additional riparian area protection and restoration; wetlands and wetland buffers protection, restoration, and creation; protection and re-establishment of forest cover; low impact and zero impact development strategies, and open space acquisition.

The Tier 2 DEIS indicates that 4 of 7 waterbodies in the project area are on Ecology's Clean Water Act 303(d) list as water quality impaired. This includes the Puyallup River, Hylebos Creek, Wapato Creek, and Fife Ditch. According to the DEIS, the remaining waterbodies lack water quality data, but are physically degraded from human activities and alterations. U.S. EPA recommends that the project proponent gather water quality data to better understand baseline conditions, improve the environmental analysis and disclosure of impacts. F02-004

Stormwater

The DEIS states in general terms that best management practices (BMPs), bioswales, constructed wetlands, detention ponds, infiltration into roadway fill, and riparian restoration will be used to offset stormwater impacts from the proposed project. More analysis and information are needed to disclose the impacts of stormwater on water quality and aquatic habitat conditions and the adequacy of stormwater management strategies. F02-005

The stormwater management plan analysis (page3-39) indicates that the annual pollutant load from treated runoff is estimated to increase Total Suspended Solids (TSS) discharges by 5,398 kg/yr in Fife Ditch and 10,908 kg/yr in the lower Hylebos Creek watershed. The DEIS concludes that because water quality BMPs would be fully implemented and maintenance practices would follow standard procedures designed to minimize impacts, highway runoff is not expected to result in significant water quality impacts. Without any information about predevelopment discharge levels, current TSS discharges, their effects relative to existing conditions, and the significance of the timing of these inputs, it is not possible to know whether this conclusion is correct. On page 3-42, there is information on 6 pollutants for Wapato Creek, however it appears (table title is not definitive) that these data are for the Valley Ave. interchange only.

This analysis of stormwater pollutants is insufficient to determine the impacts of the proposed project for several reasons. First, there is only one calculation provided – for TSS. Stormwater contains many pollutants, including heat, toxic chemicals, heavy metals, nutrients, pesticides, and so on. The DEIS should provide an assessment for all stormwater pollutants, the expected treatment efficiencies of the stormwater runoff BMPs and stormwater treatment methodologies that are being proposed, and the residual pollutants that will be discharged to the various waterbodies. Second, the discharge locations should be identified and the existing water quality conditions of the discharge reach described. If water quality data are lacking, these data deficiencies and the resulting uncertainties in the analysis should be discussed. Because follow-up monitoring requires knowledge of baseline conditions, we recommend that these data gaps be filled. Third, the DEIS should disclose whether or not the discharges will cause or contribute to exceedances of State or Tribal water quality standards that apply to the specific water body. For 303(d) listed waters, the discharges cannot further degrade water quality for the parameters for which the waterbody is listed.

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RESPONSE F02-004

The remaining three water bodies are Hylebos Waterway, Surprise Lake Drain and Old Oxbow Lake Ditch. Additional data was evaluated from three existing sources:

1) Federal Way continuous flow and temperature monitoring at one station in Hylebos;
2) Hydrologic analysis and modeling of Hylebos, Wapato, and Surprise Lake Drain as part of the RRP; and
3) Puyallup Tribe data in general summary form for Hylebos and Wapato and through King County for East Hylebos.

Hylebos Waterway is regulated as a Class B (marine) surface water. However, the waterway is designated as part of the Commencement Bay Nearshore/Tide-flats Superfund Site and does not meet minimum state water quality standards (Ecology 1992). Surprise Lake Drain originates from the spring-fed Surprise Lake north of the Puyallup River Valley. This Class A surface water conveys runoff from residential areas in the City of Edgewood south to the valley below, and drains agricultural and residential runoff from the City of Fife through a series of linear ditches to the Fife Ditch and eventually to Lower Hylebos Creek. No water quality data is available for the Surprise Lake Drain. Old Oxbow Lake Ditch drains mostly agricultural lands that fall between Wapato Creek divide and the Puyallup River levee system. The ditch drains to Old Oxbow Lake, an old Puyallup River oxbow that is now isolated behind the levee, but connects to the Puyallup River through a floodgate. No water quality data is identified for this ditch.

RESPONSE F02-005

We have updated the Water Resources section 3.2 of the FEIS to address your comment. An updated pollutant loading analysis is described in sections 3.2.3 through 3.2.7 of the FEIS.

