



July 28, 2016

U.S. Army Corps of Engineers
Omaha District
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Submitted via email and UPS 2nd Day Air

Dear Ms. Vanosdall:

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

We urge the Corps and Reclamation (collectively, the "Agencies") to adopt the "Multiple Pump Alternative" as is, or with some of the conservation measures described in the "Multiple Pumps with Conservation Measures Alternative." Restoring the endangered pallid sturgeon's habitat on the Yellowstone River is essential to averting the imminent extinction of the wild population of this species in Montana. The only way to allow pallid sturgeon to once again successfully spawn and "recruit" (produce young which survive to adulthood) and begin rebuilding a self-sustaining population in the river is to remove the existing dam and provide unobstructed passage through the main channel.

We also urge the Agencies to abandon their preferred alternative, the "Bypass Channel Alternative" (hereinafter, "Dam/Bypass Channel Alternative"). There is no evidence in the Draft EIS suggesting that the Dam/Bypass Channel Alternative will succeed in averting extirpation of the pallid sturgeon or in setting the pallid sturgeon on a path that would restore a self-sustaining, viable population. Instead, this alternative likely ensures the extirpation of the wild pallid sturgeon population in the upper Missouri River basin.

Perhaps recognizing that the best available science does not support adoption of the Dam/Bypass Channel Alternative, the Draft EIS fails altogether to analyze how it will

affect pallid sturgeon survival or recovery in the Yellowstone River, and therefore, whether this alternative is likely to succeed. By failing to complete this analysis, the Draft EIS violates the National Environmental Policy Act (NEPA) and fails to cure a legal violation identified by the U.S. District Court for the District of Montana in its preliminary injunction order regarding the Agencies' prior NEPA process for this project. In that order, the court specifically concluded that a "new analysis should include the anticipated effects of the Project on the recovery of pallid sturgeon." Defenders of Wildlife v. U.S. Army Corps of Engineers, 15-cv-14-GF-BMM (D. Mont. Sept. 4, 2015), Dkt. #73 at 12 (citation omitted).

The Dam/Bypass Channel Alternative will not even meet the very low (and unlawful) bar set by the Draft EIS to "improve" pallid sturgeon passage. This Alternative would replace a porous rock dam with a concrete dam and replace a natural side channel with a man-made side channel. These changes are not an "improvement" for pallid sturgeon, and will likely permanently close the door on any potential for natural reproduction in the Yellowstone River. At best, a few pallid sturgeon may swim up the bypass channel each year, just as a handful of pallid sturgeon use the existing natural side channel now, and reach essential spawning habitat upstream. Further, even if a few pallid sturgeon swim upstream, there is no evidence to suggest that pallid sturgeon will successfully spawn and that their larvae will survive.

As a result, if the Agencies adopt the Dam/Bypass Channel alternative, they will not remedy their long-standing and well-documented Endangered Species Act (ESA) violations with respect to Reclamation's operations of Intake Dam or the Corps' operations of Fort Peck Dam. A central premise of the Intake Project is that the Corps will fund the Project – even though Intake is a Reclamation facility – in exchange for being allowed to abandon at least some of the operational modifications at Fort Peck Dam required by the 2003 Biological Opinion on the Corps' Missouri River dam operations ("2003 Biological Opinion"). While we support restoring a free-flowing Yellowstone River as the best and only means of protecting the pallid sturgeon and other native fish species in this River, addressing the Yellowstone alone may not be sufficient to allow for the recovery of the pallid sturgeon in the upper Missouri River basin, nor resolve the Corps' ESA obligations at Fort Peck Dam. Regardless of the alternative chosen, restoration of the Missouri River, in addition to any changes made at Intake, may well be necessary for the Corps to avoid jeopardizing the pallid sturgeon. If the Agencies choose the Dam/Bypass Channel in the Final EIS and Record of Decision (ROD), they will foreclose the opportunity for pallid sturgeon survival and recovery in the Yellowstone River and restoration of the Missouri River will be mandatory.

I. NEPA Requirements for the Intake Project

NEPA's goals are twofold. First, NEPA requires federal agencies to evaluate and consider the environmental impacts of their actions. Marsh v. ONRC, 490 U.S. 360, 371 (1989). Through this review, NEPA ensures agencies make informed decisions before taking action. Id. at 371 ("By so focusing agency attention, NEPA ensures that the agency will not act on incomplete information, only to regret its decision after it is too

late to correct.”) (citation omitted); Bob Marshall Alliance v. Hodel, 852 F.2d 1223, 1228 (9th Cir. 1988) (“The goal of the statute is to ensure ‘that federal agencies infuse in project planning a thorough consideration of environmental values’”) (citation omitted). Second, NEPA provides a mechanism for the public to learn about and comment on the impacts of a proposed action. Marsh, 490 U.S. at 371. NEPA is intended to ensure that relevant information is conveyed to the public in a timely way so that the public may play a meaningful role in the decision-making process. WildEarth Guardians v. Mont. Snowmobile Ass’n, 790 F.3d 920, 924 (9th Cir. 2015) (quoting Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989)).

An EIS is required, among other things, to “provide full and fair discussion of significant environmental impacts” and “inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.” 40 C.F.R. § 1502.1. NEPA requires that a draft EIS carefully and thoroughly describe the environmental consequences of each alternative, including its direct, indirect, and cumulative effects. See 40 C.F.R. §§ 1502.16(a), (b), 1508.25(c); 1508.7. “Direct effects” are those “caused by the action and occur at the same time and place.” Id. § 1508.8(a). “Indirect effects” are those “caused by the action and [] later in time or farther removed in distance, but still [] reasonably foreseeable.” Id. § 1508.8(b). Direct and indirect effects “may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial.” Id. “Cumulative impacts” are those that “result[] from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions.” Id. § 1508.7. NEPA also requires evaluation of “connected actions.” Id. § 1508.25(c). “Connected actions” are “closely related” actions, including actions that “[a]re interdependent parts of a larger action and depend on the larger action for their justification.” Id. § 1508.25(c).

II. THE SCOPE OF THE ANALYSIS IN THE DRAFT EIS IS UNLAWFULLY NARROW

The scope of a NEPA analysis is determined in part by the relevant substantive statute driving the action. See Montana Wilderness Ass’n v. Connell, 725 F.3d 988, 1002 (9th Cir. 2013) (noting that a “NEPA analysis should be informed by the laws driving the federal action being reviewed”) (citations omitted); ONDA v. BLM, 625 F.3d 1092, 1109-12 (9th Cir. 2008) (finding that agency must evaluate affected wilderness values where underlying statute requires agency to balance multiple uses, including wilderness resources). In addition, NEPA regulations require that an EIS “shall state how alternatives considered in it and decisions based on it will or will not achieve the requirements of ... other environmental laws and policies.” 40 C.F.R. § 1502.2(d); Mont. Wilderness Ass’n v. McAllister, 658 F. Supp. 2d 1249, 1255-56 (D. Mont. 2009) (finding NEPA violation where Forest Service “fail[ed] to consider an important aspect of the problem” in EIS by failing to address whether proposed travel plan impacting wilderness character achieved requirements of Wilderness Study Act) (quoting Lands Council v. McNair, 537 F.3d 981, 987 (9th Cir. 2008), aff’d 666 F.3d 549 (9th Cir. 2011)).

The relevant substantive statute driving the Intake Project is the ESA. As Defenders and NRDC described in our scoping letter, the Intake Project is intended to address and resolve Reclamation’s ongoing ESA violations at Intake Dam and the Corps’ ongoing ESA violations at Fort Peck Dam. See Defenders and NRDC scoping letter at 4-12. Thus, the Draft EIS must evaluate whether each of the alternatives will resolve these violations, including the ongoing “jeopardy” and unlawful “take” caused by Intake Dam and Fort Peck Dam. See 16 U.S.C. §§ 1536, 1538. Jeopardy results when it is reasonable to expect that a federal action would “reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.” 50 C.F.R. § 402.02. The jeopardy standard mandates that agencies consider whether and how their actions will affect imperiled species’ ability to both survive and recover. NWF v. NMFS, 524 F.3d 917, 931-33 (9th Cir. 2008). “Recovery” is the point at which a species is healthy enough to be taken off the endangered species list. Alaska v. Lubchenko, 723 F.3d 1043, 1054 (9th Cir. 2013).

As described in more detail below, the Draft EIS does not analyze the impacts on pallid sturgeon survival and recovery. Nor does the Draft EIS attempt to explain how or why the various alternatives will or will not comply with the ESA. See 40 C.F.R. § 1502.2(d). Instead, the Draft EIS offers a chart with brief conclusions about the purported “ESA success” of each alternative (2-103), but does not support that conclusion with an analysis. The Draft EIS also states that the Agencies included a draft biological assessment as Appendix D. This appears to be an error. Appendix D is the Fish Passage Connectivity Index and Cost Effectiveness and Incremental Cost Analysis. The Agencies have not provided a biological assessment in connection with the 2016 Draft EIS and nowhere analyze whether the alternatives will comply with the ESA.

A. The Draft EIS Fails to Disclose or Analyze the Impacts of the Intake Project on the Survival or Recovery of the Pallid Sturgeon

To comply with NEPA, the Agencies must disclose and evaluate the impacts relevant to the ESA’s jeopardy standard, including the effects of each alternative on survival and recovery of the pallid sturgeon. See Defenders of Wildlife, 15-cv-14-GF-BMM, Dkt. #73 at 12) (“The new analysis should include the anticipated effects of the Project on the recovery of the pallid sturgeon.”).¹ Despite the Court’s specific direction in the preliminary injunction order, the Draft EIS fails to evaluate survival or recovery. As a result, the Draft EIS violates NEPA.²

¹ The Draft EIS inexplicably states that recovery was analyzed (see 1-4, 1-13), but elsewhere claims that recovery is outside its scope (1-8), as described below. Regardless, there is no recovery analysis in the Draft EIS or the appendices.

