UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
ENVIRONMENTAL REVIEW
AND ASSESSMENT

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U.S. EPA's Comments on Public Notice NWW-2004-0600046-B02
Thorn Creek & Unnamed Tributaries, Idaho Transportation Department

The following comments are provided to assist the U.S. Army Corps of Engineers (Corps) in its evaluation of the proposed project's compliance with the Clean Water Act (CWA) 404(b)(1) Guidelines (Guidelines), and to suggest additional measures to avoid, minimize, and mitigate for impacts to aquatic resources. The EPA hopes that these comments will be of use to the applicant as the Corps proceeds with its review.

Section 404 of the CWA established the permitting program for the discharge of dredged and fill material into waters of the United States at specified disposal sites. This program is co-administered by the Corps and EPA. Section 404(b)(1) requires the EPA, in conjunction with the Corps, to develop guidelines for the specification of disposal sites. The guidelines, referred to as the 404(b)(1) Guidelines, were to be patterned after the ocean discharge criteria developed by Congress and included in the CWA.

The purpose of the Guidelines is to restore and maintain the chemical, physical, and biological integrity of waters of the U.S. through control of discharges of dredged or fill material. They were codified in regulation (40 CFR Part 230) in 1980 and are the substantive environmental criteria used by the Corps in every review of proposed discharges and issue of permits under Section 404. The Guidelines prohibit issuance of a permit that would cause an avoidable or significant adverse impact to waters of the U.S.

The Corps must find that a proposed activity complies with the Guidelines; if it is unable to make such a finding, it cannot issue a permit[i]. The demonstration that an activity complies is the responsibility of the applicant. Section 230.10 of the Guidelines contains the four principle requirements for compliance. If an activity fails to comply with any one of the four requirements, the Corps must deny a permit. For example, if the Corps finds that the applicant has failed to "clearly demonstrate" that there is no "practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem," in accordance with §230.10(a), that proposed activity would not comply with the Guidelines, and no permit could be issued.

Basic Project Purpose

The definition of the basic project purpose is critical to documentation of compliance with the Guidelines, because it is the basic project purpose that identifies the scope of the alternatives analysis. The Public Notice (PN) identifies the Basic Project Purpose as, "to improve safety for the traveling public and to increase the capacity of US 95, between Mile Posts 337.67 and 344.00." The Record of Decision on the Environmental Impact Statement prepared by Federal Highway Administration (FHWA) and Idaho Transportation Department (ITD) identifies the purpose and need in the same way. Consequently, alternatives that would improve safety and increase capacity of US 95 in the relevant locations would meet the basic project purpose under 40 CFR 230.10(a).

Alternatives Analysis

Pursuant to §230.10(a), an alternatives analysis is conducted to identify practicable alternatives to a proposed discharge. "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" [§ 230.10(a)(2)]. As noted above, the project purpose plays a critical role in determining whether a particular alternative is practicable or not. The consideration of cost, existing technology, and logistics is to determine whether one or more of these factors render an alternative unavailable and/or incapable of being done. This is a very high standard, and an alternative must be demonstrated to be impracticable before it can be excluded from analysis. For non-water dependent activities, practicable alternatives with fewer adverse impacts are presumed to exist unless "clearly demonstrated otherwise."

Once the range of practicable alternatives has been identified, the environmental impacts of those alternatives are then compared so that the Corps can ensure it is authorizing only the alternative that generates the least environmental damage. This alternative is referred to as the Least Environmentally Damaging Practicable Alternative. Except as permitted under Section 404(b)(2), the Guidelines prohibit the authorization of any alternative that is not the LEDPA.

NEPA Review

A robust National Environmental Policy Act review can provide the information necessary to evaluate practicable alternatives for a §404 permit decision. The FHWA encourages merging the NEPA and 404 process, noting that it expedites project decision-making and leads to one overall public interest decision, at one point in time.[1] Several states have a Memorandum of Understanding between their Department of Transportation, Corps, EPA, U.S. Fish and Wildlife Service, and NOAA Fisheries regarding transportation projects requiring a 404 permit. One such agreement emphasizes that the NEPA preferred alternative must be determined to be the LEDPA in order for the Corps to be able to proceed with authorization under the CWA.[2]

Pursuant to the NEPA requirements, ITD and FHWA engaged in an analysis of the proposed project. Under its Clean Air Act § 309 authority, the EPA reviewed and submitted comments on both the Draft and Final Environmental Impact Statement for the US-95 Thorn Creek Road to Moscow project in Latah County, Idaho. The EPA rated the Draft EIS as EO-2, Environmental Objections, Insufficient Information. Our environmental objections remained unchanged upon review of the Final EIS.

