



**Washington State
Department of Transportation**
Paula J. Hammond, P.E.
Secretary of Transportation

Engineering and Regional Operations
SR 520 Bridge Replacement and HOV Program
600 Stewart Street, Suite 520
Seattle, WA 98101

Phone: 206-770-3500
Fax: 206-770-3569
TTY: 1-800-833-6388
www.wsdot.wa.gov/Projects/SR520Bridge

October 14, 2011

Mr. Steve Landino
National Marine Fisheries Service
510 Desmond Drive SE, Suite 103
Lacey, Washington 98503

Re: Consultation Reinitiation *Type of consultation*
SR 520, Medina to SR202: Eastside Transit and HOV Project *Project name*
Tracking No. 2009/03446 *Consultation number*

Dear Mr. Landino:

The Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA) is requesting reinitiation of consultation for the Medina to SR 202: Eastside Transit and HOV Project (Eastside Project). A Biological Assessment (BA) was prepared for the Eastside Project and received by National Marine Fisheries Service (NMFS) on June 29, 2009. A Biological Opinion (BO) for the Project was issued by NMFS on October 22, 2009. The BO concluded that the Project was “not likely to jeopardize the continued existence of Puget Sound (PS) Chinook salmon or result in the destruction or adverse modification of designated critical habitat for PS Chinook salmon.” As discussed below WSDOT does not believe the modified project changes the conclusions of the BO but that the changes do require the modification of the numeric stormwater mixing zones which are the basis of the take statement.

Sates and outcomes of previous consultations

Previous consultation updates include a letter dated June 25, 2010 in which WSDOT provided a description of Project updates and concluded that reinitiation of consultation was not needed. A second Project update was sent via email from Phil Bloch on May 09, 2011 and the conclusions were concurred with via email by Mike Lisitza on May 10, 2011. An additional email was sent on October 11, 2011 from Michelle Meade with a requested addition to the in-water work window.

WSDOT is now providing this update letter to address additional design refinements. The updates include changes to the stormwater modeling, additional detail on construction activities at the Evans Creek mitigation site and several other minor design changes

Project Stormwater *Description of changes*

The amount of new or replaced pollutant generating impervious surface (PGIS) created by the Project and the associated stormwater modeling has been refined. The BA used Threshold Discharge Areas (TDA) to separate the Project’s stormwater into four separate basins. Within these basins individual outfalls were identified and modeled for pollutants of concern (total

suspended solids (TSS), total and dissolved copper, and total and dissolved zinc). As the design of the Project has progressed it has resulted in changes to the amount of PGIS in each TDA. The area of post-project PGIS has decreased in each of TDAs 2, 3 and 4 from what was identified in the BA. Therefore stormwater modeling was not redone for these TDAs. However, within TDA 1, Yarrow Creek, there have been increases in the amount of PGIS and changes to the outfall location.

- Within TDA 1 the BA modeled two separate stormwater outfalls; one on Yarrow Creek¹ mainstem and one on the West Tributary to Yarrow Creek. Upon further analysis WSDOT is no longer proposing to construct the stormwater facility identified as G4 in the BA which discharged to the West Tributary to Yarrow Creek. All water from TDA 1 will be conveyed to the stormwater facilities discharging to the Yarrow Creek mainstem. There is no longer a discharge of pollutants or required mixing zone for the West Tributary to Yarrow Creek; however there is an increase in the area of PGIS being routed to the Yarrow Creek outfall and resulting increase in the mixing zone.
- At the time of the BA, WSDOT was uncertain as to the Project’s impacts on local streets and how stormwater from those streets would be routed and treated. The areas of PGIS identified in the BA were only those areas within WSDOT right-of-way. At this time WSDOT has identified the areas of local streets that will be impacted by the Project. Within TDA 1 a total 5.61 acres of post-project PGIS is located on local streets.² The majority of this area represents unmodified existing PGIS that is within the project limits due to traffic modifications or utilities. The relatively small amount of new (0.61 acre) and replaced (0.90 acre) PGIS will receive water quality treatment consistent with local standards. Because none of these areas receive water quality treatment today the Project represents an improvement over baseline conditions.

Based on the current design, TDA 1 has a total of 37.11 acres of post-project PGIS. Of this 9.84 acres is existing, unmodified area, 14.15 acres is replaced and 13.12 acres is new PGIS. Consistent with the WSDOT Highway Runoff Manual all new and replaced PGIS in TDA 1 will receive enhanced water quality treatment. The HI-RUN water quality monitoring described in the BA has been re-run for TDA 1 to reflect the changes to the PGIS areas and points of discharge described above. A modified Exhibit 13 from the BA is presented below to reflect the changes to the relevant mixing zones. Because the outfall to the West tributary to Yarrow Creek is no longer proposed, that discharge location is no longer presented in the exhibit.

