irrigation. For the sturgeon, the released water needs to be warmer than what is provided from the bottom of the reservoir. The release should be from the spillway using shallower and warmer water. This easily might not be available in the looming drought conditions.

Thank you for your time and attention.

Sincerely,
Roosevelt County Commission

Gordon Oelkers, Presiding Officer

Duane Nygaard, Member

Gary Macdonald, Member

NORTH Dakota | Water Commission
Be Legendary.™

May 24, 2021

U.S. Army Corps of Engineers
Omaha District
CENWO-PMA-C
Attn: Fort Peck draft EIS comments
1616 Capitol Avenue
Omaha, NE 68102-4901

Below are comments from the North Dakota State Water Commission on the Fort Peck Dam Test Releases Draft Environmental Impact Statement dated March 2021.

1. **Page xii**: The Alternative 2 summary does not discuss the spawning cue flow regime.
2. **Page xviii**: Discussion regarding piping plovers indicates that the effects to plovers and terns from a test flow are negligible. However, it is unclear what the analysis took into account. During test flow years, it appears likely that plover/tern habitat and nests on Lake Sakakawea and the Fort Peck Reach would be impacted. Consideration into the potential effects on meeting bird targets, and the subsequent cost to the MRRP of such effects, should be reviewed and addressed if they have not been already.
3. **Page 1-13 & throughout DEIS**: Alternative 1 includes a spillway release from Fort Peck in April in an attempt to meet hypothesis 5 of the AM framework that warmer flow releases may increase growth rates and shorten drift distance for larval pallid sturgeon during the drifting phase of the hydrograph. As noted on page 3-101 of the DEIS, it is uncertain how much warmer this water would actually be and how it would influence riverine water temperatures relative to the No Action Alternative. Given the location of Fort Peck, it is likely that in many years ice would have only recently melted from the reservoir and snowmelt would be contributing runoff to the reservoir.
    a. *Comment:* Is data available on the average temperature variation between surface water and water from the outlet tunnels at Fort Peck in April?
    b. *Comment:* What is the desired/target river temperature downstream of Fort Peck Dam?
    c. *Comment:* How critical is it for the selected alternative to meet hypothesis 5 and the temperature component of the April attraction flow?

d. *Comment:* It is unclear in the DEIS what percentage of flow during the attraction spill will come from the spillway vs. the powerhouse tunnels. This should be clarified.

4. **Section 1.4.2, page 1-9**: The following are criteria specific to North Dakota that must be met to proceed with a test flow:
    a. The forecasted stages at Williston, ND cannot reach flood stage (22.0 feet).
    b. The forecasted water surface elevation cannot exceed 1853.5 feet at the downstream portion of the Williston Levee. This is based on the elevation that will not increase seepage.
        i. *Comment:* Given that it may take many years, or decades, for the proposed test to be implemented 3-5 times, it is perceivable that the elevation necessary to prevent increased seepage may change. This should be noted and accounted for as needed.
        ii. *Comment:* Elevation datum should be stated.
    c. The forecasted Lake Sakakawea pool elevation must remain below 1850.0 feet for the duration of the test flow.
        i. *Comment:* It is recommended that, to the extent possible, two feet of freeboard be incorporated, making the not-to-exceed elevation 1,848.0 feet. This would reduce the risk of Lake Sakakawea entering the Exclusive Flood Control Zone.
        ii. *Comment:* Elevation datum should be stated.
5. **Section 1.4.2, page 1-9:** Regarding the criteria that must be met to proceed with a test flow.
        i. *Comment:* Additional explanation should be provided regarding the 14-day forecast that is referenced for several criterion. What is the origin of this forecast and what is the confidence of the forecast used?
6. **Section 1.4.2, page 1-9:** This section states that "a 14-day forecast that would lead to exceeding any of these flood targets would trigger a decision process for determining whether to continue with the test flow, or to shut off all or parts of the test flow resulting in a partial test flow release that addresses zero to four of the hydrograph phase objectives."
        i. *Comment:* Who is involved in the mentioned decision process and under what conditions would a flow test be continued?
7. **Figure 2-3, page 2-12:** The resolution of this figure is too poor, as such the figure is unreadable.
8. **Section 2.4, page 2-16:** States that "under the conceptual hydrographs, the test flows would have been initiated any time the minimum Fort Peck Reservoir

elevation was above 2225.0 feet." This same paragraph goes on to state that a limitation is a "minimum forecasted Fort Peck Lake pool elevation of 2227.0 feet." The intent of this is unclear. How can a test flow be initiated if the pool is greater than 2225.0 feet, yet there is a minimum constraint of 2227.0 feet?

9. References on pages 3-54, 3-71, and 3-81 of the report are broken.

We appreciate the opportunity to comment on this DEIS and look forward to continuing to work with the USACE on this issue.

Sincerely,

John A. Paczkowski, P.E.
Interim State Engineer

KBCD
5/18/21

Board of County Commissioners

Richland County
Montana

201 West Main, Sidney, MT 59270 | 406-433-1706
lyoung@richland.org | sgorder@richland.org | dmitchell@richland.org

May 12, 2021

U.S. Army Corps of Engineers, Omaha District
CENWO-PMA-C Attn: Fort Peck Draft EIS Comments
1616 Capitol Avenue
Omaha, NE 68102-4901

Via postal mail and email:
cenwo-planning@usace.army.mil

RE: Comment on Fort Peck Test Releases Draft EIS

The Board of County Commissioners of Richland County, Montana comments on the Fort Peck Dam Test Releases Draft Environmental Impact Statement March 2021 as follows:

1. "Temporary" and "Short-Term" Miscalculation Timing Effects

A failure to appreciate timing effects causes the DEIS to miscalculate irrigation impacts as "temporary" and "short-term."

The "Irrigation Pump Survey Report"[1] identifies a concern that "warrants consideration within the EIS modeling."[2] The concern is "that the proposed test occurs during critical crop irrigation periods."[3]

Despite identifying this concern, the DEIS repeatedly characterizes impacts to irrigation as "temporary" and "short-term." It does so by measuring the impacts chronographically rather than agronomically and agriculturally. This is a failure to consider the concern about timing because what makes the timing critical is agronomic and agricultural factors, not chronological ones. Irrigation is agronomic and agricultural.[4]

---

[1] Appendix D, Draft Environmental Impact Statement, "Hydrology and Hydraulics Technical Reports," pp. 379-400.

[2] Irrigation Pump Survey Report, p. 8.

[3] *Ibid.*

[4] "Irrigation is a common practice in the Upper Basin, where low annual rainfall and a short growing season requires river and reservoir water to improve crop viability." DEIS, 3-180.

The issue of timing has two main aspects: (1) The timing of the proposed test flows embraces nearly the whole irrigation season; and (2) Within the irrigation season, an interruption or reduction of irrigation at one time does not have the same impact as at another time.

(A) Whole Season

The proposed:

- attraction flow begins April 16.
- retention flow is held until May 28.
- spawning cue flow begins May 28.
- drifting flow is held until September 1.

On a chronograph, that is a fraction of a year. Measured that way, it sounds "temporary" or "short-term." Agronomically, however, this nearly is the entire irrigation season. The DEIS itself notes that "the irrigation season lasts approximately from May through September."[5] Agriculturally speaking, the proposed test flows impact the whole year. In Montana, there is only one irrigation season and only one crop per year.

During critical time, the spawning cue flow level and the flood target are too high. They will flood pumps, electrical boxes, road access to pumps, and even crops themselves. That is a year-long, permanent, non-temporary, non-short-term impact.

During critical time, the drift flow of only 8,000 cfs is marginal under otherwise ideal conditions. In the practical world, many irrigators require 10,500 cfs, or they cannot take in water. Under agricultural operating conditions, those will not be "temporary" or "short-term" losses. That will impact the entire year.

(B) Timing Within the Season

Many non-irrigated farmers say things like, "My best crops were raised on two thunderstorms that came at the right times." That is the result of cultivar response to moisture timing. Like the pallid sturgeon, agricultural cultivars have life cycles and cycle-stage-sensitive responses. The cultivars and their responses do not change when going from non-irrigated to irrigated farming. The timing of irrigation has an effect like the timing of natural precipitation.

---

[5] "The irrigation season lasts approximately from May through September." DEIS, 3-180.

To compute, for example, 15 added days of water level below operable for irrigation intake as having a 10 percent impact because 15 days is 10 percent of the irrigation season is a statement in neglect of agronomy and agriculture. It fails to take account of *when* this deprivation of moisture occurs.

The DEIS and attachments do not contain an agronomic or agricultural assessment of the critical irrigation timing effects. The "List of Preparers" of the DEIS[6] does not make clear who among the preparers, if anyone, is qualified as an agronomist or agriculturalist to assess the timing impacts.

2. "Temporary" and "Short-Term" Miscalculation
Sedimentation, Contracted Crops, and Crop Rotation

A failure to appreciate sedimentation after-effects, contracted crops, and crop rotation causes the DEIS to miscalculate irrigation impacts as "temporary" and "short-term."

(A) Sedimentation After-Effects

High flow events cause sedimentation. Irrigation does not and cannot resume immediately simply because a high flow event no longer is flooding irrigation infrastructure. Dredge operators will not put a dredge into that environment soon after the water recedes. The practical effect could be abolition of irrigation for the year, especially for side channel intakes. The DEIS expresses no appreciation of this delay in the resumption of irrigation.

(B) Contracted Crops

Some of the affected crops are planted, raised, and marketed under advance contracts. For example, sugar beet acres are contracted in advance with the Sidney Sugars factory in Sidney, Montana. The DEIS expresses no appreciation of the effect of losses from high and low water interruptions of irrigation on the ability to continue contracting acres. A carry-over effect on contracting is not "temporary" or "short-term."

(C) Crop Rotation

With the advent of advanced continuous cropping cultures and technology in the early 1990s (which is superior for soil health, the environment, and farm economics), agronomically sound crop rotation became indispensable. Rotation is necessitated for

[6] Pp. 9-1 to 9-2.

multiple reasons including plant pathology and disease control,[7] aggregate nutrient levels, nutrient tie-up, biomass management, and soil moisture profiles. To lose or severely diminish a crop from interruption of irrigation by flooding irrigation works, sedimentation after-effects, or low water throws a monkey wrench into rotation. Disjointing the rotation causes loss effects that flow from one year to another.

3. Sidney Sugars Threatened and Ignored

For some crops, such as spring wheat, farmers have marketing options. There are multiple grain elevators and terminals where they can sell and haul wheat. For other crops, there is only one buyer in the market. For example, in eastern Montana and western North Dakota, sugar beets are purchased only by Sidney Sugars Incorporated, a wholly owned subsidiary of American Crystal Sugar Company.

Sidney Sugars provided a significant amount of information and financial data during the preparation of the DEIS showing the threat of the proposed releases to its sole factory in Sidney. The DEIS simply ignores this information.

The impacts could be lethal to the factory. This would foist devastating impacts upon an entirely different and additional set of 54,000 flood irrigated acres in the Lower Yellowstone Irrigation Project (LYIP) to which the DEIS is oblivious.

Close the factory and all the acres of the LYIP – along with those under sprinkler irrigation from the Missouri River – will have no market for sugar beets. Close the factory and count the loss of jobs, loss of business and personal incomes, impacts upon school districts, erosion of tax bases, closure of other businesses, etc. By ignoring Sidney Sugars, the DEIS ignores an elephant in the middle of the room.

4. Lack of Safety Net

There is no safety net for this. Crop insurance will not cover the losses. The U. S. Army Corps of Engineers (USACE) will not mitigate costs or indemnify losses. The uninsured, indemnified, uncompensated loss of one crop can put many a farmer out business. Three such losses from three miscalculated test flows would ruin most farms. That is not temporary. That is not short-term. That is the farm.

---

[7] Planting durum on durum, spring wheat on spring wheat, peas on peas, beets on beets, etc. causes devastating losses from diseases.

5. Initial Test Year Ill-Timed

The target of 2022 for the initial test year is ill-timed.

(A) Too soon for farmers

To decide these test flows one year and implement them the next is too sudden and stampeded for farmers to be able to make whatever adjustments might be feasible to maintain crop viability.

(B) Current and projected drought

Based on current and developing conditions, the Board of County Commissioners sent a request to Montana Governor Greg Gianforte dated April 13, 2021 that he submit a request to the U. S. Secretary of Agriculture and the President of the United States for an agriculture-related disaster declaration for Richland County, Montana based on drought. Richland County already was designated a contiguous drought disaster county in December, 2020. Because of worsened conditions and meteorological forecasts, the Board seeks a designation of Richland County as a primary drought disaster county.

Already by April 8, 2021, the U. S. Drought Monitor rated Richland County as suffering from category "D3 – Extreme Drought" with "Major crop/pasture losses" and "Widespread water shortages or restrictions."

The National Weather Service Climate Prediction Center "Three-Month Outlook" for "Temperature Probability" for June-July-August of 2021 forecasts higher than normal temperatures.[1] The Service's "Precipitation Outlook" for the same period forecasts lower than normal precipitation.[2]

USACE Missouri River Water Management Division itself issued News Release No. 21-020 on May 6, 2021 headed "Drought conditions driving lowered runoff forecast."[8] The release says:

> Very dry conditions in April resulted in very low runoff in the upper Missouri River Basin.
>
> The upper Basin runoff was 44% of average, which was the 9th driest April in 123 years of record. The updated 2021 upper Basin runoff forecast is 17.8

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[8] https://www.nwd.usace.army.mil/Media/News-Releases/Article/2597809/drought-conditions-driving-lowered-runoff-forecast/ accessed May 10, 2021.

> million acre-feet (MAF), 69% of average, which, if realized, would rank as the 22nd lowest calendar year runoff volume.
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> 'The extremely dry April, current drought conditions, and below-normal mountain snowpack has led our office to significantly lower the 2021 calendar year runoff forecast," said John Remus, chief of the U.S. Army Corps of Engineers', Missouri River Basin Water Management Division. "Based on this forecast, the May reservoir monthly studies indicate reduced flow support for navigation during the second half of the navigation season and a 12,000-cfs Gavins Point winter release rate. I urge all water users, particularly intake owners, to begin preparing for the possibility of lower river levels later this summer and during the fall and winter."

A rush to make 2022 the first year of test releases is ill-timed both for irrigation and for the pallid sturgeon. A drought year is a particularly bad year not to have reliable irrigation. For the sturgeon, the released water needs to be warmer than what is provided from the bottom of the reservoir. The release should be from the spillway using shallower and warmer water. This easily might not be available in the looming drought conditions.

Thank you for your time and attention.

Sincerely,

Duane Mitchell	Shane Gorder	Loren H. Young	Tom Halvorson
Chairman	Commissioner	Commissioner	Civil Attorney

TRH:mmi

CC: Attorney General Austin Knudsen
Governor Greg Gianforte
Director, Montana Department of Agriculture
U. S. Senator John Tester
U. S. Senator Steve Daines
U. S. Representative Matt Rosendale
Hon. Rick Norby, Mayor of the City of Sidney
Hon. Brian Bieber, Mayor of the Town of Fairview
Sidney Herald
The Roundup

Sidney Area Chamber of Commerce and Agriculture
Richland Economic Development Corp.
Attorney General Wayne Stenehjem
Governor Douglas Burgum
Commissioner of Agriculture Doug Goehring
U. S. Senator John Hoeven
U. S. Senator Kevin Kramer
U.S. Representative Kelly Armstrong
Williston Herald
McKenzie County Farmer

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[1] Three-Month Outlooks, Official Forecasts, National Weather Service, Climate Prediction Center, June-Jul-Aug 2021, https://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=3, accessed April 12, 2021.
[2] *Ibid.*

May 24, 2021

U.S Army Corps of Engineers, Omaha District
CENWO-PMA-C Attn: Fort Peck Draft EIS Comments
116 Capital A venue
Omaha, NE 68102-4901

RE: Comment on Fort Peck Test Releases Draft EIS

I, Thomas Q. Nichols, a family farm irrigator from Wolf Point, MT, 59201, comment on the Fort Peck Dam Test Releases Draft Environmental Impact Statement March 2021 as follows:

1. "Temporary" and "Short-Term" Miscalculation Timing Effects.

A failure to appreciate timing effects causes the DEIS to miscalculate irrigation impacts as "temporary" and "short-term."

The "Irrigation Pump Survey Report" identifies a concern that "warrants consideration within the EIS modeling." The concern is "that the proposed test occurs during critical crop irrigation periods."

Despite identifying this concern, the DEIS repeatedly characterizes impacts to irrigation as "temporary" and "short-term." It does so by measuring the impacts chronographically rather than agronomically and agriculturally. This is a failure to consider the concern about timing because what makes the timing critical is agronomic and agricultural factors, not chronological ones. Irrigation is agronomic and agricultural.

The issue of timing has two main aspects: (1) The timing of the proposed test flows embraces nearly the whole irrigation season; and (2) Within the irrigation season, an interruption or reduction of irrigation at one time does not have the same impact as at another time.

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To compute, for example, 15 added days of water level below operable for irrigation intake as having a 10 percent impact because 15 days is 10 percent of the irrigation season is a statement in neglect of agronomy and agriculture. It fails to take account of when this deprivation of moisture occurs.

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Thank you for your time and attention.

Sincerely,

Thomas Q. Nichols

_____

From: Salak, Jennifer L CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: [Non-DoD Source] Ft Peck Dam Test Release DEIS comments
Date: Tuesday, May 25, 2021 7:08:36 AM

From: Caroline Pufalt <carolinepufalt@gmail.com>
Sent: Monday, May 24, 2021 10:43 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Cc: Caroline Pufalt <carolinepufalt@gmail.com>
Subject: [Non-DoD Source] Ft Peck Dam Test Release DEIS comments

Ft Peck Flow Dam Test Release DEIS- March 2021

May 24,2021

US Army Corps of Engineers

We appreciate the work done by the US Army Corps of Engineers and the US Fish & Wildlife Service in the preparation for and completion of this DEIS. Developing a recovery scenario for the Pallid Sturgeon (PS) in the river reach between Ft Peck Dam and Lake Sakakawea is a challenging project given the constraints of the managed river, length of the reach and other existing uses along this river stretch. We strongly support efforts to fulfill the Corps responsibility regarding the recovery of the Pallid Sturgeon.

The DEIS represents considerable effort at assessing environmental consequences, relevant species and human impacts of the various increased and decreased flows represented across the two alternatives, plus the no action option.

To justify dedicating resources toward the chosen alternative, a case needs to be made that implementation has a reasonable chance of success and is thus worth the direct costs to the agency and any costs to other authorized uses.

If the Corps implements the high flows as represented in the preferred alternative, any unfinished spillway repairs should be completed before any releases and a reliable budget established to promptly address future repairs. In addition, additional steps that are within the Corps' scope, such as assisting in securing more high-water irrigation sites, should be pursued.

Many public resources have already been spent on attempts to improve opportunities for PS spawning and larval survival in the Yellowstone River Intake and Fish Bypass project. We caution against any actions related to this

DEIS which might put that project at risk.

Despite considerable productive research directed to learning about Missouri River PS populations, there are still weak spots in our knowledge of this rare species. Relevant to this project are the particulars of its earliest developmental stage to a more mature status that enables survival in the benthic reservoir environment. How long and under what conditions the PS requires for this drift stage is a key variable. If, as the DEIS states, 8-14 days is the most likely time span needed for this development, conditions in the river segment from Ft Peck Dam to Lake Sakakawea Reservoir are far from ideal. Estimates of the drift time quoted in the DEIS range from 6.5 to 37 days. This disparity indicates much is yet to be learned, but the lack of 0-1 survival would suggest that the lower range is more likely.

The resources and costs associated with the high flow releases designed to attract and result in successful spawning will be for naught if the product from that effort, larval stage PS, cannot develop enough to survive encountering Lake Sakakawea.

We recommend that the Corp include actions within alternatives to increase drift time other than just reduced flow to 8000 cfs as planned in alternatives one and two. Are there options for reconnecting more of the river's floodplain to increase drift time in parts of the more easterly stretch of this river section? Would a more braided river increase drift time? Are there feasible low flows between 8000 and 4000cfs which could enhance success?

The DEIS refers to the Corps responsibility as outlined in the 2018 ROD to complete a study and proposal considering flow patterns for recruitment, spawning and drift. But the study boundary is also described as bluff-to-bluff. (page 3-117) Yet, the Corps seems unwilling to look beyond the perceived current river constraints.

Finally, the Corps has established specific conditions under which a flow test regimen, or part of a regimen, would be completed. The Corps has reviewed the prior 82-year period to assess the likelihood of the occurrence of all or some of the specified conditions. The influences of climate change make that past record a less reliable predictor of the future. The Corps estimates 3 to 5 flow test runs would be required to evaluate results and consider moving to the next level of implementation. And that, due to the required parameters, it is likely to take 15 years or more to complete this initial step. That is a long time to achieve benefits to the PS population. This difficult time frame makes it more important that the Corps consider other options also, taking the bluff-to-bluff view.

Given the concerns we have raised in our comments, we are not able to support either alternative.

We ask that the Corps continue to conduct public outreach and engagement on this ongoing project, and we appreciate the complexity of the topic and multiple interests involved. However, the Corps needs to make sure its outreach efforts are readily accessible, widely distributed and reach stakeholders, including the Tribes and the broader public.

Thank you for considering our comments.

Caroline Pufalt, chair

Sierra Club, Missouri River Network

carolinepufalt@gmail.com <mailto:carolinepufalt@gmail.com>

From: Salak, Jennifer L CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: [Non-DoD Source] River flow
Date: Monday, May 24, 2021 12:20:31 PM

From: 2rats 2rats <2rats@nemont.net>
Sent: Monday, May 24, 2021 10:43 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] River flow

William and Irene Rathert

Remuda Creek Ranch

924 5th Ave N

Wolf Point, MT 59201

406-653-2334

To Whom It May Concern:

Our concerns:

1. Pump Sites
2. We have to dredge every spring to irrigate
3. We irrigate alfalfa and it would be a hardship with less hay
4. The river has taken several acres in the past years
5. We lost our pump sites
6. Please take into consideration the farmers and ranchers that depend on the river for irrigation

Thank you,

Bill and Irene Rathert

From: Salak, Jennifer L CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: [Non-DoD Source] Comment on Fort Peck Test Releases Draft Environmental Impact Statement (DEIS)
Date: Tuesday, May 25, 2021 7:06:54 AM

From: Samree <islandgirl59262@yahoo.com>
Sent: Monday, May 24, 2021 9:05 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] Comment on Fort Peck Test Releases Draft Environmental Impact Statement (DEIS)

Hi, my name is Samree Reynolds, I'm the white sugar boiler at Sidney Sugars, Incorporated in Sidney, MT. I found myself completely dumbfounded as to why I have to once again defend my job and my way of living due to the extinction of some prehistoric fish in the Missouri River that I believed we saved not that long ago from becoming extinct from the Yellowstone River.

Once again, this simple city girl is asking Why? I'm sorry,, I do not understand how flooding Fort Peck over a matter of years, killing other animal's habitats, destroying farmer's fields, costing employee's their jobs, just so an experiment can be done to see if this will save the Pallid Sturgeon from becoming extinct. Why!? This is the most insane idea I have ever heard! Flooding Fort Peck is such a drastic measure with dire consequences. I understand that you care about the Pallid sturgeon but for once, could you also care about the people? I don't mean to be rude and I honestly do not know all the facts and numbers but I do know that

my job, my community, my family and friends and our way of living are being attacked once again. I pray that the USACE will have some common sense and not go thru with the flooding of Fort Peck but choose the No Action Alternative. I thank you for your time.

Sincerely, Samree

From: Dalbey, Susan E CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Cc: Fromdahl, Michele L CIV USARMY CENWO (USA)
Subject: FW: Omaha District Contact Form: sturgeon
Date: Tuesday, May 25, 2021 6:39:33 PM

Aaron - this appears to be a comment for the EIS?
Sue

Sue Dalbey
Fort Peck Interpretive Center Director
US Army Corps of Engineers
PO Box 208
157 Yellowstone Road
Fort Peck, MT 59223

(406) 526-3493 or
(406) 526-3411 x3755
susan.e.dalbey@usace.army.mil

-----Original Message-----
From: noreply@dma.mil <noreply@dma.mil>
Sent: Monday, May 24, 2021 9:07 PM
To: DLL-CENWO-WEB-ODPROJECT-FP <DLL-CENWO-WEB-ODPROJECT-FP@usace.army.mil>
Subject: Omaha District Contact Form: sturgeon

This message was sent from the Omaha District website.

Message From: Les Toews

Email: lat100@nemont.net

Response requested: No

Message:

I have a pump site on the Missouri River about 50 miles downsteam from the Fort Peck Dam and flooding the river for the sturgeon next year will cause a lot of problems for each of us that have pump sites in the river. In my case it will will wash out my pump site and will have to move (dig up) under ground lines. This will be a great expense along with pulling out the pump ,motor and above lines each time as the river is raised or lowered in the detailed message you purpose to do. Do not see any reason this is being done with the expense to each farmer along with the washing out of the river banks.

HTTP_CMS_CLIENT_IP:
HTTP_X_ARR_LOG_ID: 8c20ccd1-4b0a-4df8-adcd-10175136f25f
HTTP_ORIGIN: Blockedhttps://www.nwo.usace.army.mil
HTTP_TRUE_CLIENT_IP: 70.33.35.205

From: Salak, Jennifer L CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: [Non-DoD Source] Ft. Peck flow test
Date: Wednesday, May 26, 2021 6:01:24 AM

From: David Norton <noreastmtacedriver@gmail.com>
Sent: Tuesday, May 25, 2021 3:21 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Cc: noreastmtacedriver@gmail.com
Subject: [Non-DoD Source] Ft. Peck flow test

To whom it may concern,

Hello my name is David Norton, I am commenting on the Ft. Peck dam flow test. I work for a farming operation that heavily relies on the Missouri River for irrigation reasons. With this proposal it would drastically interfere with our operation and our livelihoods. It would also further the erosion of the river banks which are already getting eroded, which in some cases are close to major county roads and access points. So please reconsider your plans for this test. Alot of people and communities rely highly on the agriculture and recreational aspects of the Missouri River.

Thank you for your time and consideration.

With best regards

David Norton

From: Cathy Hintz
Sent: Friday, May 21, 2021 8:04 AM
To: cenwo-planning@usace.army.mil
Subject: FW: [EXTERNAL] Fort Peck Dam Test Flow DEIS

My name is James Twitchell and I live on the south side of the Missouri river – across from Frazer, MT. For generations, we have raised cattle and farmed this area. We've flood irrigated from the Missouri river for over 50 years – approximately 350 acres in order to produce feed for our cattle. I have great concerns about the DEIS and how it will effect our operation and production. We currently have a pump site that has to be adjusted for different water levels in the river and this takes time and money to adjust. We can adjust for lower levels but my main concern is that by raising the river any amount, not only will our pump site be at risk, but the effects of erosion on the site could be significant. If our pump site is filled in with sand and silt, it will have to be dredged and we don't have the equipment to do so – we would have to hire it done. This is a huge expense as well as time consuming when time is of the essence to get water on a crop. Significant erosion not only effects pump sites but also effects the flow of the river and my neighbor's ability to irrigate as well. It seems that everything but the pallid sturgeon is being sacrificed in this instance and it's a possibility that this action wont save the sturgeon. There is no way to avoid additional operation and maintenance costs when adjustments have to continually be made. Some of the costs can be significant if they involve damage to the pump, buying extra pipe, dredging, etc. Without irrigation, we would not yield enough crop to feed the cattle in our current operation. I question why the cost is up to the Farmer/Rancher who is already struggling to make ends meet – why isn't the cost shared with the organization that is requesting that the Sturgeon be saved? In closing, we live in a small, rural community that depends on the farmers and ranchers to support local businesses. Any negative impact on farms and ranches effects our whole area including businesses and job availability. I would like to see the next generation come back to this area but in order for that to happen, there has to be something to come back to. We have to look at the whole picture and the effects that the DEIS will have on everyone and everything. Thank you,
James Twitchell

*Tried to email this + got a message it couldn't be delivered.

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hintzco@midrivers.com

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Subject **Fort Peck Dam Test Flow DEIS**

Sender hintzco@midrivers.com

Recipient(s) cenwo-planning@usace.army.mil

Date Mon 09:37

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My name is Cathy Hintz and I grew up on a ranch along the Missouri river - downstream from FT Peck Dam. I still actively help with the ranch, working cows, irrigating, haying, etc. I am concerned about the Test flow DEIS. My first concern is in regard to erosion of the river banks. Our pump site could be effected if the site fills in with sand, mud and silt as the river is raised and lowered. If this was to happen, we would have to hire dredging done at the site - costing money and time during a busy irrigating season. My second concern is he impact on our neighbors and the community. Farmers and ranchers are the main support system of the small towns in our area - if this revenue source is no longer viable, these small communities would suffer more than they are currently. Lastly, I hate to see the livelihood of a profession (farming/ranching) jeopardized because of a fish that is trying to evolve to survive. When we put any animal, fish, insect, etc before people and their livelihood, we should rethink our motives. Farmers and Ranchers are the first and most active protectors of the environment - their lives and business depends on it. Why should they be saddled with expenses and problems because a group of people will sacrifice nothing of theirs but everything of those along the Missouri River to save the paddlefish? With all due respect, the power that these groups have to control people who have worked the land and lived along the river for generations is ridiculous! Thank You,
Cathy Hintz

PO Box 276
Circle, MT 59215

Phone: (406) 485-2744
mcconecd@macdnet.org

May 24, 2021

U.S Army Corps of Engineers, Omaha Districta
CENWO-PMA-C Attn: Fort Peck Draft EIS Commentsa
1616 Capitol Avenuea
Omaha, NE 68102-4901a

RE: Comment on Fort Peck Test Releases Draft Environmental Impact Statement

The McCone Conservation District would like to offer comments in regard to the Fort Peck Test Releases Draft Environmental Impact Statement (DEIS). The high flows and low flows projected in alternatives 1 & 2 will have dire consequences for irrigators and the economic region below Fort Peck Dam. The high flows will decimate pump sites and the infrastructure that goes with them. There is no mention of how to mitigate this catastrophic loss. Most of the irrigators will not be able to recover from the high flows in time to irrigate that season. Regardless of this inability the low flows projected will make irrigation nearly impossible. Since this is a man-made disaster, not a natural disaster, Risk Management Agency will decline to mitigate this catastrophic loss to production. Simply put, this catastrophic man-made disaster will put some producers out of business. These producers and the region can ill afford this economic and social loss. Therefore, McCone Conservation District can only support the no action alternative!

Respectfully,
Steve Wanderaas Chm

Steve Wanderaas
Board Chairman
McCone Conservation District

From: Salak, Jennifer L CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: Fort Peck Dam Test Flow DEIS
Date: Tuesday, May 25, 2021 9:37:59 AM

From: Jeff Bieber <bieb@live.com>
Sent: Tuesday, May 25, 2021 9:10 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] Fort Peck Dam Test Flow DEIS

My name is Jeff Bieber and along with my wife Jessica and son Justin own and operate Texas-Red Enterprises Inc, a family owned sugarbeet, soybean and small grain farm that is located 2 miles north of Fairview Mt in Mckenzie Co North Dakota. Texas-Red Enterprises and Jeff Bieber is also an Independent Sales Agent for Crystal Beetseed and Pioneer Hybrids.

The DEIS will greatly affect the operations of Texas-Red in a very negative way. First off, the land I farm is low lying land south of the Missouri and confluence of the Missouri and Yellowstone rivers and is affected by normal spring runoffs by flooding back thru the drainage channels. Multiplying spring run-off normal flows and holding that level thru the summer will make my rented farmland in accessible through the DEIS period which appears to be most of the summer. Texas-Red also operates land on the north side of the Missouri river in the Buford bottoms that would also be impacted by the DEIS. The Buford land would be affected by flooding and probably most of all by the damage these unprecedented flow rates would do to the pumping system that provides irrigation water to the land that wouldn't be affected by the flooding.

Also as I mentioned Texas-Red is a seed dealer for both Crystal Beetseed and Pioneer Hybrids, these would both be affected as ground gets covered with flood water, pump sites get ruined, and land will be taken out of production, thus less seed will need to be provided to area farmers.

This would seriously affect my ability to irrigate. The drain water would have no where to go as drainage areas backfill with river water and pour onto our irrigated ground, therefore irrigation would make the problem worse. Also the high flow rates would damage pumping sites thus taking away our ability to access water for irrigation.

Operation costs will increase as we will be forced to put up dikes to protect our land as we did in the summer of 2011, and purchase and maintain pumps to remove excess water from drainage area.

Crops and contracts would not be grown or filled on a large portion of the ground that I farm especially under option 2.

What will this cost me...my livelihood, my ability to provide for my family, my ability to continue as a farmer. I'm not being dramatic and I'm not overstating this. This will put me out of business as a famer.

Agriculture has been the backbone of this region, losing any portion of it hurts but killing 22% of the production of Sidney Sugars Inc, in Sidney MT would in my opinion cripple the factory forcing its closure affecting hundreds of full and part time jobs. This is, in my opinion a horrible idea that should not be considered.

Thanks for listening, Jeff Bieber

From: Salak, Jennifer L CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: [Non-DoD Source] Fort Peck Dam Test Flow
Date: Tuesday, May 25, 2021 1:53:10 PM

From: lambertc@yahoo.com <lambertc@yahoo.com>
Sent: Tuesday, May 25, 2021 10:43 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] Fort Peck Dam Test Flow

Hello,

I am a small scale cattle producer. We have about 42 acres of irrigated hay crop land along the Missouri River near Culbertson. We don't have much, but it is just enough to support our operation. Increasing the river flows to 2x and 3.5x the spring average will cause irreparable harm and loss of acreage along our almost 1 mile of river bank. Every square inch of that ground is vital to our operation and I guarantee that this planned flow increase will erode ground and take away from us and this consequently puts the viability of our operation in question.

The 2 irrigation pump locations we use are already in bad shape since the flood of 2011. Raising the river will damage them even further and may even cause them to be unusable. This will put the cost of fixing the pump locations on us and with the way the prices of goods and services are currently that extra cost will hurt the pocketbook and surely take us into the red.

Nobody sets out in life to fail but when it's taken out of your hands and the importance of your long term livelihood is determined by some engineer downstream you feel totally helpless. My grandmother was born and raised on this place. She worked all her life to finally get the land paid off. And now she sits here feeling totally hopeless. The thought that the land she put blood, sweat and tears into might be taken from us 1 cubic yard at a time has her pushed to tears.

There are so very many people along this stretch of the Missouri River that depend on its stable and regulated waters for their livelihood. Please don't take that stability away from us.

Thank your for your time,

Cory Lambert

From: Salak, Jennifer L CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: [Non-DoD Source] fort peck dam test flow
Date: Tuesday, May 25, 2021 1:52:55 PM

From: Scott Buxbaum <4bfarms1@gmail.com>
Sent: Tuesday, May 25, 2021 10:50 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] fort peck dam test flow

I am in opposition to this plan. I have battled flooding on some farmland I own from high water for the past years. With the amount of water you are planning to release I'm afraid it will flood some of the land I farm. With annual spring thaw coming down the Yellowstone River and the increase of flow from the dam it would flood my land.

Scott Buxbaum

Fairview, Mt

406-480-1259

From: Salak, Jennifer L CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: [Non-DoD Source] water management comments
Date: Tuesday, May 25, 2021 8:46:09 AM

From: Jim Marmon <marmonjd@gmail.com>
Sent: Tuesday, May 25, 2021 8:30 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] water management comments

May 25, 2021

U.S Army Corps of Engineers, Omaha District

CENWO-PMA-C Attn: Fort Peck Draft EIS Comments

116 Capital A venue

Omaha, NE 68102-4901

RE: Comment on Fort Peck Test Releases Draft EIS

I, Jim Marmon, an irrigator from Wolf Point, MT, 59201, comment on the Fort

Peck Dam Test Releases Draft Environmental Impact Statement March 2021 as follows:

1. "Temporary" and "Short-Term" Miscalculation Timing Effects.

A failure to appreciate timing effects causes the DEIS to miscalculate irrigation impacts as

"temporary" and "short-term."

The "Irrigation Pump Survey Report" identifies a concern that "warrants consideration

within the EIS modeling." The concern is "that the proposed test occurs during critical crop

irrigation periods."

Despite identifying this concern, the DEIS repeatedly characterizes impacts to irrigation as "temporary" and "short-term." It does so by measuring the impacts chronographically rather than agronomically and agriculturally. This is a failure to consider the concern about timing because what makes the timing critical is agronomic and agricultural factors, not chronological ones. Irrigation is agronomic and agricultural.

The issue of timing has two main aspects: (1) The timing of the proposed test flows embraces nearly the whole irrigation season; and (2) Within the irrigation season, an interruption or reduction of irrigation at one time does not have the same impact as at another time.

(A) Whole Season.

The proposed:

• attraction flow begins April 16.

• retention flow is held until May 28.

• spawning cue flow begins May 28.

• drifting flow is held until September 1.

On a chronograph, that is a fraction of a year. Measured that way, it sounds "temporary" or "short-term." Agronomically, however, this nearly is the entire irrigation season. The DEIS itself notes that "the irrigation season lasts approximately from May through September." Agriculturally speaking, the proposed test flows impact the whole year. In Montana, there is only one irrigation season and only one crop per year.

During critical time, the spawning cue flow level and the flood target are too high. They will flood pumps, electrical boxes, road access to pumps, and even crops themselves. That

is a year-long, permanent, non-temporary, non-short-term impact.

During critical time, the drift flow of only 8,000-cfs is marginal under otherwise ideal conditions. In the practical world, many irrigators require 10,500-cfs, or they cannot take in water. Under agricultural operating conditions, those will not be "temporary" or "short-term" losses. That will impact the entire year.

(B) Timing Within the Season.

Many non-irrigated farmers say things like, "My best crops were raised on two thunderstorms that came at the right times." That is the result of cultivar response to moisture timing. Like the pallid sturgeon, agricultural cultivars have life cycles and cycle-stage-sensitive responses. The cultivars and their responses do not change when going from non-irrigated to irrigated farming. The timing of irrigation has an effect like the timing of natural precipitation.

To compute, for example, 15 added days of water level below operable for irrigation intake as having a 10 percent impact because 15 days is 10 percent of the irrigation season is a statement in neglect of agronomy and agriculture. It fails to take account of when this deprivation of moisture occurs.

The DEIS and attachments do not contain an agronomic or agricultural assessment of the critical irrigation timing effects. The "List of Preparers" of the DEIS does not make clear who among the preparers, if anyone, is qualified as an agronomist or agriculturalist to assess the timing impacts.

2. "Temporary" and "Short-Term" Miscalculation Sedimentation, Contracted Crops, and Crop Rotation.

A failure to appreciate sedimentation after-effects, contracted crops, and crop rotation

causes the DEIS to miscalculate irrigation impacts as "temporary" and "short-term."

(A) Sedimentation After-Effects.

High flow events cause sedimentation. Irrigation does not and cannot resume immediately simply because a high flow event no longer is flooding irrigation infrastructure. Dredge operators will not put a dredge into that environment soon after the water recedes. The practical effect could be abolition of irrigation for the year, especially for side channel intakes. The DEIS expresses no appreciation of this delay in the resumption of irrigation.

(B) Crop Rotation.

With the advent of advanced continuous cropping cultures and technology in the early 1990s (which is superior for soil health, the environment, and farm economics), agronomically sound crop rotation became indispensable. Rotation is necessitated for multiple reasons including plant pathology and disease control/ aggregate nutrient levels, nutrient tie-up, biomass management, and soil moisture profiles. To lose or severely diminish a crop from interruption of irrigation by flooding irrigation works, sedimentation after-effects, or low water throws a monkey wrench into rotation. Disjointing the rotation causes loss effects that flow from one year to another.

3. Lack of Safety Net.

There is no safety net for this. Crop insurance will not cover the losses. The U.S. Army Corps of Engineers (USACE) will not mitigate costs or indemnify losses. The uninsured, indemnified, uncompensated loss of one crop can put many a farmer out business. Three such losses from three miscalculated test flows would ruin most farms. That is not temporary. That is not short-term. That is the farm.

4. Initial Test Year Ill-Timed.

The target of 2022 for the initial test year is ill-timed.

(A) Too soon for farmers.

To decide these test flows one year and implement them the next is too sudden and stampeded for farmers to be able to make whatever adjustments might be feasible to maintain crop viability.

(B) Current and projected drought.

Already by April 8, 2021, the U.S. Drought Monitor rated Roosevelt County as suffering from category "D3 - Extreme Drought" with "Major crop/pasture losses" and 'Widespread water shortages or restrictions."

The National Weather Service Climate Prediction Center "Three-Month Outlook" for "Temperature Probability" for June-July-August of 2021 forecasts higher than normal temperatures. The Service's "Precipitation outlook" for the same period forecasts lower than normal precipitation.

USACE Missouri River Water Management Division itself issued News Release No. 21-020 on May 6, 2021 headed "Drought conditions driving lowered runoff forecast." The release says:

“Very dry conditions in April resulted in very low runoff in the upper Missouri River Basin. The upper Basin runoff was 44% of average, which was the 9th driest April in 123 years of record. The updated 2021 upper Basin runoff forecast is 17 .8 million acre-feet (MAF),

69% of average, which, if realized, would rank as the 22nd lowest calendar year runoff volume.

“The extremely dry April, current drought conditions, and below-normal mountain snowpack has led our office to significantly lower the 2021 calendar year runoff forecast," said John Remus, chief of the U.S. Army Corps of Engineers', Missouri River Basin Water Management Division. "Based on this forecast, the May reservoir monthly studies indicate reduced flow support for navigation during the second half of the navigation season and a 12,000-cfs Gavins Point winter release rate. I urge all water users, particularly intake owners, to begin preparing for the possibility of lower river levels later this summer and during the fall and winter."

A rush to make 2022 the first year of test releases is ill-timed both for irrigation and for the pallid sturgeon. A drought year is a particularly bad year not to have reliable irrigation. For the sturgeon, the released water needs to be warmer than what is provided from the bottom of the reservoir. The release should be from the spillway using shallower and warmer water. This easily might not be available in the looming drought conditions.

Thank you for your time and attention.

Sincerely,

Jim Marmon

From: Salak, Jennifer L CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: [Non-DoD Source] Fort Peck water release for pallid sturgeon
Date: Friday, May 21, 2021 9:54:36 AM

Aaron – please see comment below on the Fort Peck Test Flows.

Jennifer

From: TERRY CAYKO <caykot@yahoo.com>
Sent: Friday, May 21, 2021 9:47 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] Fort Peck water release for pallid sturgeon

My name is Terry Cayko and I am a landowner right at the confluence of the Yellowstone and Missouri Rivers. I strongly recommend "No Action " alternative. I'm 69 years old and still actively farming and with the high water levels it will interfere with the drainage and backing up of water on my fields. I see you haven't any monitoring devices at the confluence and the Williston device is way too far away. Farmers cannot afford to lose crops for a fish that is being reproduced in hatcheries in large numbers.

Again I strongly recommend "No Action " alternative and let Mother Nature take its course.

Sent from Yahoo Mail for iPhone <Blockedhttps://overview.mail.yahoo.com/?.src=iOS>

From: Salak, Jennifer L CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: [Non-DoD Source] Water Flow protest
Date: Tuesday, May 25, 2021 8:45:25 AM

From: Mary Kate Tihista <j.mtihista@yahoo.com>
Sent: Tuesday, May 25, 2021 7:54 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>; Charlene_Reddig@daines.senate.gov; Thomas_Culver@tester.senate.gov; Melissa.Dean@mail.house.gov
Subject: [Non-DoD Source] Water Flow protest

May, 25 2021

U.S. Army Corps of Engineers, Omaha District

CENWO-PMA-CATTN: Fort Peck Draft EIS Comments

1616 Capital Avenue

Omaha, NE 68102-4901

RE: Comment on the Fort Peck Test Release Draft Environmental Impact Statement

My name is Jeremy Tihista, my wife and I along with my parents have irrigated land on the Wiota unit, Fort Peck Irrigation Project. This land is our sole source of raising hay for our cow calf operation. The proposed plan of reducing the water flow in the Missouri river would cause major problems to our farm. Not being able to get enough water on our hay crop at the peak point of growing season could mean a drastic reduction in hay production. We would still have all the same input money into the crop and possibly get less than half a normal crop if not watered properly. This would put us in a very had position having to try to spend well over $100,000 just to try to buy enough hay to get through the winter months.

There are many more farmers on this project that would be affected in the same way. This would put a huge financial stress on many many families.

These crops are not insurable for man made disaster so all this loss would come out of the farmers pocket.

Low water flow in the Missouri river causes many problems with our pump and pump site. If the water is low the pump sucks up a lot of silt off the river bed and pumps it down the ditch. This causes extreme wear on the pump and fills our ditch system with silt. These irrigation pumps are extremely expensive and hard to work on. This could cost the water users a huge amount of money in repairs and down time!

Thankyou for listening to our concerns

Jeremy, Mary Kate, Doug and Carla Tihista

May 25,2021

U.S. Army Corps of Engineers, Omaha District
CENWO-PMA-C Attn: Fort Peck Draft EIS Comments
1616 Capitol Avenue
Omaha, NE 68102-4901

Re: Comment on Fort Peck Test Releases Draft Environmental Impact Statement

My name is Scott McGowan, and along with my wife Stephanie and three children, operate a dryland and irrigated hay farm in Northeastern Montana near Poplar.

Raising hay in the semi-arid plains of Montana is a risky business. Water, usually the lack of, is always the limiting factor of crop production from year to year. In 2007, when my wife and I returned to the family farm, my father was gracious enough to allow us to purchase some property he owned along the Missouri River to start our own operation. Along with this purchase, a lease from a neighbor, and thirteen years of education at the "School of Hard Knocks", we were able to put together eight hundred acres of irrigated hay land using Missouri River water.

Over time our hay business has grown rapidly with the irrigated portion being the centerpiece of our operation. Production on an irrigated acre is routinely triple that of a non-irrigated acre. We work hard to produce consistent, high quality hay and have grown a customer base of ranchers who depend on our hay year in and year out that span an area from Wright, Wyoming to Hinsdale, Montana. I have two full-time employees who live and support their families in Poplar, both who have worked for my wife and I for five plus years. A business associate of mine from Broadus, Montana, has two trucks of his own and routinely hires two more "owner-operators" to deliver our hay from Poplar to ranches in Southeastern Montana and Northern Wyoming, providing an economic stimulus outside my community.

Given the above, I think you can understand why I would be concerned with the test releases from Fort Peck Dam concerning the pallid sturgeon. Bank degradation is already a problem at one pump site I own, caused by the regular ebb and flow of the Missouri year to year. Based on a survey conducted last summer, and a proposed high flow of 35,000 CFS in the draft EIS, damage to this particular pump site would be catastrophic. Costs to move this site to mitigate damage was estimated at $60,000 last summer. Another pump site we operate located on a side channel of the river needed $12,000 worth of repairs this spring when river levels dropped to 7,500 CFS. Alternating high and low flows proposed by the Corps would undoubtedly necessitate more repairs, and constant management with heavy equipment during the season to keep irrigating. This would also be a large expense.

The potential loss of production because of the inability to irrigate because of these artificially created test flows would be highly detrimental to my family's farm, and would have negative consequences for my employees, customers and business associates. I believe it would be

foolish of the Army Corps of Engineers to allow the test flows on the Missouri River to begin in the spring of 2022 without further study and comment. After all, the mission of the Army Corps of Engineers is to “Deliver vital engineering solutions, in collaboration with our partners, to secure our Nation, energize our economy, and reduce disaster risk.” Please, take more time to consider the potential disaster these test flows will have on families and communities that depend on the Missouri River for their livelihoods.

Thanks for your time,

Scott McGowan
Poplar, Montana

Larry C. Olson
P.O. Box 1020
Wolf Point, MT 59201

May 25, 2021

U.S. Army Corps of Engineers, Omaha District
CENWO-PMA-C Attn: Fort Peck Draft EIS Comments
1616 Capitol Avenue
Omaha, NE 68102-4901

RE: Comment on Fort Peck Test Releases Draft Environmental Impact Statement

My father, born in Wolf Point in 1917, began a small farm two miles east of Wolf Point in 1939. I was born in 1949. I have lived along the Missouri all my life except for 5 years from 1967 to 1972 when I attended and received a degree from MSU Bozeman in Civil Engineering. I returned to Wolf Point. My roots were too deep in the Missouri River gumbo. I went home.

Today we have 2 pump sites and can flood irrigate 290 acres. Our home place pump site is in a side channel. Our west pump site is on the main stream. Neither pump site has electric power available. Centrifugal pumps are powered by diesel engines located on pump landings. They can operate from a river flow of 22,000 CFS to 10,500 CFS. They are connected to 15" diameter pipelines. If the flood proposals are implemented, both pump sites will be negatively impacted. The west pump site will be affected by stream bank erosion following the 28,000 CFS flow, resulting in possible reconstruction work. The home place pump site would have to be relocated downstream in order to access the 8000 CFS flow. Property boundary fences will be negatively impacted. Some reconstruction will be required, necessary to prevent comingling of livestock and keeping them off public traveled ways.

In 2011, the Missouri River below Fort Peck Dam flooded, cresting at 93,000 CFS on June 2nd. The duration of the flood continued up to the fall of 2011. On Bogut's Island, we had fish swimming in the fields and a large amount of debris float across the crop land. We did not irrigate in 2011. During the winter of 2012, we collected a lot of debris. Our home place pump site was operable in 2012/13. In 2014 it was reconstructed and our west pump site was relocated upstream 600 feet as flood sedimentation had left it in a new sandbar. Also in 2014, we installed new pipeline check valves, flow meters and revolving, floating river screen suction intakes to

meet pallid sturgeon recovery regulations. This investment cost exceeded $58,000. No EQUIP or subsidy mitigation funds were available.

About 20 years ago, the NRCS and USACE completed a project for streambank soil erosion along the Missouri River between Wolf Point, MT and Oswego, MT. The mission was to abate soil erosion and the project cost exceeded $750,000. The project was successful. Now the USACE is turning 180°, proposing just the opposite environmental impact. These flood proposals would increase streambank erosion. The reach of the Missouri that I am familiar with doesn't have as much braided stream channel as existed before 2011. The 2011 flood scoured the main channel, resulting in a river flow to be higher at a lower elevation. Prior to 2011, 8500 CFS was an adequate for irrigation in the side channel. Now 10,500 CFS is adequate.

This flood proposal is to be based on what is in the best beneficial interest of the pallid sturgeon. However, the Missouri River is no longer the same environmental habitat that the pallid sturgeon had in the past. Over the last one hundred years, dams have been constructed and, unfortunately, non-native predatory species of fish have been introduced. As I understand, pallid sturgeon grow slowly and the time they are vulnerable to predation is longer than that of their non-native predators. Could pallid sturgeon be successfully raised in a fish hatchery and then be released into the river once they reach the size at which they would no longer be vulnerable to non-native species predation?

During my time on the river I've been fortunate to have had some remarkable experiences. Years ago, a pair of loons nested near our original pump site. For 3 years we watched them and their hatch in the summer evenings along the backwater. How lucky we were, to hear the cry of the loon. In the spring of 2018, while feeding cattle, we witnessed the spring breakup of river ice. The sound of ice blocks, the size of pickup trucks rolling and floating downstream was spectacular. The power and strength of water pushing ice and trees over each other, 15 feet high, was very impressive. The river is and will always be a very dynamic force.

I thank you for your time and consideration and I remain a participant in Missouri River issues.

Sincerely yours,

Larry C. Olson

From: Salak, Jennifer L CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: [Non-DoD Source] U.S. Army Corps of Engineers, Omaha District
Date: Tuesday, May 25, 2021 1:55:04 PM

From: Neil Iversen <neiliversen@gmail.com>
Sent: Tuesday, May 25, 2021 1:19 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] U.S. Army Corps of Engineers, Omaha District

I irrigate in Richland County south of Fort Kipp.

My family has irrigated in this area for 40 years and I have done so for 15 years. In the time that I have owned property along the Missouri I have experienced devastating loss. The USACE operates the river with such disregard for my property that it is a disgrace. Through rising and lowering water levels I have seen 100 acres of my property disappear into the river. This equates to a loss of $250,000 or more in value. I have also been forced to relocate my pump site at least five times and to totally abandon a pump site. I feel strongly that the EIS does not properly address the damage that the high flows will do to my property through erosion of the bank, loss of irrigated land, and need to relocate irrigation infrastructure. The EIS is insufficient in stating the loss of property I will have to erosion or in providing a means in which I can protect my property from such.