In the FEIS, three alternatives were brought forward for detailed analysis; these were alternatives W-4, C-3, and E-2. All three alternatives met the American Association of State Highway and Transportation Officials safety standards. All three increased capacity in the relevant location. The construction costs of the three alternatives varied from $43 million to $52 million dollars, with alternative C-3 being the least expensive and alternative W-4 being the most expensive, in terms of construction cost estimates. In the Record of Decision for the proposed project, FHWA and ITD identified Alternative E-2 as the applicant's preferred alternative for the proposal. The stated reason for this selection is that Alternative E-2 is the safest among those evaluated. ITD further stated in the ROD that, "Practicable alternatives will be evaluated by [the Corps] during the Section 404 permitting process" (FEIS Letter-Comment # F-

[1] https://www.environment.fhwa.dot.gov/projdev/tdmnepa404.asp
[2] https://admin.rtd-fastracks.com/media/uploads/se/App_H_PA_1_M1.pdf

51m, p. 237). Because only the LEDPA can be permitted by the Corps, the permitted action may differ from the alternatives evaluated during the NEPA process.

Practicability of the Alternatives

Evaluating practicability is a conclusive determination; that is to say, an alternative either is or is not practicable. Alternatives are evaluated independently to determine whether they meet the project purpose and are practicable. It is inappropriate to compare one alternative against another in determining practicability, for an alternative cannot be more or less practicable than another. For these reasons, the EPA does not agree with ITD's assertion that because Alternative E-2 would provide the "greatest safety benefit which best meets the project purpose and need," it is more practicable than the Modified W-4 or C-3 alternatives. The threshold against which alternatives were considered reasonable for meeting safety for the evaluation were the AASHTO standards. All three of the alternatives met these criteria. If a particular threshold for safety must be met that is different from the standards used in the NEPA review, this should have been explicit in the definition and selection of alternatives. Presently, all three alternatives carried forward in the Final EIS have been identified as being available and capable of being done, and would achieve the project purpose and need. ITD did not, in its ROD, provide any new criteria against which practicable alternatives must be measured; thus, the EPA must conclude that all three alternatives remain practicable for the purpose of evaluating the project under the Guidelines.

Impacts of the Proposed Project

The Public Notice on the proposed project identifies the impacts to aquatic resources as, "permanently filling 3.43 acres of wetlands (3.23 acres of emergent and 0.20 acres of scrub-shrub) and [the] discharge [of] approximately 620 cubic yards of road fill materials below the ordinary high water mark of five (5) unnamed drainages. Five (5) drainages would be crossed with the new alignment, resulting in the piping of 4,290 linear feet of unnamed tributaries/drainages. The proposed project would construct 4,030 linear feet of drainages on-site, adjacent to the new roadway."

The impacts of the proposed project differ from the magnitude of impacts to aquatic resources identified in the ROD. In a response to an inquiry from the EPA, Mr. Ken Helm of the ITD stated that the 4,290 linear feet "was for all the pipes being proposed on the project, including side drains, tributaries, and non-tributaries." Those impacts are identified in the table below.

IMPACTS TO AQUATIC RESOURCES FROM DIFFERENT US-95 ROAD ALIGNMENTS	Proposed project from PN	Modified W-4	C-3	E-2
Wetlands (acres)	3.43	1.85	0.99	3.61
Number of Tributary Crossings/ Linear Feet	5/4290	10/3592	5/7,808	5/2,592

Sources: Record of Decision, Table 2. Summary of Alternatives' Benefits and Effects, and Public Notice NWW-2004-0600046-B02.

However, the extent of impacts to stream resources from the proposed project is not completely clear in the PN. It is not clear whether the construction of 4,030 linear feet of drainages would be diversions of existing waterways, and thus would be included in the 4,290 linear feet of piping proposed for those waterways, or whether it represents additional work, for a total of 8,320 linear feet of stream impacts. Furthermore, it is unclear from the PN why it is necessary to place nearly a mile of streams into pipes,

which would greatly diminish the functions of those streams and likely contribute to downstream degradation.