EXHIBIT 13. SUMMARY OF HI-RUN MODEL DILUTION RESULTS FOR THE YARROW CREEK OUTFALL

Discharge Location	Constituent	Mixing Zone Distance (ft)		
		January	May	August
Yarrow Creek	Dissolved Copper	>1	4	9

¹ As described in the BA there are several outfalls to the Yarrow Creek mainstem however to simplify the modeling they were modeled as a single outfall at the most downstream location.

² A small amount of PGIS from local streets is also located in TDA 2 (0.31 acre) and TDA 3 (0.21). However due to an overall decrease in the area of post-project PGIS these TDAs are still below the areas described in the BA and therefore have not been remodeled.

Dissolved Zinc

3

22

520

In comparing the mixing zones to the information presented in the BA, the updated design increases each mixing zone for the Yarrow Creek discharge. However this does not represent a significant increase in the area of effected habitat. The largest revised mixing zone, 520 ft for dissolved zinc in August, represents a location approximately the same distance from Lake Washington than the previous West Tributary to Yarrow Creek mixing zone of 340 ft due to the location of the outfalls. Both the current largest mixing zone and the largest from the BA occur near the confluence of the West Tributary with Yarrow Creek mainstem, a location approximately one-quarter of a mile upstream from Lake Washington. Therefore the revised design does not increase the likelihood of effect to Chinook Salmon using Yarrow Creek from what was presented in the BA.

Evans Creek Mitigation Site

The BA included minimal details regarding activities at the Evans Creek Mitigation Site. The June 25, 2010 project description update letter identified further details including habitat improvements to Evans Creek. Updated and refined activities at the Evans Creek mitigation site include construction of an access bridge across Evans Creek from 188th Avenue NE on the south of the site, and installation of a temporary stream diversion/bypass system along Evans Creek to minimize turbidity within the creek during construction.

Construction Access Bridge

A bridge will be built over Evans Creek to allow construction equipment to access the site. An access bridge was included in the conceptual design, but the structure will be larger and more substantial than the original plan. A larger span is necessary to meet Federal Emergency Management Agency requirements and account for softer soils on the site. The roadway area of the bridge will be approximately 15 feet wide and 100 feet long, and will remain in place until performance requirements are attained (approximately 13 years) to allow monitoring and maintenance crews and equipment to cross the creek. The bridge will span the floodway of Evans Creek (see attached bridge layout plan sheets BGP1 and BGP2) and will be designed to prevent material from falling into the creek. Bridge approaches will be MSE retaining walls approximately 20 feet wide and 120 feet long. Piles will be needed to support the bridge abutments and will be located outside the floodway.

A smaller temporary bridge will be constructed prior to the long-term bridge to allow bridge construction equipment to cross Evans Creek. The final bridge design will be left to the contractor, but the bridge will span the active channel of the creek and be designed to prevent material from falling into the creek. The temporary bridge will be in place for up to two months.

Temporary Stream Bypass

The BA stated that activities at the mitigation site may include in-water work in Evans Creek. A temporary stream diversion/ bypass system approximately 550 feet long will be installed on Evans Creek during installation of large woody debris along the creek, removal of man-made log retaining structures, removal of existing pedestrian bridge and connection of the backwater channel to Evans Creek. Fish exclusion will be necessary prior to installation of the bypass system and will follow established WSDOT fish exclusion protocols. Diversion dams will be

installed within the creek as a water quality BMP (see attached temporary stream diversion plan sheet TSDP1 and temporary stream diversion plan details sheet TSDD1). The bypass system will remain in place for approximately two months. Some woody vegetation within the stream buffer may need to be removed to install the stream bypass. The amount of vegetation to be removed will be kept as small as possible and disturbed areas will be revegetated once the bypass is taken out.

BMPs and Minimization Measures

The access bridge and bypass system have been designed to minimize impacts to listed species to the greatest extent possible. The following features have been incorporated into the project design to minimize impacts to listed species and habitat:

- Bridge construction and stream bypass work will occur during the approved in-water work window.
- The larger bridge will completely span the floodway of Evans Creek; no work will occur within the creek channel.
- The height of the larger bridge will be one foot above the 100-year flood elevation to allow high flows and debris to pass under the bridge.
- Bridges will be designed to ensure no material falls into the creek.
- Bridges have been designed to be as small as possible.
- MSE retaining walls will reduce the footprint of the bridge approaches.
- Bridge construction will be limited to the shortest time possible, approximately six weeks.
- The stream bypass system will be kept in place for as short a time as possible.
- The amount of vegetation removed for bridge construction and stream bypass installation will be as small as possible.
- Fish exclusion will follow established WSDOT protocols that have been approved by the Services.
- The section of Evans Creek where work will occur for this project does not contain designated critical habitat for Chinook salmon. The closest occurrence of critical habitat is Lake Washington, approximately 15 miles downstream from the mitigation site.