The EIS does not accurately represent the timing of the proposed flows. The EIS tries to minimize the proposal by using terms such as “temporary” and “short-term”. The EIS is accurate in its usage of those terms if only the hydrograph is studied. What the EIS fails to comprehend is the collateral damage caused by the flows. When the river rises, I will have to remove my pump and cease irrigation until the river has reached a stable level. This will cost me nearly the entire length of time of the rise. Once the river has stabilized, I will be able to irrigate a short time but then will again have to cease while the river drops.

Once the river drops are where the real problems will begin for me. I know from experience, year after year, that when water levels drop to below 9000 cfs I have lost access to water. The water is out there in a channel and my floating pump can pump it, but I have no way of getting to it. The high waters in the peak flow will bring much siltation to my pump site. This siltation will leave saturated material behind that will not support the weight of man or beast not to mention the heavy equipment I will need to get my pump out to the water. The water may drain out of the silt after several weeks and allow me to get to the river or I may have to wait until the next spring before I can get my pump to the water.

The timeline of the hydrograph may seem temporary but the cost to me as an irrigator may be the loss of my entire irrigation season following the initiation of the test flow. The EIS is insufficient in stating the loss I will have in my ability to irrigate once the test flow has begun.

The EIS is insufficient in its discussion of the effect of non-native fish species on the pallid sturgeon.

The EIS is insufficient in its discussion of the effect of the test flows on other endangered species.

The EIS is insufficient in its discussion of the ability of the Milk River to support pallid sturgeon.

The USACE operation of the river has cost me a fortune and this test flow is set to double down on that tragedy.

Neil Iversen
Mobile: (701)770-5113
neiliversen@gmail.com <mailto:neiliversen@gmail.com>

From: Salak, Jennifer L CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: [Non-DoD Source] ATTN: CENWO-PM-AC- Fort Peck EIS--Comments
Date: Tuesday, May 25, 2021 1:56:29 PM

From: Neil Iversen <neil@h2oagri.com>
Sent: Tuesday, May 25, 2021 1:18 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] ATTN: CENWO-PM-AC- Fort Peck EIS--Comments

USACE, Omaha District
ATTN: CENWO-PM-AC Fort Peck EIS Comment
1616 Capital Ave
Omaha, NE 68102-4901

To Whom It May Concern:

I am the General Manager and Williston, ND, location manager for Agri Industries. Agri Industries has been operating in Montana and North Dakota since 1982. We have done much to develop and improve irrigation along the Missouri and Yellowstone Rivers since that time. At Agri Industries all of our upper management have a background in engineering including civil, agricultural, environmental, and mechanical. There are few who have access to as much knowledge about irrigation on these rivers as Agri Industries.

Much of our success at Agri Industries has been finding ways to manage the great amounts of damage done by the USACE operation of the Missouri River and the unsuitable conditions created by such management. Early in our company's history, we developed the Floating Pump System. We found that river operations made the riverbank unstable and created highly varying water levels. The floating pump system was the only way many of our customers could deal with these inconsistencies.

The floating pump system allows the irrigator to have a portable pumping system. Often times we will work with a customer who will either have gained several hundred feet of pump site or lost several hundred feet of pump site in the matter of a growing season. Our installations and floating pumps allow these irrigators to react to this by moving the pump in and out with portable piping. This flexibility has become the hallmark of our pump site design. Relocating a pump site during the operating season can cost an irrigator as much as $20,000 and take up to four weeks.

The other aspect of a floating pump is its ability to operate in varying water depths. Again, USACE river operations are so variable that an irrigator can experience as little as inches of water to as much as tens of feet of water. While the floating pump cannot pump in inches of water it does do well at shallower depths and is able to, in many cases, automatically adjust to rising water levels. Relocating a pump for shallow water can cost as much as $20,000 and take up to four weeks.

Floating pumps are susceptible to floating debris. Logs and other large objects can get stuck on or puncture the pump's pontoons causing a pump to sink. A sunk pump can cost up to as much $50,000 and take as long as 12 weeks to repair.

Floating pumps have a very advanced screening system but that system is not infallible to debris in the river. Grass,

weeds, cotton, sticks, and other items can become lodged on, stuck on, or sucked into the pump screen causing the pump to lose suction. Repairs as a result of this can cost as much as $7500. This repair can take up to two weeks to accomplish.

Agri Industries is aware that each spring a great number of our irrigators face challenges caused by USACE winter operations of the river. If the river is running at high levels bank erosion is witnessed and irrigators must find a way to move their pump site back away from new cut banks and to redevelop pump ramps. These high flows at other sites transport large amounts of sediment and leave some irrigators unable to reach the water because a new deposit of swampy, saturated silt has been placed between them and the river. If the river is low during operations Agri Industries has witnessed irrigators being unable to reach the water because of the swampy silt described above or because of larger dry sand bars formed between them and their water supply. We estimate that these repairs can cost upwards to $50,000 and can take months to implement.

All of the above scenarios will be encounter once, twice, or more times as a result of the test flows. Riverbanks will erode, pump sites will silt in, logs will come down the river, trash will incorporate into the flow profile. There will be greats costs of time and money to the irrigator.

The Draft EIS does not do enough to address the concerns of the irrigator. The EIS continually references the surges and lulls in the dam discharges to be “temporary” or “short-term”. While it is true that these proposed fluctuations are indeed short in duration, in the life of an irrigator and the life of a crop they are an eternity. When the flow is increased, the irrigator will need to react quickly and remove their pump from the river and then reinstall it at a level which they can pump at. This will take mobilization of heavy equipment and skilled labor. This is not a speedy endeavor.

Then, just as quickly as the river rises and the irrigator has been able to adjust and resume pumping the river is set to fall drastically. This will be more devastating than the rise. The rise will erode land and laden the river with silt. This silt will be deposited indiscriminately by the river and in many cases, it will be laid where the original pump site was located. Once the water levels recede the irrigator will be left with a quagmire of saturated silt. This silt does not drain and it is unpassable by the heavy equipment needed to relocate the pump to the now nearly nonexistent river flow. The irrigator will have no option but to wait it out until they can safely move equipment onto the swampy silt. This could take weeks or in many cases may not be possible until the next spring. At best the “temporary” flood will have cost the irrigator two weeks of irrigating in the rise and four weeks of irrigating in the recession. This loss of ability to irrigate in our northern, arid climate and short growing season will be devastating. Most crops will be lost.

The EIS does not properly address the effects on the irrigator, their costs, or their loss of income.

The EIS does not properly address the effects of nonnative fish species, such at the walleye, on the propagation of pallid sturgeon.

The EIS does not properly address the loss of land to erosion.

The EIS does not properly address the suitability of the Milk River for pallid sturgeon preservation.

The EIS does not properly address the effects of the high flows on other endangered species such as the piping plover and the least tern.

The EIS does not properly address the effects on the Fort Peck Sioux and Assiniboine Tribes.

Those of us involved in agriculture and irrigation along this stretch of the river cannot justify the loss of our way of life for this gamble on the pallid sturgeon. We know what we will lose but we have know way of knowing what the fish will gain.

Respectfully

Neil Iversen, Agri Industries, Inc
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From: Salak, Jennifer L CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: Comment on Fort Peck Test Releases Draft Environmental Impact Statement
Date: Tuesday, May 25, 2021 7:05:18 AM

From: Rhonda Knudsen <RhondaKnudsenforMontana@hotmail.com>
Sent: Monday, May 24, 2021 8:33 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] Comment on Fort Peck Test Releases Draft Environmental Impact Statement

I am State Representative Rhonda Knudsen. My legislative district includes Valley County and Roosevelt County, 2 of the counties that will be impacted by the proposed Fort Peck Dam releases.

The significant rise and subsequent lowering of the Missouri River flow will have a detrimental affect on the land owners, especially irrigators, along the Missouri River. There are more than 140 irrigation intake sites located between Fort Peck Dam and the North Dakota border. Raising the flow rate to 35,000 cfs will quite possibly flood pumps, electrical boxes, access roads and cropland. Much of the flooded equipment and property will be permanently lost, costs may exceed $100,000 per site. These losses will not be covered by insurance, and it expected that USACE will not mitigate these costs. A losses at this level will certainly put the areas small farmers out of business.

The proposed fluctuation in flow rates will have a devastating impact on the unstable banks all along the river. The massive erosion will rip the trees from the banks and make the banks more unstable. The eroded banks will remain bare and will continue to erode, contributing to the sediment and turbidity problem for the Missouri River.

For the above reasons, and many more, I urge the USACE to pursue the No Action Alternative.

Respectfully,

Representative Rhonda Knudsen

Montana House District 34

Sent from Mail <Blockedhttps://go.microsoft.com/fwlink/?LinkId=550986> for Windows 10

Fort Peck Test Flow DEIS

Comments

My name is Buzz Mattelin, farmer- irrigator, I farm about 100 river miles below Fort Peck Dam. My family has had a presence here along the river for over 100 years. I represented irrigation stakeholders on MRRIC for 8 years and have been active in Missouri river issues for over 40 years.

I think it is important to understand that these proposed actions would not occur under the current Master Water Control Manual, but are being proposed under the auspices of adaptive management and without change to the Master Manual. Those of us that live below Fort Peck based our planning decisions and significant investments, based on past management prescribed under the Master Manual. Our decisions on authorized purposes including: flood control, water supply, water quality, irrigation, recreation, power generation, etc. rely on the well vetted Master Manual. Adaptive Management relies on the "best available science" to create and test hypothesis. Part of this best available science relies heavily on a documented pallid spawn at the mouth of the Milk River in 2011, 2011 flows were a one in 500-year event. And **one** viable pallid embryo sampled during one of the larval drift studies.

Irrigators downstream of Fort Peck maybe able to survive one or two tests in 10 years, by changing crop rotations or growing a lower value crop, but many will not survive 3-5 tests in ten years.

The USACE has not scheduled or conducted a public in person meeting in the Montana four-county region below Fort Peck since release of the DEIS in March. **Stakeholders deserve better**.

There are no plans in place to mitigate the impacts of the proposed tests.

Page numbers reference pages in the 612-page DEIS

Dam Safety/Flood Risk

During the extreme flood of 2011, I watched news video of Garrison Dam releases. Water was being released via the spillway when a problem was noticed with one of the spillway slabs, diversion over the spillway was stopped and the excess water was run through the flood tunnels until repairs could be made to the spillway. This was not an option at Fort Peck as the ring gates which control the flood tunnels are prone to extreme cavitation and vibration problems, and are not useable. I was invited to testify before US Senate Committee on Energy and Natural Resources, in the fall of 2011, concerning the 2011 flood, and included the problem with the ring gates in my testimony. Unfortunately, appropriations for repairs due to damages of the 2011 flood, only covered repairs to infrastructure which flood waters had touched. The ring gates were not used due to the vibration problem so they were not included in the appropriations for repair to the spillway gates, slabs, and discharge channel. The DEIS has substantial information concerning the impacts of the alternatives on the integrity of the spillway as listed below.

Recommendation: In light of the fact, that the operating priority for the Missouri River NWD is to protect "Life and Safety", that: the emergency spillway at Fort Peck was not designed to be used for regular releases, test flow releases would increase the likelihood repairs would be needed, repairs to the spillway can take years to complete, the identified preferred alternative poses the greatest risk to

spillway damage, the lack of safety redundancy, due to inability to utilize flood tunnels, , the emergency spillway at Fort Peck is the last line of defense in preventing catastrophic failure with extremely high life and economic loss of national significance and increased variability in rain events due to climate change which may lead to increased flood events. The EIS needs to complete a more detailed investigation of the alternatives impact on Dam safety, identify and secure funding for possible damages, and the possible recommendation the alternative should not be implemented until the gates on the flood tunnels are useable.

Operating priority," LIFE and Safety" NWD AOP meeting April 6, 2021.

The spillway was not designed to be used for regular releases

Fort Peck spillway experienced significant damage due to flow releases in 2011. Repairs were conducted as previously described. Spillway slab concerns were noted in a 2019 inspection report (USACE 2019a). **These recommended repairs have not yet been performed**

Page 26 If damage to the spillway slabs would occur, repair would likely be extensive and not limited to a single slab or small area due to the high spillway flow velocities and the change in flow hydraulics as a result of slab uplift. The spillway slab and sub-drain system repairs would be difficult, expensive, and likely constrained by time in order to address dam safety due to loss of spillway operation as quickly as possible. Depending on damage extent and **allowable repair time period, repair cost is estimated to be in the range of $20 to $40M. The test flow releases would increase the likelihood these repairs would be needed because they increase the use of the spillway.** The risk of spillway slab damage in the future is likely cumulative and related to both operation frequency and flow. Physical monitoring during a test flow would include monitoring of the spillway as described in Section 3.2.2.11.

Page 144 The Fort Peck project also includes a separate outlet works with four flood tunnels. However, due to extreme cavitation and vibration problems, the outlet works is not considered a reliable flow release mechanism.

Page 147 A semi-quantitative risk assessment was conducted by USACE in 2014. This study concluded that the emergency spillway structure was designed with a high level of redundancy resulting in a remote likelihood of failure. However, **the emergency spillway at Fort Peck is the last line of defense in preventing catastrophic failure with extremely high life and economic loss of national significance**. A proper functioning spillway sub-drain system is vital to the stability and performance of the spillway

Page 180 In summary, the analysis illustrates a large increase in the spillway operation for all alternatives. Increased frequency of Fort Peck spillway operation could provide additional risk to the spillway reliability, damage spillway features, and affect spillway operation and maintenance costs. **Each alternative result in a large change in the number of days of spillway operation, the spillway flow volume, and the spillway peak flow.**

Page 182 While the magnitude of change in flow duration and operation may not be large, using ranked order **alternative 1 does appear to have the greatest potential to increase spillway damage risk**.

Page 160 Climate Change Large rain events are likely to become more frequent and interspersed by longer relatively dry periods.

Environmental Justice:

Much has been learned about the life cycle of the pallid sturgeon since its' listing as endangered in the early 1990s. Two of the most important, that pallid sturgeon are spawning in the wild, and that lack of adequate drift distance for pallid embryos is a limiting factor in recruitment. Spawning has been documented near Fairview Montana where the hatching embryos drift into the hypoxic head waters of Lake Sakakawea and die. This is consistent with the observation that recruitment ended with the filling of Lake Sakakawea. Instead of addressing the lack of drift distance from a known, spawning site the USACE has proposed two action alternatives that attempt to encourage the fish to spawn near Fort Peck Dam with the hope that there is enough drift distance for recruitment. It's important to note that the remaining wild adult fish are of an age that shows that there was recruitment after construction of the initial Intake project on the Yellowstone River circa 1910 and closure of Fort Peck Dam in 1938. 52 mThe proposed actions of Fort Peck Test Flows have shifted most of the impacts from stakeholders of Lake Sakakawea to the four-county area below Fort Peck Dam. Roosevelt county as noted below ranks 2546 of 3142 U.S. counties in median household income for the years 2013-2017. The draft EIS shows Roosevelt County experiencing more negative impacts than any other county. The Fort Peck Indian reservation borders the right bank of the river for much of the impacted area.

The USACE has not fulfilled their duty under Executive Order 12898, in their evaluation of a range alternatives to avoid jeopardy, 52m or <u>in identifying and addressing</u> the effects of the selected alternatives to low-income and minority populations.

The remaining wild adults were estimated to be 43-57 years old (i.e., fish spawned before Lake Sakakawea was filled in the 1950s); (USACE, 2017, p. 133; Braaten et al., 2015b).

Page 29 Environmental Justice Executive Order 12898, issued in 1994, directs federal agencies to incorporate environmental justice as part of their mission by identifying and addressing the effects of programs, policies, and activities on minority and low-income populations

Roosevelt County Montana ranks 2546 in median household income 3,142 counties data from 2013-2017

Page 252 Tribal Benefits. WAPA allocates low-cost power to Tribal irrigation districts, which is mainly used for pumping water out of the Missouri to Tribal agricultural and ranching productions. In 2001, WAPA also contracted with 25 Tribes in the Upper Great Plains region to provide Tribal allocations of power. Generally, these power allocations provide 50 percent of Tribal power needs (Sundsted, 2011).

Page 280 The potential for adverse impacts to the Tribes would follow the same pattern as the NED results. That is, the more adverse the impact on hydropower generation and capacity, the larger potential to negatively affect the rate/credit that the Tribes receive

Bank Erosion/Sedimentation

Every change in flow and stage encourage the river to seek an equilibrium and results in changes to the channel. Higher flows result in more erosion. A sediment study measured the sediment transport of the Missouri River below Fort Peck at 7 million tons per year compared to the unregulated flow of Yellowstone which deposits 35 million tons per year into the Missouri River system. High flows flowed by a rapid drawdown will threaten infrastructure, bank stability, and deposit sediment and debris in side channels.

Recommendation:.1 Reduce the rate of drawdown below 3000 cfs per day. 2. Lower the maximum flow below 35,000 cfs. 3. Use existing USACE authority under past WRDAs to protect streambanks and offer sloughing easements to landowners with high rates of erosion. 4. Work with local stakeholders to identify and increase monitoring sites from proposed 20 cross sections, only about one for every 10 miles of river.

Page 11 Rapidly decreasing flow releases would likely result in damaging stream bank erosion leading to impacts for municipal and industrial (M&I) and irrigation water intakes and to existing infrastructure such as recreation access points and pump stations.

A further study (Collison et al., 2002) concluded that the effects of an elevated flow release followed by a period of low flow is likely to have a detrimental effect on bank stability. Page 3-28

Interaction with management actions on the Yellowstone

When the lack of availability of larval drift distance was identified as a major lacking factor in pallid sturgeon recruitment, a fish by-pass at the Intake project on the Yellowstone River was proposed and approved. A letter between the US Fish and Wildlife Service and the USACE, stated that if the USACE built the by-pass at Intake there would be a moratorium, for ten years, on any actions at Fort Peck to evaluate the impact of the by-pass at Intake. There is a sizeable investment of dollars and political capital in the Intake project. The Yellowstone has a mostly natural hydrograph and other than a few low-level diversion dams similar to the one at Intake, is free flowing. In fact, the majority of pallid sturgeon move from the Missouri into the Yellowstone to spawn. While the Fort Peck AM Framework is designed to be complementary to the Intake fish passage project, the two actions will be competing to attract the same population of fish. While many of the fish are telemetered it may be difficult to determine with a high degree of confidence which action, Intake or Fort Peck, is responsible for any observed success. Scientific method typically does not change more than one variable at one time.

Recommendation: .1 Monitor effectiveness of Intake Project for a reasonable length of time before implementing action at Fort Peck. 2. Consider lowering criteria for implementing test flow from lower than upper quartile runoff on the Yellowstone, to lower than 10% above median. This would lower the

number of partial flow test years and decrease the magnitude of flow needed for attraction of fish to the Missouri. 3. Provide substantive information on how the Fort Peck test flow will be complementary to the Intake fish passage project. 4. Specify how recruitment success will be attributed to which management action, Fort Peck or Intake, and with what degree of certainty.

Page 11 The intent of the Fort Peck AM Framework is to design test flow releases to be complementary to the Intake fish passage project

Page 62 Fort Peck Dam test release flows should not be designed or intended to attract pallid sturgeon that would otherwise have migrated upstream in the Yellowstone River past the Intake Diversion Dam fish passage project.

Page 80 In a departure from the natural flow regime, the Technical Team hypothesized that the attractant flow would be more effective if moved later in the month of April when it will compete less with the YSTON March-April flow.

Page 197 the majority of telemetered pallid sturgeon typically move from the Missouri River into the el

If recruitment occurs, how will you know if success was from the Yellowstone or the Missouri actions?

Criteria for initiation or stopping test flows

No test if Yellowstone (Fort Peck to Garrison reach) runoff is upper quartile.

The DEIS predicts that during the 82-year period of record alternative one would be initiated 22 times resulting 11 full tests and 11 partial tests. The major reason for terminating the test flows in the partial test years are stage and flows that are too high at Williston. This is due to the combination of the contribution of the Missouri test flow and the Yellowstone flow. It's predictable that by setting the criteria to initiate a test at below upper quartile on the Yellowstone, that test flows would from Fort Peck would need to be terminated due to high water levels at Williston. The test is proposed to be run 3-5 times; my assumption is this range is due to one half of the tests-initiated result in partial test. Three full tests should yield more than enough data to determine if the fish is attracted up the Missouri and spawn, hatch occurs, larval drift is adequate. Three tests instead of 5 would greatly reduce the impact to stakeholders.

Recommendation: Evaluate, no test if Yellowstone predicted runoff is 10% above median

Much of the impacted area below Fort Peck is currently experiencing extreme drought conditions. Impacts to stakeholder are exacerbated by drought.

Recommendation: Evaluate, no test if National Weather Service designation of D1-D4 (moderate drought- exceptional drought) in four county area below Fort Peck dam.

Termination of test if flows are predicted to exceed 35kcfs at Wolf Point or Culbertson gauge.

While it is true that flows of in the magnitude have occurred, historical data from the Culbertson gauge show that they usually occur in March or April during the plains runoff when ice jams occur. Only 4-5 times including the 500-year event in 2011, have flows been over 30KCFS during the May-September irrigation season. Irrigators have adapted to an anticipated range, based on historical records, of flows through use of floating pumps and suctions. 35KCFS falls outside of range that we have prepared for.

Recommendation: Consider lower threshold than 35kcfs for termination of test.

At one of the MRRIC meeting the question was asked "if no pallid sturgeon is attracted by the proposed attraction flow que will the test be terminated before the spawning que?". The question was not addressed in the DEIS. Biologists have stated that enough of the fish have telemetry that they can tell by the genetics of the embryos if the fish spawned in the Missouri or the Yellowstone. The high flows of the spawning que have adverse impacts to downstream stakeholders.

Recommendation: If no pallid sturgeon are attracted up the Missouri, close to the confluence with the Milk River the test is terminated before the spawning que is initiated.

The USACE in their presentations of the DEIS has stated that the low flow after the spawning que at a level of 8kcfs is a concession to irrigators, not entirely true. The original level of 4kcfs was not supported by Montana Fish Wildlife and Parks, as it actually increased the speed of larval drift by dewatering the side channels and placing most of the flow into the thalweg. The optimal flow for maximizing larval drift time is not known, the drift studies were conducted at whatever the Fort Peck releases were at the time of the drift study (10kcfs).

Recommendation: Additional larval drift studies should be conducted at proposed low release levels (8kcfs) to determine optimal low flow larval drift levels before implementation of full tests.

Errors and omissions

Page 144 The Fort Peck project also includes a separate outlet works with four flood tunnels. However, due to extreme cavitation and vibration problems, the outlet works is not considered a reliable flow release mechanism. ***Two of the flood tunnels supply the two power houses at Fort Peck***

Page 124 Brockton river mile 1660. ***Brockton located at river mile 1650, floodplain narrows downstream of Culbertson.***

Page 284 McCone County acres? ***No acres listed for McCone County in table***

YDOC Land and Livestock LLC

215 Westland Road
Frazer, MT 59225

May 25, 2021

USACE, Omaha District
ATTN: CENWO-PM-AC Fort Peck EIS Comment
1616 Capital Ave
Omaha, NE 68102-4901

RE: Comment on Fort Peck Test Release Draft Environmental Impact Statement

To Whom It May Concern:

We feel the draft EIS fails to address the following facts.

According to Montana State University Led research dated Jan 23, 2015, on the pallid sturgeon in the Missouri River below Fort Peck Dam the embryonic pallid sturgeon hatch and then die in the sediment laden area south of Williston, ND. The sediment area is a result of silt, clay, and sand from the Missouri and Yellowstone Rivers aggradation. The EIS does not address dredging the area to improve habitat for the pallid sturgeon to fully develop. This alternative should be addressed and considered.

The EIS fails to consider fish that are not native to the Missouri River such as the walleye that is an aggressive, introduced fish that will consume most other fish. The comments I have received from the fishery people is that they have never seen a walleye with a juvenile palled sturgeon in its stomach. A study must be made to prove that the fish not native to the Missouri river do not eat and consume young pallid sturgeon. I believe they do and if so, those nonnative fish must be removed from the Missouri River below Fort Peck Dam. Please provide documentation and proof that the walleye does not eat pallid sturgeon. Do

pallid sturgeon survive in the Yellowstone River and develop and do they survive above Fort Peck Dam up to the Great Falls? Please provide your studies recognizing the pallid sturgeon in the Yellowstone River and above Fort Peck Dam.

Has the Milk River been considered as an alternative to assist the Pallid Sturgeon? Can fish ladders be installed in the Milk River to help the pallid sturgeon swim and spawn 100 miles upstream from the mouth of the Milk River. Please provide all data and studies considering the Milk River as an alternative to improve the Pallid Sturgeon's natural ability to survive.

Piping plover and least tern birds that are on the endangered species list nest on sand and gravel bars below Fort Peck Dam. The spring flows in June of the proposed plan will decimate these nesting habitats. How can this proposal that will destroy all nesting habitat below Fort Peck Dam for any bird along the Missouri River be considered? Please explain how this devasting man made act will benefit waterfowl and birds that nest on the sand bars and are protected from most natural predators due to being on the sand bars. How can you protect one endangered species and destroy another? Please address this concern.

The plan to create a manmade spring rise with clean and sediment free water from Fort Peck Dam will erode and destroy the banks of the Missouri River below the dam. Clean water has a tremendous ability mine silt, clay, and sand until it becomes laden with siltation and turns into muddy water. USACE knows how devastating the flood of 2011 was and how it excavated a tremendous trench below the spillway at Fort Pec that took years to repair. This June rise will destroy and cut millions of tons of Silt and Clay below the dam and the settlement will end up in the head water of Lake Sakakawea in North Dakota Adding millions of tons of sediment to an area already full of sediment below Williston, ND, is the very cause of the death of the developing pallid surgeon according to the MSU study. Please explain and address how this drastic action will really help the pallid sturgeon and provide a safe environment for the other animals and fish. Before Fort Peck Dam the June rise in the Missouri River was full of silt and sediment and you cannot replicate a June rise with clean water

without destroying everyone's existence that currently lives and works along the river.

Our irrigated farm will be devastated by this action and the bank erosion will be enormous. The USACE knows how to stabilize and protect the banks along the river, and we request a study by the USACE to design hard points and bank stabilization to prevent massive erosion and minimize aggradation include that at Williston, ND.

This study by the USACE and a plan to implement bank stabilization, protect irrigation, and municipal pump sites must be incorporated and installed before any man made June rise below Fort Peck Dam.

Sincerely,

Mike Ames
Managing Member
YDOC Land and Livestock, LLC

From: Salak, Jennifer L CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: [Non-DoD Source] Missouri River
Date: Tuesday, May 25, 2021 1:54:15 PM

From: Scott Buxbaum <4bfarms1@gmail.com>
Sent: Tuesday, May 25, 2021 1:17 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] Missouri River

We farm along the Missouri and Yellowstone Rivers and have concerns about the water flows that are being proposed. Not only will the low water flows cause damage to crops from lack of water due to the river being too low to run the necessary irrigation pumps but also the high water flows could potentially cause low land flooding on farmland. We have had times where the high water in the Missouri River has caused back water and the Four Mile Creek to rise to the point of flooding our fields causing significant crop loss. We are sure that we are not alone in this situation. Is there compensation being discussed for the farmers who could potentially lose income due to lack of irrigation water or flooding of fields? It seems that the human aspect also needs to be weighed heavily in this situation. We are all in favor of nature and wildlife but at what expense? Loss of income for those involved needs to be addressed. No one can afford to lose a portion of their income.

Anita Buxbaum

Fairview, Montana

701-744-3407

U.S. Army Corp of Engineers, Omaha District

CENWO-PMA-C

Attn: Fort Peck Dam draft EIS comments

1616 Capitol Avenue

Omaha, NE 68102-4901

RE: Fort Peck Dam Draft EIS

May 24, 2021

I am writing in opposition to the draft DEIS. The draft provided does not provide empirical evidence of successful implementation of the pallid sturgeon; scientific evidence has not been presented that implementing these catastrophic measures will help the pallid sturgeon in any way, nor does it take into consideration the impact of other migratory species and how these effects could influence the spawning of other species of fishes.

Conservation issues are a drastic consideration that is not provided enough leverage. Illustrated below is the shore line drafted as of 2010, before significant flooding. The next picture is in 2017. In 7 years and three significant floods, the shoreline moved a total of 100 feet!!!! So, if the intention is to increase the flood rate every year, than instead of taking 7 years to erode 100 feet, it will take three.

Illustration number 3 shows the area that has eroded away in the last 7 years: A total of 2.95 Acres. With the increase rate of discharge, the perpetual and annual flood level, this acreage of destruction will only increase.

Time and again, the case of the pallid sturgeon has been used to destroy agriculture in the region. The advocates for this program have even gone to the extent of suing to cease construction on a pallid sturgeon bypass because it didn't fit their agenda. Fish and wildlife has successfully and continually spawn, and reintroduced the sturgeon into the environment with great success. I feel that wildlife needs to be protected when a symbiotic relationship cannot be established. In the case of the Pallid Sturgeon, this relationship can and has existed for many years, but to destroy everything that has been created on a question of "will it work?" does not precipitate necessity.

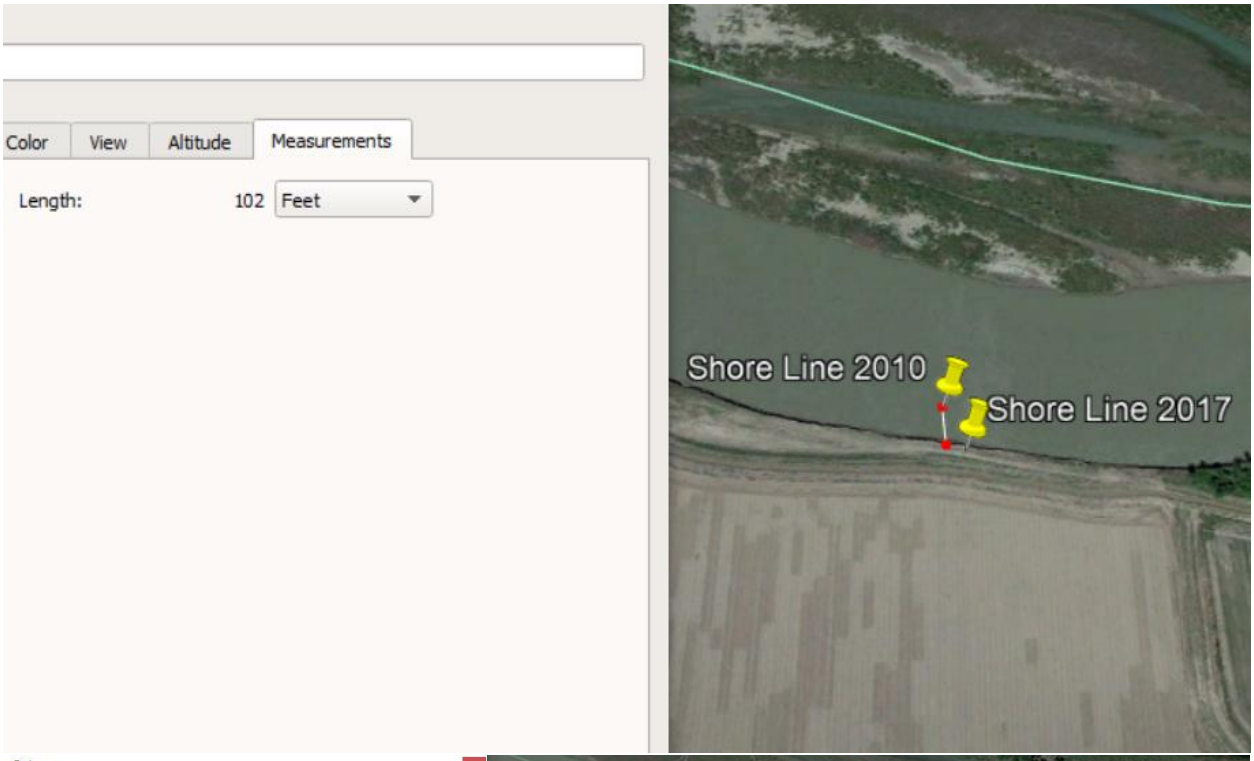
In summary, I feel it is a terrible idea to increase the rate of flow from Fort Peck to encourage spawning. I have multiple ideas that have equal relevance and reliability and would be happy to discuss the alternatives. Additionally, this comment session did not include Williams or McKenzie counties. These counties also are affected by the alteration. My contact information is:

Cory Wheeler

14375 County Road 356

Fairview, MT 59270


Shore Line 2010


Color
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Altitude
Measurements
Length:
102
Feet
Shore Line 2010
Shore Line 2017


Polygon
ygon
tyle, Color
View
Altitude
Measurements
Perimeter:
2,958
Feet
Area:
2.95
Acres

AUSTIN KNUDSEN

STATE OF MONTANA

May 25, 2021

U.S. Army Corps of Engineers
Omaha District
CENWO-PMA-C Attn: Fort Peck Draft EIS Comments
1616 Capitol Avenue
Omaha, NE 68102-4901
Submitted via email to: cenwo-planning@usace.army.mil

Re: Fort Peck Test Release Draft EIS

The Montana Attorney General writes to express grave concern over the Army Corps of Engineers' ("USACE") Fort Peck Test Release Draft Environmental Impact Statement ("DEIS"). The DEIS proposes a series of test dam releases from Spring to Summer to simulate Spring flood flows that might induce pallid sturgeon spawning. In short, the proposed test releases pose an acknowledged risk to dam safety and downstream flood risk; however, the DEIS does not quantify or fully explore this risk and instead punts to a future flood risk evaluation separate from this DEIS. Furthermore, the test release program poses serious financial risk to Montana irrigators because of crop loss and increased operations and maintenance costs. Finally, as expressed during the scoping period, the test release program poses risks for those Montana communities–including tribal communities–whose water systems rely on withdrawals from the Missouri River.

As for the benefits to the pallid sturgeon, the benefit modeling is admittedly deficient, and even the most optimistic models would not lead to species recovery. Meanwhile, downstream Montana communities will face real and severe agricultural, economic, and safety consequences. The marginal–if any–benefits to the pallid sturgeon do not outweigh these social and economic risks to Montanans.

The No Action Alternative Should be the Preferred Alternative

The No Action Alternative best protects the pallid sturgeon population, Montana irrigators, and the continued operational safety of Fort Peck Dam. While labeled "no action," the No Action Alternative will continue existing actions under those policies and programs that have stabilized the pallid sturgeon population. The USACE and USFWS should continue to engage in artificial propagation and stocking efforts, as well as continue efforts to construct and finish the bypass at the Yellowstone Intake.

DEPARTMENT OF JUSTICE

215 North Sanders
PO Box 201401
Helena, MT 59620-1401

(406) 444-2026
Contactdoj@mt.gov
mtdoj.gov

The No Action Alternative serves as the baseline for the estimated impacts of Alternatives 1 and 2 and their variants. But it must be noted that the No Action Alternative is a bit of a misnomer. It does in fact contemplate continuing actions for the benefit of the pallid sturgeon. *See* DEIS at 3-100 (actions "include fish bypass construction at Yellowstone Intake, continued propagation and stocking of pallid sturgeon in the Upper Basin, and continued pallid sturgeon science and monitoring activities in the Upper Basin"). Indeed, the current species recovery plan determined the population is stable due to artificial propagation and stocking. DEIS at 3-90. Further the proposed test releases are based, in part, on the assertion that there is "no known natural recruitment." That prognosis may be premature, however, based on recent statements by a Montana biologist that the 2011 spawn resulted in "wild-produced, genetically confirmed pallid sturgeon free embryo" in the Upper Missouri Basin. *Compare* DEIS at 3-97 to the statement of Tyler Haddix, Montana FWP pallid sturgeon biologist.[1] In other words, more time is needed to learn whether the natural

more time is needed to learn whether the naturalt

t 1. Alternatives 1 and 2 Pose Unacceptable Risks to Fort Peck Damt Operations.

The acknowledged risk to the Fort Peck Dam is unacceptable, both because the USACE has thus far not fully studied the risk to the spillway and because the proposed test releases will cause unavoidable damage to the dam that costs tens of millions of dollars. *See* DEIS at xxii-xxiii. The Fort Peck Dam spillway was not designed for regular use. *See* Appendix D, HEC-RAS and Geomorphic Analysis Technical Report March 2021 Draft at 44 ("March 2021 Report"). The spillway is "the last line of defense in preventing catastrophic failure with extremely high life and economic loss of national significance." *Id.* at 47. It is thus irresponsible to proceed without further knowledge of the risk to the spillway from increased use.

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[1] Andrew McKean, *Why a brief surge from Fort Peck Dam mimicking natural spring runoff could help restore life to Montana's rarest fish species,* Montana Outdoors May-June 2021 issue, published by Montana Fish, Wildlife & Parks at 4-5. Available online at: https://issuu.com/montanaoutdoors/docs/pallidpulse

The USACE believes both alternatives pose an unavoidable risk to increased spillway damage that, to repair, could be "difficult, expensive, and likely constrained by time."[2] DEIS at xxii-xxiii. Under both Alternatives 1 and 2, the use of the spillway (both in days of operation and total volume flowing through the spillway) will increase by 18%–30% and 18%–36%, respectively. *Id.* at 75, Table 6-12. This increased use of the spillway causes the "difficult" and "expensive" repairs. As a point of comparison, due to the high rate of use during the 2011 floods, repairs to the spillway cost $52M. *Id.* at 45. The estimated repair costs for the test releases are between $20M and $40M. *Id.* at xxii-xxiii. Merely monitoring dam safety and spillway reliability during the test releases will cost between $500,000 and $1M. *Id.* at 3-88. Furthermore, recommended repairs and operational improvements from the recent 2019 inspection of the spillway do not have an estimated or targeted implementation or completion date. March 2021 Report at 48. It makes little financial or safety sense to add additional repair and maintenance costs to Fort Peck Dam when the USACE does not have a timetable to complete currently scheduled necessary repairs and improvements.

Beyond these concerning generalities, the USACE does not provide a detailed risk assessment regarding dam safety risks. The best the USACE does is state it will conduct additional hydrologic analysis to study "possible implications for dam safety" prior to any management action. March 2021 Report at 81. With due respect, that is not enough. Vague promises about potential future action do nothing to address this imminent threat. The DEIS envisions using a spillway already in need of necessary repairs to process more water with more frequency than it was designed to accommodate. Failure of the spillway risks "catastrophic failure" of the dam. Now is the time to fully grapple with the risks to the spillway and dam safety posed by the prospective test releases.

2. Risk to Irrigators

The USACE's proposed test releases will damage Montana's agricultural economy. Overall, Alternative 1 estimates that its test releases will decrease annual net farm income in the impacted Montana counties by a little over 3%. *See* DEIS at 3-199, Table 3-81. This decrease however is greatly exacerbated in those years with the

[2] "Constrained by time" refers to the fact that repairs to the dam necessary after the test releases would need to occur during the onset of Winter, when the days are shorter, and dam operators must reckon with cold weather phenomena like ice flows. All necessary repairs would need to be completed before the following Spring flood season.

lowest crop production value. *Id.* For example, net farm income will decrease by 39.5% in Roosevelt County, 40.1% in Richland County, 26.6% in Valley County, ande 36.1% in McCone County during those lean years. *Id.*

During years with Alternative 1's test flows, the USACE notes that these water releases will result in a loss of 80 jobs and $4M in labor income. *Id.* at 3-222 to 3-223. This loss of employment and income would be devastating. Currently, 24.3% of Montanans in Roosevelt County live below the poverty line, which is roughly 2.5 times the national average.[3] The USACE inappropriately and incorrectly states the long-term implications of such economic loss pose a "negligible" social cost on area communities. *Id.* at 3-206.

While the DEIS has classified these test releases as "temporary," there is nothing temporary about the impact these test releases have on the communities. Montanans in these downstream communities are still recovering from the 2011 season, which permanently altered the soil, the crops, and their everyday lives. These test releases moreover take place during Montana's already short growing season. They may only last for five months out of of the year, but those five months correspond with the entirety of the agricultural growing season. And should these "test" releases become permanent, then Montanans deserve to know now, not later, so that they may assert their legal rights to protect their property and livelihoods from devastating federal action. *See* U.S. CONST., amend. V. As stated previously, these "tests" will cause significant and long-lasting economic harm to Montana.

Quite simply, given the marginal benefits to the species discussed below, Alternatives 1 and 2 pose unacceptable risks to Montana farmers, irrigators, and communities. Their livelihoods should not be jeopardized to conduct scientific tests that do not appreciably benefit the pallid sturgeon above what is already being done to stabilize the local species population.

3. Risk to Water Systems

[3] This is according to the most recent U.S. Census Bureau estimates (July 2019) available online at: https://www.census.gov/quickfacts/fact/table/rooseveltcountymontana/PST045219; and https://www.census.gov/library/publications/2020/demo/p60-270.html

During the scoping period, numerous concerns were raised by stakeholders that higher flows from test releases pose a risk to community water systems and water rights holders. *See e.g.* Appendix G, Comments by Ashleigh Weeks, General Manager, Assiniboine and Sioux Rural Water Supply System. Stakeholders expressed concerns that higher flows from the test release program could damage water intakes as well as increase sedimentation because the test releases will increase riverbank erosions. *Id.* These concerns were echoed by the Montana Department of Natural Resources and Conservation. *Id.* (comments by Laurie Zeller, Chief, Conservation Districts Bureau, also raising specific concerns regarding the Dry Prairie Regional Water System). Until and unless these concerns are addressed satisfactorily, the USACE should demur from Alternatives 1 and 2, which unnecessarily jeopardize Montana communities' safe drinking and irrigation water supplies.

4.s Marginal Benefits to the Pallid Sturgeons

The USACE asserts that the acknowledged risks to dam safety and local agricultural communities are worth the "incremental" benefit to the pallid sturgeon that Alternatives 1 or 2 *may* provide. DEIS at 3-116.

At the outset, the USACE's modeling is not supported by field observations. For instance, in support of Alternatives 1 and 2, the USACE states that no natural recruitment has occurred in the Upper Missouri River Basin. DEIS at 3-90. But the USACE's No Action Alternative modeling states that spawning *could* have occurred during two years in the study period. DEIS at 3-104 (1975 and 2011). If the latter is correct, then the former overstates the lack of recruitment. If the USACE is uncertain whether natural flooding has encouraged spawning and recruitment, then thats demonstrates the purely hypothetical nature of the proposed test releases. Thiss uncertainty is apparent in the USACE's lack of confidence in its modeling. *See* DEISs at 3-105 ("The model may be overestimating retention and survival to first exogenouss feeding during the 1975 flow year because no wild pallid sturgeon from the 1975 years class are known to exist in the study area."). Even if therefore the modelings accurately states the lack of natural recruitment, the solution is more observation tos better understand the implications of flood years such as 2011.[4S]

[4] *See* McKean at 4-5 (stating that the 2011 and 2018 floods form the genesis of the test release program and that the 2011 floods led to an observed natural pallid sturgeon spawn).

Looking back at the 81-year study period, the No Action Alternative assumes a 1.1% spawn retention rate. *Id.* at 3-103, Table 3-23. Alternatives 1 and 2 predict a spawn retention rate of between 1.2%–3.9%. Given the acknowledged discrepancy between observation records and modeling data, this is a marginal difference in outcomes. It is not a large enough difference to have an appreciable impact on the likelihood of species recovery in the management area. And notably, the DEIS does not even venture a guess as to what spawning retention rate is sufficient for species recovery.

These test releases are just that, *tests*. And the USACE should be transparent to Montanans about what measures are actually required for species recovery. If this program—with all its attendant risks and costs—is insufficient to more than "incremental[ly]" benefit the species, what sorts of measures would be sufficient?

Conclusion

For the foregoing reasons, the USACE should adopt the No Action Alternative. The No Action Alternative poses the fewest risks to dam safety, economic vitality, and community well-being, while still benefitting the pallid sturgeon through stocking, artificial propagation, and the construction of the Yellowstone Intake.

Sincerely,

Austin Knudsen
ATTORNEY GENERAL OF MONTANA

Big Flat Electric Cooperative

Serving Blaine, Phillips and Valley Counties

Dated: 05/25/2021

United States Army Corps of Engineers
Omaha District CENWO-PMA-C
Attn: Fort Peck Draft EIS Comments
1616 Capitol Avenue
Omaha, NE 68102-4901

To Whom it May Concern:

RE: Fort Peck Dam DEIS Comments

On behalf of Big Flat Electric Cooperative, I would like to share some thoughts on the Fort Peck DEIS. I am the General Manager and Big Flat Electric Cooperative serves roughly 1,100 members in Blaine, Phillips and Valley Counties as well as a large portion of the Fort Belknap Indian Reservation. We have over 1,600 miles of line, which is .69 members per mile of line whereas many other utilities have 30 to 40 consumers per mile of line. The magnitude of line for each member results in high costs per member for the needed power lines. We receive our power from Central Montana Electric Power Cooperative. All three counties and the Fort Belknap Indian Reservation need affordable, reliable power and that is where Central Montana Electric Power Cooperative comes in. Through Central Montana we receive a large amount of power from Western Area Power Administration (WAPA) that is both affordable and reliable which allows rates to be relatively affordable even with high costs of delivering the electricity in such a rural area. Agricultural makes up a large amount of our surface territory as well as our sales. We currently have 60 current memberships using irrigation, primarily in northern Blaine County. If WAPA were to raise rates, Big Flat Electric Cooperative could very easily struggle financially. Many of our members are currently on federal financial assistance or fixed incomes and we receive roughly $4,500 per month from Tribal LIEAP. Our rates would more than likely have to raise to accommodate any potential increase. Some members already have difficulties paying month to month especially in our cold winter months.

The Big Flat Electric Cooperative service area adjoins the Missouri River and the Milk River flows through East to West. Big Flat Electric definitely understands the attempts to recover the Pallid Sturgeon and hope that it can be successful. However, we just want you to understand how important our power system is to many Montanans and specifically our rural cooperative members rates and sustainability. Please limit the scope of the DEIS to the least cost to Hydro power option as possible while considering needs for the Pallid Sturgeon.

PO Box 229 Malta, MT 59538
Phone 406-654-2040 | Fax 406-654-2292 | www.bigflatelectric.com

Big Flat Electric Cooperative

Serving Blaine, Phillips and Valley Counties

Big Flat Electric supports the comments of Central Montana Electric Power Cooperative and Mid-West Electric Consumers Association.

We appreciate you giving us the opportunity to share our thoughts with you.

Sincerely,

GretchenBoardman
General Manager

PO Box 229 Malta, MT 59538
Phone 406-654-2040 | Fax 406-654-2292 | www.bigflatelectric.com

LOWER YELLOWSTONE
RURAL ELECTRIC COOPERATIVE
Your Touchstone Energy® Cooperative

PO Box 1047
3200 West Holly Street
Sidney, MT 5927
Phone: (406) 488-1602
Fax: (406) 488-6524
www.lyrec.com

5/25/2021

U.S. Army Corps of Engineers
Omaha District
CENWO-PMA-C Attn: Fort Peck Draft EIS Comments
1616 Capitol Avenue, Omaha, NE 68102-4901

RE: Common on Fort Peck Test Releases Draft Environmental Impact Statement

On behalf of the Board of Directors, membership and staff of Lower Yellowstone Rural Electric Cooperative in Sidney, Montana, I would like to comment on a concern we have in relation to the Fort Peck DEIS.

Our electric distribution cooperative supplies power to all the famers, ranchers and Western Area Power Administration pump sites along the river. This includes approximately 50,000 acres of irrigated land, with 10,000 of the acres in Richland County alone.

The proposed test will impact the pump site facilities and lively hood of the irrigators in our county and many of the surrounding counties.

The proposed changes to the river flow would affect the electrical power supply needed to operate pumps for those irrigator's using electricity. Connections from transformers to the pump will need to be altered and then resized due to the added length and then resizing the service again when the river changes. All of this would be at a cost to the irrigator. The resources needed by the irrigator and the cooperative would be above what we are equipped with right now, and would not have the ability to change the services quickly.

I appreciate the opportunity to comment on the Fort Peck Test Release Draft EIS. The proposed action jeopardizes many authorized purposes of the Fort Peck Dam. We are concerned with the impact to our facilities and our member owned facilities. As a cooperative the irrigator would be looking to us for support and answers to rapid changes in the river causing an impairment to their irrigation services.

Please do not hesitate to reach me with any questions you may have.

Sincerely,

Jason A. Brothen
CEO, Lower Yellowstone Rural Electric Cooperative

OFFICE OF THE GOVERNOR
STATE OF MONTANA

Greg Gianforte
GOVERNOR

Kristen Juras
LT. GOVERNOR

May 25, 2021

U.S. Army Corps of Engineers
Omaha District
1616 Capitol Avenue
Omaha, NE 68102-4901

Re: EIS No. 20210037, Draft, USACE, MT, Fort Peck Dam Test Releases, Comment

Dear Agency Officials:

Thank you for the opportunity to offer comment on the U.S. Army Corps of Engineers (USACE) draft Environmental Impact Statement (DEIS) for proposed test releases from the Fort Peck Dam in Montana for the pallid sturgeon. As a preliminary matter, the State of Montana formally requests a 120-day extension of the comment period. As part of the extension, the State requests that the USACE hold in-person public hearings, in the affected communities, to ensure that Montanans have an opportunity to meaningfully engage on this matter. Given the significance of this proposal to tribal nations and communities downstream of the dam, an extension of the comment period and public hearings will ensure robust and thorough public participation occurs.

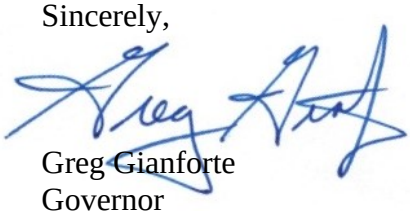
After reviewing the DEIS, the State of Montana has several concerns which prevent it from endorsing the USACE's preferred alternative at this time. They are as follows:

1. The USACE lacks the legal authority to implement the proposed alternative. Specifically, the USACE holds no water rights in Fort Peck or the Missouri River, let alone a water right that would allow flow manipulation for fish and wildlife.
2. The State of Montana is in the midst of its statewide water rights adjudication, and there has been no final decree of water rights below the Fort Peck Dam. As such, any analysis of potential impacts to downstream water users, or their water rights, is speculative. Absent accurate identification and careful consideration of downstream water rights, the USACE's proposed flow manipulations could flood water users in late spring and deprive water users during the hot summer months when moisture is most critical.
3. The public engagement to date, as detailed in Chapter 5 of the DEIS, occurred over two years ago. In light of current drought conditions in Montana, as well as additional changes on the ground that have occurred since the last opportunity to participate in the National Environmental Policy Act (NEPA) process, Montanans have not had a sufficient opportunity to provide the USACE with the latest information to inform its decision-making. A proposal of this nature must not be done in a vacuum, and I would encourage a renewed effort to communicate and coordinate with affected communities, tribes, state government agencies, conservation districts, and interest groups.

4. The DEIS contains no discussion of how the USACE plans to mitigate against any damages caused by these releases to infrastructure and agricultural commodities.

Thank you for considering the comments of the State of Montana. We strongly urge you to extend the comment period by an additional 120 days and hold in-person public meetings, in the affected communities, to ensure Montanans have sufficient time to participate in the NEPA process for this significant proposal. We look forward to supplementing our initial comments and continuing our participation throughout the NEPA process.

Sincerely,



Greg Gianforte
Governor

Missouri Department of NATURAL RESOURCES
dnr.mo.gov
Michael L. Parson, Governor
Carol S. Comer, Director

May 25, 2021

U.S. Army Corps of Engineers, Omaha District
CENWO-PMA-C Attn: Fort Peck Draft EIS Comments
1616 Capitol Avenue
Omaha, NE 68102-4901
cenwo-planning@usace.army.mil

Subject: Fort Peck Test Release Draft EIS

The Missouri Department of Natural Resources represents and protects the interests of the State of Missouri in matters pertaining to water, water quantity, water quality, and Missouri River management issues. The Department's Water Resources Center (Center) appreciates the opportunity to submit comments to the U.S. Army Corps of Engineers (USACE) in response to the release of the *Fort Peck Dam Test Releases Draft Environmental Impact Statement* (Draft EIS).

The Draft EIS evaluates the impacts of a range of test flow releases from Fort Peck Dam on the Missouri River in Montana for the benefit of the pallid sturgeon as part of the USACE's responsibilities under the Endangered Species Act and the 2018 Biological Opinion. The release of water from Fort Peck Dam is intended to test the hypothesis that flow increases with the proper magnitude and timing will attract pallid sturgeon to spawning areas, hold them there, trigger spawning, and then provide conditions conducive to the drifting and survival of larval pallid sturgeon.

