

Appendix Q

Environmental Assessment Commitments

WSDOT has well-established design and construction practices for avoiding or minimizing impacts resulting from environmental conditions anticipated along the project alignment. The following sections describe the measures that WSDOT will include in the project to avoid or minimize impacts during construction and operation.

Geology and Soils

WSDOT will implement required measures to avoid or minimize geologic impacts during construction. These will include the following:

- A large landslide feature was identified at the eastern end of the project. The geotechnical investigation has evaluated the portions of the landslide area adjacent to the project, and the design will include appropriate construction procedures to maintain or enhance slope stability.
- WSDOT will prepare project contract plans that include earthwork plans, drainage plans, and slope stabilization plans, including horizontal drains and temporary and permanent erosion control plans.
- During construction, the contractor will drain areas of observed or suspected groundwater seepage to reduce the risk of landslide and surface sloughing through the use of gravel drainage blankets, French drains, horizontal drains, and/or placement of a surface rock facing or similar methods.
- WSDOT will develop the means and methods to avoid or minimize settlement. Construction vibration, particularly that generated by driven pile installation (if allowed by resource agencies), large diameter drilled pier installation, and any required ground improvement, can cause settlement of adjacent areas underlain by loose granular soils. Project engineers will identify and mitigate these areas during the design phase.
- WSDOT will prepare a Temporary Erosion and Sedimentation Control Plan.

- Should any best management practices (BMP) or other operation not function as intended, the contractor will take additional action to minimize erosion, maintain water quality, and achieve the intended environmental performance.

Noise

To reduce construction noise at nearby receptors, the following measures will be incorporated into construction plans and specifications:

- Three noise barriers (walls) are proposed for the project corridor. These three barriers are feasible considering the total noise environment, which includes traffic noise, aircraft noise, and future light rail noise.
- Limiting the noisiest construction activities, such as pile driving (if allowed by resource agencies), to between the hours of 7 am and 10 pm to reduce construction noise levels during sensitive nighttime hours.
- Outfitting construction equipment engines with adequate mufflers, intake silencers, and engine enclosures to reduce their noise by 5 to 10 dBA.
- Turning off construction equipment during prolonged periods of nonuse to eliminate noise.
- Requiring contractors to maintain all equipment and train their equipment operators in good practices to reduce noise levels.
- Locating stationary equipment away from receiving properties to decrease noise.
- Constructing temporary noise barriers or curtains around stationary equipment that must be located close to residences to decrease noise levels at nearby sensitive receptors.
- Requiring resilient bed liners in dump trucks to be loaded onsite during nighttime hours.
- Requiring contractors to use ambient sound-sensing backup alarms that could reduce disturbances from backup alarms during quieter construction periods.
- Obtaining noise variances from the city of Tukwila and the city of SeaTac for construction activities during night-time hours.

Water Resources

The Proposed Project is designed to avoid or minimize adverse effects that could otherwise occur in Gilliam Creek. Because Gilliam Creek is severely altered and degraded compared to its natural condition, it is important that stormwater treatment and flow control measures be included in project plans for protection of the already stressed stream. The stormwater

treatment and detention facilities that will be built as part of the Proposed Project will support the city of Tukwila's efforts to improve conditions in Gilliam Creek.

In addition, the following mitigation measures will be considered in accordance with applicable state and local regulations:

- A Temporary Erosion and Sedimentation Control Plan will be implemented during construction to control stormwater runoff and minimize sediment transport to Gilliam Creek. These measures will greatly reduce the extent of temporary water quality impacts that occur in the creek.
- A Spill Prevention, Control, and Countermeasures (SPCC) Plan will be in effect during project construction according to WSDOT standards. This plan details containment and cleanup procedures in the event of a spill of fuel or other chemicals during project construction. Effective implementation of the SPCC Plan will greatly reduce the potential for release of toxic materials to Gilliam Creek during construction.

The following water resource permits will be obtained prior to construction:

- Section 404.
- Section 401 Water Quality Certification.
- Hydraulic Project Approval.
- Coastal Zone Management Certification.
- National Pollutant Discharge Elimination System (NPDES) Construction Permit.
- City of Tukwila Special Permission from Director.

Wetlands

- A retaining wall will be constructed to reduce permanent impacts on Wetland 7. Wetlands will be affected only in areas where the wetland abuts the existing roadway and highway safety considerations make avoiding the wetland impossible.
- Wetland and wetland buffer areas that are temporarily affected during construction will be replanted with native species following construction.
- Compensatory mitigation for wetland impacts will be provided within WRIA 9, which is the Water Resource Inventory Area in which the wetland impacts will occur. Impacts will be mitigated by purchasing credits from a mitigation bank or by constructing an off-site wetland mitigation site.

- If the mitigation bank option fails, there are two potential off-site wetland mitigation sites within WRIA 9 that could be used. Mitigation activities will include wetland creation, restoration, enhancement, or a combination thereof in support of a Category II wetland, as rated according to the Washington State Department of Ecology criteria. The following replacement ratios will be implemented in accordance with the city of Tukwila municipal code and the implementing agreement between WSDOT and the Washington State Department of Ecology concerning wetlands protection and management (WSDOT, 2004a):
 - Creating or restoring wetlands at a 1.5-to-1 replacement ratio.
 - Enhancing wetlands at a 3-to-1 replacement ratio.
 - Combining creation or restoration with enhancement based upon the above ratios.
 - Including a 100-foot enhanced wetland buffer for the selected off-site wetland mitigation site.

Wildlife and Vegetation

- Project construction will temporarily affect wildlife and habitat as a result of temporary vegetation clearing and water quality effects. Temporary vegetation clearing and shading would reduce wildlife habitat until the vegetation is reestablished following construction. Temporary water quality effects would include increased sedimentation and pollutant loadings to receiving water bodies.
- Areas that are temporarily disturbed during construction will be replanted with grass and native species. Compensatory mitigation for wetland impacts will be provided within Water Resource Inventory Area 9. Wetland mitigation will involve creating, restoring, or enhancing wetlands. A minimum 100-foot-wide upland buffer will also be provided adjacent to wetlands on the mitigation site. The buffer will be enhanced to forested conditions if existing buffers on the site require enhancement. A mature forested buffer on the wetland mitigation site will help mitigate for permanent clearing of upland forest within the project area.

Transportation

- No long-term closures of SR 518 in either direction are expected during construction. However, temporary lane shifting will be required to provide a safe construction environment.
- While under construction, the number of lanes existing today will be maintained during peak hours. This will be achieved by shifting lanes during some construction activities.