² The Draft EIS also failed to explain how the alternative will comply with other ESA requirements, including the Agencies’ obligation to avoid “taking” pallid sturgeon at Intake in violation of ESA section 9, 16 U.S.C. § 1538, and their duties under ESA section 7(a)(1), 16 U.S.C. § 1536(a)(1). See 40 C.F.R. § 1502.2(d).

For pallid sturgeon, a recovery analysis would include, among other things, whether and how each alternative will move the pallid sturgeon closer to achieving the 2014 Recovery Plan's goal of a self-sustaining population of 5,000 adult fish in the upper Missouri River basin, including what percentage of the adult pallid sturgeon are expected to migrate upstream for each alternative; their likelihood of successfully spawning and in what numbers; the likelihood of their larvae surviving the downstream drift and in what numbers, whether these numbers would be sufficient to re-establish a viable, self-sustaining population; whether and why the Yellowstone River alone would be enough to re-establish a viable, self-sustaining population, and any other relevant factors to survival and recovery of the species in the wild.

The Draft EIS does not analyze any of these factors. In fact, the Draft EIS provides no more in the way of analysis of survival and recovery than the 2015 Final Supplemental Environmental Assessment to the 2010 Final Environmental Assessment ("2015 EA"), even though the Court held that the 2015 EA was likely to violate NEPA because it did not contain this analysis. Defenders of Wildlife, 15-cv-14, Dkt. #73 at 8 ("The EA also fails to analyze whether the bypass channel likely would allow a sufficient number of pallid sturgeons to spawn so that the species could recover, or whether the new weir will prevent pallid sturgeon from recovering.").

The few references to "recovery" in the Draft EIS highlight the lack of analysis. For example, the Draft EIS concludes that the "proposed Intake Project would contribute to recovery of pallid sturgeon by providing up to an additional 165 miles of the Yellowstone River for migration, spawning, and development." Draft EIS at 2-22. This is a conclusion that presumes full success of all of the alternatives, not an analysis of whether and how each of the alternatives will facilitate recovery.

Similarly, the Draft EIS notes that recruitment is a part of recovery, but never analyzes how each alternative will affect recruitment. Instead, the Draft EIS generally recites uncertainties related to the potential for recruitment: "(1) it is unclear what length of drift distance is actually required for successful recruitment... and (2) the location, quantity, and quality of spawning habitat, and (3) the number of pallid sturgeon that would be motivated to migrate upstream to suitable spawning habitat." Draft EIS at 4-152. Without any further analysis, the Draft EIS concludes that the Yellowstone River "appears to offer the best chance of potentially successful spawning and recruitment" for the management area and that the chances for recovering the wild population are "rapidly diminishing." Id. This is not an analysis of what is required for survival or recovery, whether and how each of the alternatives will move the pallid sturgeon toward those goals, or even whether any particular alternative will slow down or halt the imminent extirpation of the wild population.

The Draft EIS also provides a speculative series of steps with respect to the anticipated success of the Dam/Bypass Channel Alternative to offer "an example of the potential recruitment from one year of much improved spawning, which could begin to contribute to recovery." Draft EIS at 4-169. This "example" again is a conclusion

without an analysis. It simply summarizes the obvious: if the bypass channel works to pass fish, recruitment may be possible.

The Agencies' failure to evaluate the effects of the alternatives on pallid sturgeon survival and recovery violates NEPA and is inconsistent with the Court's preliminary injunction order.

B. The Draft EIS Fails to Disclose and Analyze the Impacts of the Agencies' Intended "Swap" With Fort Peck Dam on Pallid Sturgeon Survival and Recovery

As part of the analysis of pallid sturgeon survival and recovery, the Agencies must evaluate the entire context of the Intake Project – including its role in the Corps' intended "swap" for Fort Peck Dam operational modifications to resolve the Corps' ESA obligations. The Corps' intention, according to all prior documentation, is to fund the Intake Project in exchange for being permitted to abandon the operational changes it is currently required to implement at Fort Peck Dam. Accordingly, one of the effects of the Intake Project may be to eliminate the requirement to make habitat modifications on the Missouri River for the benefit of the pallid sturgeon.

The Draft EIS does not include any analysis of this "swap," nor even appear to mention it. Moreover, the Draft EIS notes that the Corps is funding the Project pursuant to the authorization in the Water Resources Development Act of 2007 (WRDA), P.L. 110-114, 121 Stat. 1041 § 3109, but does not explain that the rationale behind providing that authorization is to relieve the Corps of its Fort Peck Dam obligations. See Draft EIS at 1-8.

One slight improvement from the 2015 EA to the Draft EIS is that the Agencies now recognize that there is not a single successful pallid sturgeon or shovelnose sturgeon bypass or fishway in the world. See Draft EIS at 2-105 – 2-107.³ However, the Agencies do not incorporate this lack of precedent into any relevant analysis to explain why this proposed bypass channel will succeed.

The Agencies' failure to acknowledge and evaluate all of the impacts associated with the Corps' involvement with the Intake Project violates NEPA's "hard look"

³ Defenders and NRDC cited and attached several studies to our scoping comments relevant to addressing the low levels of success for fish passage projects across the country, but the Draft EIS does not mention or cite them. See, e.g., Noonan et al., A quantitative assessment of fish passage efficiency, (2012) (study referenced in Braaten et al., finding that at existing fish passage facilities in the northeast United States, upstream passage for non-salmonids was only 21.1%); Brown et al. ("It may be time to admit failure of fish passage and hatchery-based restoration programs and acknowledge that significant diadromous species restoration is not possible without dam removals."); http://e360.yale.edu/feature/blocked_migration_fish_ladders_on_us_dams_are_not_effective/2636/ (article summarizing findings).

requirement. There is no doubt that the Corps is funding this Project solely to be relieved of its ESA duties at Fort Peck Dam. Thus, the impacts of making that “swap,” particularly with respect to the impacts on pallid sturgeon survival and recovery, must be included in a NEPA analysis because the swap is part of the contemplated action. At a minimum, the Corps’ intention to abandon Fort Peck Dam modifications is a “connected” agency action. See 40 C.F.R. § 1508.25(a)(1). In addition, NEPA’s implementing regulations require an analysis of how each alternative will comply with the Agencies’ obligations under other laws. 40 C.F.R. § 1502.2(d). Here, that analysis must include whether and how the Corps will comply with the ESA through this Project.

Notably, the Draft EIS includes other potential Missouri River habitat modifications in the “cumulative effects” section. Yet even here the Agencies ignore the intended “swap,” and the existing obligations for habitat modifications. The Draft EIS describes the “Missouri River Management Plan” within the “Reasonably Foreseeable Future Projects/Actions” section and suggests that the Plan will “evaluate[] the effectiveness of current habitat development and will recommend modifications ‘to more effectively create habitat and avoid jeopardy to the species.’” Draft EIS at 4-4. The Draft EIS also notes that “[i]mplementation of the [Plan] will likely help to slightly further reduce cumulative effects on surface water in the upper Missouri River basin.” Draft EIS at 4-57. Incredibly, the Draft EIS does not acknowledge that FWS has already determined what is required to avoid jeopardy – in the 2003 BiOp – and that the Corps intends to abandon any obligation to implement those very actions in exchange for funding the Intake Project.

The Agencies’ failure to complete this analysis is scientifically indefensible. The best available science indicates that both the Missouri and the Yellowstone rivers contain habitat essential to this population’s survival. A successful Intake Project would provide access to 165 miles of potential spawning habitat and more river miles for larval drift. However, as explained by the Montana Chapter of the American Fisheries Society, the chances for pallid sturgeon recovery in the upper Missouri River basin will be harmed if the Agencies focus on restoring the Yellowstone River alone. Defenders of Wildlife, 15-cv-00014-GF-BMM, Dkt. #63 at 13-16 (Amicus brief).

Further, the best available science confirms the premise of the 2003 Biological Opinion on the Missouri River – that the Missouri River below the Fort Peck Dam could be restored to allow successful pallid sturgeon spawning and recruitment if the Corps implemented flow and temperature modifications. See Defenders and NRDC’s scoping comments at 7-8, 10-11.⁴ The Draft EIS acknowledges that several studies “highlight the ability of the Yellowstone and Missouri Rivers to provide conditions that support survival, feeding, and growth of pallid sturgeon early life stages.” Draft EIS at 2-24. The Draft EIS also acknowledges that “[e]xtremely low recruitment is possibly occurring in the Missouri River.” Draft EIS at 3-83. Yet the Draft EIS does not examine the trade-offs of

⁴ Defenders and NRDC attached several studies cited in our scoping comments related to pallid sturgeon habitat in the Missouri River. The Draft EIS does not acknowledge or address these studies.

abandoning any effort to restore the Missouri River habitat in exchange for funding the Intake Project.

The Agencies' failure to analyze the impacts of the "swap" on pallid sturgeon survival and recovery violates NEPA.

C. The Draft EIS's Apparent Rationales for Narrowing the Scope of the Analysis are Arbitrary and Do Not Comply with NEPA

1. The Draft EIS Misstates the Agencies' Obligations Under the ESA and the Required Scope of Analysis under NEPA

The Draft EIS appears to try to avoid analyzing the effects of the Project on pallid sturgeon survival and recovery by narrowing the Agencies' ESA obligations. According to the Draft EIS, the ESA "does not require the actions on which the federal agencies are consulting to contribute to or result in the recovery of the species." Draft EIS at 1-7; see also xxvi ("Pallid sturgeon recovery is not within the scope of this project"); 4-152 (stating that "pallid sturgeon recovery is not an objective of the project").⁵ This statement is inconsistent with the ESA. However, even if this approach somehow complied with the ESA, the Agencies would not be absolved of their NEPA obligations to disclose and evaluate all impacts to pallid sturgeon survival and recovery.