The Center's role in the Missouri River Recovery Implementation Committee (MRRIC) demonstrates our commitment to endangered species recovery. Likewise, our MRRIC role requires us to encourage the USACE to listen to the concerns of people dependent on the Missouri River. Robust stakeholder engagement, transparent decision-making, and rigorous science are imperative to the development and implementation of any proposed test flows from Fort Peck Dam to ensure that flows provide maximum benefit to pallid sturgeon and minimum impact to stakeholders.

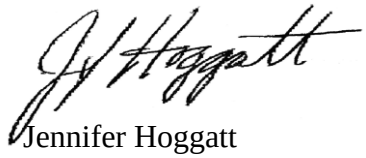
Because the proposed flow alterations (tests) constitute intra-system operations occurring from Fort Peck Dam to Garrison Dam, it is imperative that the USACE does not impact downstream flow support or flood control below Gavins Point Dam. By approaching the formulation and implementation of these test flows as simply an intra-system operation, the USACE can ensure

that the flow alterations are sized and timed such that the reservoir system is able to absorb them without causing downstream impacts.

The Center looks forward to continued participation and engagement with the USACE on the implementation of the Missouri River Recovery Plan (MRRP). Projects supporting the MRRP can and should be managed without jeopardizing Missouri's safety, navigation interests, private property, and municipal infrastructure. The Center is committed to assisting the USACE in managing the Missouri River for the benefit of all. If you have questions regarding our comments, please feel free to contact me at (573) 751-1403 or jennifer.hoggatt@dnr.mo.gov.

Sincerely,

WATER RESOURCES CENTER



Jennifer Hoggatt
Director

PO Box 118
Winnett, MT 59087

Missouri River Conservation Districts Council

Phone: (406) 454-0056
mrcdc@macdnet.org
www.MissouriRiverCouncil.info

May 24, 2021

U.S. Army Corps of Engineers, Omaha District
CENWO-PMA-C Attn: Fort Peck Draft EIS Comments
1616 Capitol Avenue
Omaha, NE 68102-4901

RE: Comment on Fort Peck Test Releases Draft Environmental Impact Statement

The Missouri River Conservation Districts Council (MRCDC) is a coalition of the fifteen Conservation Districts located along the Missouri River in Montana. Spanning 725 miles of River corridor, MRCDC seeks to be the united voice for conservation of the Missouri River, its tributaries, and its associated uplands. We have been actively engaged in the development of the proposed action to test releases at Fort Peck Dam since the process began in 2019. This involvement comprised of participating in scoping meetings, coordinating the irrigation pump site surveys in the summer and fall of 2020, working directly with USACE staff to answer questions specific to irrigation, and acting as a liaison between the USACE and the 140+ irrigators located downstream of Fort Peck Dam. MRCDC is also an active member in the Missouri River Recovery and Implementation Committee (MRRIC).

Given this close working relationship, MRCDC understands the vast amount of time and resources the USACE has expended in developing this DEIS. We also recognize the efforts the USACE has made to listen to the concerns of irrigators. While the document acknowledges some of these concerns raised by the irrigation community, the USACE proposed alternatives fail to properly address the colossal impact for farmers and ranchers (irrigators), agricultural businesses, and the four rural counties in the region. We appreciate the opportunity to comment on the Fort Peck Dam DEIS to highlight these concerns.

Flow Targets/Timing

The flow targets and timing specified in Alternative 1 and 2 do not adequately consider the needs of irrigation, except for the Attraction Flow of approximately 14,000-16,000 cfs which would not likely hinder a farmer or rancher's ability to irrigate. The remaining flow targets cause substantial problems, which will leave many irrigation pumps inoperable.

1) The Spawning Cue Release(s) and 35,000 cfs flood target are too high. Raising the river to such a level will flood irrigation pumps, electrical boxes, the roads to access pumps, and in some cases, flood cropland itself. These damages were made evident during the irrigation pump site surveys in which surveyors were able to point to the estimated high-water mark of a 35,000 cfs high flow event. Increases to this high flow have an exponentially negative impact to irrigation intakes. Aside from the impacts caused by flooding equipment and land, the proposed high flow event will…

    a. Rip established cottonwood trees and other riparian vegetation from riverbanks. The roots of these plants naturally assist in preventing the sloughing and erosion of riverbank. Removing them from the bank will leave the area at greater risk of erosion. Furthermore,

these large logs will then move down the river at high speeds and tear through floating irrigation pumps, causing irreplaceable damage.

b. Hinder successful weed control efforts. Farmers and ranchers invest substantial resources to manage the spread of noxious weeds along the River. Flooding riverbank obliterates these attempts by spreading the seeds of these plants as well as the plants themselves and washing out any biocontrol agents that have been dispersed.

c. Jeopardize water quality due to increased turbidity. This increase in sediment in the water declines the quality of the water, which comes at a cost to the irrigator. Excess sediment running through irrigation pumps and pipes will shorten the lifespan of the equipment. This sediment will then be deposited onto irrigated fields. This may equate to a decline in soil quality and will require additional inputs and fieldwork overtime to moderate.

2) The flow release rate of change following this high-flow event occurs too rapidly and will lead to massive erosion of riverbank. Erosion is already occurring on this stretch of the River under controlled management of the Dam. A 20,000-27,000 cfs reduction in releases over the short span of two weeks will expedite erosion beyond an adaptable level. This is a loss of property that can never be replaced – a loss of income for a farmer or rancher whose livelihood relies on the land and a loss of cultural and historical resources for the Fort Peck Assiniboine & Sioux Tribes.

3) The proposed Drifting Flow is too low. 8,000 cfs is marginal in perfect situations from an irrigation standpoint. This spring, for example, approximately half of all pump sites required additional work to become operable at 7,500 cfs. This is a job that many would not be able to do after a July high water test. Riverbed stability will differ greatly from in the spring when sandbars and areas above the water lines are generally dry and not too difficult to drive on with equipment. After high flows recede, it will be wet, silt-ladened and likely unsafe to access. While 8,000 cfs is not an historically low flow, the river has changed dramatically since the flood in 2011. 8,000 cfs today appears to be the lowest many irrigators have seen the River in their lifetime. The DEIS fails to consider the most recent 12 years of data, which is likely the most relevant. Most irrigation pump sites require 10,500 cfs to irrigate comfortably now.

Irrigation Impact Analysis

The DEIS fails to illustrate the impact to irrigation and the corresponding impact to the economy of the region that relies largely on agriculture.

1) High flow impacts were assessed in two different categories – side channel intakes and mainstem intakes. The DEIS assumes that intakes located on a side channel will lose the ability to irrigate for the remainder of the season. This is an accurate assumption; however, it only accounts for 20% of the intakes located on the River. Impacts to mainstem intakes should also consider losses to crop production. While the sedimentation issues may not be as dire as those found on side channel intakes, there will still be a loss in crop production due to an inability to irrigate after high flows recede.

a. Labor and equipment resources to get irrigation intakes back up and running after a tier 1 or tier 2 event are quite limited on this stretch of the River. If all 111 mainstem irrigation intakes need operation and maintenance, most will sit idle during prime irrigation season waiting for a contractor. There is only one dredge and a few excavators run by a single agricultural equipment company in the four-county region. The electric cooperatives in the area have indicated that they do not have the capacity to move the many electrical panels that power these floating irrigation pumps. Furthermore, the stability of the riverbed after the high flow event (as mentioned previously) may render a contractor unwilling to work in the area due to safety concerns, while some mainstem pump sites may not be accessible in the first place.

b. The River changes substantially from year to year, especially when the flow releases differ from standard management practices. What was a mainstem intake one year may be a side channel intake the next due to a new sandbar forming in the middle of the river.

Impacts to mainstem intakes need to be analyzed in the same way as side channel intakes. Crops under irrigation would suffer greatly if not timely irrigated. There will undoubtedly be partial or complete losses to crop production for *all* irrigation intakes. Recognizing this, regional economic development losses will need to be considered for these mainstem intakes as well.

2) The analysis specific to low flow impacts is unclear. The DEIS does not indicate what low flow threshold the models begin assuming equates to a loss of access to water for irrigation. Given the low estimated decrease in net farm income that the models conclude will occur (Alt 1: 2.9-4%; Alt 2: 2.4-6.7%), this "no access" indicator appears to differ greatly from the on-the-ground perspective of an irrigator. In the rare event that the high flow and subsequent drop in river flow has not already hindered a farmer's ability to irrigate, the 8,000 cfs low flow certainly will. This will result in a loss to crop yields (net farm income) far greater than the DEIS estimates. Additionally, this loss in crop production due to low flows will bear costs to the entire region.

3) The estimates to the region's economic impacts are surely understated (likely because they do not incorporate the loss in crop production from mainstem intakes). For example, Sidney Sugars Incorporated, a leading economic driver for the region, has estimated that they could experience a loss of up to $25 million alone due to lost production by Missouri River irrigators. Sidney Sugars leadership has also indicated that a loss such as this one, approximately 20% of their production, would put them out of business. This impact will be felt by the entire region. Richland County will experience lost property tax revenue, while the Fort Peck Assiniboine and Sioux Tribes will lose a valuable employment partnership. A detailed report of this economic impact was provided to the individuals contracted by the USACE in the summer of 2020 but does not appear to be included in the DEIS.

The DEIS repeatedly describes the above impacts as "temporary" or "short-term". Most farmers derive their income solely from crop production, while ranchers derive theirs from cattle whose feed during the winter months is reliant on hay production during the summer. Crop production is not a 12 months out of the year revenue source. Instead, these families' sole source of income depends on the 4-6 month growing season that coincides with the proposed test flow implementation. The agricultural economy is already struggling with many farmers and ranchers one lost crop away from going out of business. The two alternatives proposed in the DEIS will put many out of business. This is not small. This is not temporary. This is a loss of permanent jobs, sales, and tax revenue to

the county. This could mean a loss of students at a dwindling rural school. This could mean a loss to a volunteer on a rural fire or EMS department. These are real, tangible losses to our rural communities that are already struggling to stay afloat. The values associated with each impact analysis warrant additional contextual consideration. The on-the-ground consequences are substantial.

Who will be paying for these impacts? Crop insurance providers have indicated that this is a man-made event and therefore would not qualify for crop insurance payments. Even so, crop insurance would not account for the loss to our region's agricultural businesses who would not have crops to purchase. The USACE has indicated that they will not mitigate these losses.

Many farmers may conclude that planting an irrigated crop is simply not a risk they are willing to take if either of the DEIS Alternatives were to be implemented. Unfortunately, a transition to a less profitable dryland crop will still result in a negative economic impact to the farmer.

Additional Recommendations

- The DEIS indicates a desire to implement the first flow test in 2022. If the flow test is indeed implemented, irrigators will need time to prepare their irrigation intakes, pump sites and cropping plans. If irrigators pursue alternative funding sources to retrofit irrigation intake structures (which we are unsure is even possible under the proposed flow targets), a minimum of 2 years will be required prior to the first test. Additionally, many farmers operate on a rotational planting schedule with crop selections occurring 2 years or more in advance. Oftentimes, farmers will contract their crop a year in advance to take advantage of higher commodity prices. A failure to deliver a contracted crop hurts both the agricultural business purchasing the crop as well as the farmer who is unable to fulfill their contract. If the test flow absolutely must occur, the irrigation community will need far more time than the current schedule provides.

- Potential use and damage of the Fort Peck Dam spillway puts downstream water users, such as irrigators, at risk. The cost of repairing any spillway damages, estimated to be in the range of $20-40 million in the DEIS, may ultimately be passed down to ratepayers, such as irrigators who will already be facing undue financial hardship following a test flow.

- Flow tests should not be implemented unless the best estimate of climatical and hydrological conditions support conclusion the full tests can be performed. Partial flow test years should only be the result of conditions contrary to the projections and forecasting.

- The drought monitor for the region needs to be considered in the list of necessary conditions to implement a test flow. If the region is already experiencing a drought, their crops cannot afford to risk a loss of irrigation that year.

- The test flow should not be implemented back-to-back years. The year after a test flow could equate to additional impacts on its own due to less water in the Reservoir after high releases. Moreover, if an irrigator *can* bounce back after a test flow, they may not be able to bounce back after another one.

- The USACE needs to improve their public participation strategy when the Final EIS is released for comment. The DEIS is a complex, 600-page document without accounting for the corresponding supplemental information. Amid a drought and busy planting season, the irrigation community cannot be expected to fully understand the consequences of the proposed action by joining poorly advertised virtual public meetings; notably, one of which did not even include an accurate link to join. The next round of public comments necessitates well-advertised, in-person public meetings.

- The USACE will need to consult with the Fort Peck Assiniboine and Sioux Tribes. We have worked closely with their leadership during this process, and it is apparent that the government-to-government consultation with the Tribes and the USACE has not occurred. They stand to lose just as much as the private irrigators downstream of the Dam, and they have not been afforded their opportunity to express this concern.

Again, we appreciate the opportunity to comment on the Fort Peck Test Releases Draft EIS. The proposed action jeopardizes an important congressionally authorized purpose of the Fort Peck Dam and puts the USACE at risk of a regulatory taking. We are all losers in this game, except for *potentially* the pallid sturgeon. The ends do not justify the means and for this reason, we hope the USACE will pursue the No Action Alternative.

If you have any questions, they can be directed to Liv Holt at 406-581-3996 or mrcdc@macdnet.org.

Sincerely,

Bruce Anderson, Chairman
Missouri River Conservation Districts Council

United States Department of the Interior

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In reply refer to:
21/0119

May 25, 2021

Aaron Quinn, Environmental Resources Specialist
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Subject: Comments on the Fort Peck Dam Test Releases Draft Environmental Impact Statement

Dear Mr. Quinn,

The U.S. Department of the Interior (Department), including the U.S. Fish and Wildlife Service (USFWS), has reviewed the U.S. Army Corps of Engineers' (USACE) Fort Peck Dam Test Releases – Draft Environmental Impact Statement (FPDTR DEIS). The purpose of the FPDTR EIS is to assess the capacity of test flows out of Fort Peck Dam to promote growth and survival of pallid sturgeon to free swimming juvenile stage before settling out in the headwaters of Lake Sakakawea USFWS thank you for the opportunity to offer the following comments and suggestions.

USFWS' COMMENTS

USFWS commends USACE's continued efforts to meet our joint responsibilities to conserve the endangered pallid sturgeon (*Scaphirhynchus albus*) under the Endangered Species Act.

Specifically, the USFWS appreciates USACE's commitment to implementing test flow releases from Fort Peck Dam in an effort to achieve the fundamental objective described in our 2018 Biological Opinion: to avoid jeopardizing the continued existence of pallid sturgeon in the Missouri River (USFWS 2018). The actions proposed in the FPDTR DEIS will improve our understanding of the potential for flow management from Fort Peck Dam to restore natural recruitment to the Upper Missouri River (UMR) demographic unit of pallid sturgeon (defined in the FPDTR DEIS, page 2-4).

USFWS offers the following comments on the FPDTR DEIS to improve the science and learning outcomes that will result from assessing the capacity of test flows out of Fort Peck Dam to promote growth and survival to the free swimming juvenile stage before settling out in the

headwaters of Lake Sakakawea – the stated purpose of the action described in the FPDTR DEIS (FPDTR DEIS, page 1-5).

Flow adjustments to minimize harm to the Yellowstone River:

Two coinciding management actions on the Yellowstone (Intake Fish Bypass Project) and Missouri (Fort Peck Dam test flow releases) rivers may contribute to restoring natural recruitment to the UMR demographic unit of pallid sturgeon. Both management actions have a high degree of uncertainty regarding their potential to restore natural recruitment to the population, and strategic implementation and effectiveness monitoring will be required to understand their relative and collective benefits.

The Purpose of the Action (FPDTR DEIS, page 1-5) states that *"Test flows would be implemented while accounting for conditions on the Yellowstone River to not harm pallid sturgeon that are or would be utilizing fish passage structures there."*, with that general prioritization being supported throughout the FPDTR DEIS. USFWS suggests that, during test flow years, evaluating the effectiveness of Fort Peck Dam test flow releases should be a higher priority than minimizing harm to individuals that would otherwise migrate into the Yellowstone River for the following reasons:

1. As a Level 2 science action[1], test flow releases from Fort Peck Dam are expected to be implemented intermittently among years (once every 5 – 7 years, on average; FPDTR DEIS, page 4-1) and for a limited number of events (3 – 5 times; FPDTR DEIS, page xiv). In contrast, the effectiveness of the Intake Fish Bypass Project will be evaluated annually after construction is completed, including years when Fort Peck Dam test flow releases are implemented. Because the number of Fort Peck Dam test flow releases will be limited, the effectiveness of each test flow event to promote pallid sturgeon natural recruitment in the Missouri River should be evaluated to the greatest extent possible.

   Delaying initiation of the "attract" phase of the Fort Peck Dam test flow releases relative to the unregulated hydrograph may limit the number of adult pallid sturgeon that occupy the Missouri River during the spawning season. The FPDTR DEIS defines the biological purpose of the "attract" phase as triggering upstream spawning migrations and attracting pallid sturgeon up the Missouri River. Visual comparison of the Yellowstone River hydrograph during the period-of-record (1910 – 2021; USGS gage at Sidney, Montana) and unregulated flows at Fort Peck Dam (FPDTR DEIS, page 2-10) suggests that the timing of the "attract" phase between the two systems should be similar. As such, delaying the "attract" phase of the conceptual hydrographs may unduly predispose the experiment to realize a reduced potential for reproductive individuals to be attracted to and occupy the Missouri River during the

[1] In-river testing – Implementation of actions at a level sufficient to expect a measurable biological, behavioral, or physiological response in pallid sturgeon, surrogate species, or related habitat response (USACE 2018).

spawning period if pallid sturgeon respond to earlier cues from the Yellowstone River.

The extent to which the "attract" phase of the conceptual hydrographs is delayed relative to the unregulated hydrograph is underrepresented. The FPDTR DEIS (page 2-17) states *"…the later initiation date of April 16 is designed to enhance the contrast between the Missouri River and Yellowstone River discharges by moving the start date approximately two weeks later than the initial flow shown in the unregulated hydrograph"*. USFWS notes that there is a discrepancy in the timing of the "attract" phase of the unregulated hydrograph between Figures 2-2 and 2-3 (FPDTR DEIS, pages 2-10 and 2-12); nonetheless, these figures show that the peak of the "attract" phase occurs on either approximately March 20 (Figure 2-2) or April 1 (Figure 2-3), with the initiation of this phase beginning approximately three weeks prior to the peak. The later initiation date of April 16 described in the FPDTR DEIS is approximately two weeks later than the ***peak*** of the "attract" phase of the unregulated hydrograph shown in Figure 2-3 (~3 weeks later than the peak in Figure 2-2); thus, the peak of the "attract" phase in the conceptual hydrographs (April 20) will not occur until approximately three weeks after the peak of the unregulated hydrograph shown in Figure 2-3 (~1 month later than the peak in Figure 2-2). The initial rise of the "attract" phase in the conceptual hydrographs (April 16) will occur approximately one (Figure 2-3) to one and a half (Figure 2-2) months later than the initial rise in the unregulated hydrograph. Substantial delay to the initiation of the "attract" phase of the conceptual hydrographs, as proposed in the FPDTR DEIS, may further limit pallid sturgeon spawning migrations into the Missouri River, thereby limiting the learning potential from the infrequent and limited number of Fort Peck test flow events.

The timing of the "attract" phase of test flow releases is critical for evaluating the effectiveness of Fort Peck Dam test flow releases because the population of telemetered adult pallid sturgeon is small; the total number of telemetered reproductive female pallid sturgeon in the UMR demographic unit has been less than 10 annually in recent years. While the number of telemetered adult pallid sturgeon may increase in the coming years due to hatchery-origin pallid sturgeon reaching sexually maturity, there is still no certainty that a sufficient number of telemetered adults will migrate into the Missouri River in response to Fort Peck Dam test flow releases such that the proposed action may be sufficiently evaluated. For example, telemetered wild adult pallid sturgeon have preferentially selected (60 – 93%) the Yellowstone River over the Missouri River during the spawning period. If delaying the initiation of the conceptual hydrographs results in a high percentage (e.g., >90%) of reproductive pallid sturgeon using the Yellowstone River, it is plausible that assessing the proposed action will depend on very few reproductive individuals. Given the small number of telemetered adult pallid sturgeon and limited opportunities to implement and evaluate test flow releases from Fort Peck Dam, promoting pallid

sturgeon spawning migrations into the Missouri River to the extent possible during test flow years is likely necessary for evaluating the effectiveness of the proposed action.

2. The perceived harm to reproductive pallid sturgeon that would otherwise migrate into the Yellowstone River during Fort Peck Dam test flow years is unsubstantiated. As stated above, telemetered wild adult pallid sturgeon have preferentially selected the Yellowstone River over the Missouri River in recent years, including during high-water years in the Missouri River. The majority of documented pallid sturgeon spawning in the Yellowstone River has occurred within the lowermost 20 miles at locations that are unlikely to support natural recruitment due the proximity to Lake Sakakawea. From 2011 through 2020, only 9 – 26% of the telemetered wild adult pallid sturgeon that migrated into the Yellowstone moved far enough upstream to encounter the Intake Diversion Dam. Successful spawning upstream of Intake has only been detected twice (2014 and 2020) and did not result in known natural recruitment. Whereas the presence of the Intake Diversion Dam may have precluded additional spawning events during the observed time period, the U.S. Bureau of Reclamation translocated telemetered pallid sturgeon that appeared motivated to migrate upstream of Intake from 2017 – 2020 to mitigate such effects. The intent of the Intake Fish Bypass Project is to increase the available drift distance upstream of Lake Sakakawea by improving access to upstream spawning habitats; however, it is currently unknown whether suitable spawning habitats exist in the Yellowstone River watershed far enough upstream of Lake Sakakawea to support natural recruitment. Further, if such spawning habitats do exist, it is also unknown whether reproductive pallid sturgeon will be motivated to utilize or able to access (e.g., upstream of Cartersville Diversion Dam) those habitats. Because pallid sturgeon natural recruitment from the Yellowstone River watershed has not been documented to-date, there is little evidence to support that influencing reproductive pallid sturgeon into the Missouri River via Fort Peck test flow releases would harm the population as a whole. Thus, USFWS suggests replacing the word “harm” with a term that appropriately characterizes that Fort Peck Dam test flow releases may alter pallid sturgeon behaviors, including spawning migrations into the Yellowstone River.

3. Any “harm” that does occur to pallid sturgeon that would otherwise use the Yellowstone River would be relatively minor, whereas the science and learning outcomes from assessing the capacity of test flows from Fort Peck Dam to support natural recruitment may contribute to the recovery of the UMR demographic unit of pallid sturgeon.

4. Though not the intended purpose of the proposed action, implementing the “attract” phase of the Fort Peck Dam test flow releases to correspond with the unregulated hydrograph (FPDTR DEIS, page 2-10) may provide insight into the pallid sturgeon

response to a pseudo-natural flow regime across the connected Yellowstone-Missouri system. Optimally, both the Yellowstone and Missouri watersheds can support natural recruitment, and future management (e.g., Level 3[2] or 4[3] Fort Peck flow releases) can be used to promote spawning in both systems when conditions allow. Such information would also be useful if natural recruitment is not realized in the Yellowstone watershed.

For the reasons listed above, USFWS suggests beginning discussions to explore Level 2 science actions that mirror the timing of the unregulated Missouri River hydrograph through the annual Missouri River Recovery Program's Science and Adaptive Management process. Potential alternatives may include partial test flow experiments of the "attract" phase or full test flow experiments in which the peak of the "attract" phase corresponds with, or occurs slightly before, the peak of the "attract" phase of the unregulated hydrograph.

USFWS also requests that the discrepancy in the timing of the unregulated hydrograph between Figures 2-2 and 2-3 be resolved to ensure that the evaluation of the timing of Fort Peck Dam test flow releases relative to historical conditions is accurate.

Monitor the upstream extent of Lake Sakakawea:

The total distance available to drifting pallid sturgeon free embryos or larvae will be bounded by spawning locations in the Missouri River and the upstream influence of Lake Sakakawea. Spawning locations will be monitored to evaluate the effectiveness of the proposed action (FPDTR DEIS, Table 4-1). USFWS suggests monitoring the upstream extent of Lake Sakakawea during the "drift" phase of the conceptual hydrographs, such that the total drift distance can be calculated after a successful spawning event; total drift distance should be included among the metrics that will be used to evaluate the effectiveness of the proposed action.

Initiate the "drift" phase of the conceptual hydrograph after a documented spawning event:

USFWS supports the Technical Team's hypothesis that returning to low flows as quickly as possible after spawning will be more effective in minimizing velocities and downstream advection of hatched free embryos (FPDTR DEIS, page 2-12). USFWS suggests implementing the "drift" phase of the conceptual hydrograph immediately after spawning is documented rather than on the calendar dates described in Table 2-1 of the FPDTR DEIS.

Minimum of three "full" test flow events:

The FPDTR DEIS states that determining the effects of test flow releases on pallid sturgeon below Fort Peck Dam is estimated to take 3 – 5 test flow events, and that test flow releases may

[2] Scaled implementation – A range of actions not expected to achieve full success, but which yields sufficient results in terms of reproduction, numbers, or distribution to provide a meaningful population response and indicate the level of effort needed for full implementation (USACE 2018).
[3] Ultimate required scale of implementation – Implementation to the ultimate level required to remove an issue (USACE 2018).

result in "partial" or "full" testing of the four conceptual hydrograph phases (i.e., attract, retain, aggregate and spawn, and drift); however, the FPDTR DEIS does not discern how many of the required 3 – 5 test flow events should be "full" test releases. USFWS suggests that determining the effects of test flow releases on pallid sturgeon below Fort Peck Dam should include at least three "full" events that test all four phases of the conceptual hydrograph.

SUMMARY

We thank you again for the opportunity to provide these comments and suggestions on the Fort Peck Dam Test Releases Draft Environmental Impact Statement.

Should you have questions related to USFWS' comments, please Maria Boroja, Regional NEPA Coordinator, U.S. Fish and Wildlife Service, DOI Regions 5 and 7 at 720-638-3036 or maria_boroja@fws.gov. If you have any questions for the Department, please contact me at 303-478-3373, or courtney_hoover@ios.doi.gov.

Sincerely,

Courtney L Hoover

Courtney Hoover
Regional Environmental Officer
Office of Environmental Policy and Compliance

TO: United State Army Corps of Engineers
Omaha District CENWO-PMA-C
Attn: Fort Peck Draft EIS Comments
1616 Capitol Avenue
Omaha, NE 68102-4901

FROM: Jim Horan
Mid-West Electric Consumers Association
3401 Quebec St., Suite 3550
Denver, CO 80270
jimbhoran@meconsumers.com

RE: Comments on the Fort Peck Dam Draft Environmental Impact Statement

DATE: May 25th, 2021

SUBMITTED VIA EMAIL TO: cenwo-planning@usace.army.mil

INTRODUCTION

Mid-West Electric Consumers Association (Mid-West) is a customer group of over 300 consumer-owned utilities in nine Upper Great Plains states. Mid-West member-utilities rely on hydropower generation produced by the federal dams on the Upper Missouri River System, including Fort Peck Dam. Through utility rates, our customers and member-owners have paid and will continue to pay for this important congressionally authorized purpose of the Upper Missouri River System.

The affordable, renewable, and reliable baseload power provided by the federal hydropower system is essential to the communities' Mid-West member-utilities serve. The USACE preferred test flow alternatives in the Draft Environmental Impact Statement (DEIS) will create uncertainty for the farms, ranches, small businesses, industrial and commercial enterprises, and homes in the Upper Great Plains. In partial or full test flow years, the loss of hydropower generation will negatively impact energy affordability across the region. Higher energy rates in flow years will be compounded for end-use consumers-owners with the other resource topic impacts listed in the DEIS.

Mid-West is an active member in the Missouri River Recovery and Implementation Committee (MRRIC) and appreciates the efforts the USACE has made to listen to hydropower customers in developing this DEIS. We appreciate the opportunity to comment on the Fort Peck Dam DEIS. While the document addresses some of the concerns raised by hydropower customers and their consumer-owners, additional sideboards should be applied to reduce uncertainty and the aggregate cumulative impact for communities in the region.

FINANCIAL IMPACT ON HYDROPOWER CUSTOMERS

The USACE's preferred alternative results in up to a $7,000,000 annual impact to hydropower customers and their consumer-owners. In the DEIS and during the public meetings, this was referred to as a "small impact". While we appreciate the efforts the USACE has made to understand the impacts on hydropower, $7,000,000 million in annual increased power costs will be felt by our consumer-owners through higher utility rates. This rate impact, even when spread across the Upper Great Plains region, will not be viewed as "small" by our consumer-owners. This will be acutely felt when the rate impact is aggregated with the other cumulative impacts of the test flows.

Mid-West appreciates the USACE effort to monitor the spillway at Fort Peck and determine the impact of test flows. We ask that USACE to work to ensure that hydropower customers and their consumer-owners are not also forced to pay for the estimate $20,000,000 to $40,000,000 in spillway repairs as a result of full or partial test flows. Hydropower customers and their consumer-owners are often asked to pay for up to half the cost of operation and maintenance at federal hydropower facilities. If hydropower customers and their consumer-owners are also asked to pay for $10,000,000 to $20,000,000 in spillway repairs as a result of the test flows then the hydropower impact will be significantly higher than the estimates in the DEIS. The USACE should ensure that spillway repairs as a result of test flows are classified as non-reimbursable by hydropower customers.

CHANGING WHOLESALE MARKET PRICES SHOULD BE CONSIDERED

The DEIS estimates hydropower generation impact by assuming the cost of replacement energy and capacity. Baseload thermal resources were used to create a "mix of least cost alternative sources" of energy and capacity. These estimates are already a few years old and based on assumptions that have not held up as additional renewable non-dispatchable resources replace baseload power in the market.

The regional electric grid risk will increase with the energy transition and so will energy prices during certain times of the year. In regard to the preferred test flow alternatives, wind capacity in the Upper Plains is high in the spring while dropping by half during the summer months. As more wind generation is brought into the wholesale power market prices will adjust to the availability of energy and capacity. Power customers in the region could see negative wholesale wind prices in the early spring months. The opposite could be true in the warmer summer months when energy and capacity will be needed in the regional markets to respond to extreme weather events (i.e. California rolling blackouts).

The USACE should revisit the hydropower cost impacts with an eye to the rapidly changing energy market in the region. In making any flow decisions, the USACE should consider the forecasted impact of wholesale market power prices on customer utilities. Working with

hydropower stakeholders and the Western Area Power Administration (WAPA), the USACE can better develop sideboards to control hydropower cost impacts.

AGGREGATE CUMULATIVE IMPACTS ON THE REGION

Mid-West encourages the United States Army Corps of Engineers (USACE) to consider the aggregate cumulative impacts across resource topics when making flow decisions. While the Fort Peck DEIS provides some analysis on cumulative impacts within a resource topic, the DEIS does not address the aggregate of those cumulative impacts on the Upper Missouri River System communities. The resource topic impacts do not occur in vacuum; the cost of the impacts will be multiplied for many in our communities.

For example, a farmer in Eastern Montana will have to endure the cumulative test flow impacts on irrigation, water supply, hydropower generation and thermal power generation. The farmer's access to water both for household use and irrigation may be limited or at the very least will be more expensive. In addition, the price the farmer pays in electric utility rates will increase with the cost impacts on hydropower and thermal generation.

Mid-West suggests the USACE extend their analysis to aggregate cumulative impacts on communities before making flow decisions. We also join with our customer-owners, the Missouri River Conservation Districts Council, in asking the USACE to provide advanced notification of flow decisions. Advanced notification would allow hydropower customers and WAPA to better prepare for power supply and power purchase impacts.

CONCLUSION

Mid-West appreciates the opportunity to provide comments on the Fort Peck Dam DEIS. While we have concerns about the preferred alternative, the USACE staff must be commended for their efforts to work with and understand impacted stakeholders. Mid-West looks forward to continuing to engage with the USACE and USFWS on Fort Peck test flows and the overall recovery efforts for the pallid sturgeon. Through MRRIC and other stakeholder opportunities, Mid-West will advocate for customer utilities and their consumer-owners. The reliable and renewable hydropower generated at Fort Peck is essential to the overall community health of our region. Affordable and dispatchable hydropower will be increasingly important as the country undergoes an energy transition.

Mid-West fully supports the comments submitted by Central Montana Electric Power Cooperative. As discussed above, many of the customer-owners represented by Mid-West will face impacts of test flows beyond increased electric utility rates. Mid-West supports the concerns raised by the Missouri River Conservation Districts Council in their comments and shares the fear of the aggregate cumulative impacts on our communities.

Mid-West does not have a preferred alternative and instead requests the USACE incorporate the following additional sideboards to reduce the impact on human considerations across the region:

1. Any needed spillway repairs should be non-reimbursable by hydropower customers. Forcing hydropower customers to pay an additional $10,000,000 to $20,000,000 (potential customer share) on top of an annual $7,000,000 cost will significantly impact energy affordability in the region.
2. The DEIS should be modified to limit maximum flow tests to 28,000 cfs.
3. The USACE should be every effort to avoid partial flow test years.
4. No flow tests should be initiated in April.
5. Flow tests should not be held in back to back years.
6. Careful review and consideration should be given to flow decisions after the completion of the Yellowstone intake and diversion

Thank you again for the opportunity to provide comments on DEIS. Mid-West appreciates the USACE staff, their public service to our country, and their continued efforts to listen and work with stakeholders.

The American Waterways Operators

666 High Street, Suite 200-B
Worthington, OH 43085

PHONE: 614.565.8319
EMAIL: jlampert@americanwaterways.com

Justin L. Lampert
Manager – Midcontinent Office

May 25, 2021

BG Peter D. Helmlinger
Commander, Northwestern Division
U.S Army Corps of Engineers
CENWO-PMA-C
1616 Capitol Avenue
Omaha, NE 68102

RE: Draft Fort Peck Dam Test Flow Release Environmental Impact Statement

Dear General Helmlinger:

On behalf of The American Waterways Operators (AWO), the national trade association for the tugboat, towboat, and barge industry, thank you for the opportunity to comment on the Corps' Draft Fort Peck Dam Test Flow Release Environmental Impact Statement (DEIS).

The U.S. tugboat, towboat, and barge industry is a vital segment of America's transportation system. The industry safely and efficiently moves over 760 million tons of cargo each year, including more than 60 percent of U.S. export grain, energy sources such as coal and petroleum, and other bulk commodities that are the building blocks of the U.S. economy. The fleet consists of nearly 5,500 tugboats and towboats, and over 31,000 barges. These vessels transit 25,000 miles of inland and intracoastal waterways; the Great Lakes; and the Atlantic, Pacific, and Gulf coasts. Tugboats also provide essential services including ship docking, tanker escort and bunkering in ports and harbors around the country.

The tugboat, towboat and barge industry is not only an integral part of the U.S. intermodal transportation system, but also the safest, most affordable and most fuel-efficient transportation mode, with the smallest carbon footprint. Actions that adversely impact the efficiency of waterborne commerce, or that result in the diversion of cargo to other modes of transportation negatively impact the U.S. economy, public safety, and the environment.

AWO has represented navigation stakeholders on the Missouri River Recovery Implementation Committee (MRRIC) since its inception in the fall of 2008. Authorized by Congress in Section 5018 of the 2007 Water Resources Development Act (WRDA), MRRIC is composed of nearly 70 representatives of tribes, stakeholder groups, states, and federal agencies.

AWO makes the following comments and recommendations regarding the Corps' proposal to implement Alternative 1, the Preferred Alternative, as described in the DEIS to benefit the pallid sturgeon:

1) AWO urges the Corps to adopt the "system" approach with the lower Missouri and Mississippi rivers for pallid sturgeon recruitment and recovery. The Corps, U.S. Fish and Wildlife Service, state agencies, and other groups encourage actions on the upper Missouri River to be viewed as a "system" in conjunction with the Yellowstone River. However, a "system" approach is not being incorporated when evaluating the Mississippi River's role in pallid sturgeon recruitment and recovery, which AWO has endorsed for years.

2) AWO is concerned that the DEIS calls for increased usage of the Fort Peck Dam spillway. Since spillways are only constructed to be utilized during extreme flood events, the Fort Peck spillway has only been used 4 or 5 times in its 80-year history. Activating the spillway more frequently than designed can cause erosion of the concrete wall underneath, leading to serious dam safety concerns. The Corps admits that Alternative 1 has the greatest potential to increase spillway risk. A Fort Peck Dam failure would have lasting impacts on the lower river basin and the primary authorized purposes of navigation and flood control. If the Corps proceeds with the test flow releases, then there must be funding to inspect the dam and spillway for damage and make all the necessary repairs before the following runoff season.

3) AWO remains concerned about the precedent Fort Peck test flow releases could set for future management actions on the Missouri River. If the test releases proposed under Alternative 1 are implemented, the Corps should assure stakeholders that this type of action will be limited to Fort Peck.

4) The DEIS clearly states that impacts to flow rates below Gavins Point Dam would be negligible. It is imperative that this remains the case if Alternative 1 is implemented. Dramatic increases to flow rates below Gavins Point Dam could impact navigation structures, imperiling safe navigation and flood control on the Missouri River.

Again, thank you for the opportunity to provide comments on the Fort Peck Test Flow DEIS. We would be pleased to provide additional feedback or answer any questions as they arise.

Sincerely,

Justin Lampert

Justin Lampert
Manager – Midcontinent Office

From: Salak, Jennifer L CIV USARMY CENWO (USA)
To: Quinn, Aaron T CIV USARMY CENWO (USA)
Subject: FW: [Non-DoD Source] Missouri River
Date: Wednesday, May 26, 2021 6:02:40 AM

-----Original Message-----
From: Don Steinbeisser Jr <donjr1205@gmail.com>
Sent: Tuesday, May 25, 2021 8:37 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] Missouri River

US Army Corp of Engineers,
My name is Don Steinbeisser Jr. I am President of the Richland County Farm Bureau. Many of our members live and irrigate on the Missouri River. They depend on the water they pump out for their living. The crops they raise help many others in the area by creating jobs and supporting local business. From a sugar factory to feedlots to a slaughter plant. Many ranchers in the area depend on irrigated farms for feed for cattle in the winter, or during drought years such as this year. The ability to irrigate crops is very important to all of eastern Montana and western North Dakota for our future.
I am also an irrigated farmer and rancher. My ability to stay in business depends on the farmers along the Missouri River to keep the Sugar factory open.
I can not tell you how important irrigation is to this area with such little rain fall.
Thank you
Don Steinbeisser Jr
Richland County Farm Bureau

Sent from my iPhone

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
Denver, CO 80202-1129
Phone 800-227-8917
www.epa.gov/region08

May 25, 2021

Ref: 8ORA-N

Colonel Mark R. Himes
U.S. Army Corps of Engineers
Omaha District
CENWO-PMA-C; ATTN: Fort Peck draft EIS
1616 Capitol Avenue
Omaha, Nebraska 68102
Electronically transmitted

Dear Colonel Himes:

The U.S. Environmental Protection Agency Region 8 has reviewed the USACE's Draft Environmental Impact Statement (EIS) for the Fort Peck Dam Test Releases project (CEQ No. 20210037). The USACE Omaha District is preparing this project as part of its commitment to the 2018 U.S. Fish and Wildlife Service's (USFWS) Biological Opinion, under its Section 7(a)(2) consultation of the Endangered Species Act for the greater implementation of the Missouri River Recovery Management Plan (MRRMP) EIS and ROD. In accordance with our responsibilities under Section 102(2)(C) of the National Environmental Policy Act (NEPA) and pursuant to Section 309 of the Clean Air Act (CAA), the EPA provides the following comments on the Draft EIS.

The USFWS' 2018 Biological Opinion based its determination that the UASCE actions under the direction of the MRRMP were not likely to jeopardize the pallid sturgeon due in part to the development of this project. In our April 20, 2017 letter, the EPA supported the restoration efforts of the MRRMP. As such, our review of this project finds that its Preferred Alternative 1 to test designed water releases at Fort Peck Dam aligns with our continued support of the MRRMP and efforts to re-establish pallid sturgeon in the Missouri River system.

We appreciate the opportunity to participate in the review of this project and are committed to continue working with you as you prepare the Final EIS. If you have any questions or comments, please contact me at (303) 312-6704, or Matt Hubner of my staff at (303) 312-6500 or hubner.matt@epa.gov.

Sincerely,

for

Philip S. Strobel
Director, NEPA Branch
Office of the Regional Administrator

Sun River ELECTRIC COOPERATIVE INC.

To: United States Army Corp of Engineers
Omaha District CENWO-PMA-C
Atten: Fort Peck Draft EIS Comment
1616 Capital Avenue
Omaha, NE 68102-4901

From: Sun River Electric Cooperative
P.O Box 309
Fairfield, MT 59436

Re: Letter of Support

To Whom It Concerns:

Sun River Electric Cooperative is a member of the Central Montana Electric Power Cooperative, Inc. (CMEPC). As a member of CMEPC, the following is a letter of support for the comments submitted by CMEPC general manager Doug Hardy and by the Mid-West Electric Consumers Association (MWECA) general manager Jim Horan.

The Fort Peck test flow Draft Environmental Impact Statement (DEIS) deserves to have viewpoints reflective of many stakeholders. The comments that are offered by CMEPC and MWECA are considerations that may have not been on the radar from other affected party's perspectives but are important considerations from these two organizations viewpoint.

Thank you for allowing comment on this impact study. I offer this letter of support with the agreement of the Sun River Electric Cooperative board president, John Burgmaier, and from the Sun River Electric Cooperative CMEPC board representative, Russ Bloom.

Sincerely,

Brad L. Bauman
Sun River Electric Cooperative
General Manager/CEO

John Burgmaier
Sun River Electric Cooperative
President of Trustees

Russ Bloom
Sun River Electric Cooperative
Central Montana Representative

310 1st Avenue South • PO Box 309 • Fairfield, Montana 59436
Phone (406) 467-2526 • 1-800-452-7516 • Fax (406) 467-3108
WWW.SUNRIVEREC.COM

Fort Peck Test Release Draft EIC 2021 comments

Ronald Garwood
Nashua, MT

I would like to thank the US Corps of Engineers for a chance to comment on this EIS on the test releases for the pallid sturgeon in 2022 and following years. I missed the meeting where we could call in our comments as rain was predicted the next day. I found out about the second call in and I wasn't prepared for it as I didn't have a chance to get an EIS to read! I wanted to finish seeding wheat for 2021 that day and I missed the call in to voice my opinion on the test in in 2022! I wasn't able to find out from the Corps of Engineers on the general website that the COE had on my computer about the Missouri River. We really need an extension in the comment period to give those that want to a chance to comment on this subject! I do want to thank Dale Pugh and Patricia Gilbert Ball for printing me up a Pallid Sturgeon test volume so I could read it so I could comment on the 2021 test!

1. I am against the low and extremely high flows that will happen during the spawn and drift phase. My #1 pump is a stationary pipe that extends out into the Missouri river two miles upriver from the spillway at river mile 1765 on an outside bend, east of the river that is fairly shallow. I haven't started irrigating at the time of this writing because of intake pipe problems but the river is not high enough in elevation to irrigate at my pump site today, May 18.2021. I believe the COE is putting out about 9000 Cubic Feet per Second (CFS) today, but they are fluctuating the flows so I can't irrigate at low night river flows from the turbines! I found out later that the COE is dropping the flows at night and I cannot keep my pump from losing the prime 8 to 10 hours after the flow is reduced from the turbines. I cannot irrigate at 6000 CFS as the water level would be too low for my intake to work without losing my prime of water in the centrifugal pump I use, even with no fluctuation. Once I start irrigating, I keep on till I get through with my alfalfa crops for my livestock and wheat at least once over. My land is level with a .2 of a foot drop for every hundred foot of length and flood irrigated from an elevated ditch with siphon tubes that need to be moved to the next check after water gets to end of field. If the pump quits pumping during the night I have to reprime and start over in the same check to get to the end of the run. This causes lost energy and time and is frustrating! The water at this pump site comes only through the turbines and I don't get any water from the spillway releases. Unless there is an extremely high flow from the spillway at Fort Peck and it backs the water upriver like it did in the 2011 high water event! I need at least 8000 CFS and very little up and down river fluctuations, from peaking to irrigate. My survival for the farm depends on irrigation in dry years. In wet years we don't need to irrigate as much and should be part of the criteria for the COE to test or not!

My second pumpsite (Garwood family and David Anderson) is directly across the river from the Fort Peck spillway and any large flow from the spillway pushes trash, trees, foam and muck into the intake and it would be pretty deep under the top of the water surface, so it is impossible to clean the intake. There is usually erosion at this site when the spillway puts out a lot of water. Therefore, I recommend a No Action to this EIS.

2. I feel using the CFS readings from Wolf Point station is misleading to the public and everyone involved as it about 50 miles downriver from the Milk River and Fort Peck Spillway. This is very

misleading to everyone reading it, but we will not get much water in the area above the spillway! There should be a river CFS reading just below the Milk River at Frazer! The figure 3-52 map could be misleading and wrong as it shows inundation for the 9 miles above the spillway location, and directly below the tunnels. The chart shows water flowing at 20k CFS and 30k CFS. This has to be flows from the spillway. The tunnels can only put out 14,000 CFS so this much inundation is not possible!

3. Also on page v and v1 (Need for the Fort Peck Test Releases) It states the need to prioritize hypothesis testing related to flows out of Fort Peck Dam. This is confusing to most people who read this as the statement does not specify if the flows are coming through the tunnels for generating power or flowing through the spillway! There are other places in this document that has this same confusing statements so that the normal person reading doesn.t know where the water is coming from, only that it's from Fort Peck Dam. This should be clarified so that the press and everyone else that is reading can comment properly without confusion. This knowledge is very important for me and the other irrigated farmers that have pump sites on the river above the Fort Peck Spillway! Under this test we won't have enough water to irrigate during the Drift process for the pallid sturgeon larval flow. This would be during the hottest time of the year, July and August, when our alfalfa for livestock is critical. Therefore, I recommend no action for this Pallid sturgeon EIS test!

4. I am the groundskeeper at School Section Fishing Access Site (FAS) located at river mile 1764 which is one mile upriver of the Fort Peck Spillway. This is a favored spot for access to the Missouri River for fishing to get to the Milk River and spillway area. This FAS launch site is a Favored take-out spot for kayakers and canoers that float and fish from a put in spot from several sites below Fort Peck Dam. This FAS had to be closed during the 2011 High water event when the water backed up the river from the releases from the spillway. The toilet was inundated from the Missouri River water backing up from the spillway releases and the turn around might not be usable during high water from the test. If that happens the FAS might have to be closed for the public. The 1764 river mile marker is hiding the purple, on the 3-52 map, for the inundation of land, so this spot would probably be unusable. I am sure the public and most recreationalists can't or won't be able to comment against this controversial test because of limited knowledge and possible clerical mistakes in the EIS. No Action!

5. About 20 years ago we went through a similar scenario called the Spring Rise and when it was over, we thought all sides of this subject kind of came to an understanding that the Glendive Intake project would allow the Pallids to go around the Glendive intake dam and up the Yellowstone River to spawn. This project is almost finished and would have been completed and Pallid Sturgeon going up the Yellowstone River to spawn naturally. I believe the project was delayed by some environmental groups! This project is almost finished for the betterment of all fish species! We irrigators thought the Glendive fish ladder would stop the spring rise and not have to be bothered with future spillway tests. If the spillway needs to be spilled because of high water in the lake, so be it!

6. I believe the Milk River watershed through the Saint Mary siphons into the Milk River and flowing into the Missouri River just below the Fort Peck spillway, is very important for all fish species and has helped the fisheries very much. I also believe that Pallids will go up the Milk in years of big spring flows. The biologists have observed this! If the Saint Mary project could all be finished, the flow down the Milk River could almost be doubled and the long curvy Milk River could be very beneficial for the Pallds. This river could allow pallid larval time to float down this warm turbid water to deposit into the Missouri River if the Saint Mary system was at full flow. It seems that the EPA has a lot of money in its budget so

the Milk River projects could go forward for the benefit of all fish species. There has been talk of a fish ladder at Vandalia Dam which would increase the amount of river miles for all fish species!

7. Also I believe if we have global climate change, we will have warmer weather and the result will be lower runoff from the mountains so that Fort Peck Lake will be lower and will have warmer water coming down through the tunnels to help the fisheries and save a lot of money from lost generation income. Valley County and Montana can't afford to lose lost lake recreation and generation!

8. This huge EIS should have come out in the winter months as we as irrigated farmers are crazy busy seeding our crops, ditching, spraying our crops and irrigating to save these crops as we are in a drought! I believe this deadline on this EIS should be delayed so that we farmers and other people can comment that haven't been able too!

Sincerely Ronald Garwood

Valley County Conservation District, Supervisor

Region 6 FWP's Citizen Advisory Council (CAC) member

RCVD 27may2021

May 23, 2021

U. S. Army Corps of Engineers, Omaha District
CENWO-PMA-C
ATTN: Fort Peck Dam draft EIS comments
1616 Capitol Avenue
Omaha, NE 68102-4901

I am Adam Huseby of Huseby Farms, Inc. We provide employment for four households plus temporary help on a yearly basis.

We own irrigated land on the Missouri River below the Fort Peck Dam.

The proposed drift flows of 35,000 cfs will flood our pump site and prevent irrigation. It will increase land erosion a hundred fold than normal making it impossible to maintain irrigation structures and losing valuable land. Our irrigation windows are days, not weeks or months. Your proposed drift flow will make irrigation impossible for the entire year forcing us to lose valuable crops that the entire operation depends on. Making it difficult to continue employing the above mentioned families.

We ask that you consider a much lower drift flow on the high end.

Without knowing what the overall destruction of the high drift flows we are unable to anticipate and redesign our infrastructure to meet possible problems.

Respectfully,
Huseby Farms, Inc.

Adam Huseby

Fort Peck Test Release Draft Environmental Impact Statement

Scoping Comment Analysis

Draft

April 2019

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Table of Contents

Acronyms

AM	adaptive management
AM Plan	Science and Adaptive Management Plan
BA	biological assessment
BiOp	Biological Opinion
BSNP	Missouri River Bank Stabilization and Navigation Project
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
cfs	cubic feet per second
EIS	environmental impact statement
ESA	Endangered Species Act
ESH	emergent sandbar habitat
FR	Federal Register
FPTR-EIS	Fort Peck Test Release Environmental Impact Statement
HEC-RAS	Hydrologic Engineering Center – River Analysis System
HEC-ResSim	Hydrologic Engineering Center – Reservoir Simulation
ISAP	Independent Science Advisory Panel
kcfs	thousands of cubic feet per second
Master Manual	Missouri River Basin Mainstem Reservoir System Master Water Control Manual
MRRIC	Missouri River Recovery Implementation Committee
MRRMP-EIS	Missouri River Recovery Management Plan and Environmental Impact Statement
MRRP	Missouri River Recovery Program
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1966
NOI	Notice of Intent
P.L.	Public Law
POR	period of record
ResSim	Reservoir System Simulation
SHPO	State Historic Preservation Officer
SWH	shallow water habitat
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USFWS	U.S. Fish and Wildlife Service
WAPA	Western Area Power Administration
WRDA	Water Resources Development Act

Introduction and Guide

Introduction

A Notice of Intent (NOI) to prepare the Fort Peck Test Release Environmental Impact Statement (FPTR-EIS) was published in the *Federal Register* on February 8, 2019. The NOI provided background information and announced the timing and location of public scoping meetings in Fort Peck, Montana and Williston, North Dakota. Members of the public also received notice through a news release published by the USACE public affairs office prior to the publication of the NOI in the *Federal Register*.

The NOI began a scoping period that extended from February 8, 2019 until March 11, 2019 although the scoping period was ultimately extended March 26, 2019 in response to stakeholder requests for an extended scoping period. During the comment period, two public meetings, which contained a formal hearing portion, were held in February 2019. These meetings provided the public an opportunity to ask questions, make comments, and encourage public involvement and community feedback on the draft FPTR-EIS. The public meetings were held during the scoping comment period as follows:

- February 19, 2019: Fort Peck Interpretive Center, Fort Peck Montana
- February 20, 2019: Williams County Administrative Building, Williston, North Dakota

The public was encouraged to submit comments during the meetings via comment forms provided by the USACE, online at CENWO-Planning@usace.army.mil, or by mailing letters and/or comment forms to the USACE Omaha District, 1616 Capitol Avenue, Omaha, Nebraska 68102. A total of 42 people signed in at the two public meetings.

During the comment period, 45 pieces of correspondence were received. Each piece of correspondence was read, and specific comments within each piece of correspondence were identified. A total of 206 comments were derived from the correspondences received. No new alternatives were identified through scoping although modifications to the proposed alternatives were identified.

The Comment Analysis Process

Comment analysis is a process used to compile and correlate similar public comments into a format that can be used by decision makers and the draft FPTR-EIS planning team. Comment analysis assists the team in organizing, clarifying, and addressing technical information pursuant to National Environmental Policy Act (NEPA) regulations. It also aids in identifying the topics and issues to be evaluated and considered throughout the planning process.