The EPA believes that the applicant should provide information to allow the Corps to evaluate whether existing technology and logistics would allow reduction and minimization of the proposed stream impacts. For example, an alternative that requires the use of advanced (but existing) technology that is available and capable of being done is a practicable alternative. Similarly, an alternative that is logistically more complex but is still available and capable of being done is a practicable alternative. Fully spanning some or all aquatic resources—beyond culverting and realigning channels—would be expected to be a practicable alternative, unless clearly demonstrated otherwise by the applicant.

The EPA requests that the Corps require the applicant to provide greater detail on the exact extent and need for the additional areas of impact, the direct and indirect impacts from the additional linear feet of work proposed in the PN, as well as an analysis identifying ways in which such impacts could be avoided. Additional technical analysis and field data where appropriate should be provided for any impacts not included in the Screen of Alternatives Technical Report. The EPA also requests that the Corps provide us with a copy of this information and the opportunity to provide comments prior to making its decision.

In addition to the stream impacts proposed by the project, a total of 3.43 acres of wetlands will be permanently destroyed. While this represents a reduction in wetland impacts from the E-2 Alignment evaluated in the FEIS, the proposed wetland losses are considerably greater than any of the other alternatives evaluated. Furthermore, as detailed in the FEIS, not only is the *amount* of permanent wetland loss greater, the *quality* and *functional performance* of those wetlands are higher than the resources that would be lost from either of the other alternatives. Consequently, both the areal and functional impacts would be greatest, not least, under the proposed project.

As the EPA stated in our comments on the FEIS, the applicant's preferred alternative does not appear to be the LEDPA. In order for the Corps to issue a permit, the Guidelines direct that the proposed alternative should be the least environmentally damaging practicable alternative. In fact, the ROD plainly states, "The FEIS disclosed that the E-2 Alternative will impact the greatest amount of wetlands and will affect higher quality wetlands compared to the other alternatives. It will affect headwater tributaries that drain into the South Fork Palouse River, a TMDL-listed water" (FEIS Letter-Comment # F-51t, p. 239). Based on the available information, the EPA concludes that the proposed project does not comply with 40 CFR 230.10(a).

The Guidelines also direct that no discharge of dredged or fill material be permitted if it "contributes…to violations of any applicable State water quality standard" [40 CFR 230.10(b)]. The wetlands within the project area drain into either the South Fork of the Palouse River or Thorn Creek, both of which are listed as impaired waterbodies by the Idaho Department of Environmental Quality (Chapter 4, Environmental Consequences, p. 173). Given that 97% of the Palouse wetlands have been lost, the remaining wetlands—albeit disturbed—serve an extremely critical role in protecting and enhancing water quality of these and other downstream waters, as well as providing valuable habitat. Notably, the Total Maximum Daily Load Report for the South Fork Palouse River states: "Most of the wetlands and flood plains in the Palouse have been eliminated by modern land use, urbanization, and transportation infrastructure. These activities have affected instream flows, channel sinuosity, and habitat diversity. The topography, soils, and climate make the Palouse watershed very susceptible to erosion. Land uses that contribute excess sediment, nutrients, and bacteria to the river can degrade water

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quality."[3] We noted in our March 25, 2013 letter that the approved TMDL for the South Fork Palouse River specifically recommends riparian area restoration and stream buffer zones to reduce temperatures and filter nutrients, sediment, and bacteria from direct delivery to the river. Further loss of wetlands from this landscape, which has experienced significant cumulative loss of wetland function, can only contribute to downstream degradation, unless such losses are offset by significant restoration in appropriately targeted geographic locations.

Compensatory Mitigation

The EPA has previously shared with ITD that a 1990 Memorandum of Agreement between the EPA and the Department of Army established a three-part process, known as the mitigation sequence, to help guide mitigation decisions and determine the type and level of mitigation required under CWA Section 404 regulations. This sequence is also embedded in the requirements of the 2008 Final Rule on Compensatory Mitigation, found at 33 CFR Parts 325 and 332 and 40 CFR Part 230. Compensatory mitigation is the third step in that sequence, which is outlined as follows:

> Step 1. Avoid – Adverse impacts to aquatic resources are to be avoided and no discharge shall be permitted if there is a practicable alternative with less adverse impact.
>
> Step 2. Minimize – If impacts cannot be avoided, appropriate and practicable steps to minimize adverse impacts must be taken.
>
> Step 3. Compensate – Appropriate and practicable compensatory mitigation is required for unavoidable adverse impacts that remain. The amount and quality of compensatory mitigation may not substitute for avoiding and minimizing impacts (emphasis added).