U.S. EPA strongly supports the riparian restoration proposal for Hylebos Creek and Surprise Lake Drain as partial mitigation for project impacts to aquatic resources. However, the DEIS does not provide an analysis that determines the extent to which it might serve as an alternative stormwater management method. U.S. EPA agrees that riparian restoration "is a more comprehensive approach to addressing lost ecosystem functions than conventional flow control BMPs..." (DEIS page 3-29). Booth (2003) has found that detention ponds, even with increasingly restrictive designs, have still proven inadequate to prevent channel erosion. He states that "preservation of aquatic resources in developing areas will require integrated mitigation, which must include impervious surface limits, forest-retention policies, stormwater detention, riparian-buffer maintenance, and protection of wetlands and unstable slopes." Consequently, we support the use of riparian restoration as a strategy for managing an appropriate portion of the anticipated runoff. Adequate analysis to account for runoff volumes and rates will need to be performed to determine this proportion to ensure that the standards in Ecology's Stormwater Management Manual for Western Washington are met or exceeded. F02-006

Restored riparian areas, such as those proposed for Hylebos Creek and Surprise Lake Drain, would enhance the existing floodplain capabilities/functions while also providing badly needed aquatic and terrestrial habitat in the project area. We view this restoration as an essential action to mitigate further degradation of water quality and salmon habitat. We urge that all stream segments and waterbodies affected by the proposed project receive riparian restoration – not just Hylebos and Surprise Lake Drain. The DEIS states that 4,400 to 4,600 linear feet of erosion hazard zone will be impacted. The amount of riparian restoration should be in an acceptable ratio, based upon resource agencies' aquatic mitigation policy, to the length of channel impacted by the project. F02-007

We believe the riparian restoration is a step in the right direction and that much more restoration is needed to protect water quality and aquatic habitat in the project area. In accord with the conclusion of Booth (2003) above, we recommend a comprehensive, multi-faceted approach to stormwater management that begins with a thorough analysis of hydrology. This approach would combine extensive riparian restoration, open space and sensitive area protection and reforestation, impervious surface limits, use of low impact and zero impact development techniques, and sub-watershed based wetlands mitigation, in combination with detention and treatment facilities. F02-008

There are several items needing clarification in the DEIS. The DEIS is inconsistent in its commitment to riparian restoration for Wapato Creek. WDOT has verbally indicated to U.S. EPA that riparian restoration would occur for Wapato Creek, but the DEIS does not mention this in key locations, such as page 3-28, page 3-227, and other locations. However, Wapato Creek is included on page 3-107. This creates confusion for the reader. Please clarify the commitment to riparian restoration and ensure that the EIS is consistent in its commitments throughout the document. F02-009

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RESPONSE F02-006

Thank you for your support of the Riparian Restoration Proposal (RRP). The project has conducted additional analyses including hydrologic modeling of the Hylebos sub-basin (MGS et al. 2004). This comprehensive study analyzed the project's effects on hydrology, channel hydraulics, and geomorphology to assure that we address the impacts of the project on the watershed. In collaboration with stakeholders such as your agency, the Riparian Restoration Proposal (RRP) has been further described in sections 3.2, 3.3, 3.4, and 3.17 of the FEIS. Future design of the RRP will be coordinated with your agency through the RRP Technical Advisory Group.

RESPONSE F02-007

In addition to the RRP for Hylebos Creek and Surprise Lake Drain in the SR 167/I-5 interchange area, we will also include Riparian Restoration for Wapato Creek as stormwater flow control. The project will incorporate approximately 73 acres of riparian habitat surrounding Wapato Creek in the vicinity of Freeman Road.

RESPONSE F02-008

The project team has conducted additional analyses including hydrologic modeling of the Hylebos sub-basin (MGS et al. 2004). Future design and implementation of the RRP and associated stormwater management measures will be coordinated with your agency through the RRP Technical Advisory Group.

RESPONSE F02-009

The FEIS now consistently reflects that the proposed project will include Riparian Restoration for Wapato Creek as stormwater flow control. The project will incorporate approximately 73 acres of riparian habitat surrounding Wapato Creek in the vicinity of Freeman Road.

