

Appendix E: List of Commitments

LIST OF COMMITMENTS IDENTIFIED IN THIS ENVIRONMENTAL ASSESSMENT

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.

Project Measures to Avoid or Minimize Effects During Construction

Design elements such as boundaries of areas that can be impacted that have been incorporated into the project specifications, as well as construction plans and procedures, will avoid or minimize most potential construction impacts. When appropriate, monitoring will be conducted to ensure that these design and construction measures are effective.

Measures for Geology and Soils

Slope Stability and Landslide Areas

- A large landslide feature was identified at the northern end of the project. The design geotechnical investigation will fully examine the landslide area and develop appropriate construction procedures to maintain or enhance slope stability.
- The contractor will be required to submit earthwork and wall placement sequencing plans, construction drainage plans, and a slope monitoring program.
- During construction, areas of observed or suspected groundwater seepage will be drained 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.

Soft Ground Areas

- During the design process, geotechnical engineers will assess potential settlement problems associated with existing utilities or structures. If deemed necessary, structures could be underpinned and utilities relocated or made more flexible. In cases where it is an acceptable solution, the settlement will be allowed, with repairs made after settlement is complete. When appropriate, project engineers will conduct pre-construction surveys and monitor construction settlements.
- Construction vibration, particularly 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 these areas during the

design phase. The contractor will be required to develop the means and methods to avoid or minimize settlement.

Erosion

- The contractor will be required to prepare and implement a temporary erosion and sedimentation control (TESC) plan.
- Should any 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.

Measures for Water Resources

Several measures will be incorporated into construction plans and specifications to reduce effects to water resources.

Groundwater

- Groundwater will be protected with the use of standard best management practices (BMPs).
- A TESC plan and a SPCC plan will be prepared and implemented.
- The contractor will be required to take added measures during construction within the Kirkland Well Field's Wellhead Protection Area to protect the area, such as prohibition of fuel and chemical storage and refueling operations. Also, construction specifications will require stormwater collection with either a lined or piped conveyance system within the Wellhead Protection Area. Stormwater will be directed and discharged outside of the Kirkland Wellhead Protection Area to prevent any possible degradation of water quality. No permanent stormwater facilities will be constructed in the Kirkland Wellhead Protection Area.
- The contractor will identify and develop staging areas for equipment repair and maintenance away from all drainage courses. Washout from concrete trucks will not be dumped into storm drains or onto soil or pavement that carries stormwater runoff. Thinners and solvents will not be used to wash oil, grease, or similar substances from heavy machinery or machine parts. The contractor will be required to designate a washdown area for equipment and concrete trucks.

Measures for Water Quality

- The contractor will identify and develop staging areas for equipment repair and maintenance away from all drainage courses. Washout from concrete trucks will not be dumped into storm drains or onto soil or pavement that carries stormwater runoff. Thinners and solvents will not be used to wash oil, grease, or similar substances from heavy machinery or machine parts. The contractor will be required to designate a washdown area for equipment and concrete trucks.

Measures for Wetlands

The following activities will be undertaken to avoid or minimize effects to wetlands:

- WSDOT and the contractor will protect, preserve, and enhance the wetlands in the project area during the planning, construction, and operation of transportation facilities and projects consistent with USDOT Order 5660.1A; Executive Order 11990 and Governor's Executive Orders EO 89-10 and EO 90-04.
- The project will follow guidance contained in the WSDOT *Environmental Procedures Manual* (WSDOT, 2004a), which outlines the issues and actions to be addressed prior to authorizing work that could affect wetlands.
- The contractor will use high-visibility fencing to clearly mark wetlands to be avoided in the construction area.
- Project-level design and environmental review has included avoidance, minimization, restoration, and compensation of wetlands. The contractor will implement these measures to reduce temporal losses of wetland functions.

Three sites (Exhibit 5-40) will be used to provide the required wetland mitigation to replace filled wetlands. These sites provide adequate area according to replacement ratios of each jurisdiction to fully mitigate for the filled wetlands.

The sites selected for mitigation are:

- Property on the west side of Forbes Lake – WSDOT will use 2.9 acres of acquired property for mitigation. After wetland mitigation has been constructed and monitored, the private property will be deeded to the City of Kirkland.
- Property on the east side of Forbes Lake – WSDOT will use 4.5 acres of City of Kirkland property for mitigation.
- Property south of Thrashers Regional Park – WSDOT will acquire 4.7 acres of private property west of SR 527 (Bothell-Everett Highway) and north of 214th Street SE. After wetland mitigation has been constructed and monitored, the acquired property will be deeded to the City of Bothell.