The FEIS acknowledges that the preferred alternative (E-2) would impact wetlands that are functioning higher for habitat, noting that these would be more difficult to replace (Chapter 4, Environmental Consequences, p. 176). The same section goes on to say, "However, because the proposed wetland mitigation involves applying mitigation credit from the Cow Creek Mitigation Area, which is already established and fully functioning, there would be no temporal loss" (p. 176). The EPA emphasized, in our response to the Final EIS that it is inappropriate to rely on proposed compensatory mitigation as a substitute for avoidance and minimization. While the use of a fully functioning advance mitigation area can avoid temporal losses of wetland functions from an activity, it does not offset the requirement to avoid the impact where possible, particularly where those resources are unlikely to be effectively replaced on the landscape.

The Cow Creek Mitigation Area may indeed offer the appropriate number and resource type of credits, such that there would be no temporal loss of wetlands. Before compensatory mitigation can be considered, however, an applicant must take all appropriate steps to first avoid and minimize impacts to aquatic resources. Additionally, even if/when there is no temporal loss of aquatic resources through compensatory mitigation, the mitigation site is usually some distance from the impact site, such that an impact is still felt.

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[3] South Fork Palouse River Watershed Assessment and TMDLs, Executive Summary: http://www.epa.gov/waters/tmdldocs/palouse_river_sf_entire.pdf

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In general, the EPA supports the use of mitigation banks, as they are identified in the 2008 Final Mitigation Rule as being the preferred method of compensatory mitigation. In that instance, permittees who intend to fulfill their compensatory mitigation obligations by securing credits from approved mitigation banks must address (c)(5) and (c)(6)—baseline information and determination of credits—of 40 CFR 230.94 or 33 CFR 332.4, Planning and documentation. A higher mitigation ratio may be warranted if the project site is located outside of the service area of an approved mitigation bank.

The EPA does not object to a permittee-responsible compensatory mitigation project, like the referenced Cow Creek mitigation site, provided that: (a) an analysis could show that the mitigation project would be sufficient to offset the authorized impacts; and (b) the mitigation project will be conducted in accordance with a mitigation plan that complies with the Mitigation Rule. If and when permittee-responsible mitigation occurs at the site of permitted impacts, or at an off-site location within the same watershed, the Mitigation Rule acknowledges that this form of compensatory mitigation may be determined to be more appropriate.

The EPA is further concerned that the Cow Creek Mitigation Site, which was developed to offset impacts from the entire 20-mile project as conceived in 1999, may not be providing adequate improvement to offset current project impacts. The PN states that the site was completed in 2005 and met its success criteria after 5 years of monitoring (2010). However, EPA staff recently observed the site and noticed significant occurrence of reed canary grass, *Phalaris arundinacea*, in the mitigation site. We believe that the Corps should evaluate the current condition of the site to ensure that it offers sufficient long-term improvements to compensate for anticipated losses.

Unfortunately, neither the Final EIS nor the PN provide enough detail as to how ITD's proposed mitigation plan would comply with the Mitigation Rule. We recognize that a final mitigation plan is not approved until the time of permit issuance; however, we offer the following comments on the proposed mitigation described in the PN:

1. There are no figures provided which show the location or size of the Cow Creek mitigation site, nor what types of aquatic resources exist that would be available to offset any unavoidable impacts of the proposed project.

2. 33 CFR part 332.3(c)(1) specifies that the type of aquatic resources the applicant proposes for compensatory mitigation should be ecologically suitable to the location and complement the diversity (including spatial distribution) of aquatic resources in a project watershed (or alternatively: ecoregion, physiographic province, or other geographic area of interest). Clarification of how the proposed mitigation meets this goal would be helpful.