The process includes seven main components:

- Developing a coding structure
- Reading and coding of public comments
- Interpreting and analyzing the comments to identify issues and themes
- Drafting concern statements
- Preparing a comment summary

A coding structure was developed to help sort comments into logical groups by topics and issues. The coding structure was derived from an analysis of the range of topics discussed during public scoping, and the comments themselves. The coding structure was designed to capture all comment content rather than to restrict or exclude any ideas.

Analysis of the public comments involved assigning codes to statements made by the public in their correspondences. All comments were read and analyzed, including those of a technical nature; opinions, feelings, and preferences of one element or one potential alternative over another; and comments of a personal or philosophical nature.

Although the analysis process attempts to capture the full range of public concerns, this content analysis report should be used with caution. Comments from people who chose to respond do not necessarily represent the sentiments of the entire public. Furthermore, this was not a vote-counting process, and the emphasis was on the content of the comment rather than the number of times a comment was received.

Definition of Terms

Primary terms used in this document are defined below.

Correspondence — A correspondence is the entire document received from a commenter.

Comment — A comment is a portion of the text within a correspondence that addresses a single subject. It could include such information as an expression of support or opposition to the use of a potential management measure, additional data regarding the existing condition, or an opinion debating the adequacy of analysis.

Code — A code is a grouping based on a common subject. The codes were developed during the scoping process and are used to track major subjects throughout the planning process.

Concern Statement — A concern statement summarizes the issues identified in each code. For each code, concern statements were developed to better categorize the content of the comments received. Some codes required multiple concern statements because the comments within them represented different ideas. Other codes had only one concern statement because the comments within them presented similar ideas.

Guide to this Document

This document is organized as follows.

Content Analysis Report — This section provides information on the numbers and types of comments received, organized by topic area.

Concern Response Report — This section summarizes the substantive comments received during the public review comment process. These comments are organized by topic area and further consolidated into concern statements. The USACE provides a response for each concern statement.

Appendix 1: Index by Organization — This is an index of organizations that provided comments during the comment period. The index includes a list of the topic areas associated

with each organization and the codes that were used to categorize comments within the correspondence.

Appendix 2: All Correspondence — This appendix contains copies of all correspondence received during the scoping period.

Content Analysis Report

Correspondence Distribution by Code – Substantive Comments

Note: Each correspondence has multiple comments and multiple codes. As a result, the total number of correspondence in this table is higher than the actual correspondence totals.

Description	Total Number of Comments
Alternatives	12
Irrigation and Agriculture	73
Fish and Wildlife	7
Flood Risk Management	10
Hydropower	18
Water Supply	10
Outreach	19
NEPA Process	8
Pallid Sturgeon Science and Effects	43
Recreation	3
Water Quality	3
Total	**206**

Concern Response Report

ALTERNATIVES

Concern Statement: The USACE should consider establishing fish bypasses around all of their dams which would aid fish populations a great deal.

Correspondence Id: 5

Response: Fish bypass structures at Fort Peck Dam and/or Lake Sakakawea would not likely help pallid sturgeon because the large, deep, cold reservoirs located upstream of the dams are not considered to be pallid sturgeon habitat. A fish bypass structure is currently being constructed at Intake, Montana which is designed to improve passage of pallid sturgeon on the Yellowstone River.

Concern Statement: The USACE should design the experiment to minimize the amount and cost of spill so that power can be generated with that water at a later date.

Correspondence Id: 6

Response: The flow experiment alternatives have been modified from the alternatives shown during the scoping period. The alternatives in the Draft EIS hold flows at least at 8,000 cfs until August 31 during the low flow drifting flow regime at Wolf Point vs. the conceptual hydrograph shown during scoping which lowered flows to 4,200 cfs. Additionally the rate of decrease on the descending limb of the attraction part of the flow regime was reduced to 1,300 cfs per day versus 3,000 cfs per day in the conceptual hydrographs shown during scoping. Given the existing uncertainty about what magnitude of flow would be needed to benefit pallid sturgeon, the USACE believes the current alternatives have been designed to minimize impacts while still using the best available science regarding the magnitude and timing of flows that might benefit pallid sturgeon.

Concern Statement: The USACE should be opportunistic regarding implementation and take advantage of natural high-flow events before keeping the elevation of Fort Peck Lake artificially high and spilling water for theories about pallid sturgeon.

Correspondence Id: 7, 15, 14

Response: In the January 19, 2018 amendment to the October 30, 2017 Biological Assessment (BA) for the Operation of the Missouri River Mainstem Reservoir System, the Operation and Maintenance of the Bank Stabilization and Navigation Project (BSNP), the Operation of the Kansas River Reservoir System, and the implementation of the Missouri River Recovery Management Plan (MRRMP) the U.S. Army Corps of Engineers (USACE) proposed to work with the USFWS and the Missouri River Recovery Implementation Committee to “review previous information and information generated since the Effects Analysis formulate test flow releases from Fort Peck Dam and an adaptive management (AM) framework for their implementation. This commitment was relied on by the USFWS in its 2018 Biological Opinion (BiOp) finding that the USACEs proposed action is “not likely to jeopardize” pallid sturgeon. A finding of no jeopardy means that the proposed action is in compliance with the Endangered Species Act and can continue to operate the Missouri River Reservoir System for its authorized purposes.

Concern Statement: The USACE should examine if the desired outcome for pallid sturgeon can be achieved by using less water than 30,000 cfs out of Fort Peck Dam.

Correspondence Id: 7

Response: The USACE approach is consistent with the suggestion. Alternative 2 would cap peak flows at 28,000 cfs during the spawning cue flow regime. The analysis in the Draft EIS will be used to help inform if this magnitude is sufficient to achieve the objectives and the extent to which it impacts other resources and authorized purposes.

Concern Statement: The USACE should re-examine if temperature curtains would help introduce warmer surface water into the river.

Correspondence Id: 9

Response: The objectives of this effort are to examine if changes in flow regime can attract, retain, cue spawning, and give enough drift distance to benefit pallid sturgeon. A warmer temperature regime could be an incidental benefit of flows released in late spring or early summer. The USACE examined the use of curtains during the Fort Peck Temperature Study in 2012 and determined that the curtains were an unacceptable dam safety risk.

Concern Statement: The USACE should indicate what years and how often the test flows would be implemented at Fort Peck and the duration of the flows during test years.

Correspondence Id: 11, 14

Response: The hydrology and hydraulics modeling includes conditions under which a test flow can occur. The modeling results will show, over the 82-year period of record, how many times each alternative can run given the constraints. This modeling exercise is useful for determining the range of impacts that could occur in years when test flows are implemented. The amount of times a test flow would run during implementation would depend upon what is learned during each test event. The USACE anticipates running the test flow up to 5 times during a 15 year period, but less may be needed if learning objectives are met with less test flows.

Concern Statement: It should be clearly defined as to when the Fort Peck test would occur in relation to Yellowstone Runoff.

Correspondence Id: 12, 14, 18

Response: The USACE recognizes that fish passage at Intake Dam on the Yellowstone River is imminent, and that management actions at Fort Peck Dam should complement, but not detract from, potential for successful recruitment from passage at Intake Dam. With this in mind, the hydrograph for Alternative 1, in a departure from the natural flow regime, calls for the attractant pulse to be moved later in the month of April when it is hypothesized to compete less with flows coming out of the Yellowstone River.

Concern Statement: The State of North Dakota is opposed to any intentional drawdown of Lake Sakakawea including for the purpose of lengthening drift distance for pallid sturgeon in the Missouri River.

Correspondence Id: 19

Response: Intentional drawdown of Lake Sakakawea is not being examined under the alternatives.

Concern Statement: The State of North Dakota has concerns regarding the potential low flow portion of the hydrograph to cause impacts to irrigation and request the USACE review alternatives that increase low flows.

Correspondence Id: 19

The alternatives in the Draft EIS hold flows at least at 8,000 cfs until August 31 during the low flow drifting flow regime at Wolf Point vs. the conceptual hydrograph shown during scoping which lowered flows to 4,200 cfs.

Concern Statement: Test releases should be made to achieve target flows at Wolf Point and Culbertson and should be quantified, not double winter flows. .

Correspondence Id: 14

The alternatives in the Draft EIS use targets at Wolf Point. The Alternative 1 peak would be double the maximum spring flow and the Alternative 2 peak would be 28,000 cfs.

Concern Statement: No test flows should be done in dry years or when there is below normal snowpack in the mountains in the Missouri River Basin.

Correspondence Id: **43**

The alternatives in the Draft EIS hold flows at least at 8,000 cfs until August 31 during the low flow drifting flow regime at Wolf Point vs. the conceptual hydrograph shown during scoping which lowered flows to 4,200 cfs. Annual decisions on whether to run the test flow or not will take into account snowpack and runoff forecasts.

FISH AND WILDLIFE

Concern Statement: If there is not enough flowing water other fish in the river will be in peril including paddlefish. Birds and other animals will move elsewhere if water flow is too low.

Correspondence Id: 9, 39

Response: The alternatives in the Draft EIS hold flows at least at 8,000 cfs until August 31 during the low flow drifting flow regime at Wolf Point vs. the conceptual hydrograph shown during scoping which lowered flows to 4,200 cfs. The flow experiment alternatives have been modified from the alternatives shown during the scoping period. The Fort Peck flow regimes in the Draft EIS alternatives utilize an in-river flow at Wolf Point vs. the conceptual hydrographs that based the flow regimes on releases from Fort Peck. The alternatives in the Draft EIS hold an in-river flow at Wolf Point of 8,000 cfs with a minimum Fort Peck release of 6,400 cfs until August 31 during the low flow drifting flow regime vs. the conceptual hydrograph A shown during scoping which lowered Fort Peck releases to 4,200 cfs.

Concern Statement: Fluctuating flows could impact survival of least tern and piping plover chicks.

Correspondence Id: 9

Response: The environmental impacts analysis will include modeling results for the least tern and piping plover. The bird model will predict tern and plover productivity and population under each flow scenario.

Concern Statement: Back bays, tributaries, and other potentially impacted water sources should be inventoried and monitored throughout the flow testing regime to protect habitat for other species that occur in the river system.

Correspondence Id: 17

Response: The low flows of 8,000 cfs are typical for summer flows in the reach below Fort Peck Dam and would not adversely affect connectivity of tributaries, side channels, back bays etc. The USACE anticipates a benefit in the form of increased connectivity of these types of habitats to the main river channel by introducing a flow regime that that more closely matches a natural regime and allows for more connection of these types of habitats than is experienced in a "normal" water year.

Concern Statement: The quality of fishing and related recreation will be reduced because of the low flow of water.

Correspondence Id: 39

Response: The low flows of 8,000 cfs are typical for summer flows in the reach below Fort Peck Dam and would not adversely affect recreational fishing activities beyond what is already experienced under the No Action Alternative.

Concern Statement: It is essential that actions at Fort Peck be complimentary and additive to those on the Yellowstone River and that for effective and expedient recovery of pallid sturgeon as well as conservation of other native species of concern (i.e. blue suckers, sturgeon chub, sicklefin chub, sauger).

Correspondence Id: 40

Response: **Response**: Flow magnitude constraints are measured at the Wolf Point gage in the hydrology and hydraulics modeling which is downstream of the Yellowstone/Missouri River confluence. Measuring at the Wolf Point gage rather than at Fort Peck Dam takes into account runoff from the Yellowstone River. The USACE anticipates a benefit to native fish by introducing a flow regime that more closely matches a natural regime and allows for more connection of backwater and side-channel habitats than is experienced in a "normal" water year.

FLOOD RISK MANAGEMENT

Concern Statement: There is concern about the precedent a test release from Fort Peck Dam could set for the future through potential efforts to replicate it from other mainstem dams.

Correspondence Id: 7, 11

Response: The test releases from Fort Peck Dam are testing different pallid sturgeon hypotheses than would be tested below Gavins Point Dam. Flow releases for pallid sturgeon from Gavins Point Dam are being addressed through the ongoing Missouri River Science and Adaptive Management process which MRRIC is heavily involved in.

Concern Statement: If a Fort Peck test release is to be implemented, it is imperative that all interested parties be assured of its parameters and those of future experiments.

Correspondence Id: 7

Response: The Draft EIS will include a full description of the test releases including criteria under which it would be implemented. The Draft EIS will also include a description of the process that would be used to inform the public about test releases in years where a release is planned.

Concern Statement: The USACE must not abandon its primary flood control and navigation missions in this process. It is essential that appropriate downstream flood control targets be established based on input received from stakeholders. It is imperative that the Corps does not impact downstream flow support or flood control below Gavins Point Dam.

Correspondence Id: 7, 11, 15

Response: The Draft EIS will include an analysis of impacts to flood risk reduction. It is not anticipated that flows below Gavins Point would be affected by the test release alternatives.

Concern Statement: The USACE should be clear in communicating any risks associated with the spillway resulting from the test flows. Activating the spillway more frequently than designed could cause erosion of the concrete wall underneath leading to serious dam safety problems. If a test release is implemented the USACE should inspect Fort Peck Dam spillway for any compromising damage and make necessary repairs before the following runoff season.

Correspondence Id: 7, 11

Response: The Draft EIS will include an analysis of potential impacts to dam safety from implementing a test release including steps that would be taken if dam safety issues are detected.

GENERAL NEPA COMMENTS

Concern Statement: NEPA coverage should be for the test flow only and not for full implementation.

Correspondence Id: 14

Response: The hydrology and hydraulics modeling includes conditions under which a test flow can occur. The modeling results will show, over the 82-year period of record, how many times each alternative can run given the constraints. This modeling exercise is useful for determining the range of impacts that could occur in years when test flows are implemented. The amount of times a test flow would run during implementation would depend upon what is learned during each test event. The USACE anticipates running the test flow up to 5 times during a 15 year period, but less may be needed if learning objectives are met with less test flows. .

Concern Statement: More study time on the impacts to the irrigators and the fish are needed.

Correspondence Id: 13

Response: The USACE believes that enough time has been allocated to conduct a thorough analysis of irrigation impacts and potential fish benefits. Irrigation pump survey information has been updated, for instance, and the test flow alternatives used the best available science.

Concern Statement: The same method and rigor should apply to human considerations affected by a test release and USACE should clearly identify potential impacts and what level of impact is tolerable. Before the release is implemented the USACE should be able to communicate to stakeholders that they understand and have measured all impacts.

Correspondence Id: 7

Response: Chapter 3 of the Draft EIS contains a detailed analysis of potential impacts to human considerations in addition to an analysis of the potential benefits to pallid sturgeon.

Concern Statement: USACE should subject the data, science, and methods and the test flows to independent review by the MRRIC ISAP.

Correspondence Id: 7, 11, 30, 34

Response: The MRRIC ISAP has provided a review of the Fort Peck Adaptive Management Framework which is the Adaptive Management framework the test releases would be implemented within. The MRRIC ISAP will also provide a review of the Draft EIS and all supporting materials.

Concern Statement: USACE should indicate if the proposed experimental flows would require changes to the Master Manual and specify the authorization within the Master Manual that allows for this sort of modification of flows. .

Correspondence Id: **6,** 7, 11

Response: The MRRIC ISAP has provided a review of the Fort Peck Adaptive Management Framework which is the Adaptive Management framework the test releases would be implemented within. The MRRIC ISAP will also provide a review of the Draft EIS and all supporting materials.

HYDROPOWER

Concern Statement: The flow experiment should not in any way degrade the delivery of power to customers or the quality of the service per reliability standards. The USACE should allow for adequate increases or decreases in power generation for balancing purposes, while maintaining an average kcfs through the appropriate period.

Correspondence Id: 6, 14, 16, 43

Response: A detailed description of the potential impacts to Hydropower including potential impacts to the delivery and reliability of power are provided in Chapter 3 of the Draft EIS.

Concern Statement: Examine how the flow experiment would impact energy production and value due to water passing over the spillway. Examine any transmission impacts that would result from lost generation.

Correspondence Id: **6,** 7, 11, 30, 34

Response: A detailed description of the potential impacts to Hydropower including potential impacts to potential lost generation and impacts to transmission are provided in Chapter 3 of the Draft EIS.

Concern Statement: The proposed flows would likely cause a change in the seasonal and hourly energy output thus impacting the value of the energy output. Low flows will impact generation capacity reliability and value and stability of the transmission grid.

Correspondence Id: 7, 11, 30, 34

Response: A detailed description of the potential impacts to Hydropower including potential impacts to generation capacity, reliability, value, and stability of the transmission grid are provided in Chapter 3 of the Draft EIS.

Concern Statement: The USACE should examine how the test flows will affect the ability of Fort Peck to shift between the Eastern and Western interconnections, especially during periods of low flows.

Correspondence Id: 6 **Comment Id**:

Response: A detailed description of the potential impacts to Hydropower including potential impacts of low flows are provided in Chapter 3 of the Draft EIS.

IRRIGATION AND AGRICULTURE

Concern Statement: An updated economic analysis should be completed with accurate acres of irrigated farm land and associated economic value. The analysis should be conducted to ensure that flow rates will not have an impact on growing crops during critical times of the year.

Correspondence Id: 16, 17, 32

Response: An updated economic analysis including acres of irrigated land and crop types are included in Chapter 3 of the Draft EIS. Sources of information and methods used for the analysis are also described in Chapter 3.

Concern Statement: Crops rely on Missouri River flows from May through September. If the flow drops below 7-8 kcfs then irrigation pumps will be short of reaching water which results in a drop in production and monetary loss.

Correspondence Id: 16, 17, 32

Response: The alternatives in the Draft EIS hold flows at least at 8,000 cfs until August 31 during the low flow drifting flow regime at Wolf Point vs. the conceptual hydrograph shown during scoping which lowered flows to 4,200 cfs. Sources of information and methods used for the analysis are also described in Chapter 3.

Concern Statement: Irrigation pumps can lose prime when large boats traveling at high speeds make wakes that hit irrigation intakes.

Correspondence Id: **9,** 43

Response: Boating laws and regulations on the Missouri River are not within the purview of the USACE. It is not anticipated that the proposed flow test would exacerbate this issue beyond what is experienced under the No Action Alternative.

Concern Statement: Irrigation pumps can lose prime when large boats traveling at high speeds make wakes that hit irrigation intakes.

Correspondence Id: **9,** 43

Response: It is not anticipated that the proposed flow test would exacerbate this issue beyond what is experienced under the No Action Alternative.

Concern Statement: The pump site inventory is nearly 20 years old on the reach of river below Fort Peck Dam and should be updated to accurately determine impacts.

Correspondence Id: **13, 14, 16, 31, 32, 33, 38, 43**

Response: The USACE worked with stakeholders to update pump site information leading up to release of the Draft EIS. The analysis and data relied on are described in Chapter 3 of the Draft EIS.

Concern Statement: The proposed lowering of the river during peak irrigation season will affect the electrical power supplies needed to operate pumps. Connections from the transformers to the pump will need to be extended and resized. Livestock could be affected by the lower flows, some ranchers would need to haul water which would incur higher expenses.

Correspondence Id: **13, 39**

Response: The USACE worked with stakeholders to update pump site information leading up to release of the Draft EIS. The analysis and data relied on are described in Chapter 3 of the Draft EIS. The alternatives in the Draft EIS hold flows at least at 8,000 cfs until August 31 during the low flow drifting flow regime at Wolf Point vs. the conceptual hydrograph shown during scoping which lowered flows to 4,200 cfs

Concern Statement: High flows cause erosion and sedimentation which causes irrigators to incur high dredging and clean out costs for pump sites. Consider an upper limit of 28,000 cfs at the Culbertson gauge.

Correspondence Id: **14, 16, 41, 42, 14, 17, 3, 31, 43, 45, 1, 2, 44**

Response: The USACE worked with stakeholders to update pump site information leading up to release of the Draft EIS. The analysis and data relied on are described in Chapter 3 of the

Draft EIS. The alternatives in the Draft EIS hold flows at least at 8,000 cfs until August 31 during the low flow drifting flow regime at Wolf Point vs. the conceptual hydrograph shown during scoping which lowered flows to 4,200 cfs

OUTREACH

Concern Statement: If a test flow is implemented, stakeholders need to know in advance so they can service intakes to protect them. Robust stakeholder engagement and transparent decision making are imperative in the formulation and successful completion of an EIS and implementation. Actively engage stakeholders because there are no current MRRIC stakeholders on this reach of the Missouri River. .

Correspondence Id: **1, 2, 9, 15, 17, 30, 34, 35**

Response: The USACE has worked directly with irrigation districts and other upper basin stakeholders during preparation of the Draft EIS. A notification and outreach strategy that would be followed during implementation is outlined in Chapter 2 of the Draft EIS.

Concern Statement: The scoping period was too short, additional scoping meetings are needed, and advertising for the meetings was not sufficient.

Correspondence Id: **3, 17, 19, 30, 32, 34, 36, 37**

Response: The scoping period and public meetings were announced through a Federal Register notice, a press release from the Omaha District public affairs office, email notification to the MRRIC email list-serve, and direct postings in several local newspapers. The scoping period was ultimately extended two weeks past the original end date. The two in-person scoping meetings held in Fort Peck and Williston were well attended and the USACE heard very similar comments at both meetings. Through scoping feedback the USACE learned that another effective tool for advertising future public meetings would be to work with the irrigation and conservation districts directly to announce meetings and potentially develop an email list serve in cooperation with the districts.

PALLID STURGEON SCIENCE and EFFECTS

Concern Statement: The USACE should study other factors such as temperature, habitat quality, and turbidity in addition to running the test flows.

Correspondence Id: **3, 17, 19, 30, 32, 34, 36, 37**

Response: The scoping period and public meetings were announced through a Federal Register notice, a press release from the Omaha District public affairs office, email notification to the MRRIC email list-serve, and direct postings in several local newspapers. The scoping period was ultimately extended two weeks past the original end date. The two in-person scoping meetings held in Fort Peck and Williston were well attended and the USACE heard very similar comments at both meetings. Through scoping feedback the USACE learned that another effective tool for advertising future public meetings would be to work with the irrigation and conservation districts directly to announce meetings and potentially develop an email list serve in cooperation with the districts.

Concern Statement: The USACE should study other factors affecting pallid sturgeon such as temperature, habitat quality, and turbidity.

Correspondence Id: **3, 17, 18, 19, 30, 32, 34, 36, 37**

Response: The Fort Peck Adaptive Management Framework (AM Framework) includes hypotheses related to factors other than flow such as temperature, turbidity, and habitat. These hypotheses will be prioritized and addressed following the process described in the AM Framework.

Concern Statement: The USACE should identify clear objectives and what results would constitute success or failure of the test flow.

Correspondence Id: **7, 18, 40, 46**

Response: Objectives have been developed and are provided in Chapter 2 of the Draft EIS. Objectives are also discussed in Section 3.4 (Pallid Sturgeon).

Concern Statement: The test flow is not needed because other factors such as high flow events in 2011, the Yellowstone Intake Bypass project, and stocking are sufficient to improve conditions for pallid sturgeon.

Correspondence Id: **9, 40, 43, 44**

Response: The January 19, 2018 amendment to the October 30, 2017 Biological Assessment (BA) for the Operation of the Missouri River Mainstem Reservoir System, the Operation and Maintenance of the Bank Stabilization and Navigation Project (BSNP), the Operation of the Kansas River Reservoir System, and the implementation of the Missouri River Recovery Management Plan (MRRMP) the U.S. Army Corps of Engineers (USACE) proposed to work with the USFWS and the Missouri River Recovery Implementation Committee to "review previous information and information generated since the Effects Analysis formulate test flow releases from Fort Peck Dam and an adaptive management (AM) framework for their implementation. This commitment was relied on by the USFWS in its 2018 Biological Opinion (BiOp) finding that the USACEs proposed action is "not likely to jeopardize" pallid sturgeon. A finding of no jeopardy means that the proposed action is in compliance with the Endangered Species Act and can continue to operate the Missouri River Reservoir System for its authorized purposes. This commitment is part of the USACE's compliance with the ESA regardless of other factors that may have benefitted the pallid sturgeon.

Concern Statement: The USACE must determine if a 30,000 cfs flow from Fort Peck dam is necessary to attain successful results for pallid sturgeon.

Correspondence Id: **11**

Response: The analysis in the Draft EIS will be used to determine what the most effective flow might be for pallid sturgeon. Currently, the peak under Alternative 1 would be 3.5 times the spring flow from Fort Peck Dam which is approximately 28,000 cfs, but could be higher or lower in some years depending on actual spring flows. Alternative 2 caps the flow at 28,000 cfs.

Concern Statement: The USACE should examine designing a hydrograph without the dramatic increase or decrease in Fort Peck Flows to mimic a more natural flow with a slower rise and fall.

Correspondence Id: **11**

Response: The alternatives are designed to have a gradual increase and decrease. The alternatives decrease flows by 1,000 cfs per day for 12 days then decrease by no more than 3,000 cfs per day until the desired flow levels are reached. The rate of increase would be 1,700 cfs per day.

Concern Statement: The USACE should update and generate new information related to pallid sturgeon including: the estimate of wild pallid sturgeon in the Upper Missouri River, the value of genetics in the remaining wild pallids to the overall recovery program, water quality implications for pallid sturgeon, if pallids frequent the same spawning site types in the Missouri and Yellowstone Rivers, if site fidelity exists in pallids, what is the substrate in known pallids sites, and if the substrate can be replicated in other areas of the upper basin or the lower basin.

Correspondence Id: **12**

Response: These suggestions are already being examined, or have already been examined, under the pallid sturgeon science program rather than alternatives or efforts that would be undertaken as part of the alternatives under examination in this EIS.

Concern Statement: The USACE should update and generate new information related to pallid sturgeon including: the estimate of wild pallid sturgeon in the Upper Missouri River, the value of genetics in the remaining wild pallids to the overall recovery program, if pallids frequent the same spawning site types in the Missouri and Yellowstone Rivers, if site fidelity exists in pallids, what is the substrate in known pallids sites, and if the substrate can be replicated in other areas of the upper basin or the lower basin.

Correspondence Id: **12**

Response: These suggestions are already being examined, or have already been examined, under the pallid sturgeon science program rather than alternatives or efforts that would be undertaken as part of the alternatives under examination in this EIS.

Concern Statement: Request that the USACE use a gauging station further downstream (i.e. Wolf Point) so modeling can better illustrate projections for source contributions. .

Correspondence Id: **18**

Response: Flow magnitude constraints are measured at the Wolf Point gage in the hydrology and hydraulics modeling which is downstream of the Milk River confluence. Measuring at the Wolf Point gage rather than at Fort Peck Dam takes into account runoff from the Milk River.
.

Concern Statement: Low flows of approximately 4,000 cfs are too low and could concentrate drifting pallids in the thalweg which might speed the drift of pallid larvae and/or not allow them to exit the thalweg into channel margin habitats. Very low flows also could disconnect the main channel from off channel habitat, which may be an important factor for supporting pallids.

Correspondence Id: **16, 18, 40**

Response: The alternatives in the Draft EIS hold flows at least at 8,000 cfs until August 31 during the low flow drifting flow regime at Wolf Point vs. the conceptual hydrograph shown during scoping which lowered flows to 4,200 cfs
.

Concern Statement: Criteria for when flows would be implemented should be clearly defined, but not be used to delay action at Fort Peck. .

Correspondence Id: **18, 46**

Response: Criteria for when a test flow would be implemented are well defined under each of the alternatives. The intent of the criteria is meet pallid sturgeon objectives while avoiding or minimizing unnecessary impacts to flood risk management, irrigation, and other concerns.

Concern Statement: Having the potential and flexibility to improve pallid sturgeon status via actions on both the Yellowstone and Missouri Rivers should be an underpinning of the adaptive management framework

Correspondence Id: **46**

Response: Noted. Actions are either ongoing or planned on both the Missouri and Yellowstone Rivers. .

Concern Statement: It is important that the hydrograph have sufficient “signal to noise” ratio so that the hypotheses related to flow modification can be adequately tested

Correspondence Id: **46**

Response: Noted. Alternatives 1 and 2 and their variations are hypothesized to be different enough from normal operations to detect attributable changes in the system.

Concern Statement: The USACE is encouraged to consider a range of flows to test during the drift phase of the hydrograph because rates which facilitate the slowest drift of pallid sturgeon free embryos remains an unknown.

Correspondence Id: **46**

Response: Alternatives 1 and 2 both have variations that would allow flexibility during implementation no matter which Alternative is ultimately selected.

RECREATION

Concern Statement: The USACE should examine recreation impacts from the flows including impacts to visitor days, boat ramps, recreational access on Fort Peck Reservoir, and what flows would do to forage and game fish production and habitats in Fort Peck Reservoir, Lake Sakakawea, and the Missouri River below Fort Peck Dam.

Correspondence Id: **9, 12**

Response: The recreation section in Chapter 3 of the Draft EIS provides a detailed analysis of potential recreation impacts from the alternatives including impacts to visitor days, boat ramp access, and recreational fishing.

Concern Statement: The impact to recreation in the dredge cuts area and river miles between the power houses and spillway should be identified.

Correspondence Id: **14**

Response: The recreation section in Chapter 3 of the Draft EIS provides a detailed analysis of potential recreation impacts from the alternatives including potential impacts to the cold water fishery below Fort Peck Dam.

WATER QUALITY

Concern Statement: Pollution enters the river from low-land flooding that occurs in high flow conditions.

Correspondence Id: **14**

Response: The recreation section in Chapter 3 of the Draft EIS provides a detailed analysis of potential recreation impacts from the alternatives including potential impacts to the cold water fishery below Fort Peck Dam.

Concern Statement: Water quality should be modeled downstream of a test flow release and should include turbidity, pH, hardness, alkalinity, common contaminants and temperature.

Correspondence Id: **7**

Response: Temperature was modeled as part of the impacts analysis because it is likely the parameter that would be most affected by the test flows. Modeling results are presented in Chapter 3 of the Draft EIS. Based on the magnitude and duration of flows it is not anticipated that the test flows would cause more than a negligible impact in terms of turbidity, pH, hardness, alkalinity, and common contaminants although these parameters are also discussed in Chapter 3.

WATER SUPPLY

Concern Statement: Artificial flows will increase river stage and bed load and suspended sediment in the Missouri River and will impact the ASRWSS intake immediately below the bridge on Montana Hwy 13. Impacts to the ASRWSS intake should be evaluated in the evaluation of municipal and commercial intakes. The cost of artificially induced sediment removal at the ASRWSS intake should be assessed in the EIS also.

Correspondence Id: **2**

Response: The Water Supply section in Chapter 3 of the Draft EIS presents a detailed analysis of potential impacts to water supply intakes from the alternatives including the ASRWSS intake.

Concern Statement: There is concern about impacts flow changes could have on the Fort Peck Irrigation Project intakes on the Reservation at Wiota and Frazer and the ASRWSS intake near the town of Wolf Point. The Tribes are concerned about adverse intakes to water intakes and water rights. The Corps should assess risks and impacts to these resources

Correspondence Id: **8**

Response: The Water Supply section in Chapter 3 of the Draft EIS presents a detailed analysis of potential impacts to water supply intakes from the alternatives including Tribal water intakes.

Concern Statement: The Dry Prairie Regional Water System has an intake southeast of Wolf Point. Potential impacts related to increased sediment and reduced flows must be evaluated to ensure health and safety of citizens that use this system.

Correspondence Id: **17**

Response: The Water Supply section in Chapter 3 of the Draft EIS presents a detailed analysis of potential impacts to water supply intakes from the alternatives including the Dry Prairie Regional Water System Intake.

Appendix 1: Index by Organization

This index is listed alphabetically by organizations that provided comments during the public comment period. Under each organization is a list of the correspondence numbers (shown in blue) associated with the organization, followed by the categories that were used to organize comments within the correspondence.

Anderson
1, Irrigation and Agriculture, Outreach

ASRWSS
2, Irrigation and Agriculture, Outreach, Pallid Sturgeon Science and Effects, Water Supply, Flood Risk Management

Berwick
3, Irrigation, Outreach

Brass
28 Irrigation

Candee
4, Irrigation

Carlisle
5, Alternatives, Irrigation

CMEPC and MWECA
6, Alternatives, Hydropower, NEPA Process

CPMR
7, Alternatives, Flood Risk Management, NEPA Process, Irrigation, Pallid Sturgeon Science and Effects, Water Quality

Denham
25, Irrigation

Fort Peck Assiniboine and Sioux Tribes
8, Water Supply, Irrigation,

Garwood
9, Alternatives, Fish and Wildlife, Irrigation, Outreach, Pallid Sturgeon Science and Effects, Recreation

Hardy
10, Irrigation

Horgan
11, Flood Risk Management, NEPA Process, Pallid Sturgeon Science and Effects

Issac Walton League
12, Pallid Sturgeon Science and Effects, Recreation, Fish and Wildlife, Water Quality

Jones
26, Irrigation

Leister
27, Irrigation

Lower Yellowstone Rural Electric Cooperative
13, Irrigation

MacDonald
33, Irrigation

Malkuch
21, Irrigation

Mattelin
14, Alternatives, Hydropower, Irrigation, Recreation

MDNR
15, Alternatives, Flood Risk Management, Outreach

Missouri River Conservation Districts Council
16, Hydropower, Irrigation, Pallid Sturgeon Science and Effects

Montana Department of Natural Resources and Conservation
17, Fish and Wildlife, Irrigation, Outreach, Water Supply

Montana Fish Wildlife and Parks
18, Pallid Sturgeon Science and Effects, Fish and Wildlife

Norby
20, Irrigation

North Dakota State Water Commission
19, Alternatives, Outreach

Richland County
32, Outreach, Irrigation

Roosevelt County Conservation District
30, NEPA Process, Irrigation, Outreach

Rostad
34, NEPA Process, Outreach

Ruffato
37, 38, 35, 36, Irrigation, Outreach

Sheehan
22, Irrigation

Stedman
24, Irrigation

Appendix 2: Correspondence

SIGN-IN SHEET

Fort Peck Test Flow Release
Environmental Impact Statement
Scoping Meetings
Williston, North Dakota

NAME	AGENCY/ORGANIZATION	ADDRESS	PHONE and/or EMAIL
Dusty Berwick	Farmer	po Box 149 Bainville MT 59212	701-571-2700
Fran Bosch	Vector Control Director	PO Box 17 58802-0017 Williston, ND	701 570 8878
Ken Kjos	Grower Buford Trenton Irr.	Williston, ND	btid@nemont.net 701-770-7256
DANNY Leep	USACE	Williston, ND	701-572-6494
Connie Larsen	Irrigator	Culbertson, MT	406-798-7720
Taylor Triest	Agri Industries	williston ND	701-770 5112
Holden Russell	Savage Water	Williston, ND	801-668-9539
Brandon Hoffman	Farmer	Williston, ND	701-770-5139
Terry Traeger	Farmer	Bainville MT.	406-789-2407
Dan Young	irrigator Richland Co. Conservation Dist	FAIRVIEW MT.	406-489-5508

Submission of comments, including personal information, is voluntary. Providing personal information, including name, address, organizational affiliation and contact information, will aid in comment organization and analysis. All comments will be included in the administrative record and considered. Personal information may be included in the public record or may be excluded upon request.

SIGN-IN SHEET

Fort Peck Test Flow Release
Environmental Impact Statement
Scoping Meetings
Williston, North Dakota

NAME	AGENCY/ORGANIZATION	ADDRESS	PHONE and/or EMAIL
Tom Ruffatto	Richland Co Cons Dist	31334 CR 146 Brockton MT 59213	4064892949
Dick Iversen	Richland Co Conservation Dist	Culb. MT	RSI@m.dRivers.com 406-489-7770
Lynette Ruffatto	Teacher	Brockton MT	406 774-3493
Lindsey Hagerman	Williams Co	Williston, ND	701-609-1160
Wade Spooner	USACE	Riverdale ND	701-654-7703

Submission of comments, including personal information, is voluntary. Providing personal information, including name, address, organizational affiliation and contact information, will aid in comment organization and analysis. All comments will be included in the administrative record and considered. Personal information may be included in the public record or may be excluded upon request.

SIGN-IN SHEET

Fort Peck Test Flow Release
Environmental Impact Statement
Scoping Meetings
Fort Peck, Montana

NAME	AGENCY/ORGANIZATION	ADDRESS	PHONE and/or EMAIL
DOUG HARDY	CENTRAL MT ELECTRIC POWER	501 BAY DR GREAT FALLS MT	406 268 1211
Aaron Kolb	MRRIC	312 N 33rd St E Billings MT	928607 3560
Dan Rostad	MRRIC		
Steve Dalbey	Montana Fish, Wildlife & Parks	#1 Airport Rd Glasgow, MT	406-228-3700
Lori Frisk	WAPA	1330 W1ST ST SE Watertown, SD 57201	605-882-7580
Don Garwood	VCCD	72 Garwood Rd Nashua, MT 59248	406-785-4781
Dale Pugl	USACE	PO Box 235 Fort Peck	406-263-6000
Tim Zabrocki	USACE	Po 364 Ft Peck MT 59223	406-210-4941
Cole Sibley	Farmer/irrigator Fort Peck Water Users Assoc	124 Black Walnut Rd Nashua MT 59248	406-785-2261
Kirk Sibley	IRR FARMER Fort Peck Water Users Assoc	199 BIA Nashua MT 59248	406 263-7879

Submission of comments, including personal information, is voluntary. Providing personal information, including name, address, organizational affiliation and contact information, will aid in comment organization and analysis. All comments will be included in the administrative record and considered. Personal information may be included in the public record or may be excluded upon request.

SIGN-IN SHEET

Fort Peck Test Flow Release
Environmental Impact Statement
Scoping Meetings
Fort Peck, Montana

NAME	AGENCY/ORGANIZATION	ADDRESS	PHONE and/or EMAIL
Taylor Twiest	Agri Industries	305 2nd St W Williston, ND. 58801	701-770-5112
Bob Norman	Agri Industries	1016 Grain Rd Fraser mt 59225	701 570 5294
Darin McMurray	USACE Fort Peck		406/526-3411 Ext. 4275
Chris Martinez	ASRWSS		zenitram0013@gmail.com
Ashleigh Weeks	ASRWSS	PO Box 10 Poplar MT 59255	406-768-5719 aweeks@asrwss.org
Saundra White Eagle	ASRWSS		2paints@nemont.net
Scott McGowan		Box 765 Poplar, MT 59255	pitchfortcc@gmail.com
Buzz Mattelin	Roosevelt CD	Box 601 Culbertson	bmattelin@gmail.com
Pat Braaten	USGS-CERC	Fort Peck, MT	pbraaten@usgs.gov
Tyler Haddix	MFWP	Fort Peck, MT	thaddix@mt.gov

Submission of comments, including personal information, is voluntary. Providing personal information, including name, address, organizational affiliation and contact information, will aid in comment organization and analysis. All comments will be included in the administrative record and considered. Personal information may be included in the public record or may be excluded upon request.

SIGN-IN SHEET

Fort Peck Test Flow Release
Environmental Impact Statement
Scoping Meetings
Fort Peck, Montana

NAME	AGENCY/ORGANIZATION	ADDRESS	PHONE and/or EMAIL
Mark Sullivan	MFWP	1 Airport Road Glasgow MT	mgsullivan@Mt.gov
Steve Wanderaas	McCone CD MRCDC	Vida MT	swbarsw@midrivers.com
Brian Healy	FP WUA	Wolf Point	650 3332
Karl Christians	MT DNRC	Helena	kchristians@MT.gov
Heath Headley	MTFWP	Glasgow, MT	hheadley@mt.gov
Michael Hoy	McCone Cty Cons Dist & McCone Electric Coop	Circle MT	MHoye@McConeElectric.coop
Wayne Nelson-Stasth		Yankton SP	

Submission of comments, including personal information, is voluntary. Providing personal information, including name, address, organizational affiliation and contact information, will aid in comment organization and analysis. All comments will be included in the administrative record and considered. Personal information may be included in the public record or may be excluded upon request.

United States Department of the Interior
FISH AND WILDLIFE SERVICE
Mountain-Prairie Region
31247 436th Avenue
Yankton, SD 57078

April 24, 2019

Ms. Tiffany Vanosdall
U.S. Anny Corps of Engineers Omaha District
ATTN: CENWO- PM- AC- Fort Peck EIS
1616 Capitol Avenue
Omaha, NE 68102

RE: U.S. Army Corps of Engineers scoping for test flow releases from Fort Peck Dam, Montana to benefit Pallid Sturgeon

Dear Ms. Vanosdall:

The U.S. Fish and Wildlife Service (Service) appreciates the opportunity to provide comment to the U.S. Army Corps of Engineers' (Corps or USACE) in their scoping process to prepare an Environmental Impact Statement for implementing test flow releases from Fort Peck Dam to benefit Pallid Sturgeon.

Adaptive Management Framework (AMF) encompassing the Fort Peck reach of the Missouri River and Yellowstone River

- The Service is supportive of the efforts to implement Fort Peck test flow releases in an AMF that incorporates fish passage efforts on the Yellowstone River, runoff status/projections, storage status, human considerations, etc. into a decision making/implementation AMF.
- The AMF when possible should work to incorporate and test the role of improving the temperature regime (increased spillway flows and/or anticipated higher Milk River flow events) and turbidity regime (anticipated higher Milk River flow events).
- Having the potential and flexibility to improve pallid sturgeon status via actions on both the Yellowstone River and Fort Peck reach of the Missouri River should be an underpinning of the AMF.

Analysis of a range of hydrographs

- The Service supports the Corps analysis of a range of hydrographs in the NEPA process. It is important to the Service that the hydrographs that are considered for testing have sufficient 'signal-to-noise' ratio so that the hypotheses related to flow modification can be adequately tested and ultimately determine the efficacy of flow modification in achieving the Missouri River Recovery Program (MRRP) objectives.
- Release rates which facilitate the slowest drift of pallid sturgeon free embryos remains an unknown. Future modelling efforts, drift studies and the implementation of test flows will

help determine the most beneficial flows to drifting pallid sturgeon free embryos while also minimizing impacts to human considerations. The Service therefore encourages the Corps to consider a range of flows to test during the drift phase of the hydrograph.

Constraints and Power Analysis

- The Service recognizes the multiple uses of the Missouri River system and appreciates the Corps efforts to implement test flows from Fort Peck. Recognizing the complexities of Missouri River water management the establishing criteria for implementation of test flows from Fort Peck could seem daunting. The Service encourages the Corps to look for appropriate criteria for implementation while not unduly constraining test flows from Fort Peck.
- Similar to the analysis for implementation of the Interception Rearing Complexes in the Lower Missouri River to achieve sufficient power to test hypotheses, the Service encourages the Corps to conduct an analysis to determine the number of test flow releases needed to achieve sufficient confidence in testing hypotheses.

The Service appreciates the opportunity to provide these recommendations to the Corps. The Service is looking forward to continuing to work collaboratively in support of this important effort to ensure the success and ultimate implementation of the MRRP for the recovery of the fish and wildlife resources of the Missouri River, while also taking into consideration the human resources. Please contact me at (605) 665-4856 for further questions and/or clarification.

Sincerely yours,

Casey D. Kruse
USFWS Missouri River Coordinator
Yankton, SD

cc: USFWS, Region 6 Acting ARD/ES, Lakewood, CO (Alt)
Mark Harberg, USACE

From:	Vanosdall, Tiffany CIV USARMY CENWO (US)
To:	Quinn, Aaron T CIV USARMY CENWO (US); Ridenour, Clayton J CIV USARMY CENWO (US)
Subject:	FW: [Non-DoD Source] Your efforts to obtain input from the general public upon your unknown and unpublished actions on the Missouri River
Date:	Saturday, February 09, 2019 9:00:31 AM

Sent with BlackBerry Work
(www.blackberry.com)

From: Jim & Evelyn Carlisle <2carl@nemont.net <mailto:2carl@nemont.net> >
Date: Friday, Feb 08, 2019, 10:07 PM
To: Vanosdall, Tiffany CIV USARMY CENWO (US) <Tiffany.K.Vanosdall@usace.army.mil <mailto:Tiffany.K.Vanosdall@usace.army.mil> >
Subject: [Non-DoD Source] Your efforts to obtain input from the general public upon your unknown and unpublished actions on the Missouri River

Hello,

What are your proposed releases? You publication detailing that you are letting the public become acquainted with your proposed actives at a public meeting does not tell us anything. Then down below you inform us that Fish and Game doesn't think the proposed releases will affect the pallid sturgeon which indicates that they are better informed than we are. Further you inform us that you intend to implement some policy and that you are have a "commitment" for something. All of this is so generic I can't help but think that maybe you asked Fish, Game, and Wildlife to write it for you.

In regards to the Fish, Game and Parks Department, they are more interested in converting our land usage to a buffalo common. After having obtained written permission from the Corp and the Conservation Department, these people sent me a letter threatening me with action if I discharged any dirt in the river. Then FWP appeared with the Conservation Department to inspect my actions. On another occasion FWP had the river flushed costing me not only several acres of land, but also leaving my two pump sites vulnerable yearly to erosion. How many yards of dirt are they responsible for in the river? One day at the SCS office I was informed that Fish, Wildlife, and parks had complain about some brush clearing because it was prime habitat. (I don't know of any deer ever taken on this small portion of land in the seventy years we've owned the land.) The FWP are into everything, yet do nothing for landowners.

Please send a detailed analysis of your proposed actions and the reasoning behind these decisions. If it is another of your flushes, I am in opposition to the action. If you intend to drop the river to nothing, you should realize that if all of the irrigators below Ft. Peck were to irrigate full force at the same time the river would drop less than a half an inch at Culbertson.

One action I have thought about proposing is a requirement for the Corps of Engineers establish fish bypasses around all their dams. Obviously this would all aid the fish populations a great deal. Fish and Parks would like it., Start considering a policy that doesn't require the weak to suffer and larger concerns to prosper.

Respectfully,

Jim Carlisle
PO Box 410
Culbertson, Montana 59218

COMMENT FORM

All information received will be included as part of the public record.

Name: Don Garwood

Mailing Address: 72 Garwood Rd

City: Wasilla State: MT Zip Code: 59846

Email: don-garwood@hotmail.com

Organization you represent (if any): _____

Date: 7-19-19

- ✓ *Please write legibly so your comments can be recorded completely and accurately.*
- ✓ *Please complete and drop this form in the box provided (or mail it to the address provided). Attach additional pages if necessary.*

See attached

My ~~#~~ no. 1 pumpsite is located 2 [mi]les up river of the spillway [an]d I need 6000 to 7000 cubic feet [per] second (CFS) [w]ithout fluctuation between day [a]nd night to keep the pump [r]unning. If it loses prime and [s]tops pumping, I have to prime [th]e lower pipe up to the pump to [st]art irrigating again. I have [se]ed large boats make a big [wa]ke, that my pump then lost its [pr]ime and it stopped pumping. [Th]is is why I need at least [7]000 CFS from the tunnels [to] irrigate. Water that comes [th]rough the spillway gates has [no] generation and doesn't make [an]y money from generation. It is [no]t money.

The Montana FWP crews have [be]en stocking Pallid Sturgeon fryE [si]nce I believe the 1997 spillway

lows and There has been
eat success From introducing
ing pallids into The Missouri
ip From The Miles City Hatchery
nd maybe From The hatchery
Fort Peck. From talking to
e Fishery crews in The past
7 years I believe The Pallids
re doing well and This controversal
rt Peck Flow Test is not needed
; it will cause inconvenicp
recreationalists, Fishermen, and boaters.
T could put The other Fish in
he river in peril when These low
ter Flows are happening. The low
nd Fluctuating Flows could affect
e survival of least Tern and
ping plover chicks.

IF This plan is implemented!
We as irrigators will need To know
advance of fluctuations in The
iver whether it is High or Low

!uctuations so we can service
ir intakes as needed To Protect
hem.

5. On my Fathers #2 site, it is
-oss The river From The spillway
a bout ½ mile down stream.
hen The spillway is Flowing
he river at The pumpsite is
ry High and with a lot of Trash
ainst The bank. Once The spillway
s Flowing we cannot put our intake
egs in The water as we have
land in The river To put them in
service. We would need To service
hem early before The Flow stops.

Ronald Garwood
72 Garwood Rd
Nashua, MT 59248
406-785-4781
ron.garwood@hotmail.com

I am a 18 year Supervisor of The
Valley County Conservation District

I am also a member of FWP
Citizen Advisory Council (CAC) in
Region 6, Montana

From:	Vanosdall, Tiffany CIV USARMY CENWO (US)
To:	Salak, Jennifer L CIV USARMY CENWO (US)
Cc:	Quinn, Aaron T CIV USARMY CENWO (US); Ridenour, Clayton J CIV USARMY CENWO (US)
Subject:	RE: [Non-DoD Source] Pallid sturgeon
Date:	Wednesday, February 20, 2019 8:35:01 AM

Yes, this is Ft Peck. Comment period is open through March 11th. Thanks for forwarding!

Sent with BlackBerry Work
(www.blackberry.com)

From: Salak, Jennifer L CIV USARMY CENWO (US) <Jennifer.Salak@usace.army.mil <mailto:Jennifer.Salak@usace.army.mil> >
Date: Wednesday, Feb 20, 2019, 7:09 AM
To: Vanosdall, Tiffany CIV USARMY CENWO (US) <Tiffany.K.Vanosdall@usace.army.mil <mailto:Tiffany.K.Vanosdall@usace.army.mil> >
Subject: FW: [Non-DoD Source] Pallid sturgeon

Tiffany,

Please see comment below - I am assuming this is a comment related to the Fort Peck public meeting.

Jennifer

-----Original Message-----
From: Mike Wilson [mailto:mikewilson222@gmail.com]
Sent: Tuesday, February 19, 2019 4:48 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] Pallid sturgeon

My thoughts

In all, I don't believe the end justifies the means.

1. Bank erosion. The high low flow plan creates bank erosion.
2. Increased turbidity
3. Increased biological oxygen demand.
4. Rapid filling of sediment in downstream lakes.
5. No concrete data to prove plan will work.
6. No intrinsic value gained by fish. Cant sell. I doubt the pallid sturgeon will feed the growing hungry population of the world, or cure cancer, or aids.
7. Has anyone done a study and seen if the fish are trying to die? Perhaps they dont actually want to be saved?? Lemmings march head long into the sea all day long.

COMMENT FORM

All information received will be included as part of the public record.

Name: Lynette Ruffatto

Mailing Address: 31334 CR 146

City: Brockton State: MT Zip Code: 59213

Email:

Organization you represent (if any):

Date: Feb 20

- ✓ *Please write legibly so your comments can be recorded completely and accurately.*
- ✓ *Please complete and drop this form in the box provided (or mail it to the address provided). Attach additional pages if necessary.*

Information needs to be disseminated more quickly and all irrigators need to know when water levels are going to rise or lower. My husband barely got his floating pump out in 2011 before the river flooded.

Dan Rostad, YRCDC Executive Director
MRRIC Major Tributaries Representative
Post Office Box 749
Big Timber, Montana 59011
Email: dan.rostad@mt.nacdnet.net
Phone: 406-932-5160, Extension 106

March 1, 2019

Tiffany Vanosdall, PMP
Senior Plan Formulator/Project Manager
US Army Corps of Engineers
1616 Capitol Ave
Omaha, NE 68059

RE: Fort Peck Dam Test Release Environmental Impact Statement

Ms. Vanosdall,

As stakeholders, former and current members of MRRIC, we are collectively writing to request modifications to the public scoping process for Fort Peck Dam Test Release EIS. As a group, we are concerned about the brevity of the scoping comment period, and the lack of effective advertising for the public scoping meetings. Based on feedback from stakeholders and concerned citizens, we respectfully request the following:

A. An extension of the scoping period for an additional 60 days beyond the March 11th comment deadline. The new comment period would conclude on May 10th. The proposed test releases will affect more than irrigators and landowners near the river, and stakeholder groups such as County Commissioners, need to have time to understand the proposed actions and how they could affect resources and planning efforts within the county. We acknowledge that extending the scoping period may delay the final record of decision, but because this federal action will affect Montana's citizens and the local environment the issue requires additional time to fully vet.

B. In conjunction with the extended comment period, we request that the Corps conduct an additional in-person scoping meeting due to inadequate publicity with regard to the February meeting dates and locations. This meeting should be held near the center of the affected river reach, specifically, in Culbertson or Sidney. This meeting may be scheduled at the Corps' convenience, but should be adequately advertised in conjunction with local partners, and should occur no later than April 5th to allow for maximum time to author comments following the scoping meetings.

C. We are requesting specific details on when the Independent Science Advisory Panel will review the proposed test releases, and where this review will fit into the timeline of the development of the EIS.