On page 3-227, the DEIS indicates that the road will be built at ground level rather than on structure to accommodate the riparian restoration. Please explain the rationale for this, since placing the roadway on structure would avoid and minimize floodplain impacts, and interfere less with aquatic and terrestrial ecosystem components and processes. F02-010

On page 3-46, there is reference to the use of "revegetated roof systems." Please define this and explain what aspect of the proposed project would make use of revegetated roof systems. F02-011

Floodplain, Hyporheic Zone, Groundwater Quality and Quantity.

The DEIS (page 3-39) states that the entire proposed project would affect 6.2 to 7.9 acres of floodplain based on FEMA, but 37.7 to 39.9 acres based on assessment of flood prone area. We agree that the latter assessment provides a better estimate of floodplain area affected. The DEIS should explain what these impacts will do to shallow groundwater movement, hyporheic zone interactions, and delivery of base flows to streams. Since low instream flows are a limiting factor for some project area streams, e.g., Wapato Creek and Surprise Lake Drain, it is important that the project not further exacerbate this condition. F02-012

The DEIS offers no estimate or quantitative assessment of the amount of existing impervious surface in the project area on a sub-watershed basis, or of the amount that is anticipated after project construction and full build out. This information is important for characterizing surface water and aquatic habitat impacts as well as subsurface hydrological connectivity involving shallow groundwater, the hyporheic zone, contribution to stream base flows, and recharge of drinking water supplies, particularly in light of Ecology's 1995 report that "... [groundwater] withdrawals in WRIA 10 'have shown a rapid and steady increase' " (page 3-335). It is also essential for determining the nature and extent of needed mitigation. We are concerned that insufficient effort has been made to perform a quantitative estimate using aerial photos and GIS analysis, despite the fact that this technology and capability are readily available to the project sponsors. F02-013

The DEIS states (page 3-15) that [shallow alluvial] aquifers at or below 70 feet are the primary source of water in the study area and provide water to the majority of Public Water Systems (PWS) in the Lower Puyallup River Valley. However, the DEIS also states that groundwater levels are consistently found at depths of 2 to 5 feet and that the shallow groundwater is more contaminated than the deeper glacial and nonglacial aquifers (page 3-18). The affected environment section of the DEIS should describe this contamination and disclose the extent to which this shallow drinking water supply is vulnerable to further contamination from the direct, indirect, and cumulative effects of the proposed project. The environmental consequences section of the DEIS should disclose the risk, anticipated impacts, and the measures that will be taken to protect underground sources of drinking water. F02-014

For example, please disclose where the most shallow aquifer depths are located relative to stormwater discharge and treatment locations. Please explain what contamination exists in the shallow aquifer and, if possible, how that contamination may have occurred. Please disclose the

RESPONSE F02-010

During Tier I EIS analysis, it was assumed the new roadway alignment would be closer to Hylebos Creek, so WSDOT agreed to build the highway on structure to avoid floodplain storage displacement. During Tier II the proposed alignment was relocated away from the creek, on the high ground between Hylebos Creek and Fife Ditch (out of the floodplain), but the structure was retained to provide access to residents and infrastructure near the creek. When the RRP was proposed, access to 8th Street and 62nd Avenue was not needed, so the highway could be placed on fill outside the floodplain boundaries instead of on structure. Potential resource fragmentation will be mitigated (as practicable) by providing under roadway crossings where appropriate.

RESPONSE F02-011

A vegetated rooftop is a covered roadway system with a pitched roof that would support approximately two feet of soil and vegetation. Underflow would drip to the ground at the drip line (i.e., without gutters). A vegetated buffer zone at the roof drip line can capture most, if not all, runoff even from the largest storm events. Vegetated roofs retain around 80% or more of annual precipitation and obviate the need for a treatment and detention system. Several stormwater management concepts were considered for the project, including low impact development options such as vegetated rooftops for the ultra-urban areas of I-5. However, this stormwater management method has been determined impracticable and is no longer being considered.

RESPONSE F02-012

Additional information on the floodplain, hyporheic zone, and groundwater quality and quantity has been included in the FEIS (see section 3.2.2).

RESPONSE F02-013

Section 3.2.5 of the FEIS was revised to include quantification, by sub-basin, of existing impervious surface, direct impervious surface additions from the project, and impervious surface additions at full build-out of the project area.