3. It is not clear whether the proposed compensatory mitigation would be in-kind or out-of-kind, based on the resources impacted. Furthermore, because the Cow Creek site has been used to offset earlier impacts from other sections of US 95 which have been constructed, please disclose how the losses from those projects were offset, and what remains available to offset the kinds and amounts off functional losses from the proposed project.

4. Additional clarification is needed on the type of compensatory mitigation provided. It is not clear which functions are proposed to be compensated at the Cow Creek site for the proposed stream impacts and wetland impacts. On a case-specific basis, different functions may be compensated at a single or multiple locations, provided the overall plan compensates for the

full suite of impacted functions. However, the amount of mitigation required to offset impacts may vary. Section 230.93(f)(2) of the Mitigation Rule notes, "The district engineer must require a mitigation ratio greater than one-to-one where necessary to account for the method of compensatory mitigation (e.g., preservation), the likelihood of success, differences between the functions lost at the impact site and the functions expected to be produced by the compensatory mitigation project, temporal losses of aquatic resource functions, the difficulty of restoring or establishing the desired aquatic resource type and functions, and/or the distance between the affected aquatic resource and the compensation site."

5. Additional information is needed to determine whether the proposed compensatory mitigation is commensurate with the "scope and scale of the proposed impacts." The Mitigation Rule specifies that compensatory mitigation should be commensurate with the amount and type of impact that is associated with a particular Department of Army permit, and should be sufficient to compensate for the full suite of impacted functions aquatic resource functions as assessed using an appropriate functional or condition assessment, when available.

6. It is not clear from the 2004 approved "Wetland Mitigation Plan for Top of Lewiston Hill to Genesee and Genesee to Moscow" how that mitigation plan compensates for the "full suite of functions impacted" per Section 33 CFR 333.2, particularly given that at the present time, the plant community appears to be of lower condition than the final projected ecological endpoint. Additional clarification is needed on how the impacted functions were measured and fully compensated for at the Cow Creek mitigation site as stated in the PN.

Other Environmental Impacts

In addition to the identified impacts to aquatic resources, the proposed project would impact 0.44 acre of ungulate habitat and is within 1 km of 24 Palouse prairie remnants, which contain rare and remnant habitats and species. The proximity of the roadway to the remnant prairie has the potential to cause secondary degradation to the prairie via hydrologic changes and the introduction of weed species from the roadway. In addition to having fewer impacts to the aquatic ecosystem, the other alternatives evaluated in the FEIS would not impact prairie remnants or ungulate habitat.

Conclusion

Neither the PN nor the extensive EIS record adequately demonstrates that the proposed project complies with the Guidelines (i.e., that Alternative E-2 is the LEDPA).

The EPA continues to have the following concerns:

1. The approach to selecting a preferred alternative is inconsistent with the requirements of the Guidelines. The Final EIS inappropriately compares one alternative against another in determining practicability. An alternative either is or is not practicable; one cannot be more or less practicable than another. Additionally, the fact that an alternative may cost more than another does not necessarily mean it is unreasonably expensive and therefore not practicable. In the instant case, however, the alternative which has the fewest wetland impacts also appears to be the least expensive.

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2. The proposed project would impact the greatest amount of wetlands compared to any of the other practicable alternatives.

3. The PN includes more impacts to tributaries than what was originally proposed in the Final EIS. That difference is an increase from 2,592 linear feet to 4,290 linear feet, or a total of 1,698 linear feet.

4. The PN does not discuss why 4,290 linear feet of streams would be piped, and why 4,030 linear feet of drainages would be constructed adjacent to the roadway. It is unclear, based on the narrative, how the two types of actions may be related (i.e., there is no distinction between what is being piped versus realigned), or whether the applicant has explored all opportunities to avoid or minimize the impacts to streams.

5. Insufficient information is provided in the PN to determine whether the proposed mitigation plan complies with the Guidelines; specifically, 2008 Final Mitigation Rule or Subpart J, Compensatory Mitigation for Losses of Aquatic Resources (40 CFR 230.91-230.98).

6. The presumption that there are alternatives to non-water dependent activities that would not involve a discharge of fill (or that would involve less fill), has not been rebutted. Rather, all available information indicates that, of the three practicable alternatives evaluated in the FEIS, the proposed project has the greatest, not the least, impacts to the aquatic ecosystem.

7. Based on the available information, the EPA must conclude that the project does not comply with 40 CFR §230.10(a).

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