The Corps relies heavily on MRRIC for stakeholder involvement and there are no current MRRIC stakeholders on this reach of the Missouri River. Consequently, the Corps should make every effort to actively engage stakeholders on this

reach of the river to ensure all environmental, social, and economic issues relevant to this proposed federal action are adequately addressed. We appreciate the prompt consideration of these concerns and requests.

Sincerely,

Dan Rostad – current MRRIC Major Tributaries Representative and Yellowstone River Conservation District Council;
Steve Wanderaas - Chairman Missouri River Conservation Districts Council; McCone County Conservation District
Dick Iversen - former MRRIC Conservation District Representative, member of Missouri River Conservation Districts Council and Richland County Conservation District;
Buzz Mattelin - former MRRIC Irrigation Representative, member of Roosevelt Conservation District;
Don Skaar – current MRRIC State of Montana Representative and Montana Fish Wildlife and Parks;
William K Drummond – current MRRIC Hydropower Representative, Executive Directors Mid-West Electric Consumers Association;
Douglas Hardy – current MRRIC Hydropower Representative, General Manager, Central Montana Electric Power Cooperative;
Laurie Zeller – Montana Department of Natural Resources and Conservation;
Thomas Nichols – President Fort Peck Water Users Association;
Brian Healy – Field Manager Fort Peck Water Users Association;

CC Senator Jon Tester
Senator Steve Daines
Representative Greg Gianforte
Governor Steve Bullock
Dave Ponganis, US ACOE
John Tubbs, MT DNRC Director
Martha Williams, MT FWP Director
Gail Bingham, MRRIC Chairman
Bill Beacom, MRRIC Vice Chair

508 6th Street East
P.O. Box 517
Culbertson, MT 59218

Phone: 406-787-5232
Fax: 406-787-5232
Rccd17@gmail.com

Roosevelt County Conservation District

March 5, 2019

Tiffany Vanosdall, PMP
Senior Plan Formulator/Project Manager
US Army Corps of Engineers
1616 Capitol Ave
Omaha, NE 68059

RE: Fort Peck Dam Test Release Environmental Impact Statement

Ms. Vanosdall,

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Sincerely,

Roosevelt County Conservation District

Roosevelt County

Commissioners:

Gary Macdonald – Presiding Officer
Duane Nygaard- Member
Gordon Oelkers- Member

400 2nd Avenue South
Wolf Point, Mt. 59201
406-653-6246
Fax
406-653-6201

March 5, 2019

Tiffany Vanosdall, PMP
Senior Plan Formulator/Project Manager
US Army Corps of Engineers
1616 Capitol Ave
Omaha, NE 68059

RE: Fort Peck Dam Test Release Environmental Impact Statement

Ms. Vanosdall,

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Sincerely,
Roosevelt County Commission

Gary Macdonald, Presiding Officer Duane Nygaard, Member Gordon Oelkers, Member

ASRWSS, INC.
5353 BIA ROUTE 14
POPLAR, MT 59255
O: 406.768.5719
F: 406.768.5720

March 8, 2019

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

RE: EIS on test-flow alternatives from Fort Peck Dam intended to benefit pallid sturgeon

Dear EIS Manager:

The Assiniboine and Sioux Rural Water Supply System (ASRWSS) understands that the Corps of Engineers will prepare an EIS to evaluate test flow alternatives from Fort Peck Dam to benefit the pallid sturgeon. Those artificial flows will have an impact on the reaches of the Missouri River between Fort Peck Dam and Lake Sakakawea and on the location of the ASRWSS intake.

Definition and identification are needed for the reaches of the Missouri River that are (1) degrading due to downcutting of the bed and erosion of the banks and (2) subsequently aggrading due to deposition of sediment as both processes relate to the ability of the pallid sturgeon to spawn and continue their life cycle. The grain size composition of suspended and bed load sediment must be determined at strategic points along the River to determine impact on pallid sturgeon and the ASRWSS intake. The bed load and suspended sediment in the Missouri River will increase at the location of the ASRWSS intake immediately below the bridge on Montana Highway 13, and the increase will be costly to ASRWSS and potentially threaten ability to supply a safe and adequate supply of water to a population of 20,000 persons in 2019 and 31,000 persons ultimately.

Our understanding of the Corps plan is as follows:

- *In the January 19, 2018 amendment to the October 30, 2017 Biological Assessment (BA) for the Operation of the Missouri River Mainstem Reservoir System, the Operation and Maintenance of the Bank Stabilization and Navigation Project, the Operation of the Kansas River Reservoir System, and the Implementation of the Missouri River Recovery Management Plan (MRRMP), the USACE proposed, among other things to work with the U.S. Fish and Wildlife Service (USFWS) and the Missouri River Recovery Implementation Committee (MRRIC) to "review previous information and information generated since the effects analysis to formulate test flow releases from Fort Peck Dam and an adaptive management framework for their implementation."*

- *This commitment was relied upon by the USFWS in its 2018 Biological Opinion (BiOp) finding that the USACE's proposed action is 'not likely to jeopardize' pallid sturgeon. The EIS will document the formulation and evaluation of test-flow alternatives from Fort Peck Dam intended to benefit pallid sturgeon.*

- *The EIS scoping period will extend from February 8, 2019 through March 11, 2019. Public comments are invited to assist in identifying the scope of potentially affected environmental, social, and economic issues relevant to the proposed Federal action and determining reasonable alternatives to be considered in the EIS.*

Accordingly, ASRWSS submits its scoping comments, including the comment that ASRWSS seeks close contact with the Corps through the ASRWSS General Manager during the EIS process, irrespective and independently of coordination with MRRIC.

Sincerely,

Ashleigh Weeks

Ashleigh Weeks, General Manger
Assiniboine and Sioux Rural Water Supply System

cc ASRWSS Board of Directors
Sandra White Eagle, Manager Eagle Shield Water Treatment Plant
Majel Russell, Attorney
Mike Watson, PE

encl: Scoping Comments of ASRWSS

SCOPING COMMENTS FOR CORPS OF ENGINEERS
ON EIS OF FORT PECK FLOW ALTERNATIVES
ASSINIBOINE AND SIOUX RURAL WATER SUPPLY SYSTEM
MARCH 11, 2019

1. ASRWSS understanding is that:

    a. the Corps intends to prepare an Environmental Impact Statement (EIS) to evaluate impacts of potential test flows from Fort Peck Dam

    b. the EIS will assess a range of flow alternatives that 1) may deviate from the USACE Master Manual and 2) are theorized to benefit Pallid Sturgeon, including periods of flows that may affect spawning and recruitment of Pallid Sturgeon.

2. Has the corps included the ASRWSS intake in the evaluation of 59 municipal and commercial intakes located along the Missouri River and its reservoirs as part of the 2018 BIOP?

3. Was the analysis of the 59 intakes limited to evaluation of the parameters in Table 1?

Table 1. Water Supply River Conditions Analysis Metrics

Metric	Performance Measure	Description
Metric 1 – Number of days river/reservoir levels fall below minimum access requirements for regular operation	Number of days	This measure is an estimate of the number of days in a calendar year that a water supply intake will not have access to water from either a river or reservoir. The focus of the metric is on operating conditions.
Metric 2 – Number of days river/reservoir levels falls below shutdown elevation.	Number of days	This measure is an estimate of the number of days in a calendar year that a water supply intake will not have access to water from either a river or reservoir. The focus of the metric is on shutdown conditions.

4. Of major concern to ASRWSS are high flow risks. ASRWSS recommends that Corps direct attention to the following risk factors:

    a. Releases from Fort Peck over the spillway in May at a level of 25,000 cfs or more requires a full reservoir unable to accommodate large runoff events in the upper basin (except by routing) during the period most likely for heavy rain (i.e. June 1964, May and June 2012), thereby endangering the structural integrity of the ASRWSS intake. EIS must assess.

    b. increases in sediment discharge at the ASRWSS intake due to Corps' artificially induced erosion of the bed and banks of the River in the degrading section between Fort Peck Dam and the upper end of Lake Sakakawea will be captured by the ASRWSS intake and must be successfully removed by ASRWSS to provide a safe and reliable water supply for its 20,000 present and 31,000 future users. EIS must assess.

c. Costs of artificially induced sediment removal by ASRWSS must be assessed in EIS

d. Corps must recommend mitigation of foregoing risks

5. ASRWSS seeks close contact with the Corps through the ASRWSS General Manager during the EIS process to accomplish the following:

    a. Address ASRWSS immediate concerns in item 4. and any new concerns or issues that may develop

    b. Determine the impact of the (1) degrading and (2) aggrading sections of the Missouri River between Fort Peck Dam and Lake Sakakawea on Pallid Sturgeon Habitat and whether the bed and bank composition in those two sections have more impact on the ES than artificial flows from Fort Peck Pallid Sturgeon releases

    c. Determine the effect of water temperature decreases (or increases) in the Missouri River along the entire distance between Fort Peck Dam and Lake Sakakawea caused by releases through the turbines, rather than over the spillway, and how those temperature decreases have been offset by water temperature rises due to global warming over the period of record used by the Corps for reservoir simulation studies and whether there is a clear advantage to Pallid Sturgeon of releases over the spillway relative to releases through the turbines considering the net temperature effect.

6. ASRWSS Contact:

    Ashleigh Weeks, General Manager
    ASRWSS, Inc.
    P. O. Box 10
    Poplar, MT 59255
    406-768-5719
    Email: aweeks@asrwss.org

THE IZAAK WALTON LEAGUE OF AMERICA

March 8, 2019

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

The Izaak Walton League of America (League) appreciates the opportunity to provide scoping comments on the Environmental Impact Statement (EIS) on the Fort Peck Flow Study. The EIS will help identify the affected environmental, social, and economic issues of any proposed federal action. It will also assess test flows out of Ft Peck Dam on pallid sturgeon recruitment, while considering conditions of the Yellowstone River.

Currently, two potential hydrographs have been developed. We commend the U.S. Army Corps of Engineers' (Corps) willingness to work with stakeholders and other federal and state agencies in the basin on possible additional alternatives and for consideration of additional alternatives that may be received through this process.

The Corps has responsibility for the operation and maintenance of the Missouri River Mainstem Reservoir System and acknowledges the operation of the System affects the endangered pallid sturgeon. The effects include, but aren't limited to, altering the hydrologic, geomorphic, and temperature regimes of the Missouri River.

The stated objectives of the study include:

- Attract pallid sturgeon up the Missouri River.
- Retain pallid sturgeon in a suitable location on the Missouri River.
- Aggregate pallid sturgeon to result in spawning in the Missouri River.
- Affect pallid sturgeon drift in the Missouri River.
- Consideration of conditions on the Yellowstone River.
- The context of the status of the species.

During this scoping process, the League respectfully requests the Corps consider investigating the following:

Hydrographs

- Does a hydrograph exist, or can one be developed, to analyze the size of the anoxic zone in the headwaters of Lake Sakakawea, as well as what must be done to reduce or eliminate it?
- Can a hydrograph be developed without the dramatic increase or decrease in Fort Peck flows contained in the current hydrographs to mimic a more natural flow with a slower rise and fall?
- Can flows be done to not adversely impact pallids utilizing the Yellowstone or the Missouri? Flows that benefit fish spawning in both rivers?

Estimating the wild pallid population

- A 2009 estimate put the number of wild pallid sturgeon in the Upper Missouri River at 125 fish.
- We believe that estimate needs to be updated and ask how this can be done.

- What can be learned from procuring a current estimate of wild pallids in this reach?
- What is the value of the genetics of the remaining wild pallids to the overall recovery program?
- Do pallids frequent the same spawning sites in the Missouri or the Yellowstone?
- Does spawning site fidelity exist in pallids?
- What's the substrate of known pallid spawning sites?
- Can that substrate be replicated in other areas of the upper basin or the lower basin?

Water Quality

- What are the water characteristics needed for pallid success?
- What's the importance of velocity, temperature, turbidity and water volume for pallid success?
- What metrics can be used to measure each of these variables?
- What's the needed interaction of these various factors?

Recreation

- What's the risk of the proposed flows to recreation on Sakakawea and Fort Peck reservoirs?
- What's the impact to visitor days?
- How will declining levels as a result of flows, especially in low runoff years, impact boat ramps and recreational access on Fort Peck?
- What will flows do to forage and game fish production and habitats in Fort Peck, Sakakawea, and the river reach below Fort Peck?

The Izaak Walton League of America appreciates the opportunity to provide scoping comments on the Fort Peck Flow Study. We respectfully ask to be kept informed on all aspects of this effort as it moves forward.

Sincerely,

Paul Lepisto
Regional Conservation Coordinator
Izaak Walton League of America
1115 South Cleveland Avenue
Pierre, SD 57501
605-224-1770 or 605-2201219
plepisto@iwla.org

From: Vanosdall, Tiffany CIV USARMY CENWO (US)
To: Quinn, Aaron T CIV USARMY CENWO (US); Ridenour, Clayton J CIV USARMY CENWO (US)
Subject: FW: [Non-DoD Source] Pallad sturgeon recovery flow
Date: Monday, March 11, 2019 11:13:30 AM

Sent with BlackBerry Work
(www.blackberry.com)

From: Salak, Jennifer L CIV USARMY CENWO (US) <Jennifer.Salak@usace.army.mil <mailto:Jennifer.Salak@usace.army.mil> >
Date: Monday, Mar 11, 2019, 10:53 AM
To: Vanosdall, Tiffany CIV USARMY CENWO (US) <Tiffany.K.Vanosdall@usace.army.mil <mailto:Tiffany.K.Vanosdall@usace.army.mil> >
Subject: FW: [Non-DoD Source] Pallad sturgeon recovery flow

-----Original Message-----
From: Dana Berwick [mailto:hayrgrower@gmail.com]
Sent: Monday, March 11, 2019 9:50 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] Pallad sturgeon recovery flow

My family farms and ranches in Roosevelt and Richland counties in Montana and irrigates on both sides of the Missouri River there. I am concerned with river bank erosion during the proposed high flow which I witnessed a fair amount of in summer 2018 at flows in the mid 20,000 cfs range but that damage is difficult to quantify. I also see the effects of the pollution entering the river from the low land flooding that occurs in these higher flow conditions, last summer I pulled a propane tank off one of my floating pumps for example and viewed many 5 gallon buckets and other containers floating by my different pumps.

I am very concerned about the proposed low flows as well, experience has shown that flows below 8,000 cfs at Culbertson the river starts to narrow to the main channel and make it difficult to keep irrigation pumps operating. The Roosevelt and Richland conservation Districts have a dredge which can help dig out pump sites but I don't think it would be able to do the job everywhere or be able to keep up with demand at proposed July August low flows approaching 4,000cfs. I am concerned about the steps irrigators would be forced to take to water their crops in these conditions, often times irrigators would need to use a excavator to keep water to their pump. Both the dredge and an excavator expense are very high, and in the poor agricultural economy we are in prove to be devistating to irrigators.

An average sugar beet crop is 30 tons per acre in Culbertson at a average value of $42/ton so approximately $1260/acre. The majority of the irrigation for this crop is done in July and August and if a farmer was unable to irrigate then the yield and quality would suffer greatly, in 2011 I was unable to irrigate due to the extremely high flows on one farm and the crop yield and quality were 40% of average so on that 100 acres I was short $50,000 revenue. Alfalfa hay would be harmed at least one cutting at 1.5 tons/acre or approximately $200/acre. Wheat crops would see a 30% reduction in yield and possibly lower test weight for a minimum $150/acre reduction. For just my family I predict a $300,000 reduction in income if river flows are reduced to the 4000cfs proposal in July and August, if flows were kept above 8,000 cfs there would be no issue. I can't accurately predict the costs associated with trying to keep irrigation at the proposed low flows, however from talking with conservation districts administrators I think dredging experiences would be near $50,000 if even possible.

I would encourage the Corps to engage with the conservation districts and look at doing a pump site survey to try

and determine more accurately how irrigators pump sights would be effected by the proposed low flows. I would also encourage the Corps to extend the public comment period to give more people a chance to comment, I feel the advertising for the meetings in Fort Peck and Williston was insufficient to reach the heart of the area effected, and that another Meeting should be held in Culbertson and Poplar.

Thank You

Dana Berwick (406)-480-5768
6045 rd 1011
Bainville, MT 59212

From: Vanosdall, Tiffany CIV USARMY CENWO (US)
To: Quinn, Aaron T CIV USARMY CENWO (US); Ridenour, Clayton J CIV USARMY CENWO (US)
Subject: FW: fort peck test release environmental impact statement
Date: Monday, March 11, 2019 4:03:44 PM

Sent with BlackBerry Work
(www.blackberry.com)

From: Salak, Jennifer L CIV USARMY CENWO (US) <Jennifer.Salak@usace.army.mil <mailto:Jennifer.Salak@usace.army.mil> >
Date: Monday, Mar 11, 2019, 1:00 PM
To: Vanosdall, Tiffany CIV USARMY CENWO (US) <Tiffany.K.Vanosdall@usace.army.mil <mailto:Tiffany.K.Vanosdall@usace.army.mil> >
Subject: FW: fort peck test release environmental impact statement

-----Original Message-----
From: Lynette Ruffatto [mailto:ruffattol@hotmail.com]
Sent: Monday, March 11, 2019 12:51 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] fort peck test release environmental impact statement

Thank you for extending the comment period for the Fort Peck Test release EIS. I am still concerned about the effective advertising of your public meetings and many of my neighbors did not know about the meetings. I am requesting another meeting put on by the U.S. Army Corps of Engineers in Culbertson or Poplar. My neighbors do not know what to comment on as they did not hear the presentation. They only know my biased opinion.

I know that at Williston you represented every division of the corps and I understand the logistics of assembling everybody. But I'm sure a scaled down assembly would be satisfactory. I seemed to me only 3 answered public comments. I understand that there is a need to protect endangered animals or we would not have lions, tigers, elephants, or fish. But farmers should not be an endangered species either. My husband and I were talking to one of our neighbors and he would not be able to irrigate if the water is lowered very much. Another neighbor said he'd have to abandon some of his irrigated land if the water level was lowered. The last June rise affected irrigators because they spent the summer renting dredges to clear the sand bars so they could reach water. We never put a pump in that summer of 2011. It took all summer after your June rise for us to clear the fields of debris and to replant our crops. We are still financially recovering from that fiasco.

Once again, please attempt to reschedule another public meeting with the U.S. Army Corps of Engineers in Culbertson or Poplar.

Sincerely,

Lynette Ruffatto

31334 CR 146

Brockton, Mt. 59213

ruffattol@hotmail.com

From: Vanosdall, Tiffany CIV USARMY CENWO (US)
To: Quinn, Aaron T CIV USARMY CENWO (US); Ridenour, Clayton J CIV USARMY CENWO (US)
Subject: FW: [Non-DoD Source] Reducing river flows
Date: Monday, March 11, 2019 11:13:43 AM

Sent with BlackBerry Work
(www.blackberry.com)

From: Salak, Jennifer L CIV USARMY CENWO (US) <Jennifer.Salak@usace.army.mil <mailto:Jennifer.Salak@usace.army.mil> >
Date: Monday, Mar 11, 2019, 10:53 AM
To: Vanosdall, Tiffany CIV USARMY CENWO (US) <Tiffany.K.Vanosdall@usace.army.mil <mailto:Tiffany.K.Vanosdall@usace.army.mil> >
Subject: FW: [Non-DoD Source] Reducing river flows

-----Original Message-----
From: Tyler Traeger [mailto:ttraeger5592@gmail.com]
Sent: Monday, March 11, 2019 10:06 AM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] Reducing river flows

We have an irrigated farm downstream from Fort Peck and we are very concerned that lowering river flows to 4,000 cfs would have negative effects on our pump site and our ability to irrigate. We are opposed to this plan at least until a study is completed to determine possible negative effects on pump sites, as well as negative impacts on the ability to irrigate.

Thanks,
Tyler Traeger

Sent from my iPhone

From: Vanosdall, Tiffany CIV USARMY CENWO (US)
To: Quinn, Aaron T CIV USARMY CENWO (US); Ridenour, Clayton J CIV USARMY CENWO (US)
Subject: FW: [Non-DoD Source] Irrigation on Missouri
Date: Saturday, March 16, 2019 4:56:40 PM

Sent with BlackBerry Work
(www.blackberry.com)

From: Salak, Jennifer L CIV USARMY CENWO (US) <Jennifer.Salak@usace.army.mil <mailto:Jennifer.Salak@usace.army.mil> >
Date: Saturday, Mar 16, 2019, 1:50 PM
To: Vanosdall, Tiffany CIV USARMY CENWO (US) <Tiffany.K.Vanosdall@usace.army.mil <mailto:Tiffany.K.Vanosdall@usace.army.mil> >
Subject: FW: [Non-DoD Source] Irrigation on Missouri

-----Original Message-----
From: David Hardy [mailto:hardy7777@gmail.com]
Sent: Saturday, March 16, 2019 1:17 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] Irrigation on Missouri

Corps of Engineers,

I am a 56 year old Farmer using multiple private water rights out of the Missouri River to grow Sugar beets, Small Grains, Alfalfa & 500 head of Black Angus cattle. I have been an Irrigator on the Missouri river for over 30 years. My Eastern Montana operation is located in northern Richland county, just 4 miles west of the North Dakota state line. My operation relies heavily on irrigation water from the Missouri river as our annual rainfall is insufficient to raise high value crops.
I was alarmed to hear of your plan to intentionally lower the Missouri river flows during our peak Irrigation season. Lower river flows make irrigation difficult, expensive or, depending on the pumpsite, simply impossible.

Below are the unintended consequences of intentionally lowering Missouri river Flows:

1) extending electric lines, pipelines and anchor cables to enable pumps to reach the river to irrigate.
2) saturated river banks fall into the river when flows are lowered causing turbidity & loss of very valuable river frontage and access.
3) large amounts of debris in river. (when river levels later rise)
4) excessive trees and brush floating down the river catch on floating pumps causing capsize of floating electric pumps.
5) river becomes impossible to navigate.
6) Boat ramps become unusable.
7) Noxious weeds appear on large sandbars
8) Cattle are able to simply walk around existing river bank fences, losing Bulls in summer months is devastating to breeding.
9) Cattle water access becomes dangerous as cattle must jump down a sand cliff to drink, often cattle are unable to get back up to dry land and eventually drown.
10) Irrigaters are now lifting water 6 to 10 feet higher, which requires significantly more energy cost and decreases pump flows.
11) Timing of water is critical to growing crop. This proposal will make irrigation less reliable when needed.

12) This proposal will almost certainly negatively affect the Missouri river and all people who rely on it.

Farming and ranching is a difficult way to earn a living. Commodity prices are currently down across the board. Intentionally lowering river levels by the Army Corp of Engineers will almost certainly create more financial hardships on an already over stressed industry.

I respectfully ask that you reconsider your plans to intentionally lower the Missouri river flows during our peak irrigation season.

Sincerely,

David Hardy
35150 CR 147
Fairview, MT 59221

Phone 406-489-7777

From: Vanosdall, Tiffany CIV USARMY CENWO (US)
To: Quinn, Aaron T CIV USARMY CENWO (US); Ridenour, Clayton J CIV USARMY CENWO (US)
Subject: FW: Comment to Pallid Sturgeon Flow
Date: Sunday, March 24, 2019 11:44:26 AM

Sent with BlackBerry Work
(www.blackberry.com)

From: Salak, Jennifer L CIV USARMY CENWO (US) <Jennifer.Salak@usace.army.mil <mailto:Jennifer.Salak@usace.army.mil> >
Date: Saturday, Mar 23, 2019, 2:40 PM
To: Vanosdall, Tiffany CIV USARMY CENWO (US) <Tiffany.K.Vanosdall@usace.army.mil <mailto:Tiffany.K.Vanosdall@usace.army.mil> >
Subject: FW: Comment to Pallid Sturgeon Flow

-----Original Message-----
From: Ron Garwood [mailto:ron.garwood@hotmail.com]
Sent: Friday, March 22, 2019 4:57 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] Fw: Comment to Pallid Sturgeon Flow

Sent from Windows Mail

From: Ron Garwood <mailto:ron.garwood@hotmail.com>
Sent: Friday, March 22, 2019 3:54 PM
To: Ron Garwood <mailto:ron.garwood@hotmail.com>

Sent from Windows Mail

This is an addition to the comments that I turned in at the Fort Peck meeting regarding the Fort Peck Flow Modification Test for Pallid Sturgeon Recovery

The success of the introduction of Pallid Sturgeon frye into the Milk and Missouri River should be assessed before this flow modification test is implemented. Also The COE feels the Yellowstone and upper Missouri Rivers are the same considering the recovery of the Pallid Sturgeon, therefore the success of the runway around the intakes at Glendive should be considered before this Flow Modification Test is attempted.

I am an irrigator who has a irrigation pump site on the Missouri River and I have water rights to irrigate during the hot and dry June and July months. The low flows that the COE has proposed (4000 CFS) isn't enough to keep my intake going. I need 6000 CFS from the tunnels, through the powerhouses to be able to keep a head of water to irrigate my alfalfa and wheat for my farm operation. If there is fluctuation from the power houses, I need at least 7000 CFS. We need a pump survey of all of the pump sites on the river to determine the elevation of the water to know how much water is necessary to satisfy the irrigators and the fisheries. This site is about 2 miles above the Fort Peck spillway and the high waters of the Milk River and the high amount of flows from the spillway in 2011 backed the water up at my pump site by about 8 feet in elevation so this could be considered if an elevation and flow pump survey is done!

In conclusion most of us irrigators are still in debt paying for our land, irrigation improvements and our operating loans and we need to irrigate in the summer to survive. If we have had about 5 inches of rain in a week, then we

wouldn’t have to irrigate for maybe a month. This study should be postponed if the snowpack is below normal in the Missouri basin above Fort Peck!

Sincerely Ronald Garwood

COMMENT FORM (continued)

Please attach additional pages as needed.

FORT PECK DAM TEST RELEASE ENVIRONMENTAL IMPACT STATEMENT

Scoping Comment Form

The U.S. Army Corps of Engineers invites scoping comments on the Fort Peck Dam Test Release Environmental Impact Statement. The EIS will document the formulation and evaluation of test releases from Fort Peck Dam intended to benefit the Federally endangered pallid sturgeon. The project description is available at: www.moriverrecovery.org. The comment period will run through March ~~11~~ 26, 2019.

How to submit your comments during or following this meeting:

- **Comment Forms**—Complete and drop off a comment form before you depart the meeting or mail the form to the address provided below postmarked by March ~~11~~ 26, 2019.
- **By Email**—Scoping comments can be emailed to: cenwo-planning@usace.army.mil
- **Written Comments**—Mail, postmarked by March ~~11~~ 26, 2019, to:

  U.S. Army Corps of Engineers
  Omaha District
  ATTN: CENWO-PM-AC – Fort Peck EIS Comments
  1616 Capitol Avenue
  Omaha, NE 68102

All information submitted will become part of the public record for the project.

COMMENT FORM

All information received will be included as part of the public record.

Name: David Anderson

Mailing Address: 231 SRR

City: Nashua State: MT Zip Code: 59248

Email:

Organization you represent (if any):

Date: March 16 2019

- ✓ *Please write legibly so your comments can be recorded completely and accurately.*
- ✓ *Please complete and drop this form in the box provided (or mail it to the address provided). Attach additional pages if necessary.*

Is playing God again? When you try to help one species how many others are affected?

Being an irrigator it's going to be trouble as it can't simply add a pipe to pump water.

Also Bank erosin will be terrible from the up and down river Level. When the sandy banks shed water the banks cave in. Who knows how much water we'll have in 2 years? I'm afraid we're running out of fresh water now, with what we do with it.

Please let me know of any news regarding this. Why did the news release stop on the projected flow?

Thanks

received
3-22-19

US Army
Corp of Engineers
Omaha District
RTNWO-PM-RC Fort Peck

Dear Sirs,

My wife, Shirley, and I have owned and irrigated land next to the Missouri River since the early 1960's. Today our son, David, rents our land. Doug Smith also rents irrigated land from us.

Doug Smith pump site is at T27N R55E Sec 11. He irrigated approx 460 ac using 3 pivots and flood irrigation on the Missouri River.

Our son David uses 3 pump sites at these locations.

(1) T26N R59E Sec 6 NW¼ of the NW¼
(2) T26N R58E Sec. 2 NW¼
(3) T26N R58E Sec. 4 SE¼ of the SE¼

He uses 7 pivots and also flood irrigates upon approx 1500 to 1600 acres.

Our son, David, and Doug Smith grow approx 50% Sugar Beets and 50% grain (wheat or barley) with approx 100 acres of Alfalfa hay grown by Me.

The cost of planting & fertilizing
Sugar beets is approx. $550/ac
Grain is approx. $150/ac

This is a Hugh investment as crops must be sprayed & harvested too.

Machinery investment to plant, prepare ground,

spray and irrigation (electricity), man power, (hire 4 hired men for eight month (South Africans) and 1 hired man year around), harvesting grain (combine), harvesting sugarbeet (2 defoliators 2-6 row beet harvesters, 10 Semi Trucks & Tri axils

The equipment To grow & harvest a grain crop & beet crop Takes a Lifetime To own and a Lifetime To operate efficiently.

To jeperdize These costly crop by raising & Lower river level To accomidate fish (Pallid sturgeon) and birds (piping plover & Least Turn) Seems very cavilous and uncaring of the Farmer. These crops are needed by the market. The Free market will pay a promium for These crops and as Farmers we have spent a Lifetime making this produce available.

I am Told that There are approx 10,000 irrigated acres on the missouri River between Ft. Peck & Wellston N. Dak. These irrigaters & their investment can't be dismissed so lightly. They need To know thet their work & investment is appreciated and needed by The American people.

I, Too, would like To preserve endangered species but The costs of These experments is To great and can't be justified. Less costly methods should be studied.

Thank you for your consideration,

Sincerely, Boyd A Hardy

From:	Vanosdall, Tiffany CIV USARMY CENWO (US)
To:	Quinn, Aaron T CIV USARMY CENWO (US); Ridenour, Clayton J CIV USARMY CENWO (US)
Subject:	FW: Fort Peck Flows Comments
Date:	Tuesday, March 26, 2019 8:51:13 AM

Tiffany Vanosdall, PMP
Senior Plan Formulator/Project Manager

US Army Corps of Engineers
1616 Capitol Ave
Omaha, NE 68059
402-995-2695
tiffany.k.vanosdall@usace.army.mil

-----Original Message-----
From: Salak, Jennifer L CIV USARMY CENWO (US)
Sent: Tuesday, March 26, 2019 6:39 AM
To: Vanosdall, Tiffany CIV USARMY CENWO (US) <Tiffany.K.Vanosdall@usace.army.mil>
Subject: FW: Fort Peck Flows Comments

-----Original Message-----
From: Angi and Troy Candee [mailto:tacandee@hotmail.com]
Sent: Monday, March 25, 2019 7:37 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] Fort Peck Flows Comments

To Whom It May Concern:

We are thankful for this opportunity to make our concerns known about the Fort Peck Flow Test being proposed. This would affect our irrigation operation greatly at a time in agriculture when any more financial strain could put us out of business. Right now we pump out of back water and we rely on a decent flow or we will not be able to irrigate for the three months it is at a low rate. This would be devastating for us! We have hundreds of thousands of dollars of irrigation equipment that would be useless. We are making payments on pivots and rent land that would not be giving us any revenue. Our ranch relies on the alfalfa hay and corn silage we produce on this irrigated ground to feed our cattle in the winter. We sell hay as well to make a profit. We have been affected greatly by the low commodity prices and feel that losing our ability to irrigate could push us into bankruptcy. We can't afford to purchase hay and still make any profit. Any extra expenses to move pumps, change electrical lines or add pipe would be a financial burden that we can't withstand. Please consider our concerns and while you value the Pallid Sturgeon I ask that you remember the value of the hardworking American farmers and ranchers that can't take another blow.

Troy and Angela Candee (4th generation farmers)

Richland County Conservation District
2745 W Holly ST
Sidney, MT 59270
PH 406-433-2103 X 3001

Comments to ACOE on Fort Peck Flow Study-amended comments 3-22-2109

Richland County Conservation District- Sidney, MT 59270

Submitted by Danny Young, Chairman

The Richland County Conservation District along with Roosevelt County Conservation District own a dredge that is used to clean out pump sites that silt in over the winter along the Missouri River. Over the last 15 years at least 10 sites have consistently needed cleaned out. This work was needed with normal river flows. If the flow was dropped to 4000 CSF or event 6000 CSF during peak irrigation season several more sites would be impacted.

We are currently in the process of working to identify sites that maybe impacted and a solution for these irrigators if needed. This survey will come at a cost, who will help pay for it. Lowering the flow during the peak irrigation season will economically impact the landowners, operators and the community. It is imperative that a solution to assist those who will be impacted during this test. Preliminary analysis of 5 pumpsites show that lower the flows would result in faster flows and no water remaining in the side channels where the larvae have a better chance of survival.

Flows of 4000 CSF and 6000 CSF jeopardize the reliability of the delivery of power and the quality of service that the hydropower can supply.

Richland County Conservation District support the efforts of the MT FWP pallid Sturgeon recruitment. We feel this objective can be achieved if all stakeholders are able to work together to preserve the economy of everyone involved.

COALITION TO PROTECT THE MISSOURI RIVER

519 West 9th Street, Hermann, MO 65041 • (573) 690-2324 • protectthemissouri.com

March 25, 2019

Brigadier General Peter D. Helmlinger
U.S. Army Corps of Engineers, Omaha District
ATTN: CENWO-PM-AC – Fort Peck EIS Comments
1616 Capitol Avenue
Omaha, Nebraska 68102

Dear General Helmlinger:

On behalf of the Coalition to Protect the Missouri River (CPMR), thank you for the opportunity to present scoping comments regarding the proposed Fort Peck Dam Test Release Environmental Impact Statement. CPMR, established in 2001, represents a broad base of interests throughout the lower Missouri River Basin, including flood control, navigation, agriculture, and public energy and water utilities. We support responsible management of Missouri River resources and maintenance of congressionally authorized purposes of the river, including flood control, navigation, water quality and water supply. Many of our members are also active participants in the Missouri River Recovery Implementation Committee (MRRIC) and have provided feedback regarding your agency's proposed action at Fort Peck through that venue as well.

To begin, we are pleased that proposed hydrographs surrounding a Fort Peck test release do not involve a drawdown of Lake Sakakawea, which could cause widespread flooding and interior drainage concerns if such a large amount of water would need to be evacuated through the Missouri River mainstem system.

Regarding recruitment for pallid sturgeon, the USACE, USFWS, state agencies and others are encouraging actions on the upper Missouri River to be viewed as a "system" in conjunction with the Yellowstone River. In fact, a "system" approach is one that CPMR and other lower Missouri River stakeholders have been urging the agencies to consider for quite some time when it comes to evaluating the Mississippi River's role in pallid sturgeon recruitment as well. We encourage federal and state agencies to also see the lower Missouri and Mississippi Rivers as a system during future species recovery considerations and actions.

We are extremely concerned, however, about the precedent a test release could set for the future through potential efforts to replicate it from other mainstem reservoir dams. If a Fort Peck test release is to be implemented, it is imperative that CPMR and all interested parties be assured of its parameters and those of future experiments. Namely, stakeholders that live and work along the river need to know that test releases will not harm their livelihoods or property in any way

whatsoever. While this exercise is to benefit larval pallid sturgeon recruitment, USACE must not abandon its primary flood control and navigation missions in the process. It is essential that appropriate downstream flood control targets be established, based upon input received from impacted stakeholders, and we support USACE's completion of hydrologic and hydraulic modeling for the entire Missouri River to better determine how a test release would impact the rest of the mainstem system. This exercise must ensure that both downstream flow support and flood control be held harmless.

Further, with flood control as paramount in priority, the elevation of Fort Peck Lake should not be kept artificially high for the purposes of spilling water for pallid sturgeon recovery theories, and USACE should position itself to take advantage of natural high-flow events if it indeed pursues a test release. The 2011 flood and the current flooding serve as reminders of how quickly conditions can change in the basin, and any purposeful spillway release that adversely impacts flood control and interior drainage is of serious concern.

If a test release is indeed implemented, USACE must inspect the Fort Peck Dam spillway for any compromising damage and make all necessary repairs before the following runoff season begins. It must also be clear in communicating any risks associated with the spillway as a result of operation to aid endangered species recovery.

In regard to the proposed test release hydrographs, USACE should examine if the desired outcome for pallid sturgeon can be achieved by using less water from the system, and if an approximate 30,000 cfs release is truly necessary. Water conservation should be a priority during the evaluation of potential hydrographs. Before any implementation, USACE should identify what constitutes pallid sturgeon requirement success or failure, such as the number of sturgeon attracted by a test release, increase in larval count and survival. It should also specify the measurement techniques and methodology that will be used to deliver empirical data and set the specific threshold that must be reached to deem the test release successful. Again, clear criteria for determining to continue test releases should be determined with a direct link to the species recovery objective. For example, pallid sturgeon moving upstream does not equate to spawning behavior or recruitment.

The same method and rigor should apply to human considerations affected by a test release. USACE should clearly identify potential impacts, how it will measure the degree of the impacts, and what level of impact is tolerable. Before a test release is conducted, USACE should be able to communicate to stakeholders that they understand and have measured all impacts.

Water quality should be modeled downstream of a test flow release and should include turbidity, pH, hardness, alkalinity, common contaminants, and temperature. The current model seems to only examine water levels and availability of water, and disregards other factors that can affect water treatment as well as species recovery efforts. Water temperature should also be evaluated both before and after a test release. It is well documented that fish move in response to river

flows, but that movement is not necessarily related to reproduction. One element that is consistent across fish species during reproduction is temperature. Moving fish up the river will not result in recruitment if other conditions are inadequate.

We have long been on record in our opposition to changing the Missouri River Mainstem Reservoir System Master Water Control Manual (Master Manual) and we question if the proposed test release fully complies. USACE should specify the authorization within the Master Manual that allows this kind of flow modification. If the authorization does not currently exist, USACE should also specify what authority allows it to take action outside of the Master Manual. Lastly, to ensure this exercise is rooted in the best available science, USACE must subject it to review by the MRRIC Independent Science Advisory Panel (ISAP). We believe a test release from Fort Peck constitutes a major Missouri River Recovery Program action, requiring scientific scrutiny from this panel of experts.

Again, thank you for the opportunity to provide comments. Please do not hesitate to contact me should you have any questions.

Respectfully,

Dan Engemann
Executive Director

C: Tiffany Vanosdoll

Missouri Department of NATURAL RESOURCES
dnr.mo.gov
Michael L. Parson, Governor
Carol S. Comer, Director

March 13, 2019

Ms. Tiffany Vanosdall
U.S. Army Corps of Engineers, Omaha District
ATTN: CENWO-PM-AC (Fort Peck EIS)
1616 Capitol Avenue
Omaha, NE 68102

Dear Ms. Vanosdall:

The Missouri Department of Natural Resources welcomes the opportunity to provide comments as part of the initial scoping effort for the Environmental Impact Statement (EIS) for implementing test flow releases from Fort Peck Dam, Montana. The Department represents the State of Missouri for all interstate water issues and submits the following comments for consideration.

The proposed EIS is intended to formulate and evaluate test flow releases from Fort Peck Dam intended to benefit the pallid sturgeon (*Scaphirhynchus albus*). It is our understanding that the impetus of this proposed action is the January 19, 2018 letter from the Corps that amended the 2017 Biological Assessment (BA). This amendment to the BA committed the Corps to conduct field and engineering studies on fish and larvae usage and movement within the affected reach (level 1 studies) and to identify and implement hydrographs to test hypotheses to benefit the pallid sturgeon (level 2 studies). The focus of the studies and dam test releases will be formulated to help initiate spawning and reduce larval sturgeon drift between Fort Peck Dam and Lake Sakakawea.

Because these proposed flow alterations (tests) are intra-system operations, occurring from Fort Peck Dam to Garrison Dam, it is imperative that the Corps does not impact downstream flow support or flood control below Gavins Point Dam. The reservoir system should be sizable enough to absorb these small intra-system flow modifications without causing downstream impacts. By approaching the formulation and implementation of these test flows as simply an intra-system operation, the Corps could focus its analysis on the target region and greatly simplify the development of an EIS.

The Corps is undertaking efforts to improve conditions for the pallid sturgeon within both the target reach (Fort Peck Dam to Lake Sakakawea headwaters) as well as within the Yellowstone River. The *Fort Peck Adaptive Management Framework* states that these formulated test flows are to be structured to be complementary with proposed work and research in the Yellowstone River. Therefore, we recommend that the Corps take the opportunity to implement these test flows only when conditions present themselves. Being selective regarding implementation could

help to improve success within both of these target reaches. This would be preferred to a rigid engineering approach that attempts flow modifications from Fort Peck dam annually. Such an approach seems appropriate given that the pallid sturgeon spawns protractedly (not every year) and generates larvae in great numbers during spawning periods. Due to this spawning practice, creating fewer more ideal opportunities would be more beneficial than formulating highly regimented flow pulses annually from Fort Peck Dam based on rigid engineering criteria.

Robust stakeholder engagement and transparent decision-making are imperative in the formulation and successful completion of an EIS and ultimately the implementation of any proposed test flow out of Fort Peck Dam. During the recent Missouri River Recovery Management Plan EIS process, several basin stakeholders resubmitted their Draft EIS comments during the Final EIS comment period asserting that the Corps had not adequately considered their comments. We suggest a more proactive approach for outreach in order to gain input from potentially affected stakeholders and adjust plans as appropriate to avoid or minimize impacts.

The Department looks forward to continued participation and engagement with the Corps on the implementation of the MRRP. If you have any question or comments, please feel free to contact Mr. Bob Bacon with the Department's Water Resources Program, P.O. Box 176, Jefferson City, MO 65101, by phone at 573-751-6632, or by email at bob.bacon@dnr.mo.gov.

Sincerely,

MISSOURI DEPARTMENT OF NATURAL RESOURCES

Dru Buntin

Dru Buntin
Deputy Director

DB/bbm

FORT PECK TRIBES
Assiniboine & Sioux

March 25, 2019

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

Re: Fort Peck Tribes' Missouri River Management Plan and EIS Comments

Dear EIS Manager:

The Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation (Tribes) submit the following comments regarding the United States Army Corps of Engineers' (Corps) Final Missouri River Recovery Management Plan and Environmental Impact Statement (EIS) for Fort Peck Dam flow alternatives.

The Tribes rely on the Assiniboine and Sioux Rural Water Supply System (ASRWSS) for potable water on the Reservation. The ASRWSS is the Tribes' only source of water due to previous oil and gas development contamination. The ASRWSS is a $302 million water supply project which supplies water to 20,000 people (31,000 when completed) on the Fort Peck Indian Reservation and surrounding areas in Montana. The Bureau of Reclamation oversees the funding and construction of the ASRWSS. The ASRWSS's intake is located on the Missouri River near the town of Wolf Point. The ASRWSS was funded by the Fort Peck Reservation Rural Water System Act of 2000.[1] Under the Act "[t]itle to the Assiniboine and Sioux Rural Water System shall be held in trust by the United States..."[2] Currently, the United States holds title to the ASRWSS. "One of the fundamental common-law duties of a trustee is to preserve and maintain trust assets."[3]

The Tribes are concerned the EIS does not mention or considered the impacts flow changes could have on the Fort Peck Irrigation Project (Project). The Project diverts water from the Missouri River at two intakes located on the Reservation at Wiota and Frazer. This is federal trust property the United States has a duty to protect and maintain.[4] The Project was authorized by Section 2 of the Act of May 30, 1908.[5] Congress thereafter appropriated funds for construction of the Project.[6] The Project is the sole source of irrigation water for approximately 19,000 acres of lands on the Reservation. So far, the Corps has failed to assess the risks and impacts to this important economic resource from alternative flows.

The water that flows through these intakes is sacred to the Tribes and has been reserved for the Tribes' uses by the Federal Government and the State of Montana. The Fort Peck Indian Reservation was created by the Treaty of Fort Laramie and ratified by Congress by Act of May 1,

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[1] P.L. 106-382; 114 Stat. 1454. The ASRWSS is approximately 70% complete.
[2] 114 Stat., at 1453.
[3] *United States v. White Mt. Apache Tribe*, 537 U.S. 465, 475 (2003) (*citing Southeast & Southwest areas Pension Fund v. Central Transport, Inc.*, 472 U.S. 559, 572 (1985)).
[4] *Id.*
[5] 35 Stat. 558.
[6] *See*, Section 10 of the Act of August 24, 1912, 37 Stat. 518, 526; Act of June 30, 1913, 38 Stat. 77, 90.

1888.[7] The United States reserved all the water needed for the Tribes to use the land.[8] The amount from the Missouri River was quantified as 1,050,472 acre-feet per year in the Tribes' compact with the State of Montana.[9] This water right "is held in trust by the United States for the benefit of the Tribes."[10] This compact was approved by the Secretary of the Interior and the U.S. Attorney General.[11]

The Tribes are concerned that changes to the water releases at the Fort Peck Dam will adversely affect the Tribes' water intakes and water rights. All of these are held in trust by the United States for the Tribes, and therefore, the Corps has a duty to protect them. Changes to the flows from the Fort Peck Dam have the potential to increase the sediment load and drop the water level of the River. The EIS acknowledges, "[a]n intake cannot access water when the elevation falls below the intake screen. Suspended sediment can clog intake screens and impede the withdrawal of water through the intake."[12]

The Tribes believe it is important to protect the piping plover, the interior least tern, and the pallid sturgeon. The Tribes also believe this can be done without endangering tribal trust resources the Corps is obligated to protect. The Tribes request the Corps analyze how changes to release flows from the Fort Peck Dam will affect the Fort Peck Irrigation Project. The Corps must also ensure changes to these release flows do not prevent the Tribes' water intakes from accessing water either through lowering the water level or clogging the intakes. Finally, the Corps cannot obstruct the Tribes' water right to the Missouri River. The Tribes look forward to future consultation and collaboration with the Corps regarding Missouri River issues.

Thank you for your consideration of these crucial matters.

Sincerely,

Floyd Azure, Chairman
Tribal Executive Board
Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation

Majel Russell
Daniel Wenner
Elk River Law Office, P.L.L.P.
PO Box 948
Billings, MT 59101
(406) 259-8611

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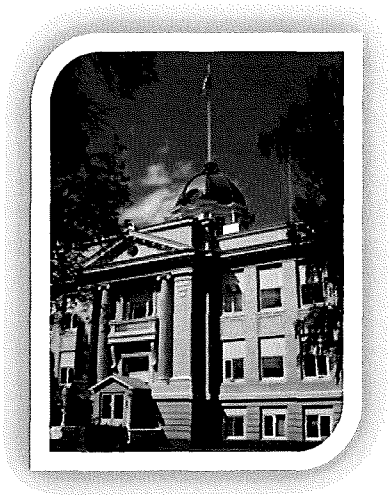
[7] 25 Stat. 113.
[8] *Winters v. United States*, 207 U.S. 564, 577 (1908).
[9] Mont. Code Ann. § 85-20-201 (2017).
[10] *Id.*; *See* 25 U.S.C. § 162a(d)(8).
[11] *Id.*
[12] EIS, at 3-578.

elkriverlaw@elkriverlaw.com
Attorneys for the Tribes



COUNTY OF RICHLAND

Office of

COUNTY COMMISSIONERS

Loren Young, *Chair*
Duane Mitchell, *Member*
Shane Gorder, *Member*

Voice: (406) 433-1706
Fax: (406) 433-3731
sgorder@richland.org
lyoung@richland.org
dmitchell@richland.org

March 18, 2019

US Army Corps of Engineers
Omaha District
ATTN: CENWO-PM-AC-Fort Peck EIS Comments
Omaha, NE 68102

To Whom it May Concern,

The Richland County Commissioners have the following comments concerning the Fort Peck Dam Test Release proposal.

- This test will impact the pump site facilities and livelihood of the irrigators in our county.
- It is imperative that a new river survey be conducted and funded to determine what the impact of this test would be on irrigation pumps-There are over 150 pump sites in this study area.
- The proposed lowering of the river flow (CFS) during peak irrigation season will also affect the electrical power supplies needed to operate pumps for the irrigators using electricity-wire cords from transformers to pump will need to be lengthened, possibly resized all at a cost to the irrigator. There are environmental issues that need to be addressed: if electricity and/or diesel tanks are placed in the flood plain. This will be necessary in some instances when the river is lowered.
- Timeline to develop alternatives is too short. More studying needs to be done on the impacts to the irrigators and the fish. It needs to start with a survey of the river, then interpreting the data for each site and figuring out a plan for impacted sites and the cost to implement the plan.

Approximately 50,000 acres of irrigated land would be impacted, 10,000 of which are in Richland County. Thank you for your time and consideration.

Sincerely,

Loren Young
Richland County Commissioner -Chair

Duane Mitchell
Richland County Commissioner

Shane Gorder
Richland County Commissioner

From: Vanosdall, Tiffany CIV USARMY CENWO (US)
To: Quinn, Aaron T CIV USARMY CENWO (US); Ridenour, Clayton J CIV USARMY CENWO (US)
Subject: FW: [Non-DoD Source] Fort Peck Releases EIS
Date: Monday, March 25, 2019 12:27:00 PM

Tiffany Vanosdall, PMP
Senior Plan Formulator/Project Manager

US Army Corps of Engineers
1616 Capitol Ave
Omaha, NE 68059
402-995-2695
tiffany.k.vanosdall@usace.army.mil

-----Original Message-----
From: Salak, Jennifer L CIV USARMY CENWO (US)
Sent: Monday, March 25, 2019 12:18 PM
To: Vanosdall, Tiffany CIV USARMY CENWO (US) <Tiffany.K.Vanosdall@usace.army.mil>
Subject: FW: [Non-DoD Source] Fort Peck Releases EIS

-----Original Message-----
From: Gary Macdonald [mailto:commissioner@rooseveltcounty.org]
Sent: Monday, March 25, 2019 12:10 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] Fort Peck Releases EIS

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

The Roosevelt County Commissioners have heard from our County Conservation District and some local irrigators about negative impact the planned flow test could have on their pump

sites. If our irrigators had to move their pumps during the irrigation season, because of this test, it would create an economic burden that they might not be able to afford.

Richland and Roosevelt County Conservation Districts are wanting to pursue a Pump Site River Study prior to the proposed river flow test, in all Counties below the dam, to identify pump sites that would be impacted by this proposed test. This study would be very expensive and we understand that they may be asking you for help. Roosevelt ask that you seriously consider helping them financially.

Thank You,

Gary A. Macdonald

Presiding Officer

Duane Nygaard

Member

Gordon Oelkers

Member

received
3-15-19

FORT PECK DAM TEST RELEASE ENVIRONMENTAL IMPACT STATEMENT

Scoping Comment Form

The U.S. Army Corps of Engineers invites scoping comments on the Fort Peck Dam Test Release Environmental Impact Statement. The EIS will document the formulation and evaluation of test releases from Fort Peck Dam intended to benefit the Federally endangered pallid sturgeon. The project description is available at: www.moriverrecovery.org. The comment period will run through March 11, 2019.

How to submit your comments during or following this meeting:

- **Comment Forms**—Complete and drop off a comment form before you depart the meeting or mail the form to the address provided below postmarked by March 11, 2019.

- **By Email**—Scoping comments can be emailed to: cenwo-planning@usace.army.mil

- **Written Comments**—Mail, postmarked by March 11, 2019, to:

  U.S. Army Corps of Engineers
  Omaha District
  ATTN: CENWO-PM-AC – Fort Peck EIS Comments
  1616 Capitol Avenue
  Omaha, NE 68102

All information submitted will become part of the public record for the project.

COMMENT FORM

All information received will be included as part of the public record.

Name: Tom Ruffatto

Mailing Address: 31334 CR 146

City: Brockton State: MT Zip Code: 59213

Email:

Organization you represent (if any): Richland County Conservation District and local irrigators

Date: March 8

- ✓ *Please write legibly so your comments can be recorded completely and accurately.*
- ✓ *Please complete and drop this form in the box provided (or mail it to the address provided). Attach additional pages if necessary.*

I am asking for an extention of the comment period for the Fort Pck test release. EIS. My wife and I are concerned about the effective advertising of the public meetings. Advertising your meeting in the Williston paper does not adequatly inform area irrigators in the Poplar/ Culbertson area. Or advertising in the Fort Peck/ Glasgow area does not reach our area. Even the Sidney paper arrives at our rural post box at least one week late as it travels to Billings from Sidney, then back up to Brockton, and then to our rural box. And we only receive our mail 3 days each week.

Irrigators need to know when specific test releases will be and when normal flows will cease. Peak irrigation is during July and August and will affect what crops are planted and what crops can survive with less water. Lowering the flow during the peak irrigation

COMMENT FORM (continued)

season will economically impact our farming operation our ability to repay loans, and our survival as a family farm.