First, the Draft EIS's disavowal of any obligation for this Project to contribute to recovery is inconsistent with the ESA's "jeopardy" standard. As described above, the Agencies have an obligation to avoid jeopardy in connection with the Intake Project, and avoiding jeopardy is, in fact, the underlying purpose of the Project. The Ninth Circuit has explained that an action can "jeopardize" a species even "if there is no appreciable reduction of survival" because "a species can often cling to survival even when recovery is far out of reach." NWF v. NMFS, 524 F.3d at 931. This standard is particularly essential for species like the pallid sturgeon, which are on the brink of extirpation. Thus, the recovery standard requires agencies to use a metric that "take[s] into account whether populations remaining at significantly low abundance numbers, even though the populations may be growing incrementally, appreciably diminish the likelihood of recovery." NWF v. NMFS, 2016 WL 235367, at *17, -- F.Supp.3d -- (D. Or. May 4, 2016).

Instead of applying these standards, however, the scope of the Draft EIS's analysis of impacts to pallid sturgeon is limited to whether the project may "improve" fish passage. See, e.g., DEIS xxv (Executive Summary). The "improvement" standard is inconsistent with the jeopardy standard because it lowers the bar to the point that "success" could occur if, for example, only one more fish passed upstream than has used

⁵ This approach is also reflected in the Biological Review Team's (BRT) criteria for success, which do not appear to mention any particular goals for recruitment – a key aspect of determining whether the pallid sturgeon can become a self-sustaining, viable population again in the upper Missouri River basin. See Draft EIS at 4-152 – 4-153.

the natural channel in the past. Compared to 2015, just two telemetered pallid sturgeon swimming upstream would be an “improvement.” The District of Oregon recently rejected a similar standard because the agency’s metric was based on “population growth regardless of actual population numbers,” and was “not tethered to any minimum population goal.” *NWF v. NMFS*, 2016 WL 235367, at *17. Here, too, nothing in the Draft EIS analyzes or suggests that “improvement” in upstream migration would be sufficient for this population to avoid extinction, let alone recover, nor could it. The Draft EIS makes no effort to “take into account” whether the very low abundance numbers for Montana’s wild population appreciably diminishes the likelihood of survival or recovery of the species.

Further, the Draft EIS fails to analyze whether an “improvement” in the number of adults migrating upstream will result in recruitment sufficient to provide for survival or recovery. The data from the telemetry stations in 2014 and 2015 demonstrates that some number of pallid sturgeon have successfully passed Intake at least in some years, yet there has been no documented recruitment. *See* Draft EIS at 4-164 (noting that pallids could have used the side channel before 2014 under certain conditions, but there has been no documented recruitment to date). The Draft EIS does not evaluate why recruitment has failed, despite a few fish spawning upstream of Intake, nor how the new Project would differ from the existing dam in a way that recruitment would somehow succeed where it has failed in the past. *See, e.g., Defenders of Wildlife*, 15-cv-14-GF-BMM, Dkt. #73 at 14 (“The proposed bypass channel likely will be ‘less bad’ than the existing channel available only during high water years. This fact alone, however, fails to demonstrate that the Project, as a whole, would improve conditions for the pallid sturgeon.”). Absent successful recruitment, the wild population cannot survive or recover.

The “improvement” standard also fails to evaluate whether the alternatives will provide for survival or recovery of the wild population in the event no modifications are made to Fort Peck Dam operations, as contemplated by the Corps.

Second, even if the Agencies could lawfully ignore an evaluation of the prospects for recovery under the ESA (which they cannot), the Draft EIS does not even analyze whether the preferred alternative will provide for the survival of the pallid sturgeon in the wild – which would require enough successful reproduction in the wild to replace the existing population. The jeopardy standard indisputably prohibits the Agencies from taking an action that will preclude an endangered species from successfully reproducing in the wild at a replacement rate. The Draft EIS provides no analysis to support the idea that any alternatives will provide for that amount of successful reproduction.

Third, regardless of the ESA standards for “jeopardy,” the impacts to pallid sturgeon survival and recovery caused by the Intake Project (including through the anticipated “swap” with Fort Peck Dam) are direct and indirect impacts under NEPA and must be analyzed for that reason as well.

At bottom, the Agencies must analyze whether the Intake Project will succeed in saving the wild pallid sturgeon population in the upper Missouri River basin from

extinction and whether it will facilitate recovery. The Agencies' failure to complete that analysis violates NEPA.

2. The Draft EIS Arbitrarily Narrows the Purpose and Need for the Intake Project

The Draft EIS appears to try to avoid the required analysis of whether this Project will succeed in allowing pallid sturgeon to survive or recover in the wild in another way: by excluding the Agencies' ESA obligations from the Purpose and Need Statement. In the statement of "Purpose and Need," the Agencies offered three purposes for the Intake Project: (1) "improve fish passage for pallid sturgeon and other native fish at the Intake Diversion Dam;" (2) "continue the viable and effective operation of the Lower Yellowstone Project;" and (3) "contribute to ecosystem restoration." Draft EIS at xxvi (Executive Summary). This Purpose and Need Statement ignores the fundamental statutory obligations driving the project.

The Purpose and Need Statement of an EIS must be informed by the statutory context of the federal action. League of Wilderness Defenders-Blue Mountain Biodiversity Project v. U.S. Forest Service, 689 F.3d 1060, 1070 (9th Cir. 2012) ("In assessing the reasonableness of a purpose and need specified in an EIS, we must consider the statutory context of the federal action"). "Where an action is taken pursuant to a specific statute, the statutory objectives of the project serve as a guide by which to determine the reasonableness of objectives outlined in an EIS." Westlands Water District v. U.S. Dept. of Interior, 376 F.3d 854, 866 (9th Cir. 2004).

The Draft EIS's Purpose and Need Statement ignores the fundamental statutory obligations driving the need for this Project – compliance with the ESA. The long-time underlying purpose for initiating the Intake Project EIS is to remedy ongoing ESA violations at Intake Dam (Reclamation) and Fort Peck Dam (Corps) and facilitate the recovery of the pallid sturgeon in the upper Missouri River basin. See, e.g., BOR-4439 (FWS noting in 2012 that, "[a]s stated in the 2010 FONSI, the underlying need for the proposed action (i.e. the overall Intake Project) is for Reclamation and the Corps to comply with the ESA."). In order to comply with the ESA, the Intake Project must not simply "improve" fish passage; it must avoid causing jeopardy to the pallid sturgeon and avoid unlawfully "taking" pallid sturgeon and resolve the Corps' ongoing jeopardy and take obligations at Fort Peck Dam as well. Here, Reclamation must comply with all of its statutory obligations, including the ESA. Because the purpose of the Intake Project is to comply with that statute, the scope of the NEPA analysis must be commensurate with that purpose, regardless of the stated purpose and need.

While it is appropriate for the Agencies to acknowledge the private goals of the Lower Yellowstone Project (LYP) in maintaining the irrigation district's viability, those private interests cannot override Congress' intent in authorizing Reclamation to act. See Nat'l Parks & Conservation Ass'n v. Bureau of Land Mgmt., 606 F.3d 1058, 1070-71 (9th Cir. 2010) (distinguishing Department of Interior NEPA regulations from Corps regulations and noting that "[r]equiring agencies to consider private objectives, however,

is a far cry from mandating that those private interests define the scope of the proposed project.”). Here, meeting the water delivery needs of the irrigation district is compatible with providing for pallid sturgeon survival and recovery through the Multiple Pump Alternative. In contrast, the Dam/Bypass Channel unlawfully prioritizes the private needs over the Agencies’ ESA mandates.

Nonetheless, regardless of the Purpose and Need statement, the Intake Project will have direct and indirect effects on pallid sturgeon survival and recovery. These effects will be compounded by the Corps’ attempt to abandon the required habitat modifications on the Missouri River as well. Thus, even if the purpose of the Project had nothing to do with the Agencies’ ESA obligations (which is not the case), the Agencies must complete the analysis described above in order to comply with NEPA.

IV. The Agencies’ No-Action Alternative Violates NEPA

NEPA requires the Agencies to evaluate a “no-action” alternative. See 40 C.F.R. §§ 1502.14(d), 1508.25(b)(1). This alternative is intended to provide an analysis of the status quo and establish a baseline against which the other alternatives may be measured. Id. § 1502.14(b); Ctr. for Biological Diversity v. U.S. Dep’t of Interior, 623 F.3d 633, 645 (9th Cir. 2010) (“It is black letter law that NEPA requires a comparative analysis of the environmental consequences of the alternatives before the agency,” including the no-action alternative); N. Carolina Wildlife Fed’n v. N. Carolina Dep’t of Transp., 677 F.3d 596, 603 (4th Cir. 2012) (“Without [accurate baseline] data, an agency cannot carefully consider information about significant environment impacts ... resulting in an arbitrary and capricious decision.”) (citing N. Plains Res. Council, Inc. v. Surface Transp. Bd., 668 F.3d 1067, 1085 (9th Cir.2011)). The analysis must be informed by what others are likely to do if the agency chooses not to act. “Where a choice of ‘no action’ by the agency would result in predictable actions by others, this consequence of the ‘no action’ alternative should be included in the analysis.” Hammond v. Norton, 370 F. Supp. 2d 226, 241 (D.D.C. 2005) (quoting Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations, at 4-5, 46 Fed. Reg. 18026, 18027 (March 23, 1981)).

The Draft EIS defines the “no-action” alternative as “continued operation, maintenance, and rehabilitation of the Lower Yellowstone Project as authorized.” Draft EIS at 2-38. The Draft EIS uses these continuing operations as the “baseline from which to measure benefits and impacts of implementing fish passage improvement alternatives considered in this document.” Id.

The Agencies’ definition of the no-action alternative violates NEPA because this alternative assumes the continued operation of an unlawful project. See Friends of Yosemite Valley v. Kempthorne, 520 F.3d 1024, 1038 (9th Cir. 2008) (holding that agency “did not set forth a true ‘no-action’ alternative because” the alternative assumed the existence of a plan that the court has already found to be invalid). As the Ninth Circuit has explained, an agency “cannot properly include elements from [an illegal] plan in the no action alternative as the status quo....” Id.