RESPONSE F02-014

The shallow aquifer identified in the DEIS, found at depths of 2 to 5 feet, is not characterized as drinking water. This non-potable ground water source is not subject to the requirements of the 1996 Safe Drinking Water Act (SDWA). Contaminants that may impact this non-potable ground water source are described in sections 3.2.4 and 3.2.5 of the FEIS. Information as to where the aquifer depths are located relative to stormwater discharge and treatment locations are described in sections 3.2.4 and 3.2.5 of the FEIS.

expected effectiveness of stormwater treatment methods and the pollutant loadings of untreated and treated discharges. Please disclose the resulting pollutant concentrations in the shallow aquifer, including the most shallow and vulnerable locations. This information should be available because the 1996 Safe Drinking Water Act (SDWA) amendments require states to:

- delineate all sources of public-drinking water supplies (watersheds for surface water sources and wellhead protection areas for ground water sources);
- inventory all potential sources of contamination within these source water areas that may impact drinking water quality;
- conduct a susceptibility analysis to assess the relative susceptibility (vulnerability) of the drinking water supply to contamination;
- provide all the consumers served by the drinking water supply, all the information on the source, threats, and risks to their drinking water supply.

Seventeen Group A wells (15+ connections/well) and 6 Group B wells (2-14 connections/-well) have wellhead protection zones overlapping the staging areas (page 3-26). In addition, SR 167 crosses one Group B and 8 Group A wells. The Draft EIS states that the wells within the roadway footprint will be decommissioned, and that a Spill Prevention Control Countermeasures (SPCC) Plan will be developed (page 3-27). The EIS should indicate what water supply will be provided to replace the decommissioned wells. For the remaining affected wells, the EIS should indicate what the SPCC measures are, their likelihood of effectiveness over a 12-year construction period, and whether they comply with the wellhead protection plans. Further, the EIS should indicate whether the proposed project and all related activities under construction, operation, and maintenance comply with the wellhead protection plans with respect to groundwater quality protection and groundwater recharge/quantity protection. F02-015

Wetlands

Project related wetlands impacts, which were stated to be 8 acres of wetlands for Alternative 2 (the selected alternative) in the Tier 1 Final EIS, have increased to 30.2 acres in the Tier 2 DEIS. A major federal consideration in approving Alternative 2 to be carried forward into the Tier 2 EIS process was the acreage of wetlands impacted when compared to the other Tier 1 Alternatives 1 and 3, which had greater wetland impacts. For the Tier 2 Build Alternative, direct wetlands impacts have doubled over what would have been impacted by Alternatives 1 and 3. Because of this increase, U.S. EPA believes that the Tier 2 Build Alternative may not be the least damaging alternative that is available, and consequently the Build Alternative may not be in compliance with the Clean Water Act Section 404(b)(1) guidelines. Additional wetland evaluations are needed to compare both direct and indirect wetlands impacts of the Tier 2 Build Alternative with the Tier 1 Final EIS Alternatives 1 and 3 before a determination of compliance or non-compliance with the guidelines can be made. F02-016

In addition, there has been no sub-watershed based analysis of wetlands acreage and functional losses, and the proposed mitigation may not offset the locally important functions the impacted wetlands provide. U.S. EPA believes that additional analysis and efforts to avoid and minimize these wetlands losses is essential, and that the mitigation should replace functions where they are most needed within each sub-watershed. F02-017

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RESPONSE F02-015

Wells that lie directly beneath the project footprint will be decommissioned in accordance with state laws. Water rights transfers and/or new water rights will be obtained from Ecology prior to decommissioning the wells. A discussion on wellhead protection has been included in sections 3.2.2 through 3.2.4 of the FEIS.

RESPONSE F02-016

A Section 404(b)(1) Analysis has been completed for this project and is included as Chapter 4 in the FEIS. The 404(b)(1) analysis demonstrates that "Alternative 2" from the Tier I FEIS is the least environmentally damaging practicable alternative (LEDPA). Through collaboration with your agency, the project re-examined wetland impacts associated with the corridor determination from Tier 1. This analysis is provided in section 4.1.3. All affected wetlands have been analyzed and the potential impact of the project on them has been described in Section 3.3. & 3.3.4 of the FEIS. It is intended that compensatory mitigation for affected wetlands would occur on adjacent parcels first, then if not available, the encompassing sub-basin or watershed, and finally if nothing nearby or in the same sub-basin is available, off-site mitigation locations would be considered. If off-site mitigation sites are ultimately included in the project, additional documentation will be provided to explain why it was necessary to select them. Also, see response F01-007.