The only reason we knew about the meetings in Glasgow and Williston is because I am on the Richland County District Board. I did attend the Williston presentation and was shocked at how few irrigators were present. I believe this lack of attendance was not due to apathy or disinterest but lack of effective advertising on the part of the US Army Corp of Engineers.

Please attach additional pages as needed.

Tom & Lynette Ruffalo

COMMENT FORM

All information received will be included as part of the public record.

Name: Lynette C. Ruffatto

Mailing Address: 31334 CR 146

City: Brockton State: Mt Zip Code: 59213

Email: ruffatto@hotmail.com

Organization you represent (if any):

Date: March 11

- ✓ *Please write legibly so your comments can be recorded completely and accurately.*
- ✓ *Please complete and drop this form in the box provided (or mail it to the address provided). Attach additional pages if necessary.*

Thank you for attending the Comment Period of the Fort Peck Test Release EIS. I am still concerned about the effective advertising of your public meetings and many of our neighbors did not know about the meetings in Williston and Glasgow.

I am requesting another meeting put on by the U.S. Army Corps of Engineers in Culbertson or Poplar.

My neighbors do not know what to comment on as they did not hear the presentation. They only knew my biased opinion.

I know that at Williston you represented every division of the corps. I understand the logistics of assembling everybody. But I'm sure a scaled down assembly would be satisfactory. It seemed to me only a few corps representatives answered public questions.

Thank you

COMMENT FORM (continued)

Here's how the last June rise in 2011 affected us — We never put a pump in. It took all summer to clear debris from our fields and replant our crops.

We are still recovering from the financial loss — we still had to repay loans even though we had no crop.

Please attach additional pages as needed.

FORT PECK DAM TEST RELEASE ENVIRONMENTAL IMPACT STATEMENT

Scoping Comment Form

The U.S. Army Corps of Engineers invites scoping comments on the Fort Peck Dam Test Release Environmental Impact Statement. The EIS will document the formulation and evaluation of test releases from Fort Peck Dam intended to benefit the Federally endangered pallid sturgeon. The project description is available at: www.moriverrecovery.org. The comment period will run through March 11, 2019.

How to submit your comments during or following this meeting:

- **Comment Forms**—Complete and drop off a comment form before you depart the meeting or mail the form to the address provided below postmarked by March 11, 2019.
- **By Email**—Scoping comments can be emailed to: cenwo-planning@usace.army.mil
- **Written Comments**—Mail, postmarked by March 11, 2019, to:

  U.S. Army Corps of Engineers
  Omaha District
  ATTN: CENWO-PM-AC – Fort Peck EIS Comments
  1616 Capitol Avenue
  Omaha, NE 68102

All information submitted will become part of the public record for the project.

From:	Vanosdall, Tiffany CIV USARMY CENWO (US)
To:	Quinn, Aaron T CIV USARMY CENWO (US); Ridenour, Clayton J CIV USARMY CENWO (US)
Subject:	FW: [Non-DoD Source] Ft peck flow test
Date:	Tuesday, March 26, 2019 8:51:09 AM

Tiffany Vanosdall, PMP
Senior Plan Formulator/Project Manager

US Army Corps of Engineers
1616 Capitol Ave
Omaha, NE 68059
402-995-2695
tiffany.k.vanosdall@usace.army.mil

-----Original Message-----
From: Salak, Jennifer L CIV USARMY CENWO (US)
Sent: Tuesday, March 26, 2019 6:39 AM
To: Vanosdall, Tiffany CIV USARMY CENWO (US) <Tiffany.K.Vanosdall@usace.army.mil>
Subject: FW: [Non-DoD Source] Ft peck flow test

-----Original Message-----
From: Neil Turnbull [mailto:nturnbull2@gmail.com]
Sent: Monday, March 25, 2019 11:15 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] Ft peck flow test

As a landowner and irrigator on the Missouri between Brockton and Culbertson, Mt I am writing to register my disagreement with this process. I have attended preliminary meetings with the federal fish and game people and have seen their presentations. I have no way to verify the study they have conducted but have real reservations of their science.

This change as proposed will have a significant impact on our operation both economical but also severe damage will be done to the riverbank due to fluctuating flows on a massive scale.

During the high flows of 2011 we suffered a financial loss of between 75000 and 100000 dollars in crop loss and lack of irrigation. To repeat this type of impact so soon is a real problem for us as we are already stressed by low commodity prices.

Also during those high flows we suffered severe riverbank erosion and deposited about 5 acres of our land in front of the next pump site which has cost us in relocating that pump site. This erosion is a serious problem for us as well as all population along the river.

Please consider the plight of all people depending on the river when considering what I see as a flawed plan.

Thank you for your consideration,

Neil Turnbull

Sent from Mail <Blockedhttps://go.microsoft.com/fwlink/?LinkId=550986> for Windows 10

VALLEY COUNTY
CONSERVATION
DISTRICT
Local Common Sense Conservation

54059 US Highway 2 W, Suite 2
Glasgow, MT 59230-2846
(406) 228-4321 Ext. 101
vccdmt20@gmail.com

March 20, 2019

Scoping Comments by Valley County Conservation District
Regarding Fort Peck Flow Modification Test for Pallid Sturgeon Recovery

1. The Valley County Conservation District does not agree that the U.S. Army Corps of Engineers (COE) needs to have more tests of the flows from the Fort Peck spillway and through the powerhouse tunnels for recruitment of spawning of pallid sturgeon on the Missouri River below Fort Peck Dam. The COE and the U.S. Fish and Wildlife Service (USFWS) have probably found out from the high water flows from the spillway in the 1997, 2011 and 2018, that there has been some natural spawning occurring, also from the high warm water flows from the Milk River into the Missouri River near the spillway.

2. In about 2003, there was proposal from the COE called the Spring Rise, which to put a larger amount of warm water flows into the cool Missouri River water. This proposal was not well accepted by irrigators on the Missouri River and others. There were a couple of other proposals that was brought up by the COE and other stakeholders that were alternatives to putting warmer water into the system. One was to put curtains on the intake on the Fort Peck Lake which would put warmer water from the surface of Fort Peck Lake through the tunnels into the generators so that no loss of generation would occur. Any water through the spillway is lost generation for the COE. The other alternative was to build a runway around the irrigation intakes near Glendive. This was the proposal at that time that was agreed by most of the organization to help the recovery of pallid sturgeon. The continued stocking of pallid sturgeon fry from fish hatcheries into the Missouri and Yellowstone rivers have had some success. The success from the Intake runway should be assessed before there should be any more money spent by the COE on the flow modification test!!

Also, the success of the introduction of pallid sturgeon fry into the Milk and Missouri Rivers should be assessed before this flow modification test in implemented.

3. We feel that the irrigators in this river system have water rights to irrigate during the June to August for their crops when the flow modification has extremely high flows that would cause erosion to pumpsites and could cause some irrigators to have to stop irrigating. Also, the low, 3000 to 5000 cfs flows would cause irrigators in the Missouri River just below the power houses and above the spillway to not have enough water to keep the pump intakes from sucking air and losing their prime. In normal rain years and below normal rain year, irrigators need a supply of

water to raise their crops to survive. No flow tests should be done on dry years or when there is below-normal snowpack in the mountains in the Missouri River basin!

4. The Missouri River channels has gotten deeper in recent years as there isn't any sediment going into the river until the spillway flows or when the Milk River flows into the Missouri River. Therefore we need a survey done in the Missouri River up to the dredge cuts area and down the Missouri River. Also, the lower Milk is affected by flows from the Missouri River. Also, high flooding flows from the Milk River backs water up the Missouri and can cause severely high water at pump sites. Survey needs to be done at each pump site so the owner and COE know how high the water has to be to irrigate continuously. To be taken into consideration, too, is the extremely high speed of boats in the river whose wakes can cause centrifugal pumps to lose their prime. If this happens the irrigator has to re-prime the lower pump with a smaller priming pump powered by gas or electric. This usually happens when the irrigator isn't around and you lose your head of water in the ditch and field and you have to start over!

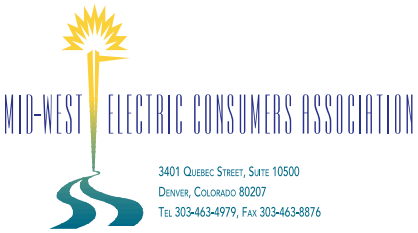
5. The flows from the warm, turbid Milk River mixed with the water of the Missouri have been known to make pallids go up the Milk River to attempt to spawn. This flow through the St. Mary diversion is very important to native and introduced fish species including the pallid sturgeon reproduction. This warm water from the Milk comes through the aging St. Mary diversion system which shows the importance of funding the system to help the viability of the pallid sturgeon. Other native and introduced fish species, irrigators on the Hi-Line, many towns that get their drinking and utility water from this flow, depend on the Milk River. If it weren't for the flows through the St. Mary diversions system, the Milk River would have stopped flowing in places near Nashua in the past!

6. The flows from the powerhouses during low flow periods should not fluctuate between night and day, just because Fort Peck is a peaking power plant. Overnight up and down fluctuations can cause river bank erosion, breakup in the tunnels, and plug up screens on irrigation intakes. Irrigation intakes could then lose prime in windy conditions and from fast motor boat waves.

Thank you for considering our input,

Ronald A Garwood

Ron Garwood, Area IV Supervisor
Valley County Conservation District



March 26, 2019

BY ELECTRONIC MAIL

U.S. Army Corps of Engineers
Omaha District
ATTN.: CENWO-PM-AC-Fort Peck EIS Comments
1616 Capitol Avenue
Omaha, NE 68102

RE: Scoping Comments on Fort Peck Dam Test Release Environmental Impact Statement

These comments are submitted on behalf of Central Montana Electric Power Cooperative and the Mid-West Electric Consumers Association in the matter of scoping of the environmental impact statement being prepared for proposed experimental flows at Fort Peck dam. Both organizations represent hydropower stakeholder interests on the Missouri River Recovery Implementation Committee (MRRIC).

The purpose of these comments is to describe some of the elements that we believe should be considered in the scoping of the impacts of the proposed experimental flows at Fort Peck. The comments provide some of the important and unique characteristics of Fort Peck's electric generation and the region's transmission system. These comments also raise questions about how the proposed experimental flows would affect the electric generation from Fort Peck and transmission system reliability.

First and foremost, we strongly believe the proposed Fort Peck flow experiment should not in any way degrade the delivery of power to customers or the quality of that service per the North American Electric Reliability Corporation's (NERC's) Reliability Standards. As such, we believe that the proposed Fort Peck flow experiment should immediately be halted if either of the above conditions is not met and not resumed until the delivery of power or the quality of the power delivered is restored to NERC Standards.

The following are elements we believe should be considered as part of the scope of the environmental impact analysis:

1. Electric energy output will change under the proposed flow experiment. All flows greater than 15 thousand cubic feet per second (kcfs) will exceed the capacity of the existing generating units and will need to be passed over the spillway, thus causing a reduction in future energy production. Further, the proposed experimental flows will likely cause a change in the seasonal and hourly energy output that would otherwise occur, thus impacting the value of the energy output. How will the flow experiment impact energy production and value due to water passing over the spillway? Also, will the experiment be designed so as to minimize the amount and cost of spill so that power can be generated with that water at a later date?

2. We understand that variations of flows within the day and within the week are necessary to maintain delivery of power along with its quality and reliability. Will the proposed flows allow adequate increases or decreases in power generation for balancing purposes, while maintaining an average kcfs through the appropriate period? If there are limits to the power generation variability please study and report how power quality and delivery will be maintained consistent with NERC Standards.

3. Low experimental flows will impact the generation capacity. Capacity from Fort Peck is necessary to support loads and transmission reliability in the Bakken area of oil development in Montana and North Dakota, particularly when loads are high in July and August. How will the low experimental flows impact the generation capacity and what is the current and forward change in the value of that capacity as a result of these impacts?

4. Fort Peck generation provides stability and reliability to the Western Area Power Administration's (WAPA's) transmission system for over 200 miles west of Fort Peck. Energy is also necessary west of Fort Peck when loads peak, usually in July, and thousands of residential and irrigation customers are receiving service. How will the proposed experimental flows impact serviceability of firm customer loads, as well as the reliability and stability of the transmission grid, especially during peak periods? What is impact to service of our firm customer loads, as well as to the value of the reliability and stability provided from Fort Peck generation?

5. Two of the five generators at Fort Peck can shift between the Eastern and Western Interconnections. This is a valuable characteristic unique to Fort Peck that supports the reliability and stability of the transmission systems in both directions. How will this unique characteristic be impacted by the test flows, especially during periods of low flows?

6. At the proposed minimum flows of 4 kcfs:

    a. Will it still be possible to generate and/or transfer power between the Eastern and Western Interconnections?
    b. Will flows at this level cause the Fort Peck generators to fall into their "rough zones?" Running the generators in their rough zones will increase the operation and maintenance costs of the units and increase the forced and planned outage rates.

7. Will any portion of the proposed flows less than 15 kcfs pass over the spillway? If the answer is yes, please study the impacts to power generation and its resulting impacts to firm load service and any transmission impacts consistent with other questions in this letter bases on the minimum remaining flows through the generators.

8. WAPA's transmission system west of Fort Peck is a radial system. Without Fort Peck generation, there is limited long-term firm transmission service available to serve the load. Will the loss of Fort Peck generation require the use of non-firm transmission, point-to-point transmission service (if available) through Northwestern Energy's constricted Great Falls cutplane, or will it require the construction of a new transmission path to support that load?

9. To the degree that the issues below are not addressed in the questions above, please indicate how the following would be impacted by any reductions in generation at Fort Peck:

    a. System Planning
    b. Allotted/Accredited Capacity
    c. Marketing Impacts
    d. Balancing Authority Operations (East and West)

10. Will the proposed experimental flows require changes to the current Master Manual?

Thank you for considering these comments. Please contact us if you have any questions.

Sincerely,

Douglass R. Hardy
Manager, CMEPC

William K. Drummond
Executive Director, MWEC

Thomas M. Horgan
Director - Midcontinent Office

1113 Mississippi Avenue
Suite 108
St. Louis, MO 63109

thorgan@americanwaterways.com
314.446.6470

March 26, 2019

Brigadier General Peter D. Helmlinger
U.S Army Corps of Engineers, Omaha District
ATTN: CENWO-PM-AC—Fort Peck EIS Comments
1616 Capitol Avenue
Omaha, NE 68102

RE: Fort Peck Dam Test Flow Release Environmental Impact Statement (EIS).

Dear General Helmlinger:

On behalf of The American Waterways Operators (AWO), the national trade association for the tugboat, towboat and barge industry, thank you for the opportunity to comment on the Corp's notice to prepare an Environmental Impact Statement (EIS) for implementing test flow releases from Fort Peck Dam, Montana. The U.S. tugboat, towboat and barge industry is a vital segment of America's transportation system. The industry safely and efficiently moves 763 million tons of cargo each year, including more than 60 percent of U.S. export grain, energy sources such as coal and petroleum and other bulk commodities that are the building blocks of the U.S. economy. The fleet consists of nearly 5,500 tugboats and towboats, and over 31,000 barges. These vessels transit 25,000 miles of inland and intracoastal waterways, the Great Lakes and the Atlantic, Pacific and Gulf coasts.

The tugboat, towboat and barge industry is not only an integral part of the U.S. intermodal transportation system, but also the safest, most affordable and most fuel-efficient, with the smallest carbon footprint of any surface transportation mode. Actions that adversely impact the efficiency of waterborne commerce, or that result in the diversion of cargo to other modes of transportation negatively impact the U.S. economy, public safety and the environment.

AWO has represented navigation stakeholders on the Missouri River Recovery Implementation Committee (MRRIC) since its inception in the fall of 2008. Authorized by Congress in Section 5018 of the 2007 Water Resources Development Act (WRDA), MRRIC is comprised of nearly 70 representatives of tribes, stakeholder groups, states, and federal agencies. The Committee has the following purposes:

- Providing guidance to federal agencies on the existing Missouri River recovery plan, including priorities for recovery work and implementing changes based on the results of adaptive management.

- Developing recommendations that recognize the social, economic and cultural interests of stakeholders, mitigate the impacts on those interests and advance the multiple uses of the river.

AWO has several comments, questions and concerns regarding the Corps' proposal to implement and evaluate test flow releases from Fort Peck Dam in Montana to benefit the pallid sturgeon. First, AWO is concerned that the test flows could have impacts on dam safety. The Corps' previous analysis indicated that modifying infrastructure and operations at Fort Peck to improve release timing and duration would result in unacceptable dam safety risks. If the dam is threatened, congressionally authorized purposes are threatened.

At the recent MRRIC Adaptive Management Workshop during the Joint Fish/Human Considerations team meeting, the Corps told stakeholders that the previous dam safety concerns related to Fort Peck test flows are no longer valid because the agency replaced the spillway after the 2011flood. However, it is our understanding that these spillway repairs were made with emergency funding and did not provide for significant upgrades to the spillway. The emergency repairs improved the damaged spillway, but only restored this infrastructure to its previous condition. Since spillways are only designed to be used in extreme flood events, this leads AWO to ask the following question:

After all the NEPA and other processes are completed, in what years and how often will the test flows at Fort Peck be implemented?

This same question was asked to a member of the Corps' technical team for the pallid sturgeon, and he responded that the answer to this question depends on several variables, conditions and caveats that may or may not present the right opportunities. This answer from the member of the fish technical team is quite concerning because it does not contain the critical information regarding the frequency of these test flows and their impacts to the spillway. Since spillways are only constructed to be utilized during extreme flood events, the Fort Peck Spillway has only been utilized 4 or 5 times in its 80-year history. Activating the spillway more frequently than designed can cause erosion of the concrete wall underneath leading to serious dam safety problems. A Fort Peck Dam failure would have lasting impacts on the lower river basin and the primary authorized purposes of navigation and flood control. If the Corps proceeds with the test flow releases, then it must ensure there are funds to inspect the dam and spillway for any damage and make all the necessary repairs before the following runoff season.

In addition to dam safety, AWO is concerned about the precedent that Fort Peck test flow releases could set for future management actions on the river. If these proposed test releases are implemented, AWO and all other stakeholders need to be assured that this type of action will be limited to Fort Peck.

Third, while these test flows are designed to benefit larval sturgeon recruitment, the Corps must not abdicate its primary missions of flood control and navigation during these experiments. AWO strongly supports the Corps' completion of hydrologic and hydraulic modeling for the entire Missouri River to better determine how these test releases would impact the rest of the mainstem reservoir system. Furthermore, the Corps should also examine if a 30,000 cfs release at Fort Peck is necessary to attain successful results for the pallid sturgeon. The Corps must also determine if a test flow release of 30,000 cfs violates the current Missouri Master Manual. Any

violation of the current Master Manual would be an unacceptable outcome to downstream stakeholders. It is imperative that the Corps hold downstream (below Gavins Point Dam) flow support and flood control harmless and avoid other downstream impacts.

AWO is very pleased that the current Fort Peck EIS does not include a drawdown of Lake Sakakawea, which could cause flooding, interior drainage harm and significant navigation challenges if this water would need to be evacuated.

In terms of the proposed recruitment plan for the sturgeon, the Corps, the USFWS, state agencies, and other groups are encouraging actions on the upper Missouri River to be viewed as a "system" in conjunction with the Yellowstone River. Ironically, a "system" approach is not being incorporated when it comes to evaluating the Mississippi River's role in pallid sturgeon recruitment and recovery, something several lower Missouri River Stakeholders including AWO have endorsed for years. Since the Corps is taking this approach with the upper Missouri in conjunction with the Yellowstone River, AWO once again urges the Corps to adopt this same "system" approach with the lower Missouri and Mississippi rivers for sturgeon recruitment and recovery.

Finally, to ensure that the rationale behind these test flows is rooted in the best available science, the Corps must subject the data, science and methodologies justifying these test flows to review by the MRRIC Independent Science Advisory Panel (ISAP). AWO believes that test releases from Fort Peck meet the definition of major Missouri River Recovery Program action, and thus require full scrutiny and peer review from this panel of scientific experts.

Again, thank you for the opportunity to provide comments. Please do not hesitate to contact me should you have any questions.

Sincerely,

Thomas M. Horgan
Director – Midcontinent Office

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March 26, 2019

U.S. Army Corps of Engineers
Omaha District
ATTN: CENWO–PM–AC–Fort Peck EIS
1616 Capitol Avenue
Omaha, NE 68102

Re: U.S. Army Corps of Engineers scoping for test flow releases from Fort Peck Dam, Montana to benefit Pallid Sturgeon

Montana Fish, Wildlife & Parks (FWP) appreciates the opportunity to provide comment to the U.S. Army Corps of Engineers (USACE) in their scoping process to prepare an Environmental Impact Statement for implementing test flow releases from Fort Peck Dam, Montana to benefit Pallid Sturgeon in the upper Missouri River basin (Upper River).

Action at Fort Peck Dam is imperative to fulfilling one of the fundamental sub-objectives in the Missouri River Recovery Management Plan (MRRMP; USACE 2018b): "Increase Pallid Sturgeon recruitment to age-1." Montana Fish, Wildlife & Parks is encouraged by the progressive direction the USACE and U.S. Fish & Wildlife Service (USFWS) have taken to advance and support greater attention to adaptive management actions in the Upper River. The amended Biological Assessment (USACE 2018a) recognized the importance of implementing additional Level-1 (e.g., larval drift, adult movement) and Level-2 (e.g., test flow releases from Fort Peck Dam) studies within the MRRMP. Furthermore, that justification and support was apparent in the USFWS's "no jeopardy" determination in the subsequent Biological Opinion (USFWS 2018), as well as in clarifying remarks in the development of the draft Fort Peck Adaptive Management Framework (FPAMF; Kruse to Galat et al.; dated February 21, 2019; USACE 2018c). While experimental test flow releases focus on benefits to Pallid Sturgeon, it is important to note that FWP manages all of Montana's fish species, including those designated as endangered, and it is the State of Montana's policy that those species and their waters be protected and preserved (§87-1-201(9)(a)(ii), MCA; §87-5-103(2)(b), MCA; §87-5-501, MCA). Experimental test flow releases will undoubtedly improve the understanding of how limiting environmental factors may be influencing recruitment in Pallid Sturgeon in the Upper River. However, as short-term learning leads to long-term adaptive management, additional factors influencing the aquatic community in the interconnected Missouri River-Yellowstone River ecosystem must be considered, including managing temperature.

Montana Fish, Wildlife & Parks supports the approach taken in the FPAMF to include development of potential actions at immediate and long-term scales. To help identify the scope of these efforts and potential issues that might be relevant for consideration in the development of alternatives as part of the anticipated Environmental Impact Statement, FWP would like to provide comment grouped into the following four main points:

An opportunistic approach to experimental test flows cannot perpetuate inaction at Fort Peck Dam

The opportunistic approach to provide experimental test flow releases from Fort Peck Dam is reasonable, as water supplies and reservoir storage may be insufficient to support such efforts in some years. Nonetheless, FWP would like to ensure that implementation is not delayed. Until recently, Upper River learning and advancement in the Science and Adaptive Management Plan (SAMP) was predicated on achieving improved bi-directional fish passage at Intake Diversion Dam (Intake) on the Yellowstone River, potentially delaying improvements to Fort Peck Dam 15-years or longer (USACE 2018b). However, including concurrent consideration of test flow releases from Fort Peck Dam "to be complementary to" the evaluation of bi-directional fish passage at Intake greatly improves the approach to progress through the developed "suite of actions that meet USACE ESA responsibilities," (USACE 2018b; Ponganis to Thabault; dated February 4, 2019). The USACE should be commended for their efforts to see greater implementation of recovery actions for Pallid Sturgeon in the Upper River.

Criteria under which test flows would be implemented at Fort Peck Dam must be well-defined

Montana Fish, Wildlife & Parks recognizes the multifaceted nature of implementing test flow releases from Fort Peck Dam and appreciates the inclusion of the physical environment and human considerations in the design of the FPAMF. However, greater decision criteria must be included to determine how and when test flow releases might be implemented. While the FPAMF outlines decisions necessary to implement flow test releases from Fort Peck Dam, greater detail beyond physical aspects of the hydrological components is essential (e.g., inclusion of the associated aquatic community, impacts to Pallid Sturgeon recovery) (USACE 2018c). Furthermore, to capture the influence of relevant system contributions in the development of test flow releases, FWP requests that the USACE utilize a gaging location further downstream (i.e., Wolf Point). In doing so, modeling can better illustrate projections for source contributions (e.g., powerhouse, spillway, Milk River) and develop release targets that more-specifically incorporate and recognize potential impacts to human considerations, necessary biological components, and expected timing and duration of flow test releases. Dissecting implementation scenarios in this manner would help provide explicit thresholds for considerations in system storage and water availability and would better-indicate necessary conditions to elicit responses from Pallid Sturgeon; be it at the confluence of the Missouri and Yellowstone rivers, the confluence of the Missouri and Milk rivers, or at the spillway of Fort Peck Dam.

Success must be clearly identified in the objectives of flow test releases from Fort Peck Dam

The complexities of implementing complimentary management actions in the interconnected Missouri River-Yellowstone River ecosystem is recognized by FWP and we commend the USACE for emphasizing the system's shared nature. Given this challenge though, it is imperative that the purpose for implementing flow test releases from Fort Peck Dam is clearly identified. Equally

important, success (and the metrics used to define success) must be explicitly defined in order to effectively evaluate implementation efforts and to ultimately progress through the SAMP. A test flow release is anticipated to be classified as a Level-2 study (in-river testing), where "a population-level response IS NOT expected," and implementation would be enough to see a measurable response in Pallid Sturgeon (USACE 2018b). However, without a defined objective or criteria to evaluate success, it is difficult to know what would be needed through test flow releases from Fort Peck to contribute to the fundamental sub-objectives for Upper River Pallid Sturgeon (i.e., increase Pallid Sturgeon recruitment to age-1, maintain or increase numbers of Pallid Sturgeon until sufficient and sustained natural recruitment occurs) (USACE 2018b). Furthermore, test flow releases from Fort Peck Dam should not be framed in a "harmful" light regarding a limited pool of sexually mature Pallid Sturgeon that might also show volition to migrate past Intake. Evaluation of bi-directional fish passage at Intake should not come at the expense of inaction at Fort Peck Dam. While it is unknown whether individuals could/would move further upstream in the Missouri River/Yellowstone River, it is vital to understand how complementary efforts at Fort Peck Dam/Intake are related. Once objectives and success are defined, further collaboration with local Pallid Sturgeon experts (e.g., FWP, USFWS) is essential to ensure that effective monitoring is implemented.

Periods of low flows in the conceptual hydrographs are too low

Montana Fish, Wildlife & Parks has met with lower Missouri River irrigators several times over the past several months to better understand their potential concerns with test flow releases. There are approximately 140 irrigation pumps along the Missouri River from Fort Peck Dam to the confluence of the Missouri and Yellowstone rivers. Montana Fish, Wildlife & Parks believes a survey of these pump sites aimed at identifying water availability at varying discharges is required to better understand how a low flow period would potentially affect irrigators. While FWP is fully supportive of a flow test release, conditions proposed should strive to minimize impacts to local stakeholders. Montana Fish, Wildlife & Parks believes that increasing river discharge during the "Disperse" phase would not substantially change the likelihood of a successful test. Rather, from a fisheries perspective, increasing test flow releases during the "Disperse" phase of the hydrograph may enhance larval survival and minimize impacts to irrigator's pumping stations and power generation. During the 2016 Pallid Sturgeon larval drift and dispersal study, discharges of ~9,000 ft^3/s were sufficient for at least one individual to have survive and recruit to age-1 in the Missouri River downstream of the Milk River confluence (Kruse to Galat et al.; dated February 21, 2019). Furthermore, in simulated Pallid Sturgeon drift paths, lower discharges (4,000-6,500 ft^3/s) converged drifting particles within a more-restricted channel, limiting interception habitat (Marotz and Lorang 2018). Conversely, higher discharges (7,000-9,000 ft^3/s) flushed drifting particles from the thalweg into low-velocity habitats; thus, the proposed test flow releases of 4,000 ft^3/s during the "Disperse" phase are likely be too low to adequately disperse larval Pallid Sturgeon into suitable rearing habitat (Marotz and Lorang 2018).

Montana Fish, Wildlife & Parks appreciates the opportunity to provide comment to the USACE in the scoping process to prepare an Environmental Impact Statement for implementing test flow releases from Fort Peck Dam, Montana to benefit Pallid Sturgeon in the Upper River. Montana Fish, Wildlife & Parks has made significant contributions to Pallid Sturgeon conservation in the Upper River and has long-assisted the USACE in aspects of research and monitoring.

Thank you for your consideration and response to our comments. Montana Fish, Wildlife & Parks looks forward to collaborating with our federal partners to continue to protect and preserve the interconnected Missouri River-Yellowstone River ecosystem and its unique fish and wildlife species.

Sincerely,

Eileen Ryce
Fisheries Division Administrator

cc: Rachel Frost, Coordinator for Missouri River Conservation District Council
Wayne Nelson-Stastny, Pallid Sturgeon Recovery Coordinator for USFWS

DEPARTMENT OF NATURAL RESOURCES
AND CONSERVATION

STEVE BULLOCK, GOVERNOR
1539 ELEVENTH AVENUE

STATE OF MONTANA

DIRECTOR'S OFFICE: (406) 444-2074
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PO BOX 201601
HELENA, MONTANA 59620-1601

March 26, 2019

US Army Corps of Engineers, Omaha District
Attention, CENWO-PM-AC-Fort Peck EIS
1616 Capitol Avenue
Omaha, NE 68102

Re: Scoping input relating to Fort Peck test flows

Dear Ms. Vanosdall:

Thank you for the extended period for which to provide comments relative to the scoping process for the environmental impact statement (EIS) pertaining to the test flows on Fort Peck.

As I understand the scoping process, the purpose of this EIS will be to analyze potential impacts of testing flow regimes to attract and retain pallid sturgeon, provide spawning habitat, and improve larval viability. The principle framework states, in part, that the purpose of the test flows are part of on-going research and will integrate human considerations, focusing on the near term, but building for the long term. With this understanding, the following should be analyzed for both short term and long term impacts.

The Dry Prairie Regional Water System has an intake southeast of Wolf Point. This water system provides drinking water to a large portion of northeastern Montana. Potential impacts related to increased sediment and reduced flows must be evaluated to ensure the health and safety of the citizens that rely on that system for domestic and agricultural use.

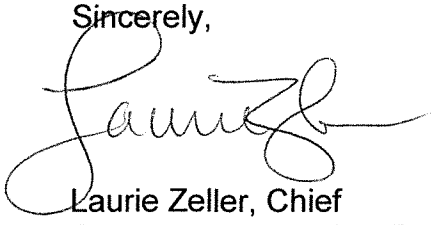
Bank condition and potential impacts from increased flow releases, as well as low flows should be analyzed. Bank condition is directly related to the potential impacts to the 140 pump sites on that stretch of the river due to potential erosion as well as sedimentation. Consider actions necessary to prevent bank stabilization issues in advance and determine a plan to address these issues as well as issues related to increased sedimentation.

An analysis of crops grown and water needs should be conducted to ensure that flow rates will not have an impact on growing crops during critical times of the year.

While recovery of pallid sturgeon is important, it is also important to manage the river flows to protect habitat for other species that occur in the river system. Back bays, tributaries, and other potentially impacted water sources should be inventoried and monitored throughout the flow testing regime. The Corps should reach out to Montana Department of Fish, Wildlife and Parks, the Montana Department of Natural Resources and Conservation, conservation districts, and other local entities to gather existing information that will be instrumental in analyzing impacts. Where that information is insufficient, it should be developed in accordance with state and local stakeholders.

Communication with potentially impacted users will be vital to building a seamless approach to testing flow regimes. A mailing list of land owners, irrigation companies, municipalities, county governments, pipeline and utility companies, affected federal and state agencies, and conservation districts, as well as potential news outlets, should be developed during this scoping process.

Sincerely,



Laurie Zeller, Chief
Conservation Districts Bureau

State of North Dakota
Office of the State Engineer

Regulatory Division

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Regulatory Division (701) 328-2752 • FAX (701) 328-3696 • http://swc.nd.gov

March 25, 2019

U.S. Army Corps of Engineers, Omaha District
Planning Branch
Attn: CENWO-PM-AC
1616 Capitol Avenue
Omaha, NE 68102-4901

Dear Ms. Vanosdall:

The North Dakota State Water Commission has reviewed the scoping documents regarding the Fort Peck Test Release Environmental Impact Statement (EIS). In response, we have developed the following scoping level comments:

1. If any actions are proposed that are outside of the conditions of the Master Manual, we request the USACE to first consult with the Basin States, their designated representatives and/or other interstate organizations consisting of Missouri River Basin State representatives before making any substantive modifications.
2. The State of North Dakota remains opposed to any intentional drawdown of Lake Sakakawea, including for the purpose of lengthing drift distance for pallid sturgeon in the Missouri River.
3. The State of North Dakota has concerns regarding the potential for the low flow portion of the hydrograph to cause impacts to irrigation. We request that the USACE review alternatives that increase flows during the low flow period in order to minimize or avoid impacts to irrigation and other water intake structures.

Sincerely,

Garland Erbele

Garland Erbele, P.E.
State Engineer

GE:JK

1101 11th Ave
Helena, MT 59601

MISSOURI RIVER CONSERVATION DISTRICTS COUNCIL

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mrcdc@macdnet.org
www.MissouriRiverCouncil.info

March 26, 2019

U.S. Army Corps of Engineers
Omaha District
ATTN: CENWO-PM-AC-Fort Peck EIS

RE: U.S. Army Corps of Engineers scoping for test flows from Fort Peck Reservoir to benefit Pallid Sturgeon

The Missouri River Conservation Districts Council (MRCDC), appreciates the opportunity to submit comments during the scoping period of the EIS for test flows from Fort Peck reservoir. The MRCDC is a coalition of 15 conservation districts along the Missouri River whose mission is t*o represent natural resource and environmental interests on the Missouri River and the associated uplands.*

The following points outline issues that should be thoroughly examined and included in the proposed EIS for implementing test flows from Fort Peck Dam for pallid sturgeon recruitment. We understand the need to recover the pallid sturgeon and advocate that progress can be made toward that objective, while preserving the economy and stability of local communities:

Science for consideration:

- A recent peer reviewed article in Applied Ichthyology, (Marotz and Lorang, 2017), indicates that larval drift distance may not be the limiting factor in pallid sturgeon recruitment. Through the use of high-resolution 3D flow and depth mapping, the researchers demonstrated that the complex channel bathymetry and flow would likely spread a plume of drifting particles bank to bank within a few kilometers downstream of the release location. The research further suggests that most larvae would not reach Sakakawea Reservoir for periods of upwards of 31 days, adequate time for maturation. If river flows were reduced to the near 4,000 cfs proposed, flows would be concentrated in the thalweg, eliminating "stall" locations within backwater and side channels that increase river residence time for larvae. **We request that this research be taken into consideration and reviewed by the independent science advisory panel prior to the development of alternatives for the EIS.**
- According to Marotz and Lorang (2017), larvae recapture studies hypothesized the larvae drift along the river bottom in an intact plume that flushes into the downstream reservoir where they die. However, those experiments recaptured less than 1 percent of released larvae, thus the dispersal fate of the remaining 99% of drifting larvae remains unknown. Increased studies of larvae drift outside the thalweg of the river should be conducted prior to testing potentially economically impacting lower flows.
- Reduced flows will disconnect main channel from off channel habitats, which are an important factor for supporting the shallow water food web for the embryos. River data should be linked to floodplain LiDAR data to evaluate repercussions of low flow.

Management considerations:

- If low flows are implemented, alternatives to protect irrigators need to be considered and implemented. Additional irrigation dredges (similar to the one currently owned by the conservation districts) may need to be made available along with operators and sufficient operating budgets to ensure pump sites can be maintained through the varied flows.
- Flows through the generators at Fort Peck are critical to maintain reliable power generation. We do not believe that the proposed Ft. Peck flow experiment should in any way degrade the delivery of power to customers or the quality of that service per the North American Electric Reliability Corporation's standards (NERC). We stipulate that the proposed Ft. Peck flow experiment should immediately be halted if either of the above conditions is not met until the delivery of power or the quality of the power delivered is restored.
- With reference to the above comments, proposed low flows will occur during peak power demand for the region, including power for irrigation pumps. Power interruptions during irrigation season will have serious economic impacts, not only from the increased man-power for restarting and monitoring the pumps, but also from reduced crop production due to lack of irrigation at critical times. Yet another reason why the test flows should be stopped immediately should the ability to supply power is compromised.

Additional information needed:

- An updated economic analysis should be completed with accurate acres of irrigated farm land and associated economic value.

Pump site survey:

There are currently over 140 pump sites on the Missouri River below Fort Peck dam in Montana alone. These pump sites divert water to irrigate many thousands of acres of croplands which add millions of dollars to the economy of Montana and North Dakota.

- With low flows occurring during key irrigation times, COE needs to calculate water surface elevations for the low flows at each irrigation pump site below the dam, and compared to channel elevations. The water elevations need to be adequate enough for pumps to avoid intaking sediment into the pumps, which causes unnecessary wear and failure of pumps and/or sprinkler systems. This data needs to be current, to adequately evaluate the effects of alternatives developed in the EIS.
- Some previous elevation data for the reach below Fort Peck dam was collected by Freshwater Map of Bigfork using hydroacoustic techniques. Current versions of this data should then be fed into a HEC RAS model to assess bedload transport. With channel bedload being of a sand/silt nature, a moving bed conditions analysis should also be completed to ensure pump site stability at each proposed alternative (flow volume)

References Cited:

Marotz, B., and M. Lorang. 2017. Pallid sturgeon larvae: The drift dispersion hypothesis. Applied Ichthyology. pp

We appreciate your consideration and incorporation of these issues into the EIS process. If you have any questions, please do not hesitate to contact us.

Sincerely,

Steve Wanderaas

Steve Wanderaas, Chairman
Missouri River Conservation Districts Council

CC: Zachary Shadduck, MT Fish Wildlife and Parks
Dan Rostad – Yellowstone River Conservation Districts Council
Karl Christians – MT Department of Natural Resources and Conservation

Patrick Byorth
Director of Montana Water, Western Water & Habitat Project

U.S. Army Corps of Engineers
Omaha District
ATTN: CNWO-PM-AC-Fort Peck EIS
1616 Capitol Avenue
Omaha, NE 68102

26 March 2019

Re: Scoping for USACE proposed test flow releases at Fort Peck Dam, Montana

Dear Sir/Madam:

Trout Unlimited and its Montana Council (MTU) appreciate the opportunity to provide scoping comments for the Corps' preparation of an Environmental Impact Statement on conducting test flow releases at Fort Peck Dam, Montana, for determining whether alternative water management could increase recruitment and increased abundance of wild pallid sturgeon in the upper Missouri River Basin.

Trout Unlimited (TU) represents 150,000 conservation-minded anglers around the nation; MTU represents more than 4,000 TU members in Montana. The TU community has an abiding interest in conservation of pallid sturgeon, having reviewed and provided comments on previous NEPA reviews regarding proposed actions affecting pallid sturgeon in the upper Missouri River Basin, including the Missouri River Recovery Management Plan (USACE 2018b); Supplemental Draft to 2010 Intake Diversion, Yellowstone River, EA (2014); Scoping for the DEIS for proposed fish passage at Intake, Yellowstone River (2016); and, the USACOE application for a CWA Section 404 permit at Intake, Yellowstone River (2015). In addition, individual Trout Unlimited members have submitted comments or testimony on proposed agency actions affecting conservation of pallid sturgeon and other native species in the Upper Missouri River Basin.

Activities such as potential modified flow releases at Fort Peck Dam are essential if the Corps and U.S. Fish and Wildlife are to fulfill objectives cited in the Missouri River Recovery Management Plan (USACOE 2018b), including: 1.) increasing pallid sturgeon recruitment to age 1+; and, 2.) increasing abundance of pallid sturgeon in the Upper Missouri River Basin that enables measurable recovery of wild populations. In fact, the amended Biological Assessment (USACOE 2018) acknowledged the importance of increasing movement of adult pallid sturgeon and increasing survival of pallid sturgeon larvae through improved drift and rearing conditions.

It is important to note, however, that improving discharge conditions for pallid sturgeon from Fort Peck Dam is only one part of the recovery equation. Improving temperature conditions in the upper Missouri River, providing access to additional suitable habitat and treating the

Missouri River and Yellowstone River as a single, connected ecosystem, are also critical elements. To that end, TU recently retained Engineering Solutions, LLC, of Bozeman, Montana to evaluate engineering concepts at Fort Peck Dam that could result in more normative temperature conditions in the Missouri River. Engineering Solutions, LLC, also developed alternative engineering concepts at Intake that would likely provide improved conditions for volitional passage of pallid sturgeon and other native fish species. Objectives of the report (*Pallid Sturgeon Recovery Concepts: Yellowstone Diversion and Fort Peck, Montana;* Hertel 2019) include:

(1) Treating the Missouri River and Yellowstone River as a single, connected river system for the purposes of pallid sturgeon recovery and irrigation water supply;
(2) Advancing pallid sturgeon population recovery by restoring more natural temperatures in the Missouri River downstream of Fort Peck Dam and removing upstream fish passage barriers and downstream larval obstacles on the Yellowstone River; and
(3) Ensuring irrigators continue having access to a reliable, continuous irrigation water supply.

Some of the concepts explored by Engineering Solutions, LLC, have been previously evaluated in some form by the Corps and U.S. Bureau of Reclamation (BoR). However, Hertel 2019 also evaluated additional options as well as modified versions of agency proposals, including phasing the Corps' proposed Intake project to allow for testing the efficacy of an engineered bypass channel before the diversion structure is constructed or the existing natural high-water channel permanently closed. This adaptive management approach would have the benefit of testing whether the bypass provides adequate passage and subsequent spawning and larval drift and survival before the full Congressional appropriation funding sturgeon conservation in the Yellowstone (WRDA 2007) is expended. Using a phased approach, the Corps would have funding for an adaptive management solution should the engineered bypass not prove adequate or otherwise problematic.

TU would be pleased to provide the Corps a copy of the 2019 Engineering Solutions, LLC, report.

TU strongly urges the Corps to not unduly delay implementation of the flow tests at Fort Peck Dam. Though extreme drought and significantly diminished water supply in a given year can justify delay in order to accommodate existing water users in the upper Missouri River Basin, it is important that the Corps also not wait for the perfect water year. Nor should the agency wait for implementation, monitoring and effects assessment of the project at Intake. It is essential that actions at Fort Peck be complimentary and additive to those on the Yellowstone, and that for effective and expedient recovery of pallid sturgeon as well as conservation of other native species of concern (i.e., blue suckers, sturgeon chub, sicklefin chub, sauger, etc.), that action in one river not be delayed by those proposed in the other.

It is essential that the Corps clearly identify the purpose and objectives of the test flows, as well as be rigidly specific about plans for monitoring and metrics for success. Monitoring should be sensitive enough to evaluate reach-by-reach effects, such as from the spillway to the confluence with the Milk River; the confluence with the Milk to Wolf Point; and from there to the confluence with the Yellowstone and below to Sakakawea. Consultation with upper basin

biologists from participating agencies as well researchers familiar with the physical and biological character of the upper Missouri River will be essential for developing monitoring criteria and success metrics.

TU's conversations with Montana FWP, review of the results of a drift studies, and limited data from 2018's spill event, provide insight on how to shape a test hydrograph. It appears that low flows for the test during the period when larvae are present could be in the 8-9K CFS range. This seemingly can accommodate both pallid sturgeon and irrigators. During a 2016 larval drift and dispersal study one individual apparently residualized after flows of 9K CFS. It was detected as a 412 mm fish in 2017's monitoring (USFWS 2018). However, more precise insight on the best flows during the period of larval drift might also be better derived by testing drift speed and dispersion at lower flows with a 3D model, perhaps later in the season when irrigation water isn't critical.

Lower stages from 4K CFS to 6.5K CFS tested by Marotz and Lorang (2017) using simulated particles in select demonstration test reaches indicate these flows might not provide adequate rearing or "interception" habitat, and that they probably would result in sturgeon larvae residing mainly in the thalweg during the drift period, leaving reduced opportunities for accessing lower velocity habitats and inadequate time for maturation before drifting into the tail of Sakakewa. Determining a more precise sweet spot between being too low or too high could benefit from additional evaluation, perhaps with deployment of 3D modeling.

It appears that spill conditions in 2018 motivated some adult pallid sturgeon to move upstream to just below Fort Peck Dam. That revelation provides important insight for how to shape the upper end of the hydrograph for the flow test.

Again, we emphasize how important it will be for the Corps to establish a well thought-out test and monitoring program that is sensitive enough to detect important relationships between river stage, adult upstream movement and larval drift.

Thank you for the opportunity to comment. We look forward to the Corps meeting its obligations in the Missouri River Recovery Program by implementing important test flow releases at Fort Peck Dam in the not too distant future.

Sincerely,

Patrick Byorth
Director, Montana Water Program

cc. David Brooks, Montana Trout Unlimited

Executive Summary

Pallid Sturgeon Recovery Concepts: Yellowstone Diversion and Fort Peck Reservoir, Montana

Dan Hertel, P.E.
Engineering Solutions, LLC

This engineering review of two dam structures within the Montana range of endangered Pallid Sturgeon (*Scaphirhynchus albus*) presents alternatives for addressing key limiting factors to successful Pallid Sturgeon passage and reproduction posed by the two structures. Intake Diversion Dam on the Yellowstone River and Fork Peck Dam on the Missouri River are considered. The alternatives presented are feasible at the conceptual analysis-level presented in this report but warrant further review and engineering analysis as recommended. The concepts presented in this document are intended to be conceptual and comparative in nature; they are not intended to be final engineering products.

Intake Diversion Dam on the Yellowstone River: Primary Recommendations

This engineering review assessed several alternative ways to deliver the full amount of irrigation water to the Lower Yellowstone Irrigation District, while providing an open river to provide for upstream Pallid Sturgeon passage and downstream larvae drift. Primary recommendations from this review are:

- Evaluate the effectiveness of the Lower Yellowstone Fish Bypass Channel before making the decision to install the proposed concrete weir crest. This way, the effectiveness of the bypass channel may be evaluated independently of the weir replacement. If the bypass channel is not effectively providing upstream and downstream passage for the Pallid Sturgeon, then one of the following open river options could be installed as an alternative.

- A gravity diversion and intake structure upstream of the existing and proposed weir is possible, in a location with sufficient grade that would not require any weir. This is further explained in **Solution YW-4**.

- The Multiple Pump Alternative described in the Final Environmental Impact Statement (FEIS) Record of Decision (ROD) should be subjected to independent review and a Value Engineering study or workshop. This alternative

should further consider the incremental value or benefit of all five proposed pump stations, spare pumps at each pump station, and the need for backup generation facilities at each location. As written in the FEIS and ROD, these elements seem overly conservative and seem to provide small incremental benefits for the cost. Additionally, it is likely worth exploring the overall need for all five pumping stations. This is further explained in **Solution YW-2**.

- A study should be conducted to examine the potential for off-stream water storage sites near Intake or downstream to capture spring flood flows for release into the canal later during the irrigation season. This could potentially reduce the number and capacity of pumping stations and could also be part of a larger pumped storage hydroelectric project. A pumped-storage reservoir could be used year-long to elevate water from a springtime-capture reservoir, so that water can be released via gravity to the bench lands or canal for distribution to irrigators. This alternative would negate or significantly reduce the need for pumps within the Yellowstone River floodplain. This is further explained in **Solution YW-5**.

- There is potential for renewable energy to be integrated into the alternative strategies presented here. For example, a pumped storage hydroelectric generation station could be added at Fort Peck, wind energy or pumped storage could be incorporated in the conveyance system, and wind or solar energy could be incorporated into a Yellowstone irrigation pumping scheme. These systems could be part of a larger grid balancing program on the Western Area Power Administration (WAPA) electrical grid system. This is further explained in **Solution YW-6.**

Fort Peck Reservoir and Dam Outlet: Primary Recommendations

Restoring natural seasonal water temperatures in the Missouri River downstream of Fort Peck Dam is key to successful Pallid Sturgeon reproduction. It requires releasing warm surface water from the reservoir. Currently, the only way to release warm surface water is through the spillway, which is not used in most years. Consequently, discharge temperatures cannot be managed unless warm surface water is pumped or somehow diverted through the dam. Ideally, warm surface waters at Fort Peck should be diverted through already existing hydroelectric facilities to maintain or increase generation capacity.

One of the challenges in releasing the correct temperature layer from the reservoir is accommodating changes in pool surface elevation, which has varied by as much as 52.7

feet (the difference between water years 1968 and 2012). During the warm months, May through September, historic surface elevations have varied by about 20 to 30 feet, which is the nominal design requirement for controlling river temperatures during the most biologically important portion of the year.

Primary short-term and long-term recommendations for temperature management are:

- The most cost-effective near-term method to direct warm water from near the reservoir surface into the existing hydroelectric turbines is the submerged weir alternative. Submerged weirs have a relatively short design life but have been utilized at similar facilities with success. Computer simulations of flow and temperature dynamics could be used to design the overall configuration of the submerged weir to achieve the greatest benefit for sturgeon and other important fish species. Scale modeling could be performed at one of several hydraulics laboratories in the United States. These recommendations are further explained in solution **FP- 1**.

- Long-term, a permanent temperature control at Fort Peck Dam can be achieved by installing a multi-level intake system (called selective withdrawal), connected to an existing, but currently unused, outlet tunnel. This system would provide an alternative outlet to release water for flood management and dam safety and could be equipped with high-efficiency hydroelectric turbines. Floating and fixed selective withdrawal devices have been successfully retrofit at other dam and hydropower facilities. This is further explained in **Solution FP-3**.

- Further analysis should consider various design configurations for a multi-level (selective withdrawal) intake to deliver water through one of the currently unused bypass tunnels (3 & 4) at Fort Peck, and then ultimately through hydroelectric turbine facilities. This configuration would provide a long-term solution, with multiple benefits, including delivery of warmer surface waters downstream, additional hydroelectric capacity at Fort Peck, and additional outlet capacity for flood management. This evaluation might include a Value Engineering workshop and/or alternatives analysis concerning the various elements of the multi-level intake, tunnel and gate works, and the hydroelectric facilities. Such analysis would consider construction sequencing, cost, and ongoing operations. This is further explained in **Solution FP-3**.

- One or more surface water pumping systems could be installed to

direct warmer water from the surface into the existing turbine penstocks (hydropower intakes). This system could be similar to that provided by Water Research and Engineering Solutions (WEARS) of Australia (https://www.wears.com.au). They typically consist of a series of units and have been effectively used in Australia, the USA, and other countries around the world. It may be possible to have WEARS conduct 3D flow modeling to better understand the potential downstream temperature benefit based on the stratification and flow rates at Fort Peck. This is further explained in **Solution FP-2**.

PALLID STURGEON RECOVERY CONCEPTS: YELLOWSTONE DIVERSION AND FORT PECK RESERVOIR, MONTANA

Prepared by

Dan Hertel, P.E.
Engineering Solutions, Inc.

January 25, 2019

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ACKNOWLEDGEMENTS

I appreciated the many people who contributed to this report by providing information, candid opinions, and helpful review of the documents. Brian Marotz of Montana Fish, Wildlife and Parks was very knowledgeable about large river infrastructure and Pallid Sturgeon recovery efforts. Laura Ziemer, David Brooks, and Patrick Byorth of Trout Unlimited and Bruce Farling of Farling Consulting secured funding and encouraged independent and creative review of the issues.

ABOUT THE AUTHOR

Dan Hertel is a Professional Engineer with decades of civil engineering experience in evaluating and constructing large water resource infrastructure projects. After many years of working for a large construction company across the United States, he retired to form Engineering Solutions, LLC where he regularly consults for Federal and State Agencies and private organizations.

EXECUTIVE SUMMARY

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1.0 INTRODUCTION

The 2007 Water Resources Development Act (WRDA), Public Law 110-114 (November 8, 2007), Section 3109, authorized the expenditure of funds for the sole purpose of "ecosystem restoration." Section 3109 authorized the use of funds from 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." Pub. Law 110-114, § 3109. This congressional authorization of funding provides an opportunity to ensure successful upstream and downstream passage of Pallid Sturgeon at the Lower Yellowstone project at Intake, which does not currently exist. Any construction of a Lower Yellowstone project that does not achieve successful two-way passage of Pallid Sturgeon is not consistent with the congressional authorization of funds. The analysis and recommendations in this report provide a blueprint for ensuring that funds expended pursuant to Section 3109 achieve the purposes authorized by Congress.