Reclamation is precluded by the ESA from continuing the current operation of Intake Dam. It is uncontested that Intake Dam, as it is currently operated, poses a near total barrier to pallid sturgeon migration to spawning areas that would be sufficiently far upstream to allow juvenile survival through the larval drift stage. Draft EIS at 2-22. Present operations allow the re-construction of the dam each year, which violates sections 7 and 9 of the ESA, as Defenders and NRDC described in our scoping letter.⁶ The 2015 BiOp conceded that the current “injury” to breeding for pallid sturgeon would continue as long as the existing dam was re-built each year. 2015 BiOp at 30-32. The 2015 BiOp also conceded that the existing dam operations “take” 32 adult sturgeon per year. *Id.* at 33. Further, the Draft EIS acknowledges that under the no-action alternative, the wild pallid sturgeon population will continue to decline. *See* Draft EIS at 4-164 (estimating that there will be fewer than 50 wild adults by 2023). The Draft EIS also acknowledges that a population based entirely on hatchery-born fish may not be able to create a “sustaining, naturally spawning population.” *Id.* In other words, if no action is taken, the wild population will certainly go extinct, and the hatchery-born population may never be able to sustain itself without perpetual stocking of hatchery-born fish. This outcome – extinction of a wild population in an isolated river basin with no chance of becoming a self-sustaining population again – indisputably violates section 7 and 9 of the ESA.

Because the current operations are illegal, a proper “no-action” alternative must include the likely consequences of taking no action. The Draft EIS fails to do so. Instead, while acknowledging that Reclamation would have to reinitiate ESA consultation for the operation and management of the Dam and Lower Yellowstone Project (LYP), the Agencies feign ignorance in several places within the Draft EIS about the likely result of that consultation. Draft EIS at 4-164 (the biological opinion resulting from a consultation “would likely require other future activities to reduce the effect on listed species, but these effects are unknown at this time”); Draft EIS at 2-38 (“[a]ny specific outcomes of future consultation for the No Action Alternative are not reasonably foreseeable at this time”). However, in the executive summary, the Agencies conceded what Reclamation has known since at least 1992 – that “fish passage” would be “an ultimate requirement at Intake Diversion Dam.” Draft EIS at xxviii; *see* BOR-5068-5069. Moreover, the Agencies explicitly determined that there was no need to propose adaptive management actions for the “no-action” alternative because “it is presumed that no action is not a viable alternative as it would not improve fish passage.” Appendix E at 1 (emphasis added).

Indeed, more than 20 years after FWS first suggested Reclamation needed to provide fish passage, the only reasonable, predictable outcome of a new consultation

⁶ The “no-action” alternative also likely violates the Clean Water Act, 33 U.S.C. § 1344 because Reclamation has never obtained a Section 404 permit for the “rocking.” The Corps has apparently relied on the exemption in section 404(f)(1)(C) to section 404’s requirements, but this exemption “for the purpose of construction or maintenance of farm or stock ponds or irrigation ditches, or the maintenance of drainage ditches” does not apply here. 13 U.S.C. §1344(f)(1)(C).

would be that the continued rocking of the Dam would be prohibited because it is illegal and the dam would eventually naturally erode away, or that Reclamation would finally comply with the law and actively remove the barrier to provide fish passage. To the extent that allowing the rock to naturally erode away would not provide passage, as the Draft EIS suggests (Draft EIS at 2-38), Reclamation would have to actively provide passage. The Agencies must analyze the consequences of those realistic, predictable scenarios. See *Ctr. for Biological Diversity v U.S. Dep't of the Interior*, 623 F.3d 633, 645-46 (9th Cir. 2010) (holding that EIS “must make a meaningful comparison of the environmental consequences of [the applicant’s] likely mining operations” both with and without the additional regulations that would apply under the no action alternative).

As a result, continuation of present Intake Dam operations as the “no-action” alternative is unrealistic and cannot serve as the baseline comparison for the EIS. Indeed, Reclamation has recognized in another context that a No Action Alternative cannot analyze a set of dam operations that have been found to violate the ESA. See “Coordinated Long-Term Operation of the Central Valley Project and State Water Project,” Final EIS, November 2015 at ES-9 (available at http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=23658) (last visited July 27, 2016). Reclamation explained:

Simply analyzing a No Action Alternative that is similar to the project description described in either the 2004 Biological Assessment or 2008 Biological Assessment is insufficient, as each was found to jeopardize listed species, the 2004 Biological Assessment by the District Court in 2007, the 2008 Biological Assessment by USFWS and [National Marine Fisheries Service]. Either of these operations would be inconsistent with Reclamation’s existing policy and management direction.

Id. Here, the comparison between the action alternatives and the no-action alternative must compare the consequences of different means of providing passage – not whether the action alternatives are an “improvement,” no matter how minute, over the current, illegal situation where there is almost no passage at all. Such an analysis would acknowledge that the pallid sturgeon has been nearly extirpated as a result of past actions, but would assume that those past actions cannot continue under any scenario. Absent a realistic, lawful “no-action” alternative, the Draft EIS fails to provide a meaningful baseline comparison between alternatives in violation of NEPA.

V. The Draft EIS Fails to Take a “Hard Look” at the Impacts of the Dam/Bypass Channel Alternative

The preferred alternative in the Draft EIS, the Dam/Bypass Channel Alternative, is nearly identical to the alternative adopted in the 2015 EA and temporarily enjoined by the District Court of Montana last September. As noted above, the Agencies have not complied with the Court’s direction to evaluate pallid sturgeon recovery in order to comply with NEPA. Moreover, the analysis that the Agencies completed to support this

alternative in the Draft EIS is based on flawed assumptions, is internally inconsistent, and is not supported by the best available science.

At bottom, regardless of the legal standard for success with this Project, the fundamental scientific problem with the Dam/Bypass Channel Alternative is that there is no evidence that the Project will pass any more fish than already use the existing side channel, let alone avert extinction of the wild population or set the species on a path to recovery. We urge the Agencies to abandon this alternative in the Final EIS and Record of Decision (ROD).

A. The Draft EIS Concedes that the Dam/Bypass Channel Alternative Will Not Meet the Biological Review Team’s Own Standards for Biological Success

The Draft EIS lists four reasons to support choosing the Dam/Bypass Channel Alternative. Draft EIS at xlii. Of these four reasons, only one prioritizes the fate of the pallid sturgeon – that the Agencies believe this alternative “could be constructed, operated, and maintained to meet the physical and biological criteria identified by the Service’s Biological Review Team (BRT), and therefore would provide passage for pallid sturgeon.” This rationale fails both scientifically and legally.

As an initial matter, “provid[ing] passage” of some unknown amount, as described above, does not necessarily meet the ESA standards for survival or recovery of this population and arbitrarily lowers the bar for success of the Intake Project.

Further, even if providing passage was sufficient, the Draft EIS makes clear that the Dam/Bypass Channel will likely fail the standards set out by the BRT, directly contradicting this rationale. The Draft EIS recites the following biological criteria for success, set by the BRT, for adult passage: “[a] passage alternative would be considered successful if greater than or equal to 85 percent of motivate[d] adult pallid sturgeon (i.e. fish that move upstream to the entrance of the passage alternative) annual[ly] pass upstream of Intake Diversion Dam during the spawning migration period (April 1 – June 15).” Draft EIS at 4-152; Appendix E at 2. However, the Agencies’ sole method of modeling potential success – the Fish Passage Connectivity Index (FPCI) – predicts that the Dam/Bypass Channel will be 67% as successful for all fish species as the Multiple Pump Alternative (which is predicted to have a 100% success rate). Appendix D at 16.⁷ As described in more detail below, the FPCI is not a rational basis on which to base any scientific conclusions about pallid sturgeon passage. Even if it was a rational basis, the actual passage rate (67% overall, 60% for pallid sturgeon) is far less than the BRT’s standard (85%). The Draft EIS never acknowledges or explains why the facts within the Draft EIS directly contradict the Agencies’ primary rationale for choosing the Dam/Bypass Channel Alternative.

⁷ As discussed below, the FPCI for pallid sturgeon specifically is 60%, using the Draft EIS’s numbers, and is likely much lower if the appropriate metrics are applied to its calculations.

B. The Draft EIS Fails to Take a “Hard Look” at Whether Any Pallid Sturgeon Will Use the Bypass Channel

To the extent the Draft EIS analyzes whether the Dam/Bypass Channel will serve the purpose of passing any pallid sturgeon upstream past the new dam, this analysis is conclusory, incomplete, and unsupported.

1. The Draft EIS Fails to Take a “Hard Look” at the Uncertainties Surrounding Pallid Sturgeon Use of the Proposed Bypass Channel

The Draft EIS vaguely and repeatedly concedes that the Agencies do not know if the Dam/Bypass Channel will succeed in passing pallid sturgeon at all, in part because such an effort has never succeeded. See, e.g., Draft EIS at 4-162 (“There are still many uncertainties over whether a majority of pallid sturgeon would actually pass through the bypass channel as there are no other examples of similar natural-type channels designed for non-jumping benthic fish.”); Appendix E at 11 (“Existing modeling indicates that the bypass channel would meet BRT criteria under all flow conditions, but it remains to be seen if the channel maintains these characteristics over the long term and if these physical criteria result in biological performance”). Such uncertainty cannot form the basis for choosing the Dam/Bypass Channel Alternative over the Multiple Pumps Alternative, which will provide near-natural conditions for pallid sturgeon and other native fish.

Although the Draft EIS does not acknowledge it, the Independent External Peer Review that was performed on the bypass channel proposal in 2013 also highlights the high level of uncertainty associated with this Project. At that time, the peer review concluded that “the probability that the [bypass channel] will perform as proposed is very low.” BOR-11188. The peer review also characterized the uncertainties associated with the bypass channel as having “high” significance, meaning that they implicated a “showstopper” issue. BOR-11154, 11169. In addition, as we described in our scoping comments, Braaten *et al.* noted that there was little information about pallid sturgeon use of natural side channels prior to their own study and that pallid sturgeon use of these channels is inconsistent and not well understood. See Defenders and NRDC scoping letter at 25. The Braaten study “identified that pallid sturgeon will use side channels as a component of the migration pathways. However, side channel use was not consistent among migrating pallid sturgeon to suggest that a by-pass channel might be used by some but not all individuals.” Id. at 193.