The methodology used to identify and assess wetlands affected by the SR 167 project is described in the "*Wetland Discipline Report*" prepared for the project and summarized in Section 3.3.1 of the FEIS. Mitigation for impacted wetlands is outlined in Section 3.3.7 of the FEIS. The wetlands affected by the project are described by sub-basin, including Hylebos Basin (which includes Surprise Lake Drain), Wapato Basin, and the lower Puyallup Basin. The Puyallup Tribe, Friends of Hylebos Creek, and the project Technical Advisory Group (TAG) have all been consulted during the preparation of the Draft and Final EIS. Work to further delineate, characterize, and categorize existing wetlands is occurring. The additional information being collected is being incorporated into the project design to avoid and minimize impacts to wetlands, as well as to prepare a Wetland Mitigation Plan.

RESPONSE F02-017

A Conceptual Mitigation Plan has been developed for this project. This plan was provided to your agency during SAC Concurrence Point 3. On March 23, 2005, you concurred with the Conceptual Mitigation Plan, noting your concern about the availability of the potential mitigation sites identified. The project will provide mitigation for floodplain, wetland, and stream fill impacts via a watershed-oriented approach. The considered wetland mitigation sites will be within the Puyallup River watershed (WRIA 10) and will be selected to prioritize, if possible, location within the project area ("on-site") and within the specific sub-watershed(s) where substantial impacts to wetlands may occur.

Following are a number of site specific comments in the DEIS:

Section 3.3.5, Mitigation Measures:

WDOT has proposed to offset wetland impacts by concentrating its mitigation into a single site adjacent to the Puyallup River and owned by Union Pacific Railroad (UPR). U.S. EPA sees some benefits in concentrating mitigation at this site and has supported this approach in some instances in Washington State. However, we do not believe this mitigation approach is appropriate for offsetting wetland impacts identified in the DEIS. U.S. EPA's major concern regarding the UPR mitigation site is the direct and cumulative project impacts upon wetlands adjacent to Wapato Creek, Hylebos Creek, and the Surprise Lake Drain.

Additionally, U.S. EPA believes that even though the UPR mitigation site is designed to concentrate wetland mitigation in one site, this action could impact the recovery of listed and candidate ESA species and the recovery of the wetlands ecosystem within the lower Puyallup River basin. Wetlands adjacent to Wapato Creek, the Surprise Lake Drain and Hylebos Creek play a very important role in maintaining water quality within these stream systems. Mitigation should first be concentrated along these streams. A positive example of using a watershed approach is in the proposed "SR 167 Puyallup to SR 509 Tier II Water Resources Discipline Study, Technical Addendum 2" dated January 2003. This report, even though it does not include a wetland component, does present a framework to connect a number of wetland functions and values (such as, water quality, wildlife connectivity, flood control). F02-018

Mitigation is a sequencing of actions. The first action in this sequencing is to avoid impact on wetlands as much as possible. This may mean realigning sections of the infrastructure, building vertical retaining walls that would eliminate slope fills that could impact wetlands, bridging over wetlands, or eliminating or relocating portions of the project that are not necessary (such as, on and off ramps, truck weigh stations, rest areas). Once these avoidance actions are incorporated into the project design, and detailed wetland functions and values studies are completed, WDOT can then evaluate the direct and secondary project impacts on identified wetland functions and values and propose and develop compensatory mitigation. F02-019

Replacing lost wetland functions and values within the area (sub watershed) of impact is the first priority. This can only be accomplished by undertaking a detailed wetlands functions and values study of those wetlands within the project area and by knowing the overall base line conditions of the aquatic resources within each sub basin. Several wetland and watershed evaluation techniques are available that would provide this information.

In reviewing Table 3.3-1, Mainline Wetland Impacts, the DEIS and the "Wetland Discipline Report," dated October 20, 2001, it appears that wetland classification using Ecology's rating system and the Cowardin Classification system were used to rate the importance of these wetlands. In determining the values and functions of those wetlands identified in the project area it appears that WDOT, in the Wetland Discipline Report, used a check list to identify some of the F02-020

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RESPONSE F02-018

The UPRR site presented in the DEIS is no longer the preferred Mitigation site. A suite of mitigation sites in the initial Conceptual Plan are currently being evaluated as to their positive and negative effects on wildlife and fish, not only at the Puyallup River but at Hylebos and Wapato Creeks (see response to F01-020). The preferred method is on-site mitigation. Wetlands impacts at Hylebos Creek, Wapato Creek, and Surprise Lake Drain will be mitigated on-site or at least within the same watershed. No final sites have been selected and none will be until the final design is nearly complete and it is known what wetlands are actually affected and what mitigation is required. It is intended that wetlands that best meet the goals and objectives of improving the project area and that can be connected and supported by the RRP would be those included in the project (see Figure 3.3-1).