Background and Purpose

Dan Hertel, PE, of Engineering Solutions, LLC, was commissioned by Trout Unlimited, Inc., to develop and write an analysis of potential options to improve conditions for Pallid Sturgeon in the Missouri and Yellowstone River basins. Mr. Hertel is a registered Professional Engineer regularly involved in civil engineering projects associated with dams and water resources. This document focuses on two primary existing facilities; the Lower Yellowstone Intake Diversion Dam and Fort Peck Reservoir and Dam, both located in eastern Montana. Mr. Hertel's professional expertise was solicited to help eventual project implementation to achieve four goals, consistent with Public Law 110-114 (November 8, 2007), Section 3109:

> (1) Treat the Missouri River and Yellowstone River as a single, connected river system for the purposes of Pallid Sturgeon recovery and irrigation water supply;
>
> (2) Continue providing irrigators with a reliable, continuous irrigation water supply;
>
> (3) Advance Pallid Sturgeon population recovery by removing upstream fish passage barriers and obstacles that hamper downstream drift of larval sturgeon in the Yellowstone River; and,
>
> (4) Advance Pallid Sturgeon population recovery by restoring more natural temperatures in the Missouri River downstream of Fort Peck Dam that are key to successful Pallid Sturgeon reproduction.

2.0 LOWER YELLOWSTONE INTAKE DIVERSION DAM

The Problem

Intake Diversion Dam on the Yellowstone River in Montana impedes upstream and downstream fish passage by Pallid Sturgeon (*Scaphirhynchus albus*) and about 50 other important fish species. Restoring unimpeded, two-way fish passage at Intake is thought to be one of the best recovery options for Pallid Sturgeon. Above Intake, there is no major impediment to fish passage in the Yellowstone River for another 166 river miles upstream to Cartersville Diversion. Two major tributary rivers that historically hosted Pallid Sturgeon, the Powder and Tongue Rivers, flow into the Yellowstone within this reach.

The remaining Pallid Sturgeon population downstream of Fort Peck Dam (an estimated 100 wild individuals and 16,444 hatchery plants) resides in the Missouri and Yellowstone rivers and fish spend most of their lives in a short reach of the Missouri River downstream of the Yellowstone confluence. Although endangered Pallid Sturgeon attempt to spawn annually, only a few adults have been documented upstream of Intake, and most spawn closer to the confluence near Fairview, which is too close to Sakakawea Reservoir to allow sufficient drift distance for larval survival. Upstream and downstream passage of migratory fish must be restored to mitigate past damages to ecosystem function. If upstream passage is achieved at Intake Diversion Dam and Pallid Sturgeon spawn upstream, adequate survival of downstream drifting larvae must occur to re-initiate recruitment of juveniles into the population.

Intake Dam is a Bureau of Reclamation irrigation weir that diverts up to 1,374 cubic feet per second (cfs) of water to irrigate about 56,000 acres in Montana and North Dakota. The diversion dam is located on the Yellowstone River 70 river miles upstream of its confluence with the Missouri River. Built in 1905, Intake Dam is a timber crib and rock diversion weir that diverts water into the irrigation canal through screens designed to reduce fish entrainment. High water and ice flows scour rocks from the weir crest, and additional boulders must be replaced at great expense every few years, leaving a rubble field downstream. The rubble field has high velocities and turbulence that make downstream passage hazardous for young fish and drifting larvae. The combined dam and rubble field impede passage of highly migratory fish species from the Missouri and the lower Yellowstone River into spawning and juvenile rearing habitat upstream of Intake, except during brief periods in particularly high run-off years when a natural side channel to the Yellowstone provides intermittent passage around the dam. In 2010, the Bureau of Reclamation and the U.S. Army Corps of Engineers (USACE) began designing a rock ramp (roughened channel) intended to provide passage for Pallid Sturgeon and other fish species over the diversion. It was later discovered that the existing ramp design could not be effectively traversed by Pallid Sturgeon. In 2015, the Bureau and Corps began work on a $57 million, low-head, concrete dam with an engineered bypass channel for fish. The Defenders of Wildlife and Natural Resources Defense Council sued, claiming violations of the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA). Construction had been on hold since then, pending resolution of the lawsuit. In August of 2018, USACE again received bids for this work and is in the process of awarding a contract and commencing construction.

Note that this memorandum does not attempt to further assess biological or environmental opinions, as they have been previously studied extensively. Additionally, this memorandum does not attempt to analyze, debate, or challenge the Record of Decision (ROD) or arguments posed in favor or opposition of that body of work.

Proposed Potential Solutions

Several possible solutions are presented here as follows:

- Install a conveyance system to move water from Fort Peck Reservoir to the Yellowstone Irrigators (Solution YW-1);
- Pump Water without the Intake Diversion Dam (Solution YW-2);
- Improved Irrigation Practices (Solution YW-3);
- Provide an Upstream Gravity Diversion (Solution YW-4);
- Develop Off-Stream or Pumped Storage of Spring Flows (Solution YW-5);
- Provide Wind or Solar Energy Source to Offset Pumping Costs (Solution YW-6).

2.1 SOLUTION YW-1 - AQUEDUCT FROM FORT PECK RESERVOIR TO YELLOWSTONE IRRIGATORS

Overall Approach

Installing a conveyance system to move water from Fort Peck Reservoir to the Yellowstone Irrigators would increase the reliability of the water supply for farmers currently relying on Intake Diversion Dam by supplying part or all of the 1,374 cubic feet per second (cfs) water right for irrigated agriculture from Fort Peck Reservoir via an aqueduct. By switching the source of water from the Yellowstone River to the Missouri River, the weir at Intake Dam would no longer be needed, and could be removed, resulting in unimpeded fish passage. A drawback is that the additional diversion from Fort Peck could exacerbate low flow conditions in the Missouri River during dry years.

The aqueduct would bring water from the Fort Peck Reservoir, primarily by means of twin pipelines, with canal and tunnel sections where the topography is appropriate. At least one intermediate reservoir would be required to accommodate pressure surges and provide the advantage of intermittent storage, depending on reservoir capacity. An alteration in the conveyance route could include higher elevations to the south to provide sufficient hydraulic head for hydroelectric generation. Wind and solar power operations could also be incorporated near Fort Peck hydroelectric station for load balancing on the regional electrical grid. Route alternatives should be fully explored to maximize hydroelectric generation or pumped storage benefits and provide additional irrigation supply flexibility. Pumped storage facilities would not necessarily need to be on the route, but may be accommodated by a branch system, which would convey water to and from the primary route. This is typical of reservoir and pumped storage facilities. Consideration should be given that the current irrigation deliveries are accommodated by three existing pumping stations which supply water to the bench lands above the river valley. This pumping effort could be reconfigured in an intermittent storage scenario by pumping during spring runoff for later releases.

At Fort Peck Reservoir, one potential connection point is to the original bypass tunnels. From there, the water would be pumped to the high point or intermediate reservoir near Milepost 18 and shown in the alignment drawings in **Attachment A - Alignment Drawings, Fort Peck to Intake**. From that point, the conveyance would be gravity fed to the Yellowstone Irrigation Project.

Potential Route

One potential conveyance route has been developed as shown on Sheet G000 in the alignment drawings in **Attachment A**.

Typical conveyance flows would be a minimum of 1,374 cfs for the existing water right and could be as high as 1,900 cfs to irrigate additional lands along the route. Flows of this magnitude, given friction losses, would likely require two 12-foot diameter pipelines (**Table 2-1**). Steel pipe would generally be the material of choice, given the pressures and velocities. However, alternatives including reinforced concrete pressure pipe could provide better economy in lower pressure areas. A project of this scale could also support the economics of a dedicated pipe manufacturing facility erected and operated in the general vicinity of the route. Intermediate reservoirs may be required for surge storage. Given the friction losses associated with the pipeline length, a gravity delivery system would likely not have sufficient force at the discharge end of the pipeline to produce hydropower, though hydropower might be produced along the route as discussed above. The conveyance system would be designed to primarily discharge near Intake, Montana, although a lateral line could be provided to discharge water into the canal near Crane, Montana, upstream from Sidney. This is referred to as the Crane Lateral and that conveyance alignment is shown on the drawings included in **Attachment A**.

Table 2-1. Pipeline Information

Conveyance Length	Approximately 122 miles
Pipe Diameter – 2 pipelines	144”
Overall Capacity	1,300 to 1,900 cfs
Friction Head Loss	~594 feet

There are some likely areas along the conveyance route that would be suitable for canals, offering some potential savings. Lined and unlined canals may provide economic solutions in numerous areas of the alignment and should also be explored. Additionally, there may be one or more locations along the route where conveyance tunnels may be advantageous to the project. The cost of tunnels generally exceeds that of direct-buried pipelines or canals but can be utilized to significantly shorten the overall route distance, in which case the tunnel section becomes the preferred alternative.

The conveyance route crosses a matrix of public and private land. This is shown on the alignment drawings in **Attachment A**.

There may be opportunity for hydropower recovery along the route. Hydropower recovery could prove helpful in offsetting some of the pumping costs at the Fort Peck facility. Hydropower recovery would require locating a section of relatively steep drop in a short section of the alignment. **Table 2-1** indicates that, over the length of the route, friction losses would negate any energy at the discharge end. At least one potential location of hydropower development has been identified near Milepost 18 on the drawings in **Attachment A**.

Engineering and Construction Considerations

- The initial alignment presented in this memorandum is conceptual and should be subjected to future optimization.
- The alignment crosses numerous private, state, and federal lands. Land owners could possibly benefit from water and power associated with the pipeline near to or across their land.
- The route crosses sage grouse habitat. These habitat areas may not be core areas. Crossings or other accommodations could make sage grouse impacts neutral or even potentially enhance habitat.
- While the alignment crosses a variety of highway, county, and private roads, much of the alignment is somewhat remote. Access roads and access points would need to be planned for.
- The terrain between Fort Peck and Intake ranges from mild badlands to sweeping plains. The number of high and low spots inevitable in the alignment will require numerous facilities for draining and for air exchange. These are commonly referred to as "blow-offs" or drains, and air vacuum and release stations.
- The alignment is generally unencumbered by existing utilities.
- The alignment is rural and agricultural in nature.
- The design pressures over much of the alignment would require steel pipe, generally designed under AWWA C200 standards. Some areas could be considered for Reinforced Concrete Pressure Pipe (RCPP), Steel Cylinder Type, generally produced under AWWA C300 standards.
- The soils along the alignment are generally fine grained, non-structural soils. Where steel pipe is required, imported crushed or screened gravels will be required for bedding the pipe. Where RCPP could be used, it is expected that some of the on-site materials may be suitable as bedding materials. Concrete aggregates would likely be imported from commercial sources or developable alluvial or quarry sources identified in further studies.
- Some of the alignment could potentially be optimized utilizing canals and drop structures at a reduced cost from the pipeline.
- The alignment would likely require at least one reservoir, near the highest elevation point for pressure surge and attenuation and pumped-storage hydropower to balance the wind and solar grid. The alignment shown with this memo includes one potential reservoir site near Milepost 18.
- The alignment could include an irrigation turnout or branch pipeline at about Milepost 97. From there, some of the capacity could be diverted across Highway 16 and to the Yellowstone Irrigation Canal near Crane, Montana.
- Crossing of the Fort Peck Dam spillway is shown on this alignment as a tunneled alignment. USACE would want to address this as a potential for dam failure. This is standard engineering practice for new or revised features on dam projects.

Potential Costs

  - The conveyance scheme presented as Solution YW-1 would require two pipelines of approximately 12-foot diameter (144".) The expected range of costs for this project would be $2 to $6 billion. As stated previously, some portions of the alignment could potentially be constructed as a canal and drop structures, resulting in significant cost savings. Obviously, this is a major civil works undertaking.

Advantages

- The conveyance system would allow for removal of the Yellowstone Weir, as flows would now come from other sources.
- The aqueduct system and accompanying reservoirs could be designed to store water during spring runoff, lift the water during periods of over-generation, and deliver water during periods of low flow.
- Operational flexibility would enable managing drought in the Missouri or Yellowstone basins.

Disadvantages

- Project cost.
- In dry years on the Missouri drainage, Yellowstone irrigators would be reliant on a system that may not have water available. Therefore, some redundancy in the system would be required to deliver Yellowstone water in these years.
- Potential for Aquatic Invasive Species (AIS) contamination from Missouri River to the Yellowstone River below intake. Treatment strategies and systems are routinely designed and would need to be considered in this alternative.

2.2 SOLUTION YW-2 - PUMP WATER WITHOUT THE INTAKE DIVERSION DAM

The option to pump water without the Intake Diversion Dam was presented as the "Multiple Pump Stations Alternative" in the Final Environmental Impact Statement (FEIS) and Record of Decision (ROD). This alternative should further consider the incremental value or benefit of all five proposed pump stations, spare pumps at each pump station, and the need for backup generation facilities at each location. As written in the FEIS and ROD, these elements seem overly conservative and seem to provide small incremental benefits for the cost. Additionally, it is likely worth exploring the overall need for all five pumping stations. As proposed in the ROD, a combination of five separate pump stations from the present diversion location to Savage, Montana was the only pumping option considered. This alternative appears too conservative in its design approach and should be subjected to review and also a Value Engineering study or workshop. The concept requiring five pump stations could likely be reduced to fewer than five. Additionally, each pump station has a spare pump as well as a backup generator, all of which may be unnecessary redundancy. Pumping stations may also be optimized by employing one or more variable frequency drive (VFD) pumps at each location.

Under this scenario, complete removal of the existing weir would be possible. This is the only ROD alternative that removes the weir from the Yellowstone River.

Potential Costs

According to the ROD published in December of 2016, the estimated annual operation and maintenance cost of the Multiple Pumps Alternative over a 50-year period is $4,950,000.

Advantages

- This solution would allow for complete removal of the Weir at Intake, restoring unimpeded fish passage. It is the only alternative that provides for this.
- Eliminates the existing rock weir and yearly movement of rock materials into the river downstream.
- From an engineering and construction viewpoint, this alternative is relatively straight-forward. The concept is consistent with other irrigation and domestic river pumping facilities on the Yellowstone and elsewhere.
- At this point, the design concept is conservative and should be optimized or subject to value engineering.

Disadvantages

- Pumping facilities are generally less reliable than the current gravity system and could potentially compromise irrigators during power interruptions, changes in river channel boundaries, and pump station failures. However, river pumping systems are common for both domestic and irrigation purposes, including those on the Yellowstone River.
- Yearly power and maintenance costs, although these could potentially be offset by wind or solar power stations.

Other Considerations

Wind energy and additional energy production at Fort Peck Dam could be used to reduce pumping costs. Some type of direct wind energy and pumping system, perhaps including pumped-storage, could be employed. It is more likely that wind energy produced over a 12-month period could generate revenues or offsets to the power needed during the 5-month irrigation season.

A wind energy component to this project could be eligible for energy credits or grants.

2.3 SOLUTION YW-3 - IMPROVED IRRIGATION PRACTICES

Improved irrigation practices would include surveying the existing irrigation practices of the Lower Yellowstone Irrigation District users and exploring what practices could be employed in the future in order to decrease demand from the Yellowstone River. Reduced irrigation withdrawals from the Yellowstone River could improve the reliability and viability of direct pumping without the need for the diversion dam. Savings in pumping costs could potentially be used by irrigators as a means to finance irrigation enhancements toward water saving practices.

Irrigation practices in the lower Yellowstone drainage include a combination of surface, sprinkler by wheel line, and sprinkler by pivot. Most natural geometry and terrain that can accommodate more efficient sprinkler methods have been modified to do so. However, there appear to be remaining opportunities within the district to convert to more efficient systems and reduce water demand. These opportunities could be further studied appropriately by agriculture and soil science experts.

2.4 SOLUTION YW-4 - PROVIDE AN UPSTREAM GRAVITY DIVERSION

The option to provide an upstream gravity diversion involves the potential for an intake alternative upstream of the existing intake structure, with the idea that gravity flows could be directed toward the existing canal without the need for the weir. This concept was dismissed in the ROD and FEIS. However, it may be feasible to create an alternative diversion upstream of the current weir. In the proposed canal alignment below, the shorter route shown would have a steeper gradient than the longer river channel, potentially providing adequate gravity delivery (**Figure 2-1**). The proximity and location of the railroad along the left bank of the river poses some challenges. The railroad would either need to be crossed twice by the canal, or the railroad bed in that area relocated to the north. **Attachment B – Alignment Drawings, Upstream Diversion and Canal** includes alignment plans and profiles showing a proposed upstream diversion and canal. Further analysis of canal hydraulics and route optimization would be recommended.

Figure 2-1. Upstream Diversion Schematic

Potential Costs

- $30 million to $100 million

Advantages

- Retains a gravity only system, avoiding pumps.
- Could potentially be designed with no or minimal weir.

Disadvantages

- Creates the need for additional land exchanges and amendment of water rights.
- Would require additional infrastructure associated with bridges and possible railroad realignment.

2.5 SOLUTION YW-5 - DEVELOP OFF-STREAM STORAGE OF SPRING FLOWS

The FEIS indicates that, under the Multiple Pumping Station Alternative, without the current weir in place that gravity flows without pumping would accommodate roughly 42 days of the irrigation season. It may be feasible to construct an off-stream reservoir (or multiple reservoirs) in which to store early spring runoff prior to irrigation season. Later in the season, water could be released from this reservoir into the canal for distribution to irrigators. This alternative would negate or significantly reduce the need for pumps within the Yellowstone River floodplain.

The FEIS further indicates that the total annual irrigation diversion rate is about 327,000 acre-feet over the 5-month irrigation season, May to September. If early spring flows, from March and April could capture even 50 percent of annual needs prior to irrigation season, stored water could be pumped back into the canal on an as-needed basis. This storage and delivery system would reduce silt in the canal as sediment would tend to settle within the reservoir. It should be noted that such a scheme would likely require significant amounts of land, if fed by gravity. A reservoir sized to capture one-half of yearly irrigation needs would hold approximately 165,000 acre-feet of water. At a nominal depth of 20 feet, the reservoir footprint would be on the order of 8,000 to 9,000 acres. Topographic features such as coulees could provide natural reservoir locations as well and should be part of any analysis.

Potential Costs

- $25 million to $100 million

Advantages

- Utilizes high spring flows prior to irrigation season.
- Could potentially be designed with no weir or minimal weir.

Disadvantages

- Cost.
- May be impractical due to reservoir size requirement.
- May create the need for renegotiation of water rights.
- Creates the need for additional land exchanges.

2.6 SOLUTION YW-6 - PROVIDE WIND OR SOLAR ENERGY SOURCE TO OFFSET PUMPING COSTS

This concept would provide an alternate wind or solar energy source to help offset pumping costs for irrigation. The solar or wind facilities could be remote to the pumping facilities, with power trade agreements in place. This concept could also be combined with pumped storage projects mentioned earlier in this document.

General Considerations

The basis for the future electrical consumption at the five pumping stations is based on analysis in Sections 2.3.7 and 2.3.8 of the *Lower Yellowstone Intake Diversion Dam Fish Passage Project* FEIS prepared in 2016. The below bullet list, "Considerations for Wind and Solar Energy Options," summarizes this analysis. The bottom line to these calculations is that the five pumping stations will consume approximately 10.1 gigawatt hours each year.

Capital costs: Exactly who would pay for the design and installation of wind and solar systems must be established. This may be a combination of government and private funding for shared benefit. While Rural Energy for America Program (REAP) and other federal type grants are a possibility, the submittal and approval process can take several years.

Power agreements: Tying a solar system to the grid requires the agreements to be established. This legal process will establish how the electricity is measured and the value of the electricity put onto the grid.

Long-term maintenance and operation of the wind or solar system: While there are no moving parts in a solar array, monthly cleaning and maintenance will be needed for a system of this size.

Considerations for Wind and Solar Energy Options

- Cost associated with Single or Multiple Power Purchase agreements (PPA)
- Cost associated with Single or Multiple Interconnection agreements (ICA)
- Size of WTG (range from 1.5 to 3.0 megawatts)
- Proximity to HV Transmission lines
- Proximity to current Substation or Switchyard
- Options are based on a yearly kW/hour usage; example would be a GE 1.5 wind turbine generator (WTG) times 40% capacity factor times hours per year (8760 hours/year) = 5256 mwh
- Effective wind production
- As the wind Production Tax Credits (PTC) expire in 2020, the window for securing any tax credit for wind renewable energy is rapidly diminishing at the federal level. Certain states will continue to give some credits as their continued involvement to expand their energy portfolio.
- Solar installation tax credits would likely apply to a solar installation
- Wind generation will require a smaller physical space (land) than the equivalent solar generation.
- Short and long-term maintenance and operation of the power system: While there are no moving parts in a solar array, monthly cleaning and maintenance will be needed for a system of this size. The WTG's have to be monitored and (depending on number) maintained/serviced periodically over the course of their typical 20-year lifetime.
- System design life
- Engineered design system

Solar Energy Source Considerations

System size

To provide 10.1 gigawatt hours of electricity each year (the amount estimated in the FEIS, and assuming 100 % of the energy consumption), the solar system would likely require a 7-megawatt site. This would be a very large solar array. The property needed for an array of this size would be 30 to 50 acres. It should also be considered that the design life of solar panels is about 25 years, with a 1% loss in efficiency per year of operation.

System Cost

A 7-megawatt system is very large in the solar industry and certain economies of scale can be obtained when doing a project of this magnitude. With current installed capital costs at $2.0 to $3.0 per watt, solar system cost would likely range from $14 million to $21 million. This assumes no land costs and minimal infrastructure costs. The amount of electricity produced each year may have a value of about $600,000 at 6 cents per kWh or $800,000 at 8 cents per kWh. Big agricultural customers get very competitive rates for their electricity and further study of the actual costs by the specific utility will be important to the final cost payback analysis.

Capital costs of the system would be amortized over the life of the project.

System Location

It would be most cost effective to install one large system rather than splitting it up into smaller systems. There is no need to locate the array close to the pumping stations – the need is to get the power onto the grid. Siting a system of this size must consider several key issues including; proximity to a substation to connect to the grid, flat topography without trees (no shading) and property costs.

In consideration of potential locations, it may be appropriate to site the system at an existing generation facility where the land and infrastructure already exist for generating and transmitting electricity. A site such as the Fort Peck Reservoir and existing hydroelectric facility may be ideal for the reasons provided above and since this facility is operated by USACE.

Wind Energy Source Considerations

System size

Assuming the same required 10.1 gigawatt hours of electricity each year, several configurations of wind turbine generator (WTG) possibilities could be supported utilizing additional information. Each option presents a unique set of circumstances. There are several possible WTG alternatives that may be suitable for the sites. The following WTG alternatives should be evaluated and either selected for further analysis or rejected on the basis of experience and engineering judgment, and analysis. It is likely under any scenario that production of the 10.1 GWh per year given in the FEIS analysis would require 2 to 4 turbines in the 1.5 MW (GE 1.5 WTG) size category.

Single or multiple WTG unit configurations could be strategically placed for each pump location or shared by 2-3 sites given accessibility to substations where relays and control protection could be installed for the off taker.

A strategically placed farm of WTG's close to a substation, such as that at Ft. Peck Dam, would present itself with the output needed along with the service and protection in one spot. This may be more prudent as service to the WTG's and having one interconnection point and power purchase agreement (PPA) may be more desirable and economical.

System Cost

Either of the options of WTG's will have differing cost evaluations and variables. One option may seem to have higher cost than the other, but one needs to take into account the timing, constructability, permitting, cost of transportation, environmental, soil requirements, agency needs and wants, and the service life and maintenance for the units.

For a large wind farm (100 megawatts), the construction of the infrastructure is generally 30-40% of the total cost of the WTG. This includes roads, foundations, WTG install and nominal collection and HV T-Line and Substation. The estimated cost of a single GE 1.5 Turbine unit is $1.5 million, or approximately $1,500/kW. Adding the cost of infrastructure, this would equate to a cost range of $4.5 to $9 million, depending on wind quality, site conditions, and the required number and size of the WTGs.

Capital costs of the system would be amortized over the life of the project.

System Location

It may be the most cost effective to install all the turbines near a substation and high voltage system rather than locating a WTG at each pumping location. However, there may be political and financial hurdles for a larger complex. Currently the Public Service Commission (PSC) regulations may limit the size of the PPA and ICA. By utilizing smaller remote locations those regulations may be simpler to obtain the PPA and ICA and allow installation with minimal regulatory effects. Depending on the option and location, certain considerations should be taken into account. Terrain, EIS requirements, tax value per county, land values, leasing value, wind profiles for capacity (i.e. the locations may be better for wind) than one near Fort Peck. There is also the option of a combination of both options, which could allow more flexibility

In consideration of potential locations, it may be appropriate to site the system, at an existing generation facility where the land and infrastructure already exist for generating and transmitting electricity. A site such as the Fort Peck Dam may be ideal for the reasons provided above – as well as because USACE operates this facility.

Other Considerations

The current Lower Yellowstone Irrigation Project Canal has a nominal capacity of up to 1,374 cfs to serve irrigators in the Lower Yellowstone Irrigation District system. The canal is aged and should be assessed for leakage. It may be possible to reduce required canal flows by reducing flows lost to leakage.

Additional hydropower generation at Fort Peck can be used to power a screened pump withdrawal system on the Yellowstone, removing the weir at Intake, negating the need for an engineered bypass channel and associated maintenance costs.

Pumped storage hydropower is America's largest source of grid-scale energy storage to align intermittent electrical supplies from wind and solar with real-time energy demands. Market, policy and regulatory burdens continue to hinder the growth of pumped storage applications. According to the U.S. Department of Energy, pumped storage could sustainably grow by 35 gigawatts (GW), particularly in areas with significant investments in variable or intermittent generation. Pumped storage can significantly improve grid reliability and reduce our reliance on fossil-fueled generation. Pumped storage should be considered as a potential component of the Missouri and Yellowstone Pallid Sturgeon recovery effort.

3.0 FORT PECK DAM AND RESERVOIR

Biologists consider the Pallid Sturgeon inhabiting the lower Yellowstone and Missouri River downstream of Fort Peck Reservoir a single, interconnected population. While this engineering assessment focused on options to enable bi-directional fish passage and sustaining irrigation diversions at Intake, multiple solutions arose that considered roles that Fort Peck Reservoir might play in meeting goals at Intake and improving habitat conditions in the Missouri River downstream of Fort Peck Dam. Solutions analyzed included potential substitution of stored water in Fort Peck to supply water to irrigators and modifications of outlets at Fort Peck Dam to naturalize water temperatures and flows to sustain Pallid Sturgeon habitat and reproduction in the Missouri.

The initial engineering assessments focused on addressing the issues both at Intake and Fort Peck simultaneously. The primary simultaneous solution (piping Fort Peck reservoir water to irrigators at Intake), while possible, turned out to be cost prohibitive. The following alternatives for addressing river temperature below Fort Peck Dam arose out of the initial analysis of piping Fort Peck reservoir water to Intake. They are presented here to provide alternatives for cost-effective ways to obtain the river temperatures below Fort Peck reservoir needed for successful Pallid Sturgeon reproduction.

Fort Peck Reservoir Selective Withdrawal and Temperature Control

The Problem

Natural reproduction of Pallid Sturgeon (*Scaphirhynchus albus*) in Montana ended after dams were built in the Missouri River Basin and flow regulation began. Pallid Sturgeon were listed as endangered under the Endangered Species Act (ESA) in 1990. A few wild Pallid Sturgeon remain isolated in the Missouri River upstream of Fort Peck Dam, Montana, and a population exists in the Missouri and Yellowstone rivers between Fort Peck Dam and Sakakawea Reservoir in North Dakota. Pallid Sturgeon in Montana are the most genetically pure populations remaining throughout their present range, which extends downstream in the Missouri and Mississippi River basins. Therefore, Montana's headwater populations represent a crucial source for future hatchery propagation to prevent extinction. The primary obstacles to Pallid Sturgeon recovery include Fort Peck Dam operations and the loss of two-way fish passage at Intake Diversion Dam on the Yellowstone River.

Fort Peck Dam is an USACE project used primarily to manage flood risk, generate hydropower and to supply water for other beneficial uses, including water supply, fish and wildlife, and recreation. Fort Peck Dam operations have fundamentally changed natural water temperatures and seasonal flows downstream. The Missouri River is now artificially cooled during summer and fall as water from deep in the reservoir is released through hydropower turbines. This hypolimnetic water is much cooler than natural river temperatures and impacts aquatic food production for about 180 miles downstream, nearly eliminating small fish that Pallid Sturgeon prey upon. Warm surface water from the reservoir can only be released through the spillway (crest elevation 2,225 feet mean sea level), which is seldom used and can only operate when Fort Peck Reservoir elevation is at or above 2,229 feet mean sea level to avoid unstable flow over the spillway. Water management reduces dam discharges during the spring and early summer when adult Pallid Sturgeon migrate upstream to spawn. Currently, adults are only documented in the upper reach of the Missouri River below Fort Peck during high water years. Water management artificially increases river flows during summer when eggs hatch and larvae drift downstream. Unnaturally high flows during the larval drift phase flush larvae downstream more rapidly.

Further, artificially cold discharges delay larval development. Embryos and larvae have limited swimming ability, so spend insufficient time in the river before flushing into the reduced oxygen conditions of downstream reservoirs. As a result, nearly all young Pallid Sturgeon die during their first year, between the fertilized egg stage and when larvae absorb their yolk sac and begin feeding exogenously. No natural recruitment of young Pallid Sturgeon has been detected since Sakakawea Reservoir first filled.

Proposed Potential Solutions

- Install a surface water withdrawal system at Fort Peck to mitigate artificially cold-water discharges into the Missouri River;
- Install a multi-level, selective withdrawal temperature control system (SWS) at Fort Peck to mitigate artificially cold-water discharges into the Missouri River;
- Install a submerged weir by means of a flexible curtain, which would direct surface waters into the existing hydropower intake;
- Install a series of surface water pumps to direct surface waters into the existing hydropower intake;
- Increase hydropower generation at Fort Peck by replacing older technology with modern turbines and pumped storage;
- Temperature control solutions should combine further refinement of downstream flow regimes to optimize temperature and flow to enhance habitat and sturgeon growth and survival.

In 2008 and 2009, the USACE conducted the *Fort Peck Temperature Control Device Reconnaissance Study, Fort Peck, Montana* (USACE 2009), which evaluated conceptual alternatives and provided recommendations for further study.

Alternatives initially considered included the following:

1. *Operational Changes*
2. *Multi-Level Intake, by Modification of the Existing Intake*
3. *Multi-Level Intake, by New Intake and Tunnel*
4. *Pumped or Siphoned Discharges Over the Spillway*
5. Surface Pumps
6. Floating Intake or Trunnion
7. *Submerged Weir*
8. Stilling/Detention Basin Warming
9. Resistance Heating of Discharges
10. *Power Plant*

Those alternatives in italics and underlined above were recommended for further feasibility study. It was further noted that Alternatives 2, 3, and 4 are complex and would take considerable time to further develop and construct. Alternative 7 – a Submerged Weir was recommended as the preferred alternative. The comparative cost of the alternatives is listed in **Table 3-1**.

Table 3-1. Preliminary Construction Cost Estimates for Recommended Alternative (USACE 2009)

Alternative	Description	Estimated Construction and O&M Cost Range*
1	Operational Changes	N/A
2	Modify Existing Intake	$155,000,000 - $482,000,000
3	New Intake and Tunnel	$217,000,000 - $361,000,000
4	Pumped Discharge Over Spillway	$238,000,000 - $397,000,000
7	Submerged Weir	$8,000,000 - $25,000,000
10	Power Plant	N/A
*Preliminary Estimated Range of Life Cycle Cost over 50 years in January 2009 Prices		

Engineering Solutions, LLC conducted a site visit on June 13 and 14, 2018. Site visit locations included facilities at Fork Peck Dam, potential aqueduct alignment from Fort Peck Reservoir to Intake, as well as the Yellowstone Diversion facilities at Intake. Photographs are included in **Attachment C – Alignment Photographs, Fort Peck to Intake**.

3.1 SOLUTION FP-1 - POTENTIAL SHORT-TERM SOLUTION - SUBMERGED WEIR

The 2009 *Fort Peck Temperature Control Device Reconnaissance Study, Fort Peck, Montana* concluded that "*construction of the Submerged Weir Alternative in parallel to the next study phases and potential design could be implemented*."

In that conclusion, the authors gave the following rationale:

- *It allows for critical time in evaluating the impact of warmer discharges from Fort Peck Dam on the Pallid Sturgeon community and habitat downstream;*
- *It provides an immediate response in attempting to stabilize a community of endangered species;*
- *It would be implemented as a full-scale pilot study to prove and refine the research, theories, biological models and water quality computer models used to address the Pallid Sturgeon recovery to date;*
- *The evaluation of the impacts from the Submerged Weir can be used to determine if a larger investment will provide a long-term solution to mitigate for the cold-water discharges;*
- *If effective, the Submerged Weir application could be used on the outlets of other dams in the Missouri River Basin.*

In the 2009 USACE study, it was speculated that the other, more complex measures described in Alternatives 2, 3, and 4 would take 2 or 3 years to construct. This time frame appears overly optimistic. Given their complexity, design challenges, permitting and other activities, these long-term alternatives could take 10 or more years to implement. The submerged weir alternative, with its minimal interface with existing facilities, would benefit the fishery rapidly as an interim measure, as a long-term solution progresses toward implementation.

Additionally, the Submerged Weir Alternative would route warm water through the turbines to maintain existing hydropower production capacity. It is noted that design would need to consider the potential for weir failure that could block the hydroelectric intakes. Existing projects have addressed this issue successfully.

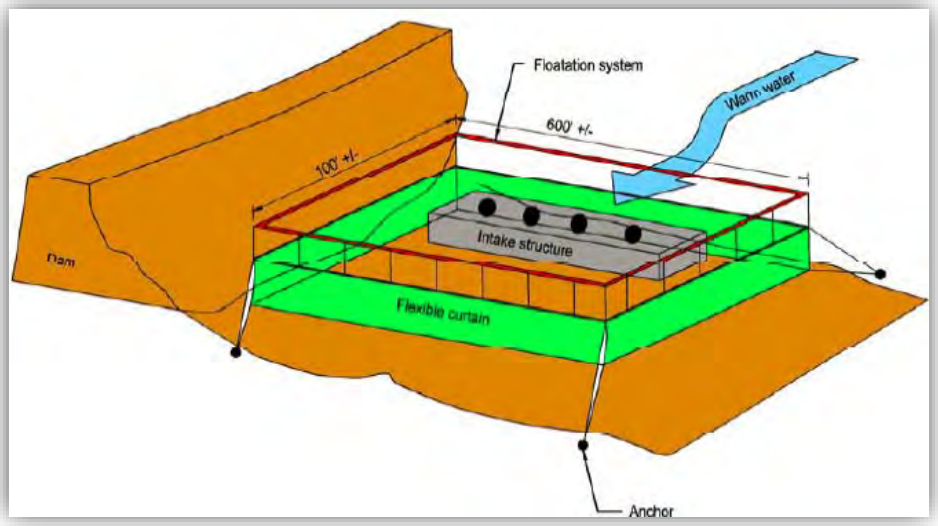

Figure 3-1. Schematic Using a Flexible Curtain as a Submerged Weir

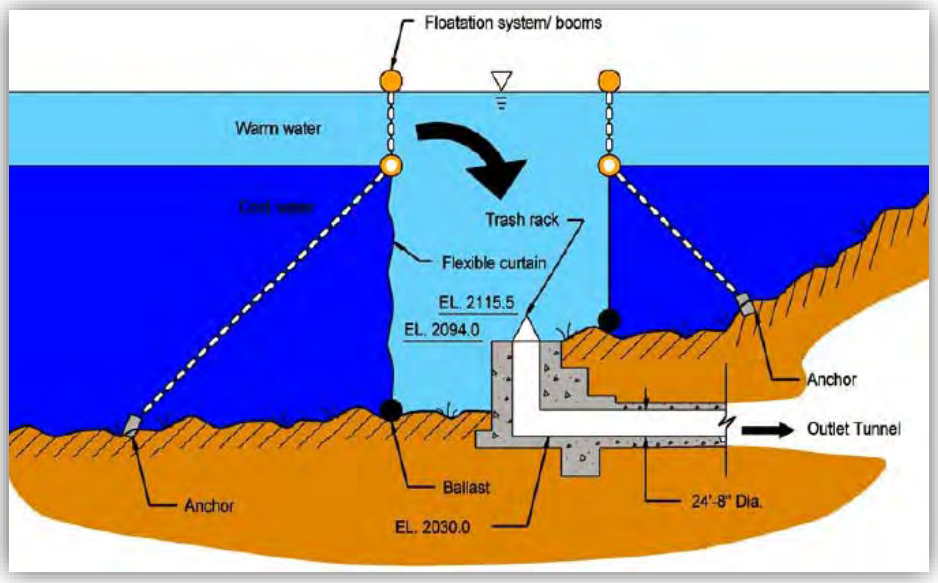

Figure 3-2. Section Schematic of a Submerged Weir

Several submerged weir installations in the United States provide case studies from which we can derive design details, life expectancy, maintenance costs, and other information. These installations include:

- Whiskeytown Reservoir – California (**Figure 3-3**)
  - Originally installed in 1993
  - Replaced in 2011
  - Two curtains:
    - Carr Powerplant Tailrace – 600 feet in length, 40 feet deep

        - Spring Creek Powerplant – 2,400 feet in length, 100 feet deep
    - The initial hypalon curtain had deteriorated due to rubbing on the anchorage assembly. The replacement curtain, made of polypropylene geomembrane, is expected to have a life of 15 years.

- Lewistown Dam – California
    - Originally installed in 1992
    - 835 feet in length, 35 feet in depth
    - Some design concepts and criteria for the Lewiston project include:
        - Maximum velocities past the curtain are limited to 0.3 feet per second (ft/s) to provide conservative withdrawal characteristics and hydraulic loading on the curtain structure.
        - Curtains are fully floatable for ease of installation and maintenance with all components surface accessible.
        - Curtains are adjustable to accommodate fluctuating lake levels and large construction tolerances.
        - Curtain vertical positions can be changed, and components retrieved using compressed air floatation.
        - No structural loads are placed on the Hypalon™ curtain fabric.
        - All pressure-bearing components of the curtain fabric and main load carrying chains are sagged (70 to 75 degrees of arc) to limit member loading.
        - The 830-ft curtain can be easily opened to allow warmer surface water passage for hatchery withdrawal as needed.
        - All anchor connections are attached to the top of the curtains to permit rapid curtain structure removal.
        - The maximum curtain deflection (under full density and dynamic loading) is held to 40 percent of the working curtain depth. The average design load was determined to be 0.6 lbs./lf.
        - Mechanical connections are designed with a conservative factor of safety of 15 to accommodate concerns with wear and fatigue failures caused by wave loading. The main support chain has redundant components at wear points.
        - Curtain fabric selected is resistant to water, sunlight, bacteria, organic growth, and corrosion, and is designed with a loading factor of safety of 10 to accommodate unusual forces during assembly and handling.
        - All steel surfaces are coated with ZRC zinc (easily applied and allows future recoating).
        - The curtain is designed with a 30-ft working depth, which field data indicated is adequate to retain the warm surface water layer.
        - Curtain installation should require minimal use of divers.

Figure 3-3. Whiskeytown Submerged Weir Installation

Potential Costs

- The 2009 *Fort Peck Temperature Control Device Reconnaissance Study, Fort Peck, Montana* suggested that the likely cost of the submerged weir option would be in the range of $8 million to $25 million. As a concept, this cost range is likely within the accuracy needed. Note that in 2011, the Whiskeytown submerged weir replacement project cost $3 million.

Advantages

- Low capital cost.
- The potentially timely installation of this relatively simple improvement could benefit the sturgeon population much more quickly than other proposals that likely would take years of study, planning, and construction.
- Retains hydroelectric capacity.
- Knowledge gained by managing discharge temperatures during this phase would benefit future studies required for more robust, long-term improvements.
- If the submerged weir proves effective, it could prove to be a model for other reservoirs.

Disadvantages

- Limited design life.
- Potential for weir failure, causing blockage of the hydroelectric intakes.

Additional information regarding the Whiskeytown and Lewiston submerged weirs can be found in:

Use of Temperature Control Curtains to Control Reservoir Release Water Temperature (Vermeyen, 1997)

At the Whiskeytown Reservoir Geomembrane Curtain Improves Salmon Habitat (Gee et al., 2012)

Additional information regarding successful use of submerged weirs can also be found in provided in:

Scoping Options for Mitigating Cold Water Discharges from Dams (Sherman, 2000)

Since the time of the Vermeyen and Sherman reports, design modifications include more durable fabrics and hardware assemblies which greatly reduce wear on the fabric and on the hardware itself. Additionally, a submerged weir at Fort Peck would be deployed below the surface and not so subject to wind and wave action.

3.2 SOLUTION FP-2 – SURFACE PUMPS TO MOVE WATER FROM THE LAKE SURFACE TO THE HYDROELECTRIC INTAKE

The 2009 *Fort Peck Temperature Control Device Reconnaissance Study, Fort Peck, Montana* dismissed surface pumps as a feasible solution, referencing project scale and past performance. Recent developments suggest that this potential solution should be revisited. Systems of this type have been installed in the United States, Australia, and Scotland. At the Tennessee Valley Authority's (TVA) Douglas Dam, a series of nine surface water pumps operate in an array as shown below in **Figure 3-4**. The surface pump system can operate vertically with reservoir fluctuations of 62 feet. The system has been in operation since 1994. The Douglas Dam system works in conjunction with intake flows to provide about 1/3 of the 16,000 cfs inflow. Fort Peck intake flows are on the order of 12,000 cfs, and the system may need to provide closer to 100% of inflows. Further study of the feasibility of surface pumps should include Computational Fluid Dynamics (CFD) modeling as well as study of current surface pumping facilities.

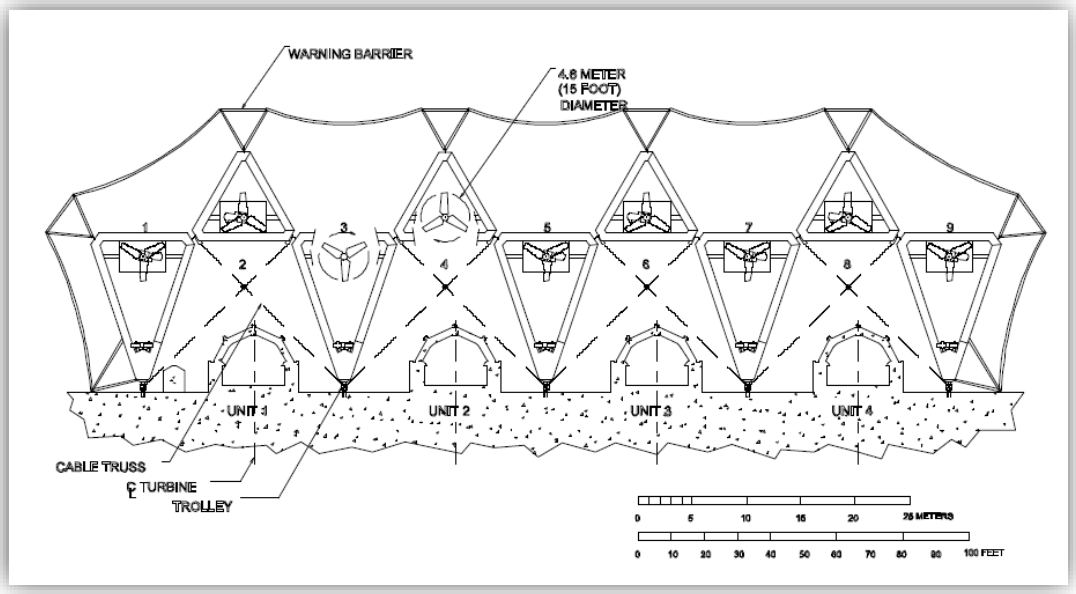

Figure 3-4. Douglas Dam Surface Pump Arrangement (Mobely et al. 1995)

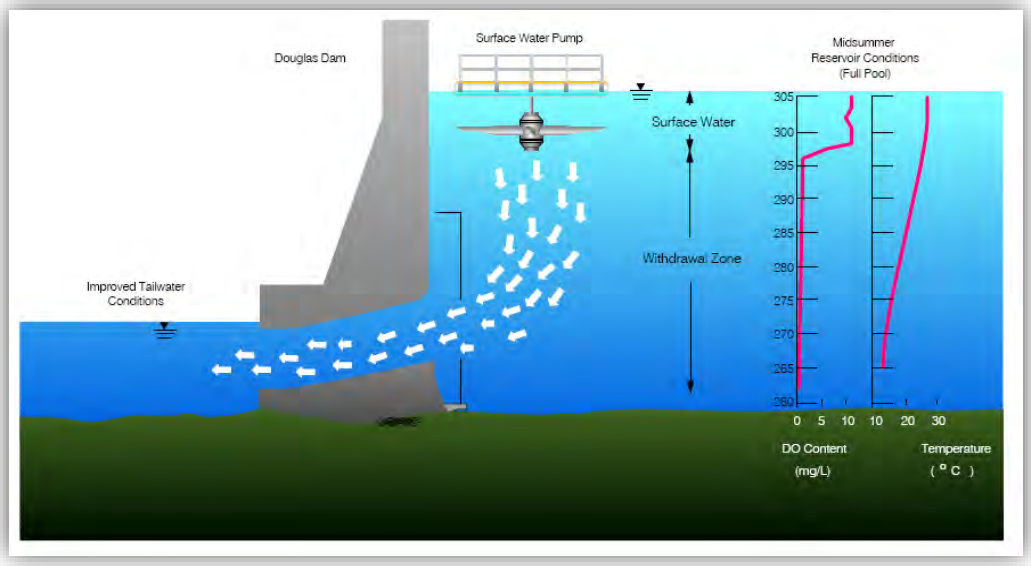

Figure 3-5. Douglas Dam Surface Pump Schematic (Mobely et al. 1995)

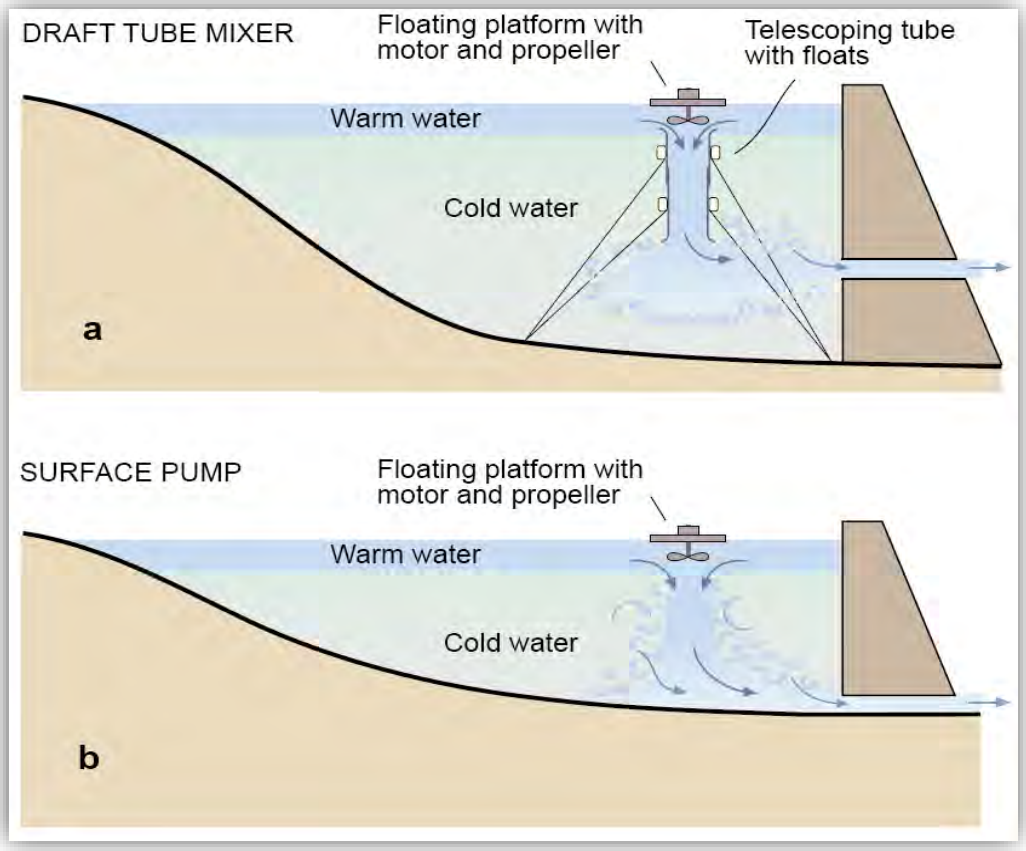

Figure 3-6. Schematic - Surface Pump with Draft Tube Mixer And Surface Pump without Draft Tube Mixer

Potential Costs

- The Douglas Dam surface pump installation had a capital cost of about $2.5 million in 1994. Adjusted for inflation (using USBR Index), this value would be about $5 million to $8 million. While the Douglas Dam system only supplies about 1/3 of the intake flows, the Fort Peck system would need to supply closer to 100% of intake flows. An approximate capital cost range of this alternative would be in the range of $15 million to $25 million.

Advantages

- Low capital cost. Relatively low annual cost.
- The potentially timely installation of this could benefit the sturgeon population much more quickly than other proposals that likely would take years of study, planning, and construction.
- Retains hydroelectric capacity.
- Knowledge gained by managing discharge temperatures during this phase would benefit future studies required for more robust, long-term improvements.
- If the surface pump proves effective, it could prove to be a model for other reservoirs.

Disadvantages

- Potential conflicts with recreation activities.
- Power cost to operate.

Additional information regarding successful use of surface pumps be found in:

Scoping Options for Mitigating Cold Water Discharges from Dams (Sherman, 2000)

3.3 SOLUTION FP-3 - MULTI-LEVEL INTAKE FOR SELECTIVE WATER WITHDRAWAL

This solution entails installation of a long-term, multi-level intake structure on Fort Peck Dam enabling surface water to be selectively withdrawn into the existing Tunnel 4 Gate Shaft. This configuration would provide the benefits of a multi-level intake for temperature control, additional flood management capacity, and additional power generation at Fort Peck.

The original construction of Fort Peck Dam included four bypass tunnels to control the Missouri River during dam construction. Tunnels 1 and 2 now deliver flows to the powerhouse, while Tunnels 3 and 4 remain unused. It may be feasible to utilize the existing gate control shaft at Tunnel 4, which houses a large ring gate, but is not used in normal operations. Upstream of the ring gate is a large roller gate. At the intake, there are exiting stoplog slots. USACE keeps these stoplogs at the site, although there is no record that they were ever deployed, consequently the tunnels may have never been tested upstream of the control gates, under full reservoir head.

The gate components and other elements could be removed from the shaft, an upstream plug created, and a steel liner installed to handle flows from the multi-level intake. The steel liner would be approximately 26 feet in diameter. Installation tie-in of this configuration could possibly be constructed

during seasonal low pool, accompanied by some cofferdams. The configuration might look something like that which is depicted in **Figure 3-7**.