Despite these uncertainties, the Draft EIS also concludes, without supporting analysis, that it is “reasonable to assume that a majority of fish would find and use the channel.” Draft EIS at 4-169. However, as with the 2015 EA, the Draft EIS only analyzes the technical suitability of the channel for upstream migration, not whether or how well the bypass channel will work biologically.

The Court has already recognized this distinction. In the preliminary injunction order, the Court acknowledged that the “Federal Defendants note that they conducted physical and computer modeling to ensure that the entrance of the bypass channel would mimic natural river flows and encourage pallid sturgeon to use it.” Defenders of Wildlife, 15-cv-14, GF-BMM, Dkt. #73 at 8. Nonetheless, the Court found this analysis insufficient because “[t]he EA fails to analyze, however, whether the pallid sturgeon actually would be likely to use the bypass channel.” Id.

The Draft EIS does not adequately evaluate the available science regarding the uncertainties associated with the Dam/Bypass Alternative nor reconcile that science with its assumption that the bypass channel will succeed in passing a majority of pallid sturgeon.

2. The Agencies’ Reliance on the Fish Passage Connectivity Index as the Basis for Determining the Likelihood of Fish Passage is Arbitrary

A second rationale for the Agencies’ preference for the Dam/Bypass Channel is that it is purportedly “a cost effective means of providing fish passage.” Draft EIS at xlii. However, despite the fact that the Draft EIS elsewhere concedes that the concept of successful “fish passage” is highly uncertain, the cost/benefit analysis rests on a very specific determination that fish passage will be 67% successful. The Draft EIS arrives at that number by using a “Fish Passage Connectivity Index” (FPCI). The FPCI’s methodology is flawed in numerous and fundamental ways and does not constitute the required “hard look” at the likelihood that the Dam/Bypass Channel will succeed in passing pallid sturgeon.⁸

The FPCI purportedly measures the likelihood of pallid sturgeon passing upstream. However, the FPCI’s methodology is flawed in numerous and fundamental ways. The Agencies have, at best, failed to disclose the sensitivity and uncertainty of the model used to justify the value of incremental fish passage benefits assigned to the various alternatives, and at worst, have manipulated the model to arrive at the conclusion that the Dam/Bypass Channel alternative is superior on a cost/habitat unit improvement basis.

The FPCI varies by alternative, from 1.0 (100%) for the no-dam alternatives to a minimal 0.08 for the No Action Alternative. See Draft EIS at 2-99, Table 2-27; Appendix D, Table 1-11 at 16. The Dam/Bypass Channel Alternative is given a FPCI of .674 (67%) passage rate. Id. However, the numbers used in the model are arbitrary and unexplained.

As an initial matter, the FPCI modeling is based on the needs of 14 different fish species with varying migration behaviors and various swimming abilities, and an average

⁸ The flawed methodology compromises the validity of the cost/benefit analysis as well, as described below.

of the results. Appendix D at 3-4. Thus, the 67% average success rate says nothing about the predicted success rate for the pallid sturgeon, the only endangered fish at issue with respect to the Project. In fact, the pallid sturgeon passage rate could be zero or anything in between. Using an average of different fish species to predict success for one species has no rational basis.

Although the Draft EIS does not offer a pallid sturgeon-specific FPCI for any of the alternatives, our expert consultant, Mr. David Marcus, calculated what the number would be, from the Agencies' perspective, based on information found within the Draft EIS. See Attachment 1 at 3-6 (formulas for calculating FPCI at Appendix D at 2, 10; pallid sturgeon-specific values for the inputs into the FPCI formula calculated from figures in Appendix D at 11-12 and 13-14). Using the Draft EIS's numbers, Mr. Marcus concluded that the FPCI for pallid sturgeon passage would be 60% – lower than the 14-species rating of 67%.⁹

However, the problems with the Agencies' reliance on the FPCI calculations run much deeper. In 2015, the EA concluded that the FPCI for pallid sturgeon for the preferred Dam/Bypass Channel alternative was only 0.5, or only half of the FPCI in the Draft EIS for the Multiple Pump Alternative. Compare 2015 EA, Appendix E Attachment 1, "Fish Passage benefits Analysis," at 23, Table 10 with Attachment 2 to these comments ("Cost per AAHU" tab, line 3). This is the same value assigned in a 2012 analysis by Reclamation. See BOR 12003. The Draft EIS offers no explanation for this discrepancy, which results in a 20% higher FPCI for pallid sturgeon in the 2016 Draft EIS as opposed to the 2015 EA. In fact, the Draft EIS does not even acknowledge it.

As Mr. Marcus explains in more detail in his report (Attachment 1), the discrepancy appears to be based on an apparently arbitrary change in one of the inputs to the FPCI model: F1. F1 represents the probability of pallid sturgeon finding the proposed bypass on a scale of 1-5, with 1 being the lowest. See Appendix D at 10. In the 2015 EA and the 2012 analysis in the administrative record (BOR 11996, Table 6), F1 was given a value of 3, while in the Draft EIS, that value has been changed to a 4 – an increase of 33%. Appendix D at 11, Table 1-7. Changing the value of F1, in turn, raises the FPCI from .5 to .6. The Draft EIS does not acknowledge or explain the change in F1. The Draft EIS simply states that "the Corps (2014) used the best professional judgment of federal and state biologists working on the Yellowstone River (Table 16)." Appendix D at 10. If this citation refers to a document, it does not appear to be in the administrative record for the existing litigation. Further, the 2014 date pre-dates the 2015 EA, which used a different F1 value. Because the Draft EIS provides no analysis or support for its assignment of an F1 value, and because this document is not readily identifiable and may

⁹ Similarly, the adjusted FPCI for the No Action Alternative would be calculated from parameters for pallid sturgeon in Appendix D at 11-12 and 14-15 $[(2+5)/2 * 180.18/25 = .0252]$. See Attachment 2, "cost per AAHU" tab.

not be publicly available, the public has no ability to determine the basis for this change.¹⁰

Moreover, the actual results are most likely even lower. As noted above, the Draft EIS concedes that pallid sturgeon passage through the artificial bypass channel is highly uncertain. This uncertainty is illustrated by the fact that there are no examples of successful bypass channels for either pallid sturgeon or shovelnose sturgeon. Draft EIS at 2-105 (“to date, no successful upstream fish passage facility of any type has been built for shovelnose or pallid sturgeon”); Draft EIS at 2-107 (noting that bypass channel built for shovelnose at T&Y dam on Tongue River has failed to pass any shovelnose sturgeon). Thus, the potential range of results for the FPCI are highly variable.

However, despite this uncertainty, the FPCI assigns a specific prediction to fish passage benefits for each alternative. As a result, the inputs to the model are each highly subjective, translating uncertain predictions into (arbitrarily) precise numerical values. Not surprisingly, the results are unsupported by scientific evidence in the Draft EIS, and the Draft EIS offers no basis for its choice of any of those numbers. Thus, the methodology underlying the FPCI is so susceptible to manipulation and sensitive to arbitrary selection of variables that the results are meaningless – and potentially highly misleading. As one FWS biologist noted in 2012, “Remember, this [the FPCI] is not a complex ecological model development exercise, but rather a mechanism to interject some level of biology into a mostly fiscally driven planning process.” BOR-11979; see also BOR 11980 (“I also tried to outline in the document how there are many uncertainties in fish passage, especially as they regard sturgeon, trying to convey that the results of the FPCI “are what they are”... a science based planning tool, not science furthering science.”).

In short, there is no basis to assume that the FPCI offers a scientific or supportable assumption for any passage benefits to pallid sturgeon, let alone at the specific level relied on for the Draft EIS. The Draft EIS’s reliance on the FPCI does not constitute the required “hard look” at the likelihood of fish passage.

C. The Draft EIS Fails to Adequately Analyze and Disclose the Impacts of the Dam/Bypass Channel Alternative on Larval Mortality

For pallid sturgeon to successfully naturally reproduce, they must not only pass Intake Dam on their upstream migration, they must spawn in a location that provides for an adequate larval drift distance, and their larvae must survive in sufficient numbers to maintain their current population and avert extinction as well as increase their population to facilitate recovery. However, the Draft EIS simply speculates about larval mortality rates, without providing a meaningful supporting analysis. See 4-169 – 4-170.

¹⁰ As described in Mr. Marcus’s report and below, the impact of this one change is significant in terms of the results of the Draft EIS’s cost/benefit analysis and the Agencies’ method for comparing one alternative to another.

Perhaps most importantly, the Draft EIS never evaluates why, given that the handful of pallid sturgeon that are currently using the existing side channel have never successfully reproduced, the pallid sturgeon that may use an artificial bypass channel would change this pattern and succeed where the prior spawning attempts have failed. As one former member of the Missouri River Recovery Implementation Committee (MRRIC) summarized the problem in 2014, “[i]f the Pallid have been using the old side channel and therefore spawning above Intake as No. 36 did, why haven’t we had the recruitment promised by the scientists who support building the new side-channel?” ACE-3600. The Draft EIS does not attempt to answer that question. To conduct that analysis, the Agencies would have to analyze the factors that have precluded the pallid sturgeon from successfully reproducing so far, and how and whether the new Dam/Bypass Channel would change those conditions. The reasons for the recruitment failure could be related to many factors, including, but not limited to, the fact that the numbers of individuals successfully migrating upstream are too few, that larvae cannot survive the journey downstream with a dam at Intake and/or due to other hazards, or that the drift distance is too short from the point at which the pallid sturgeon have spawned so far.