The methodology used to identify and assess wetlands affected by the SR 167 project is described in the "*Wetland Discipline Report*" prepared for the project and summarized in Section 3.3.1 of the FEIS. Mitigation for impacted wetlands is outlined in Section 3.3.7 of the FEIS. The wetlands affected by the project are described by sub-basin, including Hylebos Basin (which includes Surprise Lake Drain), Wapato Basin, and the lower Puyallup Basin. The Puyallup Tribe, Friends of Hylebos Creek, and the project Technical Advisory Group (TAG) have all been consulted during the preparation of Draft and Final EIS. Work to further delineate, characterize, and categorize existing wetlands is occurring. The additional information being collected is being incorporated into the project design to avoid and minimize impacts to wetlands, as well as to prepare a Wetland Mitigation Plan.

RESPONSE F02-019

SR 167 mainline avoidance and minimization efforts for streams and wetlands are described in section 4.2.2. FHWA and WSDOT will also continue to evaluate potential opportunities to incorporate additional avoidance and minimization measures during final design.

RESPONSE F02-020

Impacts to wetland functions are summarized in sections 3.3.3 through 3.3.6 of the FEIS. Specific functions lost in impacted wetland are identified in the revised Wetland Discipline Report, March 2005. They are also noted in section 3.3.3 grouped by mainline section and interchange options, which correlates somewhat with sub-watershed basins. Wetlands were assessed using the "WSDOT Wetland Functional Assessment for Linear projects." Wetland functions and values are clarified in section 3.3.2 of the FEIS.

wetland functions and values. It is unclear if this is the Wetlands Function Characteristic Tool for Linear Projects (WDOT 2002) referenced on page 3-66 of the DEIS. If this is the approach being used, it is not clear to U.S. EPA whether it is being properly used to effectively evaluate the lost functions and values that would occur from the direct fill needed for the project infrastructure and secondary impacts. A detailed evaluation of wetlands functions and values is needed to fully understand the extent of the impact of the infrastructure, and to clearly understand if and what type of mitigation is needed to replace these lost functions and values within each sub-watershed. The findings of this evaluation should be included in the DEIS in tabular form that clearly shows the values of the existing wetlands and those that will be lost and/or impaired. Then mitigation concepts can be developed to replace lost wetland functions and values within the sub-watersheds. For a good example, see the SeaTac Third Runway EIS, which is available on line.

Page 3-63, first paragraph, first sentence – The definition that is being used in the draft EIS in defining wetlands is the Clean Water Act (CWA) definition used in identifying and regulating wetlands as waters of the United States. The U.S. Fish and Wildlife Service (USFWS) and other federal and state resources agencies use a definition that is more liberal in identifying wetlands. If the DEIS is to use this regulatory definition of wetlands, it should clarify the reasoning behind this choice. F02-021

Page 3-64, bulleted list – It would be helpful for the list to indicate if the policies or regulations are federal, state or local. F02-022

Page 3-64, top of page, second sentence – Section 404(b)(1) of the CWA is not a permitting section of the CWA. It directs the applicant to prepare a project alternative analysis that would avoid or reduce wetland impacts. F02-023

Page 3-64 – In the second paragraph first sentence the (b) needs to be removed after 404. F02-024

Page 3-66, first paragraph – The DEIS states, "... some ditch areas dug in uplands for drainage purposes have hydrology and hydrophytic vegetation, but these are not jurisdictional wetlands under the COE or Pierce County definition...". This statement should be corrected to reflect that these areas may be jurisdictional wetlands. Specifically, it is both the COE and U.S. EPA's interpretation that a drain ditch would be jurisdictional under the CWA if the ditch has relocated or diverted water flows from a pre-existing natural channel or swale. In a number of cases in the project area this is likely the effect these drainage ditches have had on the hydrology in the project area. WDOT needs to re-evaluate this issue to determine whether areas that were omitted in their initial study may need to be included as jurisdictional waters under the CWA. F02-025

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RESPONSE F02-021

Every effort has been made to define wetland by explaining the three attributes common to all wetlands. The definition of wetlands has been clarified in the introductory portion of section 3.3 of the FEIS.