Changes to where work will occur

Changes to the Limits of Construction and other Corridor Elements

There have been numerous small changes to the design and layout of roadway elements, trails and walls, as well as small increases in the limits of construction due to temporary access needs. These changes do not increase the project's impacts to wetlands, streams or other sensitive areas beyond what was described in the BA and subsequent update letters. The updates include;

- Temporary construction on and off ramps were added in the vicinity of Evergreen Point Road.
- Based on input from local jurisdictions the Point Loop Trail was moved into an alignment south of the highway between 92nd Ave and Evergreen Point Road. The new alignment will primarily be located on existing sidewalks and right-of-way. A new connector trail will provide pedestrian access between the vicinity of Fairweather Bay and Evergreen Point Road on the north side of the highway.

- Additional trees were removed from within WSDOT right-of-way along NE Points Drive. Access to construct adjacent walls and other structures necessitated the additional clearing.
- Construction of a temporary signal at the intersection of the SR 520 eastbound off-ramp with N Bellevue Way. This activity was within the WSDOT right-of-way and the limit of construction.
- Replacement of the stormwater bioswale, Facility K, along the shoreline of Lake Washington with an interim water quality vault adjacent to the highway. It was determined that because Facility K was in conflict with the construction of the ultimate bridge construction project it should not be built. The interim water quality vault will achieve basic treatment and the outfall will be reconstructed as describe in the BA. The ultimate stormwater treatment facility is described in the separate bridge construction project BA.
- Changes to the alignment and heights of several corridor noise walls based on revised modeling and highway design.
- Several small changes to the limits of construction to incorporate design refinements involving retaining walls, slopes and construction access needs.
- Due to concerns about constructability the design of the new Culvert H on the South Fork to Yarrow Creek has changed to a round aluminized steel structure with an 11-foot interior diameter. This size will allow for appropriate stream width and height consistent with fish passage requirements.

Conclusion

The BO's conclusion was based on the information presented in the BA and subsequent update letters, complete and successful implementation of the conservation measures described in the BA and the finding that;

“Stormwater discharges from increased impervious surface in the action area could injure a limited number of exposed PS Chinook salmon individuals. However, the extremely small area affected by stormwater discharges that approach injury thresholds means that the action might injure only a very few individuals per year in a very small area of habitat.”... “Since the action will not appreciably reduce the likelihood of both the survival and recovery of the ESU in the wild, NMFS concludes that the action is not likely to jeopardize the continued existence of PS Chinook salmon.”

In regards to critical habitat the BO concluded that;

“...[A]lthough the results of added impervious surface in the action area increases the production of stormwater runoff in the action, changes in water quality will be insufficient to diminish the function of the freshwater rearing and migration PCEs in the action area. Since action area function is not diminished, the action will not influence the role of the Lake Washington Watershed for rearing and migration. Therefore, the action will not appreciably diminish the conservation role of the Lake Washington Watershed, it is not likely to destroy or adversely modify designated PS Chinook salmon critical habitat.”

How reinitiation was triggered and resulting conclusion.

WSDOT has evaluated the project updates described in this letter and concluded that the project is consistent with the conclusions of the BO regarding the effect to the population of Chinook salmon and critical habitat for the following reasons;

- The change in stormwater modeling does not result in a significant increase in the area of habitat affected by the stormwater discharges. The new, larger mixing zone, will impact roughly the same area of the Yarrow Creek basin as what was described in the BA due to the change in discharge location.
- The activities at the Evans Creek Mitigation Site will occur within approved in-water work windows, thereby minimizing the likelihood of listed species being present.
- The access bridge and stream bypass at the Evans Creek Mitigation Site will have some temporary, though long-term, impacts to stream and riparian habitat. However this area is relatively small, will ultimately be improved through the mitigation action and does not contain critical habitat.

However due to the revised stormwater modeling WSDOT understands that reinitiation of consultation is necessary due to a change in **the amount or extent** of take from that listed in the incidental take statement. Therefore WSDOT requests a modification to the BO and incidental take statement based on the modified Exhibit 13 included above.

Please contact me at (206) 805-2890 or at meadem@wsdot.wa.gov if you require additional information or have any questions about this project.

Sincerely,

Michelle Meade
Biology Program Manager
WSDOT, ESO Mega Projects

cc: Randy Everett, FHWA
Chris Cziesla, WSDOT