Further, the Draft EIS completely discounts the possibility of any larval mortality caused by traveling over the new concrete dam or striking the boulder field below the new concrete dam without any analysis or scientific citation. Draft EIS at 4-170. The Draft EIS concludes in one sentence that larvae “would be able to drift downstream of the weir with no difficulty as they would typically be drifting in the deepest part of the channel and would pass through the low-flow notch without injury.” *Id.* This single sentence, with no scientific basis, does not constitute a “hard look” at larval mortality caused by the new dam and existing boulder field. The new concrete dam and existing boulder field will cause changes in water velocities, gradients, and other river conditions that must be analyzed to determine how they will affect the downstream drift. Given the precarious nature of the pallid sturgeon population in Montana, the Intake Project should be designed to minimize larval mortalities, not create new sources of mortality without even the benefit of an analysis of their impacts.

The Draft EIS also discounts larval mortalities caused by entrainment. Draft EIS at 4-169 – 4-170. As Defenders and NRDC previously explained, larvae are expected to be entrained in the main irrigation canal at Intake because the fish screens cannot block pallid sturgeon larvae. *See* 2015 Biological Opinion on “Interim and Future Maintenance of the Lower Yellowstone Irrigation Project and Construction of Fish Passage” at 26. They may also be killed on the screens themselves. *Id.* at 26, 30. In addition, the upstream, neighboring Buffalo Rapids Irrigation District has an unscreened canal that could entrain pallid sturgeon larvae. Some number of larvae will also be killed on the dam in the river. *See id.* The Draft EIS ignores the impacts of the Buffalo Rapids Irrigation District, and assumes a maximum 5% entrainment rate at the headworks, but describes these deaths as having “negligible effects” on recruitment because age-0 pallid sturgeon typically suffer mortality rates of 99.9% anyway. Draft EIS at 4-169. The Draft EIS also assumes that there will be no mortality at the new dam because larvae will drift through the low-flow notch. The opposite conclusion is just as likely – that with such

high rates of mortality, there is no margin for error. Moreover, the Draft EIS does not analyze the various sources of larval mortality together, to determine how they may affect the species cumulatively.

In short, the Agencies failed to take a “hard look” at larval mortality.

D. The Draft EIS’s Economic Rationales for the Dam/Bypass Channel Alternative Are Not Supportable

As noted above, one of the primary rationales for identifying the Dam/Bypass Channel as the preferred alternative is the Agencies’ conclusion that this alternative is the most “cost-effective means of providing fish passage.” Draft EIS at xlii. However, the Agencies’ reliance on the “cost-effectiveness” of the various alternatives is unsupported in this context. The fact that a project may be “cost-effective” is irrelevant – and not an appropriate basis to choose an alternative – if it does not comply with the law. Here, as described above, the Draft EIS fails to even analyze the impacts that would indicate whether the Dam/Bypass Channel Alternative will fulfill the Intake Project’s purpose or comply with the ESA, let alone describe how this alternative will comply with that law. Further, all available evidence indicates that the Dam/Bypass Channel will, in fact, violate the ESA.¹¹ Thus, the Agencies’ reliance on the cost/benefit analysis in support of an unlawful alternative is arbitrary.

Even if the Agencies’ reliance on cost/benefit analysis to identify the preferred alternative was appropriate, Mr. Marcus’s attached report demonstrates that the calculations underlying the Agencies’ cost/benefit analysis are unsupported and fatally flawed. See Attachment 1.

For example, one key calculation underlying the cost/benefit analysis is the FPCI, which, as described above, is a planning tool subject to arbitrary and unexplained inputs. As Mr. Marcus describes, had the Agencies continued to use a “3” as the “F1” value – as they did in the 2015 EA – the Multiple Pumps Alternative would be most cost-effective per habitat unit gained, according to the Agencies’ own methodologies. See Attachment 1 at 5-7. The cost per habitat unit grows even greater if the “F1” value is assigned a lower value, consistent with a more realistic biological perspective. Id. at 7-8. At the very least, the high level of uncertainty suggests that, if the “F1” value was modeled statistically, it would result in a higher cost per habitat unit for the Bypass Channel in nearly every scenario.

In short, the Draft EIS’s reliance on the cost/benefit analysis is unfounded legally and scientifically and does not support the Agencies’ preferred Dam/Bypass Channel Alternative.

¹¹ The Dam/Bypass Channel Alternative will also violate the Clean Water Act, as described below.

E. The Adaptive Management Provisions are Unfunded and Uncertain

The Draft EIS also fails to adequately disclose and analyze the future ramifications of choosing the Dam/Bypass Channel Alternative with respect to necessary adaptive management funding and actions.

As an initial matter, the Draft EIS notes that the Corps will not be accountable or responsible for addressing any needed changes to the Intake Project if the Project fails. See Appendix E at 12 (“Once the one year warranty period [for the Corps] is complete, Reclamation through the LYP will be responsible for maintaining the new weir and bypass channel for the life of the project.”). This means that if the Project fails to provide for survival and recovery of pallid sturgeon, as required by the ESA, the Corps will not necessarily be on the hook to fund any changes to the Project, large or small.¹² In the event any changes are needed, the Draft EIS does not identify funding sources. Indeed, there does not appear to be any dedicated funding for monitoring or alterations to the plan even if Reclamation concludes that the Project has failed. Instead, the Draft EIS notes that implementation of adaptive management measures “would [] depend on funding availability.” Appendix E at 16. Given that the Dam/Bypass Channel is essentially an experiment, with the fate of a highly imperiled endangered species at stake, funding should be in place prior to proceeding with such an uncertain project.

Nonetheless, the Draft EIS’s adaptive management plan does not even contemplate the idea that the Project will fail – even though the Agencies admit that “it remains to be seen” if the bypass channel will succeed biologically. Appendix E at 11. The potential adaptive management actions for the Dam/Bypass Channel Alternative involve making modifications to the bypass channel, removing fill from the existing natural channel, removing the existing boulder field, modifying the notch in the new dam, or modifying the headworks. *Id.* at 15-16. None of these measures involve removing the new dam and installing a pump system – the one action that would indisputably provide pallid sturgeon with the opportunity to naturally reproduce in the Yellowstone River. This is also the action that will be required of Reclamation if the Dam/Bypass Channel fails to provide for pallid sturgeon survival and recovery.

Given the admitted uncertainty associated with this Project and the precarious status of the species, the Draft EIS must disclose and analyze all available funding and a realistic menu of for fixing any problems that arise when the Dam/Bypass Channel fails, including removal of the new dam.

¹² The Corps may be accountable for operational changes at Fort Peck Dam under the ESA whether or not the Intake Project fails, but the Draft EIS specifically contemplates absolving the Corps of any obligations to address future issues with the Intake Project, regardless of its success.

F. The EIS Does Not Adequately Disclose and Analyze Impacts to the Entire Ecosystem

According to the Draft EIS, there are 54 fish species in the Yellowstone River, 7 of which are listed as Montana Species of Concern. Draft EIS at 3-50 and 3-85. The Draft EIS recognizes the differences in preferred habitat conditions between these species by classifying them as “Main Channel Species” or “Backwater Species.” Draft EIS at 3-52 to 3-54 and 3-85. Yet the Draft EIS does not differentiate between these sets of species in addressing the impacts of each alternative. With respect to at least the seven species of concern, the Draft EIS concludes, in one sentence, that under the Dam/Bypass Channel Alternative, all “sensitive fish species” will be allowed to move upstream, “including both stronger and weaker swimming fish, providing a major benefit to these species.” Draft EIS at 4-168. A single sentence is not sufficient to analyze the impacts of the Draft/Bypass Channel Alternative on the species of concern in the Yellowstone River.

The Draft EIS’s discussion of the impacts of climate change are also cursory and insufficient. The Draft EIS notes that the artificial bypass channel planned for the Dam/Bypass Channel Alternative may not be enough for fish passage for some species during drought years, and that floods may cause structural problems to the channel. Draft EIS at 4-11. Yet the Draft EIS concludes that the risk is “minor” without providing any detail to support that conclusion. Absent more analysis, there is no way for the public to understand or respond to the Draft EIS’s discussion of climate change.

VI. THE AGENCIES SHOULD ADOPT THE MULTIPLE PUMP ALTERNATIVE WITH OR WITHOUT ADDITIONAL CONSERVATION MEASURES

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

As Defenders and NRDC explained in our scoping letter, the consistent and uncontroverted findings in scientific studies over the past two decades confirm that removing Intake Dam and restoring a free-flowing river is the only reliable way to facilitate successful natural reproduction for pallid sturgeon in the Yellowstone River. Restoring this habitat is essential to the survival and recovery of the pallid sturgeon. Compared to other alternatives, this alternative also presents less of a risk for fish during droughts, which are expected to increase as a result of climate change. *Id.* at 4-12. In addition, given that the Agencies intend to abandon the efforts at Fort Peck Dam, there is no room for error with respect to the Intake Project – the fate of the species may rest entirely on this decision and therefore must be the best possible project for the pallid sturgeon. As a result, we urge the Agencies to adopt the Multiple Pump Alternative in the Final EIS and ROD.

B. The Draft EIS's Cost Analysis Does Not Support Rejection of the Multiple Pump Alternative

As described above, the Agencies identified the Dam/Bypass Channel at the expense of the Multiple Pump Alternative in large part based on cost comparisons. The Draft EIS references two different kinds of costs to justify this choice: (1) construction costs; and (2) OM&R costs. Draft EIS at xlii. However, costs are only relevant if the chosen alternative complies with all applicable laws, including the ESA – which the Dam/Bypass Channel Alternative will not. Even if the Dam/Bypass Channel Alternative complied with all applicable laws, the cost analysis in the Draft EIS does not comply with NEPA and does not support rejection of the Multiple Pump Alternative.