RESPONSE F02-022

This revision has been made within the introductory portion of section 3.3 of the FEIS.

RESPONSE F02-023

This has been clarified in the introductory portion of section 3.3 of the FEIS. A Section 404(b)(1) analysis has also been included as chapter 4 in the FEIS.

RESPONSE F02-024

This revision has been completed in the FEIS.

RESPONSE F02-025

Guidance on ditches resulting from the recent U.S. Supreme Court decision (referred to as the Talent decision) has recently become available. Therefore, before initiating permitting, these areas will be examined to determine if they are jurisdictional under the Clean Water Act Section 404 Program.

Section 3.3.3, Impacts of Construction:

No Build Alternative – The DEIS states that, "The existing rate of development under the No Build Alternative would not necessarily be the rate at which development would occur under the Build Alternative." Please clarify what is meant by this statement. Is it that wetland impacts over time that are associated with commercial, residential and agricultural development would be less than what would occur with the build alternative? This would be consistent with other statements in the DEIS regarding the cumulative impacts of the Build and No Build Alternatives. F02-026

Section 3.3.2, Affected Environment, General Comments:

Within this section the reference to wetland buffers occurs in a number of sub-sections. Please clarify how wetland buffers are being defined. Wetland buffers are in most cases a natural open space between the delineated wetland boundary and potential activities or structures that may impact various functions of a wetland. As with wetlands, buffers can vary in quality depending upon their existing environmental condition. The goal for establishing these buffers is to provide not only protection, but also ecological linkages and transitions from an aquatic environment to an upland environment. In most cases they are as important as the aquatic habitat they are protecting and provide similar values and functions. The DEIS should identify the width of these buffers and their general ecological condition. This will be used to identify the significance of their loss and to develop an approach to compensation. We suggest developing a numeric rating system similar to the wetland approach, which could be used to characterize the importance of the existing buffer on the wetland system and to determine options for replacing impacted functions and values. F02-027

Section 3.34, Impacts of Operation:

No Build Alternative – This section needs to be clarified regarding the difference in both the timing of the impacts and the extent of the impacts associated with the no action alternative. There is no reference to any federal, state or local wetland protection that is in place or that may be in place in the future to prevent wetlands losses in the Puyallup River watershed. Current wetland regulatory protection is based on a tiered system where the federal government more directly regulates larger wetland systems and protection of smaller wetlands are addressed by local government through the State Growth Management Act, local land use plans and regulations. If this regulatory approach is applied, as development occurs in the Puyallup River Valley wetlands impacts would be avoided to the extent practicable and then impacts further mitigated as needed. This needs to be explained in the EIS. F02-028

3.17 Secondary Impacts and Cumulative Impacts

Page 3-337, first paragraph, first sentence. Please indicate the impacts of the direct filling of wetlands and the impacts to wetland buffers. The sentence could be reworded as follows: "The SR-167 Build Alternative would be expected to lead to some degradation of wetland functions due to ***the direct filling of wetlands and their buffers and the*** addition of impervious surface. The impact to wetland buffers are a significant factor in determining the impact to wetland functions and values. This should be included in the cumulative analysis. F02-029

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RESPONSE F02-026

The wetland impacts over time that are associated with commercial, residential and agricultural development would not be less than what would occur with the build alternative. The rate of change would potentially be different, however, the ultimate impact to wetlands would not be substantively different.

RESPONSE F02-027

Wetland buffers are regulated by the local governments under critical area ordinances to protect the intrusion into wetlands. The regulated buffer widths are based on the categories of the associated wetlands, and differ from category to category. Buffer impacts are one of the screening criteria that have been used to select options.

RESPONSE F02-028

The timing and extent of the impacts are discussed in the FEIS qualitatively. The reference to protection under Federal Law and local government ordinances is included in section 3.3 (Regulatory Authority) of the FEIS. All impacts to wetlands are also reviewed under Growth Management Act (GMA).

RESPONSE F02-029

We agree that filling of wetlands and their buffers does affect wetland functions. Buffer impacts are included in our direct impact analysis (also see F02-027). We will work with local governments on the buffer issues.