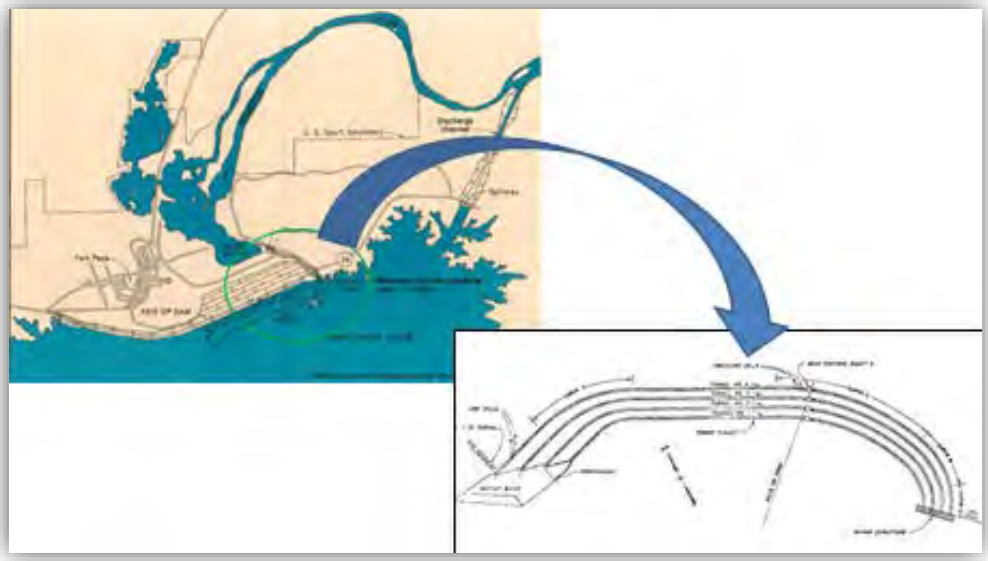

Figure 3-7. Plan View – Multiple Level Intake with Connection to Tunnel 4

Figure 3-8. Intake Gate Houses at Fort Peck, Showing both Ring Gate and Roller Gate Houses

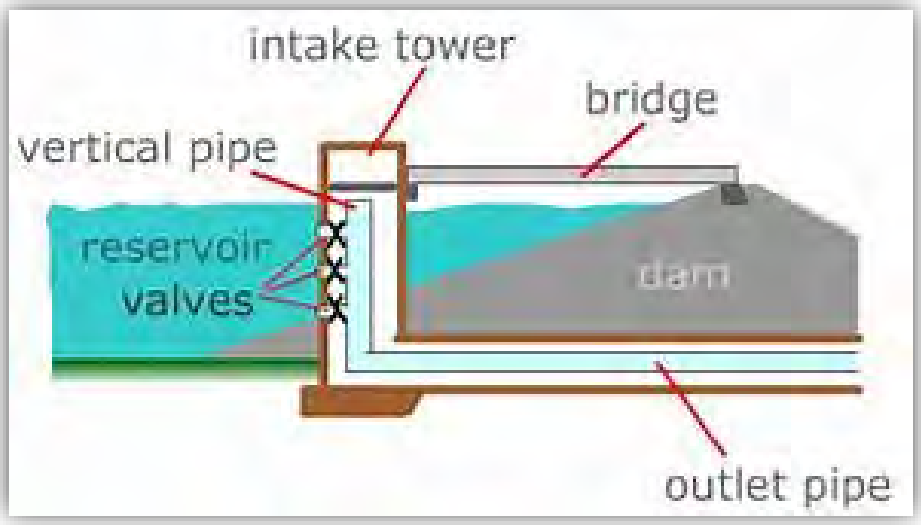

Figure 3-9. Typical Multi-Level Intake Schematic

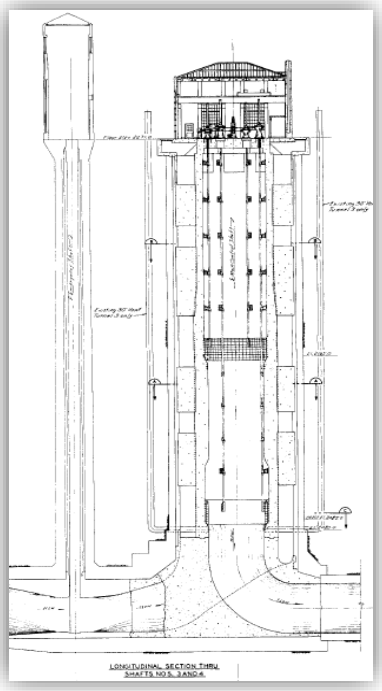

Figure 3-10. Existing Shaft and Ring Gate Configuration at Fort Peck

A multi-level intake structure could be installed when the reservoir elevation is maintained at low level conducive to construction. The intake must be able to select the appropriate temperature layers as the reservoir elevation fluctuates by about 30 feet during the summer months. Several common intake configurations could be compatible with the Fort Peck facilities, including inclined and vertical intake structures. The system described here should also be designed with hydroelectric turbines to increase power production capacity at Fort Peck.

Potential Costs

- The 2009 *Fort Peck Temperature Control Device Reconnaissance Study, Fort Peck, Montana* suggested that the likely cost of Alternative 2 - Modify Existing Intake would be in the range of $155 million to $482 million, while the cost of Alternative 3 - New Intake and Tunnel, would be in the range of $217 million to $361 million. This Solution FP-3, would be simpler to implement than either Alternative 2 or Alternative 3 (Tetra Tech 2009), and likely in a cost range of $125 million to $250 million.

Advantages

- Continuous vertical adjustment to intake water from the desired temperature layer near the surface of the reservoir.
- Simpler design and construction than Alternatives 2 and 3.
- Construction can be scheduled during low pool periods, to reduce cofferdam and marine construction costs and constraints.
- This alternative would give USACE operators at Fort Peck an additional alternate outlet for releases in case of an emergency at the existing powerhouse, routine maintenance, or high runoff flows such as those experienced in 2011.
- Additional hydroelectric capacity at Fort Peck. Additional revenue from hydropower generation could offset construction costs of the new intake.
- This system could potentially be designed with one or more reversible turbines to utilize the large footprint of Fort Peck Reservoir as a pumped storage facility to balance intermittent generation by regional wind and solar facilities.

Disadvantages

- Cost, although the hydroelectric and biological (sturgeon) benefits listed would likely justify the cost.
- Considerable time for planning, permitting, and financing.
- This alternative should be designed with hydroelectric turbines to avoid loss of hydropower capacity.

3.4 SOLUTION FP-4 - POTENTIAL LONG-TERM SOLUTION - FLOATING INTAKE STRUCTURE WITH CONNECTION TO TUNNEL 4 GATE SHAFT

This concept would use a floating intake to convey warm surface water to the existing outlet tunnels or intake structure. Examples of this type of facility include Portland General Electric's Selective Water Withdrawal facility at Lake Billy Chinook (Round Butte Dam and Hydro Facility) near Redmond, Oregon and Puget Sound Energy's Upper Baker Hydroelectric project in Washington (**Figures 3-10** through **3-12**). These floating structures convey near-surface flows to the hydroelectric intakes below. Although these facilities are more often used to improve fish passage, the concept could be modified to convey warm reservoir water directly to the Fort Peck intake structure. The floating facility does not rely on the existing intake penstocks for structural support.

Figure 3-10. Plan Schematic – Floating Collector with Intake Connection

Figure 3-11. Floating Surface Collector (Lake Billy Chinook, OR)

Figure 3-12. Floating Surface Collector (Lake Billy Chinook, OR)

Proposed Potential Costs

- The 2009 *Fort Peck Temperature Control Device Reconnaissance Study, Fort Peck, Montana* suggested that the likely cost of Alternative 2 -Modify Existing Intake would be in the range of $155 million - $482 million, while the cost of Alternative 3 - New Intake and Tunnel, would be in the range of $217 million - $361 million. Solution FP-4 would be more complicated than Solution FP-3, but simpler than either Alternative 2 or Alternative 3. The cost of Solution FP-4 would likely range from $150 million to $350 million.

Advantages

- High degree of flexibility for warmer near-surface water withdrawals.
- Simpler design and construction than Alternatives 2 and 3.
- The floating intake can be constructed on the water, reducing cofferdam and marine construction costs and constraints.

Disadvantages

- Cost.
- Considerable time for planning, permitting, and financing.
- The floating surface collector would need to be stored above or below the surface during winter to prevent ice damage.

4.0 CONCLUSION

Pallid Sturgeon inhabiting the Yellowstone River downstream of Intake Dam and the Missouri River downstream of Fort Peck Dam comprise a single population restricted by conditions created at both dams. A proposal to build a larger dam at Intake and provide fish passage through an artificially constructed bypass may meet upstream fish passage objectives. The artificial bypass channel, however, poses a significant risk of not being successful for upstream, adult Pallid Sturgeon passage. In addition, the bypass channel has not been designed to provide downstream Pallid Sturgeon larval drift, and the construction of a larger dam at Intake would only increase mortality of Pallid Sturgeon larvae. This report has presented a number of alternatives to obviate the need for a dam at Intake. This report also couples open river alternatives at Intake with changes at Fort Peck dam to meet a wider variety of Pallid Sturgeon recovery objectives. This report was commissioned to analyze feasibility of the broader suite of options available to provide water to irrigators, recover Pallid Sturgeon, and spend federal Water Resources Development Act (WRDA) funds consistent with Congress' specific and exclusive direction to provide "ecosystem restoration" in the design and construction of the irrigation structure at Intake.

The concepts presented in this document are intended to be conceptual and comparative in nature, and not an engineering product. This document is meant to provide concepts for further study in the overall effort to improve Pallid Sturgeon habitat and recovery on in the Missouri and Yellowstone River basins.

4.0 REFERENCES

BOR and USACE. 2016a. *Lower Yellowstone Intake Diversion Dam Fish Passage Project, Montana, Final Environmental Impact Statement*, October 2016. Prepared by joint lead agencies U.S. Department of Interior, Bureau of Reclamation, Billings, Montana, and U.S. Army Corps of Engineers, Omaha District, Omaha, Nebraska. Available online: https://www.usbr.gov/gp/mtao/loweryellowstone/EIS/2016feis.pdf

BOR and USACE. 2016b. *Lower Yellowstone Intake Diversion Dam Fish Passage Project, Montana, Record of Decision*, December 2016. Prepared by joint lead agencies U.S. Department of Interior, Bureau of Reclamation, Billings, Montana, and U.S. Army Corps of Engineers, Omaha District, Omaha, Nebraska. Available online: https://www.usbr.gov/gp/mtao/loweryellowstone/ly_rod.pdf

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Attachment A

Alignment Drawings, Fort Peck to Intake

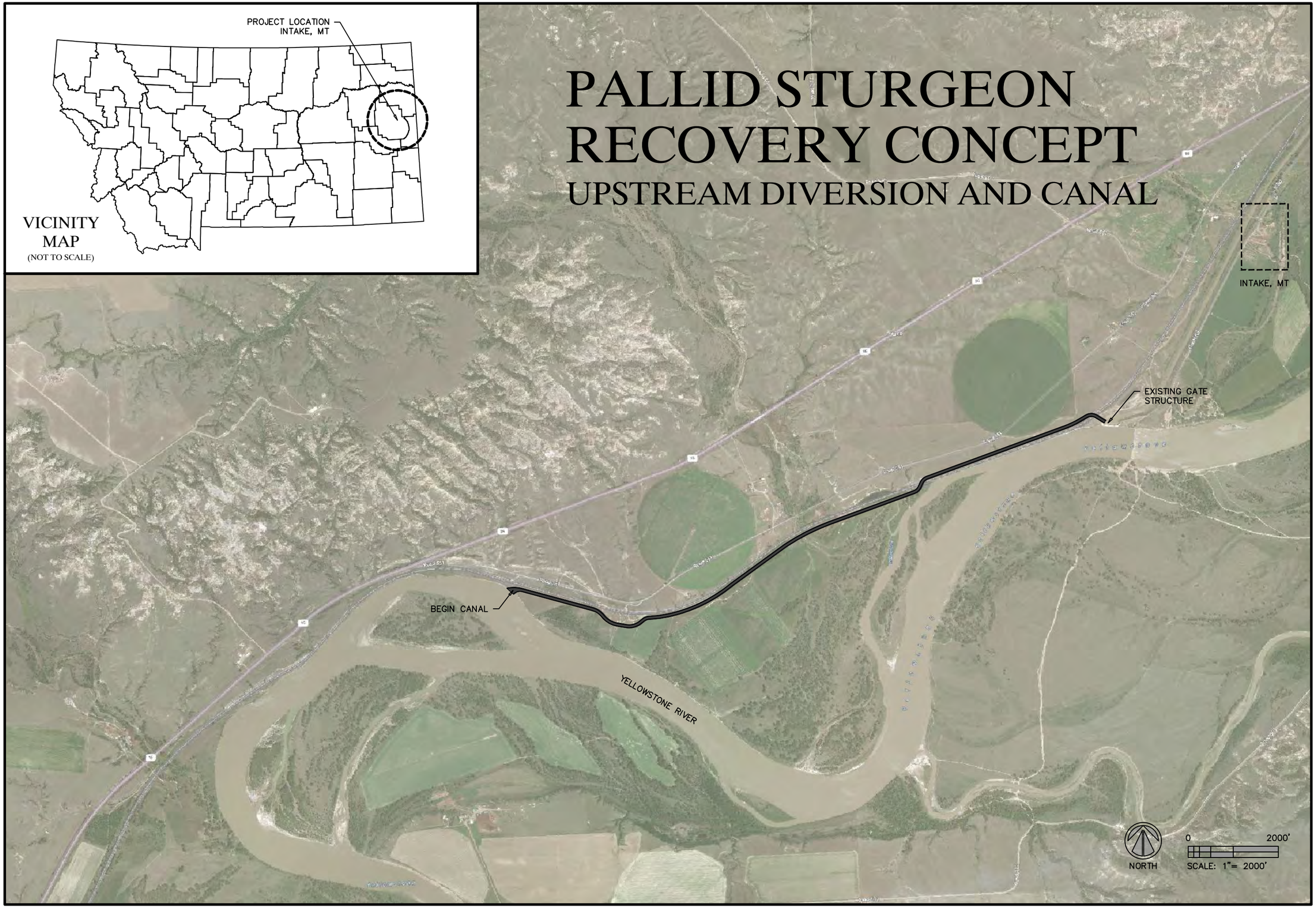
Available upon request: pbyorth@tu.org

Attachment B

Alignment Drawings, Upstream Diversion and Canal

PALLID STURGEON RECOVERY CONCEPT

UPSTREAM DIVERSION AND CANAL



REVISION:
2018-09-14
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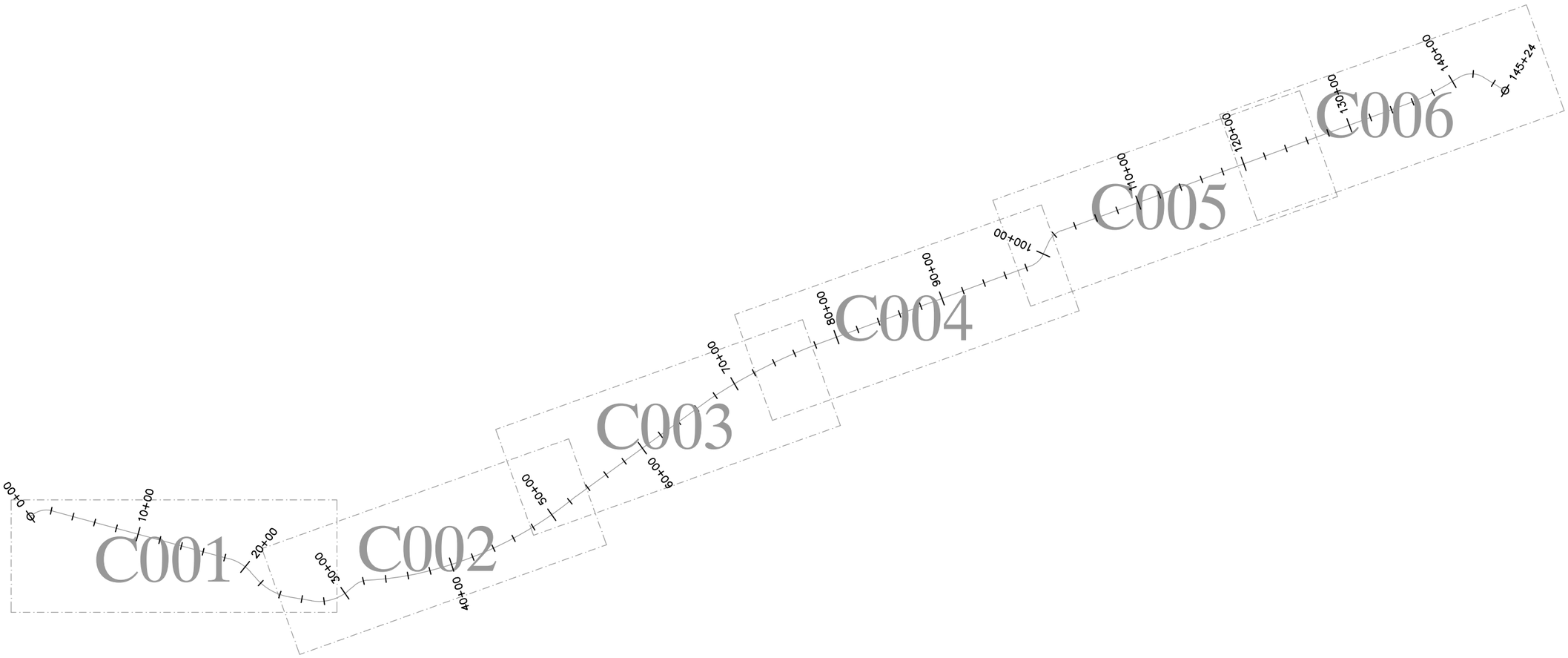
PALLID STURGEON RECOVERY CONCEPT
UPSTREAM DIVERSION AND CANAL

COVER

SHEET
G000



NORTH

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REVISION:
2018-09-14
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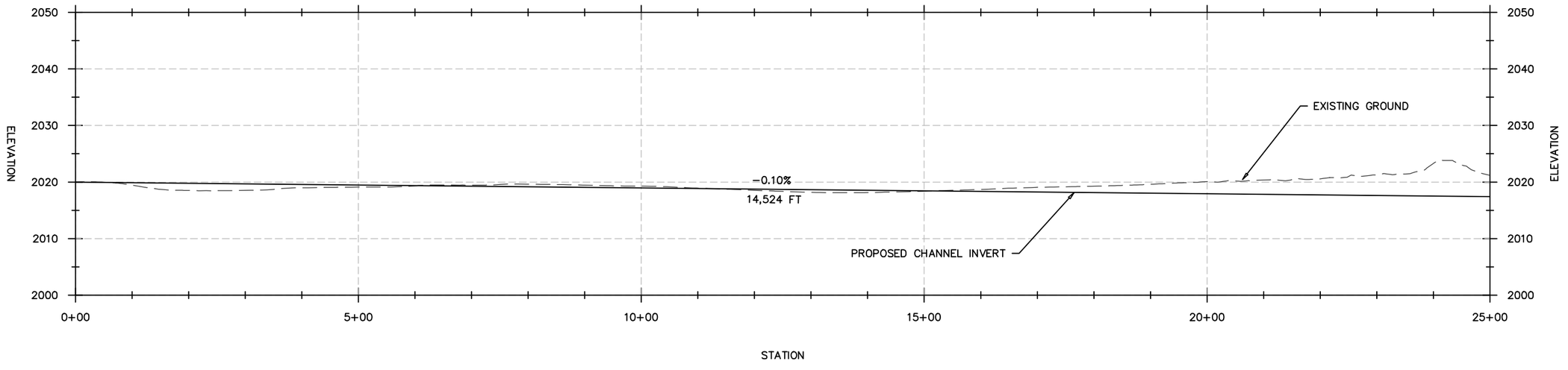
PALLID STURGEON RECOVERY CONCEPT

UPSTREAM DIVERSION AND CANAL

PLAN INDEX

SHEET
C000

CANAL – CL



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V SCALE: 1"= 20'

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2018–09–14
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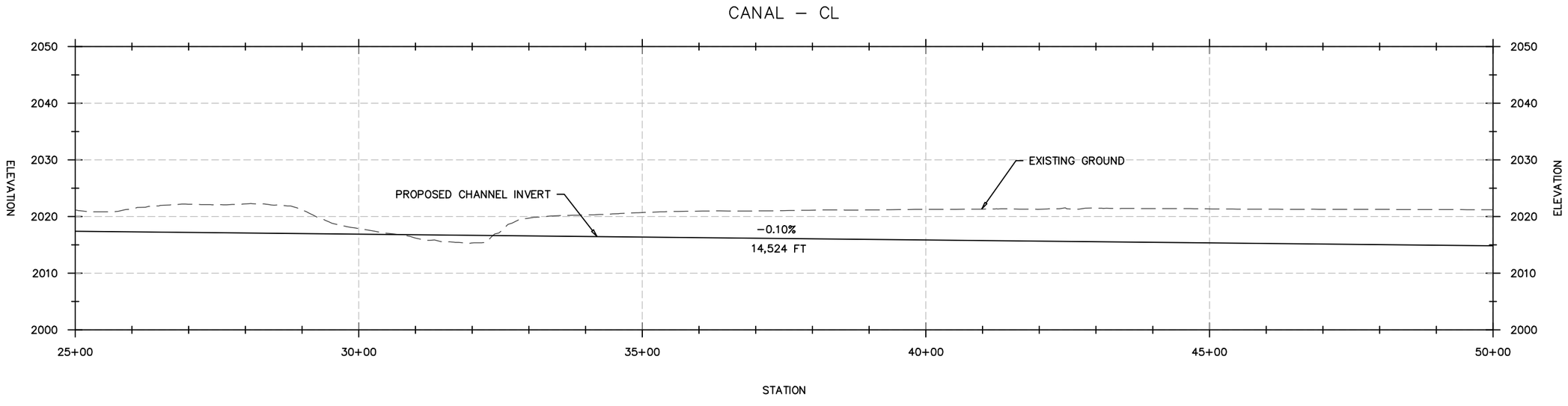
PALLID STURGEON RECOVERY CONCEPT

UPSTREAM DIVERSION AND CANAL

PLAN AND PROFILE

SHEET
C001



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2018–09–14
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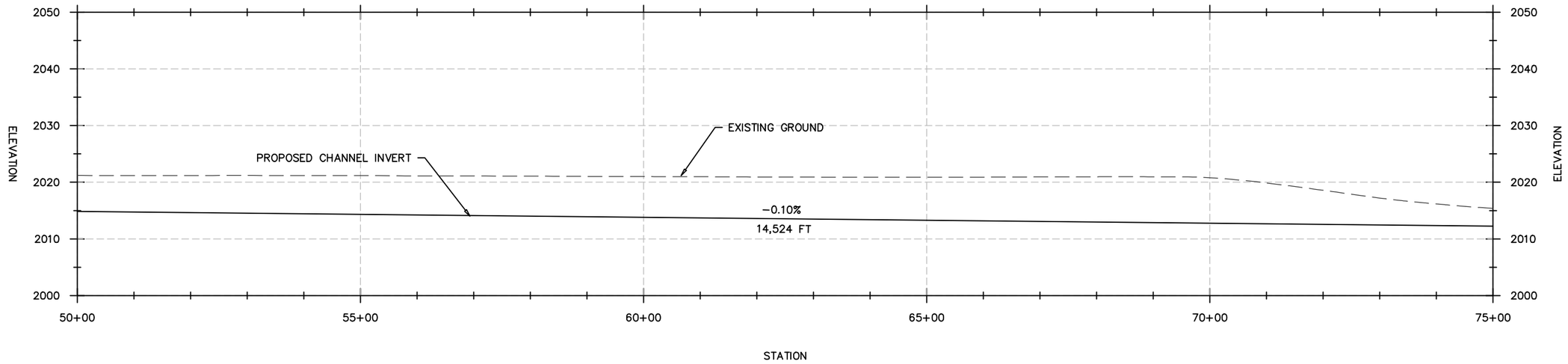
PALLID STURGEON RECOVERY CONCEPT

UPSTREAM DIVERSION AND CANAL

PLAN AND PROFILE

SHEET
C002

CANAL – CL



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REVISION:
2018–09–14
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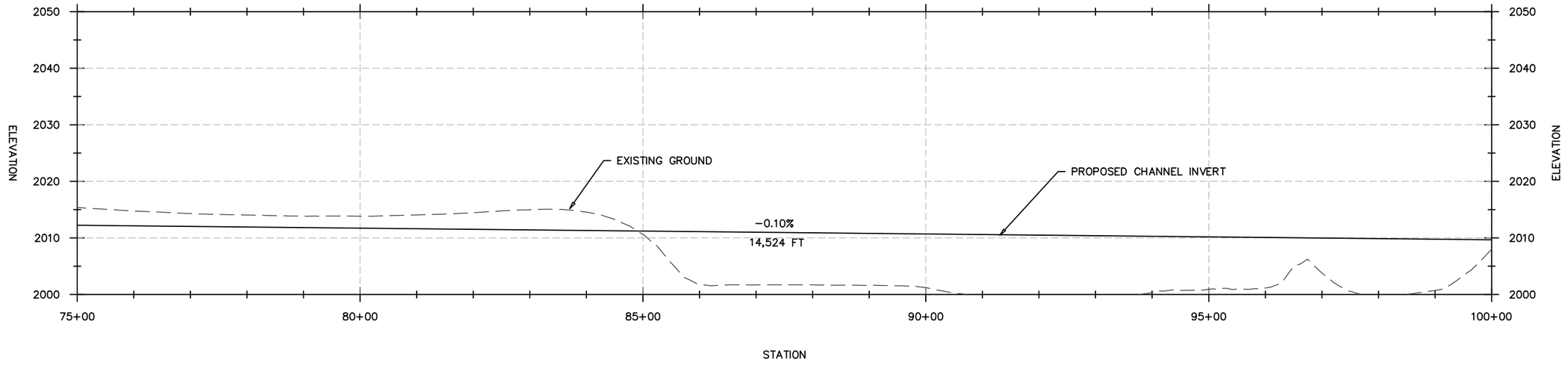
PALLID STURGEON RECOVERY CONCEPT

UPSTREAM DIVERSION AND CANAL

PLAN AND PROFILE

SHEET
C003

CANAL – CL



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V SCALE: 1"= 20'

REVISION:
2018–09–14
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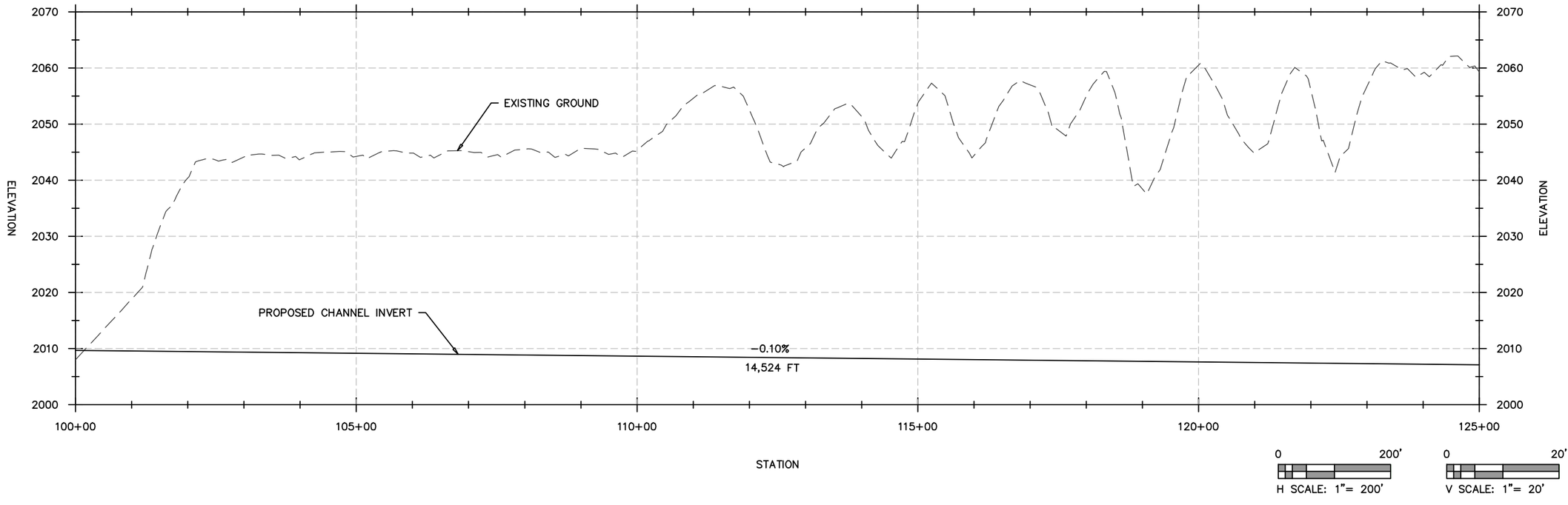
PALLID STURGEON RECOVERY CONCEPT

UPSTREAM DIVERSION AND CANAL

PLAN AND PROFILE

SHEET
C004



REVISION:
2018–09–14
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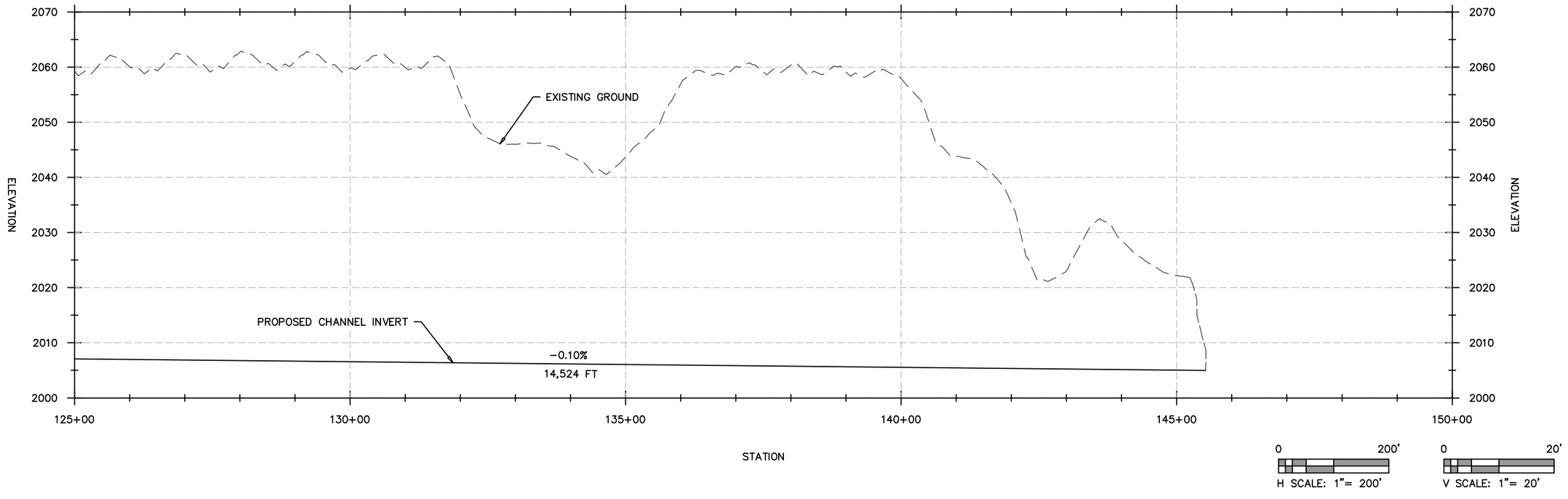
PALLID STURGEON RECOVERY CONCEPT

UPSTREAM DIVERSION AND CANAL

PLAN AND PROFILE

SHEET
C005

CANAL – CL



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V SCALE: 1"= 20'

REVISION:
2018–09–14
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PALLID STURGEON RECOVERY CONCEPT

UPSTREAM DIVERSION AND CANAL

PLAN AND PROFILE

SHEET
C006

Attachment C

Alignment Photographs, Fort Peck to Intake

Available upon request: pbyorth@tu.org

From: Vanosdall, Tiffany CIV USARMY CENWO (US)
To: Quinn, Aaron T CIV USARMY CENWO (US); Ridenour, Clayton J CIV USARMY CENWO (US)
Subject: FW: FORT PECK FLOWS
Date: Wednesday, March 27, 2019 7:38:11 AM

Sent with BlackBerry Work
(www.blackberry.com)

From: Salak, Jennifer L CIV USARMY CENWO (US) <Jennifer.Salak@usace.army.mil <mailto:Jennifer.Salak@usace.army.mil> >
Date: Wednesday, Mar 27, 2019, 6:10 AM
To: Vanosdall, Tiffany CIV USARMY CENWO (US) <Tiffany.K.Vanosdall@usace.army.mil <mailto:Tiffany.K.Vanosdall@usace.army.mil> >
Subject: FW: FORT PECK FLOWS

-----Original Message-----
From: Leslie Tveit [mailto:leslietveit@hotmail.com]
Sent: Tuesday, March 26, 2019 2:44 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] FORT PECK FLOWS

High water flows increase erosion and forces us to hire a dredge to clean out water access. When flows drop, the dredge needs to be hired again to clean out access. This is an added cost to our production. This process continues every time the river flows increase or decrease by 5,000 to 7,000 cfs. Every year we loose 5 to 15 feet of stream bank on our farm. The more radical the releases, the more stream bank we loose.

July and August are our prime irrigating and growing months. Lowering the cfs anytime causes havoc with our pumps and water needs. When you affect the farmers way of producing food for all, the crops produce less, which makes less income then there is less money spent at local businesses. Everyone suffers to "save the fish"?

What is the main reason the pallid sturgeon must be saved? They do not provide a food source. There must be other ways to preserve them than to hinder the farmer. We understand the pallid sturgeon are thriving downstream.

The cfs range that needs to be maintained for proper irrigation and less erosion is from 8,000 (minimum) to 22,000 (maximum).

Thank you,
Tveit Land & Cattle Co
Nolan Tveit
Brad Tveit

From: Vanosdall, Tiffany CIV USARMY CENWO (US)
To: Ridenour, Clayton J CIV USARMY CENWO (US); Quinn, Aaron T CIV USARMY CENWO (US)
Subject: FW: [Non-DoD Source] Scoping Comments
Date: Tuesday, March 26, 2019 8:51:07 AM

Tiffany Vanosdall, PMP
Senior Plan Formulator/Project Manager

US Army Corps of Engineers
1616 Capitol Ave
Omaha, NE 68059
402-995-2695
tiffany.k.vanosdall@usace.army.mil

-----Original Message-----
From: Salak, Jennifer L CIV USARMY CENWO (US)
Sent: Tuesday, March 26, 2019 6:39 AM
To: Vanosdall, Tiffany CIV USARMY CENWO (US) <Tiffany.K.Vanosdall@usace.army.mil>
Subject: FW: [Non-DoD Source] Scoping Comments

-----Original Message-----
From: Dan Young [mailto:youngrnch@gmail.com]
Sent: Monday, March 25, 2019 11:42 PM
To: CENWO-Planning <CENWO-Planning@usace.army.mil>
Subject: [Non-DoD Source] Scoping Comments

U.S. Army Corps of Engineers:
This email is in regards to your invitation for public comment regarding the Fort Peck dam test release. I started my first year in irrigated farming along the Missouri river in 2018 and I have already learned a lot in the first year, flows above 20000 steal a lot of real estate on our farm and flows below 8000 make it very difficult if not impossible to water crops. Extremely low flows below 8000 would cause major hardship on my operation as would the drastic dropping of water levels to that point because of the sluffing it would cause. While I fully understand the reasoning behind the test flows and I sympathize with the plight of the Pallid sturgeon I hope you will keep the irrigators on the very forefront of this issue, if we can't reach the water to irrigate in the crucial summer months it will cause a very large economic loss for my operation. I hope you can develop a plan that will not cause any unneeded economic strain on the farmers, thank you for considering my comment.

Dan Young
13689 CR 352 Fairview Mt. 59221
youngrnch@gmail.com <mailto:youngrnch@gmail.com>

LOWER YELLOWSTONE
RURAL ELECTRIC COOPERATIVE
Your Touchstone Energy® Cooperative

PO Box 1047
3200 West Holly Street
Sidney, MT 5927
Phone: (406) 488-1602
Fax: (406) 488-6524
www.lyrec.com

3/14/2019

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

Dear U.S. Army Corps of Engineers:

On behalf of the Board of Directors, membership and staff of Lower Yellowstone Rural Electric Cooperative in Sidney, Montana, I want to make a few comments on the Fort Peck flows study.

Our electric distribution cooperative supplies power to all the famers, ranchers and Western Area Power Administration pump sites along the river. This includes approximately 50,000 acres of irrigated land, with 10,000 of the acres in Richland County alone.

The proposed test will impact the pump site facilities and lively hood of the irrigators in our county and many of the surrounding counties.

It is imperative that a new river survey be conducted and funded to determine what the impact of this test would be on over 150 irrigation pump sites in this study area.

The proposed lowering of the river flow (CFS) during peak irrigation season will also affect the electrical power supplies needed to operate pumps for those irrigator's using electricity. Connections from transformers to the pump will need to be extended and then resized due to the added length at a cost to the irrigator. This would also cause environmental issues that need to be addressed, if electricity and or diesel tanks are placed in the flood plain. There should be consideration of what happens to these facilities once the river is lowered.

We feel a timeline to develop alternatives is short and more study time on the impacts to the irrigators and the fish are needed. A survey of the river, interpreting the data for each site and figuring out a plan for impacted sites and the cost to implement the plan should be discussed.

Thank you for your time and consideration on this important topic.

Sincerely,

Jason A. Brothen
CEO, Lower Yellowstone Rural Electric Cooperative

We at Norby Inc. operate a farm growing small grains and sugar beets. These crops rely on the Missouri river to supply water for irrigation. From May through September we require water for irrigation in order for the crops to flourish. If the flow drops below 7,000-8,000 CMF's our irrigation pumps will be very short of reaching water. This would cause a drop in production, resulting in poor crops and a large monetary loss.

It is vital for farmers raising irrigated crops for the flow tests to not be done from May through September. This would be a huge deficit not only for the farmers, it would affect our entire community.

Please take this into consideration.

Sincerely, Rocky Norby

3-27-19

We at Norby Inc. operate a farm growing small grains and sugar beets. These crops rely on the Missouri river to supply water for irrigation. From May through September we require water for irrigation in order for the crops to flourish. If the flow drops below 7,000-8,000 CMF's our irrigation pumps will be very short of reaching water. This would cause a drop in production, resulting in poor crops and a large monetary loss.

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Please take this into consideration.

Sincerely,

Mardy Malkuch
3/27/19

We at Norby Inc. operate a farm growing small grains and sugar beets. These crops rely on the Missouri river to supply water for irrigation. From May through September we require water for irrigation in order for the crops to flourish. If the flow drops below 7,000-8,000 CMF's our irrigation pumps will be very short of reaching water. This would cause a drop in production, resulting in poor crops and a large monetary loss.

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Please take this into consideration.

Sincerely, 3-27-19

Charlie Sheehan

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Please take this into consideration.

Sincerely,

03/27/19.

Dean Verhasselt

We at Norby Inc. operate a farm growing small grains and sugar beets. These crops rely on the Missouri river to supply water for irrigation. From May through September we require water for irrigation in order for the crops to flourish. If the flow drops below 7,000-8,000 CMF's our irrigation pumps will be very short of reaching water. This would cause a drop in production, resulting in poor crops and a large monetary loss.

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Please take this into consideration.

Sincerely,

3/27/19

Matt Stedman

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Please take this into consideration.

Sincerely,

Scott P. Denham 3/27/19

Scott Denham

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Please take this into consideration.

Sincerely,

Bryce Jones 3-27-2019

Bryce Jones

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Please take this into consideration.

Sincerely, 3-27-19

Randy Leister

6

We at Norby Inc. operate a farm growing small grains and sugar beets. These crops rely on the Missouri river to supply water for irrigation. From May through September we require water for irrigation in order for the crops to flourish. If the flow drops below 7,000-8,000 CMF's our irrigation pumps will be very short of reaching water. This would cause a drop in production, resulting in poor crops and a large monetary loss.

It is vital for farmers raising irrigated crops for the flow tests to not be done from May through September. This would be a huge deficit not only for the farmers, it would affect our entire community.

Please take this into consideration.

Sincerely,

Tony Brass 3-27-19

Tony Brass

519 West 9th Street, Hermann, MO 65041 • (573) 690-2324 • protectthemissouri.com

March 25, 2019

Brigadier General Peter D. Helmlinger
U.S. Army Corps of Engineers, Omaha District
ATTN: CENWO-PM-AC – Fort Peck EIS Comments
1616 Capitol Avenue
Omaha, Nebraska 68102

Dear General Helmlinger:

On behalf of the Coalition to Protect the Missouri River (CPMR), thank you for the opportunity to present scoping comments regarding the proposed Fort Peck Dam Test Release Environmental Impact Statement. CPMR, established in 2001, represents a broad base of interests throughout the lower Missouri River Basin, including flood control, navigation, agriculture, and public energy and water utilities. We support responsible management of Missouri River resources and maintenance of congressionally authorized purposes of the river, including flood control, navigation, water quality and water supply. Many of our members are also active participants in the Missouri River Recovery Implementation Committee (MRRIC) and have provided feedback regarding your agency's proposed action at Fort Peck through that venue as well.

To begin, we are pleased that proposed hydrographs surrounding a Fort Peck test release do not involve a drawdown of Lake Sakakawea, which could cause widespread flooding and interior drainage concerns if such a large amount of water would need to be evacuated through the Missouri River mainstem system.

Regarding recruitment for pallid sturgeon, the USACE, USFWS, state agencies and others are encouraging actions on the upper Missouri River to be viewed as a "system" in conjunction with the Yellowstone River. In fact, a "system" approach is one that CPMR and other lower Missouri River stakeholders have been urging the agencies to consider for quite some time when it comes to evaluating the Mississippi River's role in pallid sturgeon recruitment as well. We encourage federal and state agencies to also see the lower Missouri and Mississippi Rivers as a system during future species recovery considerations and actions.

We are extremely concerned, however, about the precedent a test release could set for the future through potential efforts to replicate it from other mainstem reservoir dams. If a Fort Peck test release is to be implemented, it is imperative that CPMR and all interested parties be assured of its parameters and those of future experiments. Namely, stakeholders that live and work along the river need to know that test releases will not harm their livelihoods or property in any way

whatsoever. While this exercise is to benefit larval pallid sturgeon recruitment, USACE must not abandon its primary flood control and navigation missions in the process. It is essential that appropriate downstream flood control targets be established, based upon input received from impacted stakeholders, and we support USACE's completion of hydrologic and hydraulic modeling for the entire Missouri River to better determine how a test release would impact the rest of the mainstem system. This exercise must ensure that both downstream flow support and flood control be held harmless.

Further, with flood control as paramount in priority, the elevation of Fort Peck Lake should not be kept artificially high for the purposes of spilling water for pallid sturgeon recovery theories, and USACE should position itself to take advantage of natural high-flow events if it indeed pursues a test release. The 2011 flood and the current flooding serve as reminders of how quickly conditions can change in the basin, and any purposeful spillway release that adversely impacts flood control and interior drainage is of serious concern.

If a test release is indeed implemented, USACE must inspect the Fort Peck Dam spillway for any compromising damage and make all necessary repairs before the following runoff season begins. It must also be clear in communicating any risks associated with the spillway as a result of operation to aid endangered species recovery.

In regard to the proposed test release hydrographs, USACE should examine if the desired outcome for pallid sturgeon can be achieved by using less water from the system, and if an approximate 30,000 cfs release is truly necessary. Water conservation should be a priority during the evaluation of potential hydrographs. Before any implementation, USACE should identify what constitutes pallid sturgeon requirement success or failure, such as the number of sturgeon attracted by a test release, increase in larval count and survival. It should also specify the measurement techniques and methodology that will be used to deliver empirical data and set the specific threshold that must be reached to deem the test release successful. Again, clear criteria for determining to continue test releases should be determined with a direct link to the species recovery objective. For example, pallid sturgeon moving upstream does not equate to spawning behavior or recruitment.

The same method and rigor should apply to human considerations affected by a test release. USACE should clearly identify potential impacts, how it will measure the degree of the impacts, and what level of impact is tolerable. Before a test release is conducted, USACE should be able to communicate to stakeholders that they understand and have measured all impacts.

Water quality should be modeled downstream of a test flow release and should include turbidity, pH, hardness, alkalinity, common contaminants, and temperature. The current model seems to only examine water levels and availability of water, and disregards other factors that can affect water treatment as well as species recovery efforts. Water temperature should also be evaluated both before and after a test release. It is well documented that fish move in response to river

flows, but that movement is not necessarily related to reproduction. One element that is consistent across fish species during reproduction is temperature. Moving fish up the river will not result in recruitment if other conditions are inadequate.

We have long been on record in our opposition to changing the Missouri River Mainstem Reservoir System Master Water Control Manual (Master Manual) and we question if the proposed test release fully complies. USACE should specify the authorization within the Master Manual that allows this kind of flow modification. If the authorization does not currently exist, USACE should also specify what authority allows it to take action outside of the Master Manual. Lastly, to ensure this exercise is rooted in the best available science, USACE must subject it to review by the MRRIC Independent Science Advisory Panel (ISAP). We believe a test release from Fort Peck constitutes a major Missouri River Recovery Program action, requiring scientific scrutiny from this panel of experts.

Again, thank you for the opportunity to provide comments. Please do not hesitate to contact me should you have any questions.

Respectfully,

Dan Engemann
Executive Director

C: Tiffany Vanosdoll

COMMENT FORM

All information received will be included as part of the public record.

Name: Jerome Tatlan

Mailing Address: P.O. Box 288

City: Poplar State: MT Zip Code: 59255

Email: tatlanjerome@Gmail.com

Organization you represent (if any):

Date: 03-21-2019

- ✓ *Please write legibly so your comments can be recorded completely and accurately.*
- ✓ *Please complete and drop this form in the box provided (or mail it to the address provided). Attach additional pages if necessary.*

The Dallid Sturgan low flow plan will have an adverse effect on the Paddle ~~fishing~~ season on the missouri river this could effect the Spaning season if there isn't enough water flow causing a hindrance for the species.

COMMENT FORM (continued)

Quality of fishing will be reduced because of the low flow of water, and Recreation will be effected in that sence. Income will be effected if not able to Locate water for irrigation, Crops will suffer because of the lack of water if in a drought system. The river is on an Indian reservation which could effect relations with the tribal members. Live stock could be effected by the low water flow, some will need to haul water which will incure higher expenses. Birds and other animals will be moving elsewhere if water flow is that low which could effect the ecosystem.

Please attach additional pages as needed.

FORT PECK DAM TEST RELEASE ENVIRONMENTAL IMPACT STATEMENT

Scoping Comment Form

The U.S. Army Corps of Engineers invites scoping comments on the Fort Peck Dam Test Release Environmental Impact Statement. The EIS will document the formulation and evaluation of test releases from Fort Peck Dam intended to benefit the Federally endangered pallid sturgeon. The project description is available at: www.moriverrecovery.org. The comment period will run through March ~~11~~ 26, 2019.

How to submit your comments during or following this meeting:

- **Comment Forms**—Complete and drop off a comment form before you depart the meeting or mail the form to the address provided below postmarked by March ~~11~~ 26, 2019.
- **By Email**—Scoping comments can be emailed to: cenwo-planning@usace.army.mil
- **Written Comments**—Mail, postmarked by March ~~11~~ 26, 2019, to:

  U.S. Army Corps of Engineers
  Omaha District
  ATTN: CENWO-PM-AC – Fort Peck EIS Comments
  1616 Capitol Avenue
  Omaha, NE 68102

All information submitted will become part of the public record for the project.

Tom Ruffatto
31334 CR 146
Brockton, MT 59213
March 25, 2019

U. S. Army Corps of Engineers
Omaha District
Attn: CENWO-PM-AC Fort Peck EIS Comments
1616 Capitol Avenue
Omaha, NE 68102

Dear U. S. Army Corps of Engineers:

Building the Fort Peck dam enabled farmers along the Missouri River to use water for irrigation. Because of the promise of the availability of a consistent water source, irrigation systems have become more complex and more expensive. As you know, building the Fort Peck dam came with the *promise* of irrigation water. Forty years ago, this promise prompted my wife and myself to devote a life time of developing an irrigation project to protect the feed base of our livestock. Throughout these forty years we have invested close to $500,000 in equipment and restructuring the land. The irrigation availability has worked well except in 2011 when our property was flooded due to the spring rise. I believe the U. S. Army Corps of Engineers was partially responsible for the damage caused that spring. The results of that flood were losing the ability to irrigate for the entire season, as my pump never got put in the river. We had to clear the debris from the fields and restructure our pump site, therefore we lost about three fourths of our crop that year. It took most of the summer for the flood water to recede from our fields.

Now the U.S. Army Corps of Engineers has been ordered to try to protect the pallid sturgeon in a different way. The artificial spring rise and the lower water levels will again cause us to have difficulty accessing water for irrigation. Why should we have to bear the burden of another lost crop as this may put us into bankruptcy. Even if we could get pipe and electricity out to where the water will be, there will not be enough for irrigators to pump because the water that is left needs to be protected for the in- stream flow. Returning to my first statement, I believe that one of the promises that came with building the Fort Peck dam has been broken. Therefore, I feel that irrigators that have a true loss from this project should be monetarily compensated. It is not right that our livelihood should be jeopardized again. Maybe there is a better way to handle this project.

I feel that a study should be done on every irrigation pump site on the river to help find the true range of high and low flows – the range where water availability will be safe for most irrigation systems. All other irrigators should be compensated for crop loss or possibly rebuild pump sites so that water can be accessed. In our case, I feel we would be safe between 6000 cfs and 12,000 cfs. Any lower would be difficult to access water, any higher would be difficult to maintain a pump site. But this is only my guess, and I would feel more comfortable with a study that shows the shape of river floor at my pump site and where the water's edge would be at high and low levels.

Please keep these thoughts in mind when you make your decision. Thank you for your time and concern in developing your project.

Sincerely,

Tom Ruffatto

Comments to ACOE on Fort Peck Flow Study

February 20, 2019

Richland County Conservation District- Sidney, MT 59270

Submitted by Danny Young, Chairman

The Richland County Conservation District along with Roosevelt County Conservation District own a dredge that is used to clean out pump sites that silt in over the winter along the Missouri River. Over the last 15 years at least 10 sites have consistently needed cleaned out. This work was needed with normal river flows. If the flow was dropped to 4000 CSF or even 6000 CSF during peak irrigation season several more sites would be impacted. We are currently in the process of working to identify sites that maybe impacted and a solution for these irrigators if needed. This survey will come at a cost, who will help pay for it? Lowering the flow during the peak irrigation season will economically impact the landowners, operators and the community. It is imperative that a solution to assist those who will be impacted during this test.

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Roosevelt County Conservation District

Comments to ACOE on Fort Peck Flow Study

Roosevelt County Conservation District – Culbertson, MT 59218

Submitted by Roosevelt County Conservation District Supervisors

The Roosevelt County Conservation District supports the sixty-day extension on the scoping period. The district also supports a pump site survey to better understand irrigation and the intake demands. The main concern the Roosevelt County Conservation District has are the low flows that are being proposed during critical irrigation times, we feel that the minimum flow at the Culbertson gauge is 7,000 cfs to service most irrigators, the district feels flows more than 20,000 cfs at the Culbertson gauge can increase stream bank erosion, flows greater than 24,000 cfs causes a lot of lowland flooding. Flows of Yellowstone river have a large effect on the Missouri River lowland flooding on the east end of Roosevelt county. The Roosevelt County Conservation District along with Richland County Conservation District own a dredge that operates on the Missouri River to aid pump sites during, low flow years, high flow years and after the ice is out. Dredging has worked ok through moderate flow changes but likely can't help many producers in large flow changes.

Fort Peck Dam Test Releases

Environmental Impact Statement

Scoping Comments

cenwo-planning@usace.army.mil

1. **Low Flows**, 4000 cfs is too low to adequately supply irrigation water, Montana Fish Wildlife and Parks holds an instream flow reservation on this reach of the Missouri, any junior rights would not be able to use water even if they could access at 4000 cfs, 7000 cfs measured at the Culbertson gauge supplies water to a majority of irrigators 8000cfs is better following the 2011 flooding. The inventory of water intakes on this reach of river is nearly twenty years old, and needs to be updated in order to accurately determine impacts. Inventory should include, range in flow and related stage which would provide or preclude service, acres served, crops grown, etc.
2. **Stop Protocol,** this region has always experienced extreme rain events which may have even increased with climate change. Consider an upper limit of 28 kcfs at the Culbertson gauge. While this might not be considered flooding considerable damage to banks and infrastructure occur at this level. NWS flood stages at gauges don't accurately represent damages.
3. **Flow to Target**, test releases should be made to achieve target flows at Wolf Point and Culbertson and should be quantified, not double winter flows. This would allow consideration of tributary contribution to the flows and extraction by consumptive uses. Example would be if the attraction flow was 26 kcfs the target would be 26 kcfs at Wolf Point not 26 kcfs release from Fort Peck, or if the low flow target was 7kcfs it should be measured at Culbertson to adjust for consumptive uses.
4. Test should be opportunistic; Fort Peck storage and related uses should not be managed to support test releases.
5. **Frequency and duration,** it should be clearly defined as to frequency of the test and duration in years covered by the EIS
6. **Yellowstone vs Missouri,** it should be clearly defined as to when the Fort Peck test would occur in relation to Yellowstone runoff. If a high runoff is predicted from the Yellowstone drainage, high releases from Fort Peck would exacerbate the flooding in the confluence area.
7. **Power House/spillway releases.** It should be clearly defined as to the split between releases through the power houses and the spillway. Lost power generation and reliability needs to be identified. Also, the impact to recreation in the dredge cuts area and river miles between the power houses and spillway.
8. **Bank Erosion,** less than 1% of the streambank in this reach is armored. Higher erosion resulting from high flows and rapid receding flows adversely affect landowners, cultural sites and mineral owners.
9. **NEPA Coverage**; Coverage for test only not implementation.

Buzz Mattelin, PO Box 601, Culbertson, Mt. 59218 bmattelin@gmail.com 3/25/19