The “cost-effectiveness” analysis in the Draft EIS evaluates construction costs. The Draft EIS’s analysis of these costs is unsupportable, as described above and in Mr. Marcus’s report.¹³

The arbitrary nature of the cost/benefit analysis is illustrated by the fact that the Draft EIS assigns an annual cost for monitoring and adaptive management requirements for the Multiple Pump Alternative that is more than two times as high as the Dam/Bypass Channel Alternative. See Appendix D at 19, Table 2-2. The Draft EIS did so by applying a 1% fee for adaptive management to each alternative. DEIS at 2-98, Appendix B at 22. This 1% addition has no logical basis. While monitoring costs should be equal, adaptive management costs should be significantly lower for the Multiple Pump Alternative. Once the dam is removed, the only potential adaptive management action mentioned by the Draft EIS is the potential for modifications to the headworks and pump stations to reduce entrainment. Appendix E at 28. In contrast, under the best case scenario, the Dam/Bypass Channel Alternative will likely require constant maintenance to maintain the bypass channel at its current specifications in the face of floods, ice flows, and other natural river processes. Those minimum measures will be required if the bypass channel succeeds – far greater costs should be assumed if it fails. Thus, there is no reasonable basis to assign a higher cost to such measures in the Multiple Pump Alternative.

The second kind of costs, for operations and maintenance (O&M), are generally paid for by the irrigation districts. The administrative record for the 2015 EA makes clear that the focus of this Project has long been on minimizing or eliminating any additional costs for the irrigators, regardless of the biological outcome for pallid sturgeon. See FWS-4960-4961 (FWS official noting that “the irrigators have enlisted congressional inquiry to ensure full implementation of the project **does not result in any** added costs to the irrigators”) (emphasis in original). As Mr. Marcus’s report describes, the Draft EIS overestimates the O&M costs associated with the Multiple Pump Alternative and

¹³ Notably, these costs have no effect on the sustainability of the LYP and are not a part of the Agencies’ stated purpose and need. They also fail to reflect the cost “savings” the Corps would attain if it is permitted to abandon its required operational modifications at Fort Peck Dam in exchange for funding the Intake Project.

underestimates those for the Bypass Channel Alternative. See Attachment 1 at 42-43. For example, although the Draft EIS acknowledges that reduced power rates may be available, the Agencies did not apply those lower rates to the Multiple Pump Alternative. See, e.g., Draft EIS at 2-75. The Draft EIS also fails to adequately describe the framework and limitations the Agencies relied on to determine whether a particular alternative would allow for the LYP to remain viable.

Finally, to the extent that construction or O&M costs are a prohibitive factor, the Agencies must explore alternative funding, as Defenders and NRDC highlighted in our scoping comments. While the Draft EIS concludes that requiring Reclamation to fund the Project will require the irrigation district to reimburse the agency, it does not otherwise offer any potential funding sources or resolutions. This analysis is insufficient to meet NEPA's requirements, especially given that available funding is a primary rationale for choosing particular alternatives.

VII. THE CORPS' SECTION 404 ANALYSIS DOES NOT COMPLY WITH THE CLEAN WATER ACT

The Clean Water Act (CWA) differs significantly from NEPA in that it has substantive standards and section 404 *prohibits* activities that violate those standards. See Bering Strait Citizens v. Army Corps of Engineers, 524 F.3d 938, 947-48 (9th Cir. 2008). The CWA is designed to "restore and maintain the chemical, physical and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). The CWA generally prohibits the discharge of pollutants, including dredged or fill material, into the waters of the United States unless authorized by a permit. 33 U.S.C. § 1311(a); see also 33 C.F.R. § 323.2 (defining discharge of dredged and fill material); 40 C.F.R. § 232.2 (same). Section 404 of the CWA authorizes the Corps to issue such permits. 33 U.S.C. § 1344. The section 404 requirements apply to the Corps where, as here, it is authorizing its own activities. See 33 C.F.R. Parts 335-337. However, instead of issuing itself a permit, the Corps issues a Statement of Findings (SOF) to authorize its activities. 33 C.F.R. §§ 336.1(a), 337.6.

The Corps has adopted regulations, known as the "public interest" factors, to implement this permitting authority. 33 C.F.R. §§ 320 et seq. The Corps must "weigh the benefits that reasonably may be expected to accrue from the proposal against its reasonably foreseeable detriments, considering all relevant factors." Alliance to Save the Mattaponi v. U.S. Army Corps of Engineers, 606 F. Supp. 2d 121, 124 (D.D.C. 2009) (citing 33 C.F.R. § 320.4). The Corps must consider a broad range of potential impacts as part of its public interest review, including "conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people." 33 C.F.R. § 320.4(a)(1). Moreover, in the evaluation of every permit, the Corps must consider:

(i) The relevant extent of the public and private need for the proposed structure or work; (ii) Where there are unresolved conflicts as to resource use, the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work; and (iii) The extent and permanence of the beneficial and/or detrimental effects which the proposed structure or work is likely to have on the public and private uses to which the area is suited.

Id. § 320.4(a)(2).

Appendix C to the Draft EIS does not appear to make an explicit finding regarding whether the Dam/Bypass Channel is in the public interest, as required by the Corps' regulations.

The Section 404 process is also governed by the Environmental Protection Agency's (EPA) "404(b)(1) Guidelines." 33 U.S.C. § 1344(b)(1); 40 C.F.R. §§ 230 et seq. The Corps reviews all proposed Section 404 permits under both the Corps' public interest factors and EPA's 404(b)(1) guidelines. 33 U.S.C. § 1344(b)(1); 33 C.F.R. § 320.2(f). A permit must be denied if it is contrary to the public interest or does not comport with the Section 404(b)(1) Guidelines. 33 C.F.R. §§ 320.4, 323.6; 40 C.F.R. §§ 230.10, 230.12.

To ensure these mandatory CWA requirements are satisfied, the Corps must fully evaluate the direct, secondary, and cumulative impacts of the activity, including impacts to endangered species, the aquatic environment, fish and wildlife, and human impacts. See, e.g., 33 C.F.R. §§ 320.4(a)(1), 336.1(c)(5), 336.1(c)(8); 40 C.F.R. §§ 230.11(a)-(h), 230.20-23, 230.30, 230.31, 230.51, 230.53. The 404(b)(1) guidelines also set forth particular restrictions on discharges, described more fully below. 40 C.F.R. § 230.12. The Corps must set forth its findings in writing on the short-term and long-term effects of the discharge of dredge or fill activities, as well as compliance or non-compliance with the restrictions on discharge. Id. §§ 230.11, 230.12(b).

EPA's 404(b)(1) guidelines prohibit the Corps from authorizing an application for dredge and fill activities under several circumstances relevant to this case:

- (1) the activity "jeopardizes the continued existence" of an endangered species under the Endangered Species Act ("ESA") (40 C.F.R. §§ 230.10(b)(3), 230.12(a)(3)(ii));
- (2) there is a practicable alternative which would have less adverse impact and does not have other significant adverse environmental consequences (40 C.F.R. §§ 230.10(a), 230.12(a)(3)(i));
- (3) the discharge will result in significant degradation to waters of the U.S. (40 C.F.R. § 230.10(c) 230.12(a)(3)(ii)); or
- (4) there does not exist sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with the COE's Guidelines for permit issuance. (40 C.F.R. § 230.12(3)(iv)).

See Utahns for Better Transp. v. U.S. Dep't of Transp., 305 F.3d 1152, 1163 (10th Cir. 2002) (citing 40 C.F.R. § 230.12(a)(3)(i-iv)). The Corps must document its findings of compliance or noncompliance with the restrictions on discharge set forth in these guidelines. 40 C.F.R. § 230.12(b). Where there is not sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with the Guidelines, the Corps must deny the permit. 40 C.F.R. § 230.12(a)(3)(iv).

A. Because the Corps' Section 404(b)(1) Analysis Relies on the Inadequate Analysis in the Draft EIS, the Corps Cannot Demonstrate Compliance with the Clean Water Act

The Corps' Clean Water Act Section 404(b)(1) Analysis (Appendix C) relies on the Draft EIS for the underlying analysis of each alternative, and supplements that analysis with specific findings with respect to the No Action and Dam/Bypass Channel Alternatives only. See Appendix C at 62 (noting analysis of alternatives provided in the Draft EIS). A NEPA analysis may be used to inform the 404 permitting decision. However, where a NEPA analysis fails to consider the alternatives "in sufficient detail to respond to the requirements of these Guidelines," the Corps should supplement the NEPA documents with additional information. 40 C.F.R. § 230.10(a)(4).

Here, as described above, the Draft EIS does not provide sufficient information or analyses to support the selection of the Dam/Bypass Channel Alternative as the preferred alternative. The Corps' 404(b)(1) Analysis perpetuates this failure by: (1) assuming the Dam/Bypass Channel's success, despite the limited scope of analysis and all evidence to the contrary; and (2) ignoring the Multiple Pump Alternative and other alternatives altogether, such that the Corps fails to weigh the benefits and costs of the Dam/Bypass Channel Alternative to the Multiple Pump Alternative as required by the CWA.

B. The Corps Failed to Evaluate Whether the Dam/Bypass Channel Alternative Will Jeopardize the Endangered Pallid Sturgeon

Under EPA's guidelines, the Corps may not permit a dredge and fill activity that "jeopardizes the continued existence" of an endangered species – the standard for prohibiting federal activities under section 7 of the ESA, 16 U.S.C. § 1536(a)(2); 40 C.F.R. § 230.10(b)(3). As described in detail in our scoping comments and noted above, Reclamation and the Corps are currently violating section 7 of the ESA and jeopardizing the continued existence of the pallid sturgeon at Intake Dam and Fort Peck Dam, respectively.

The Section 404(b)(1) analysis relies on Appendix D to conclude that the Dam/Bypass Channel Alternative will not result in jeopardy to any listed species. Appendix C at 67. However, the reference to Appendix D appears to be an error. Neither Appendix D nor the Draft EIS contain any analysis of the Dam/Bypass Channel Alternative's effects on survival and recovery of the species (essential elements of a "jeopardy" analysis) or reach a conclusion regarding whether it will cause jeopardy. The Draft EIS also contains no analysis of the effects of the intended "swap" of Fort Peck Dam operational modifications on survival and recovery of the species. As a result, the

Section 404(b)(1) analysis's conclusion that the preferred alternative will not cause jeopardy to pallid sturgeon on the Yellowstone River is unfounded and arbitrary.

Even with respect to upstream passage, just one component of the pallid sturgeon's life cycle relevant to the jeopardy analysis, the 404(b)(1) Analysis is insufficient. Instead, the Corps perpetuates the assumption of success that permeates the Draft EIS. "It is anticipated that a majority of pallid sturgeon that swim up to the weir would encounter the bypass channel as its entrance will be located close to the weir, thus a likely majority of pallid sturgeon [will] use the channel." Appendix C at 38. As with the conclusions in the main body of the Draft EIS, there is no analysis to support the conclusion that simply "encountering" the bypass channel will mean that pallid sturgeon will use it, and the Draft EIS concedes that the likelihood that pallid sturgeon will use the bypass channel is highly uncertain. Neither the Draft EIS nor the 404(b)(1) Analysis provide sufficient data or analysis to determine whether pallid sturgeon will use the channel at all. They certainly fail to demonstrate that adult pallid sturgeon will use the channel in sufficient numbers to provide for natural reproduction at a survival or recovery level.

Further, the Section 404(b)(1) Analysis repeats the Agencies' conclusion that the Dam/Bypass Channel will be a success if 85% or more of the telemetered pallid sturgeon use the bypass channel. Appendix C at 60. Yet, as described above, the Draft EIS estimates that only 67% of pallid sturgeon will utilize the bypass channel, and that estimate is deeply flawed and likely vastly overstated. Appendix D at 16. Thus, even under the Draft EIS's own analysis and their own (unlawful) metric for success, the Dam/Bypass Channel is predicted to fail. The Section 404(b)(1) Analysis offers no rationale for concluding that a Project that will fail the Agencies' own metric for success will somehow also avoid causing "jeopardy" to pallid sturgeon.

Even if the Agencies' conclusion regarding the anticipated passage of pallid sturgeon upstream was supportable, the Agencies failed to analyze how or whether the pallid sturgeon will be able to complete their life cycle and successfully naturally reproduce. Absent this analysis, there is no way to determine whether the species will be able to replace itself in the wild, let alone move toward recovery, the key elements in any analysis of whether an action will jeopardize a species.

In short, the available evidence demonstrates that the Dam/Bypass Channel will cause jeopardy to the species, based on ESA legal standards as well as the Agencies' own (legally inadequate) conclusions. Absent evidence demonstrating that the Intake Project will not cause jeopardy to the species, approval of the Dam/Bypass Channel will violate Section 404(b)(1). See 40 C.F.R. § 230.10(b)(3). The Corps' conclusion that this element of the 404(b)(1) guidelines has been met is unfounded.

C. The Least Environmentally Damaging Practicable Alternative is to Remove the Dam and Adopt the Multiple Pump Alternative

As noted above, in order to comply with CWA Section 404, the Corps must choose the alternative that is the least damaging alternative unless it is proven to be impracticable. See Utahns, 305 F.3d at 1186-87; Alliance to Save the Mattaponi, 606 F. Supp. 2d at 128; 40 C.F.R. § 230.10(a). The Corps is required to deny the application “if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.” 40 C.F.R. § 230.10(a). The Clean Water Act “compels that the [least-damaging] alternative be considered and selected unless proven impracticable.” Utahns, 305 F.3d at 1189; Alliance to Save the Mattaponi, 606 F. Supp. 2d at 130 (“The Corps must adequately explain why there is no less-damaging practicable alternative. If the Corps cannot so explain based on the record before it, it must reconsider its determination based on an adequate analysis of the alternatives.”). An alternative is practicable if it is “available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.” 40 C.F.R. § 230.10(a)(2).

Notably, although one factor of the practicability test involves the cost of a particular alternative, the fact that one alternative may cost more than another is not, by itself, sufficient to reject it. Instead, the Corps must weigh the relative benefits and impacts of all of the potential alternatives. See Alameda Water & Sanitation District v. Reilly, 930 F. Supp. 486, 489, 492 (D. Colo. 1996) (upholding EPA’s determination that practicable alternatives existed even though the record showed “very substantial regulatory and legal obstacles to these alternatives” – such as moving an entire town and obtaining a Presidential exemption); Friends of the Earth v. Hall, 693 F. Supp. 904, 946-47 (W.D. Wash. 1988) (noting that whether costs make an alternative impracticable depends on whether “competing alternatives can reasonably be viewed as equivalent with respect to other factors” including the “potential for environmental harm”); Hough v. Marsh, 557 F. Supp. 74, 83-84 (D. Mass. 1982) (remanding because “‘exorbitant cost’ . . . by itself carries little weight; although cost is relevant to an assessment of an alternative’s ‘practicability,’ the Corps conducted no examination of whether the price was unreasonably high [or] whether the defendants could afford it . . .”). Accordingly, the Agencies must fully evaluate the relative benefits of all of these costs and benefits for public information and comment.

It is indisputable that the least environmentally damaging alternative is removing the dam and installing a pumping system for irrigation, as contemplated by the Multiple Pump Alternative. The Section 404(b)(1) Analysis in Appendix C ignores this alternative in its effects analysis, and therefore fails to weigh the relative benefits of this alternative to the Dam/Bypass Channel Alternative as required by the statute.

Balancing the relative benefits – and not just the costs – is essential here because the Dam/Bypass Channel does not comply with all legal standards or provide for pallid sturgeon survival and recovery, the fundamental purpose of the Project. Costs may only be used as the determining factor for a Section 404 analysis if the benefits “can

reasonably be viewed as equivalent with respect to other factors.” Friends of the Earth, 693 F. Supp. at 946-47. Here, there is no scientific evidence to support the idea that the Dam/Bypass Channel is “equivalent” to the Multiple Pump Alternative in terms of benefits to the pallid sturgeon, and, in fact, the available scientific evidence indicates that the Dam/Bypass Channel will permanently close the door on pallid sturgeon recovery.

Further, as described above, the Draft EIS does not support the conclusion that the Multiple Pump Alternative is impracticable. The cost/benefit analysis concluding that the Multiple Pump Alternative is less cost-effective than the Bypass Channel Alternative is built on numerous unsupportable and arbitrary assumptions that make its conclusions essentially meaningless. However, even using the Agencies’ assumptions, the Multiple Pump Alternative was deemed “cost-effective” in the Draft EIS and the Agencies offer no evidence to demonstrate that it is “impracticable.” See Appendix C at 12. Moreover, if realistic numbers are applied, the Multiple Pump Alternative would cost even less per habitat unit gained than the Bypass Channel Alternative, making it even more “cost-effective” (under the Agencies’ metric) than the Bypass Channel Alternative.

Moreover, the Section 404(b)(1) Analysis failed to include the costs that are likely to occur if the Dam/Bypass Channel fails to provide for survival and recovery of pallid sturgeon. For example, if an alternative is chosen that will not recover the species, there will be additional costs associated with: (1) the costs of evaluating and implementing a new alternative to comply with the ESA if the initial plan fails to provide for recovery of the species; (2) the adaptive management activities required to tear down any construction and implement a new solution; and (3) the maintenance, in perpetuity, of a hatchery program for pallid sturgeon if the species continues to be unable to be self-sustaining.

The Draft Section 404(b)(1) Analysis fails to comply with the CWA because the Corps failed to adopt the least environmentally damaging alternative – the Multiple Pump Alternative. See 40 C.F.R. § 230.10(a).

D. The Dam/Bypass Channel Alternative Will Cause or Contribute to Significant Degradation of the Yellowstone River

The Corps may not permit a dredge and fill activity that “cause[s] or contribute[s] to significant degradation of the waters of the United States,” which includes the Yellowstone River. 40 C.F.R. § 230.10(c). Effects that contribute to significant degradation include: “[s]ignificant adverse effects of the discharge of pollutants on aquatic ecosystem diversity, productivity, and stability. Such effects may include ... loss of fish and wildlife habitat.” 40 C.F.R. § 230.10(c)(3).

First and foremost, the Dam/Bypass Channel Alternative violates this standard because it will contribute to the extirpation of an endangered species, which indisputably “causes or contributes” to significant degradation to the Yellowstone River.

Moreover, as described in our scoping comments and above, the Dam/Bypass Channel Alternative will significantly degrade the entire aquatic ecosystem of the

Yellowstone, a river regarded by the Environmental Protection Agency as an aquatic resource of national importance. See *Greater Yellowstone Coalition v. Flowers*, 321 F.3d 1250, 1257-1258 (10th Cir. 2003) (“adverse impact on the aquatic ecosystem” under the Guidelines does not require showing jeopardy; harm to individuals can suffice). The Dam/Bypass Channel Alternative will require extensive bank stabilization or river modifications, and will significantly alter and degrade the Yellowstone River’s fishery and riparian habitat. This Alternative is also inconsistent with the Yellowstone River Conservation District Council’s plan to protect and encourage channel migration easements within channel migration zones on the Yellowstone River as well as the Agencies’ acknowledgment that dam building, bank stabilization, and other river modification efforts throughout the Missouri and Mississippi River basins are the primary reason that the pallid sturgeon is nearing extinction.

In contrast, the Multiple Pump Alternative will start the process of reversing the degradation caused by the more than a century of dam building and river modifications that have destroyed the habitat for pallid sturgeon and other sensitive species.

VI. CONCLUSION

Thank you for providing the opportunity to comment on the Draft EIS for the Intake Project. Defenders and NRDC urge the Agencies to take this opportunity to protect the pallid sturgeon and restore its habitat in the state of Montana by adopting the Multiple Pump Alternative, or some close variation that removes the existing dam, restores the free-flowing Yellowstone River, and provides an alternate means of providing water for the LYP.

Sincerely,



McCrystie Adams
Jay Tutchton
Defenders of Wildlife

On behalf of:
Defenders of Wildlife
Natural Resources Defense Council