Measures for Wildlife and Upland Vegetation

The mitigation measures established in the *I-405 Corridor EIS* will be used for implementation of the Kirkland Nickel Project.

- The contractor will be required to prepare and implement a revegetation plan that has been approved by WSDOT. In addition, areas with mixed forest will not be removed for temporary use (i.e., construction staging). If the contractor must permanently remove an area of mixed forest for roadway construction, it will be replaced with plantings of native tree and shrub species (acre for acre) within the affected area.
- The contractor will adhere to project conditions identified in the Biological Assessment and agency concurrence letters.

Measures for Fish and Aquatic Resources

The following measures will be followed to avoid or minimize effects to fish and aquatic resources during construction:

- The contractor will be required to implement construction BMPs (such as silt fencing or sedimentation ponds) and to avoid disturbing sensitive areas during the development and use of any staging areas, access roads, and turnouts associated with resurfacing activities.
- The contractor will not allow any in-water work to occur except during seasonal work windows established to protect fish.
- The fish-friendly culvert or bridge constructed at Forbes Creek will restore fish passage beneath the freeway. Approximately 7,500 linear feet of stream between the freeway and Forbes Lake will become available for fish use.
- If conditions allow, the contractor will use bio-engineering techniques at new stormwater outfalls near Yarrow Creek, Juanita Creek, Forbes Creek, and the Sammamish River.
- New stormwater discharged to Forbes Creek will be conveyed to Forbes Creek via existing stormwater conveyances so no new outfalls (requiring grading or filling with bank-stabilizing or energy-dissipating riprap) will be constructed in Forbes Creek.
- If the width of the road prism¹ increases to accommodate the wider span of roadway at Forbes Creek and at Stream KL8, retaining walls (headwalls) will be constructed at the culvert inlet and outlet to minimize the amount of grading and filling.
- The detention pond on the west side of I-405 will be sited at a sufficient distance south of Forbes Creek so no grading or filling in Forbes Creek or its stream-side zone will be required.
- The combined stormwater treatment wetland/ detention to be constructed near Riverside Drive will be sited at a sufficient distance from both the Sammamish River and the unnamed stream KL14 (at Riverside Drive) so no grading or filling in the streams or the stream-side zones will be required.

Measures for Air Quality

Measures to reduce air quality emissions during construction were discussed in the *I-405 Corridor EIS*. The measures applicable to the Kirkland Nickel Project are summarized here.

¹ The portion of the highway between the ditch lines, curb lines, or toe of fill lines.

Fugitive dust will be controlled by the contractor in accordance with the Memorandum of Agreement between WSDOT and PSCAA Regarding Control of Fugitive Dust from Construction Projects (October 1999).

The following measures will be used to control dust (PM₁₀), transmission of particulate matter, and emissions of CO and NO_x during construction:

- Exposed soil will be sprayed with water to reduce emissions of PM₁₀ and deposition of particulate matter.
- All truck loads will be covered, and materials in trucks will be wetted or providing adequate freeboard (space from the top of the material to the top of the truck) to reduce PM₁₀ and deposition of particulates during transport.
- Wheel washers will be provided to remove particulate matter that would otherwise be carried off site by vehicles to decrease deposition of particulate matter on area roadways.
- Particulate matter deposited on public roads will be removed to reduce mud on area roadways.
- Dirt, gravel, and debris piles will be covered or wetted during periods of high wind when the stockpiles are not in use.
- Construction trucks will be routed and scheduled to reduce travel delays and unnecessary fuel consumption.

Measures for Noise

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

- Erecting noise berms and barriers prior to other construction activities to provide noise shielding;
- Limiting the noisiest construction activities, such as pile driving (if allowed by resource agencies), to between 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 (US EPA, 1971);
- 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 on site during nighttime hours; and
- Requiring contractors to use OSHA-approved ambient sound-sensing backup alarms that could reduce disturbances from backup alarms during quieter periods.

New noise walls will be constructed at five locations provided that adjacent residents agree and that wall construction is feasible from an engineering perspective (see Exhibits 4-2 and 5-8).

- Along the eastern edge of the I-405 right-of-way along the NE 160th Street northbound on-ramp to 118th Avenue NE. The noise wall (NW1) will be approximately 1,280 feet long and 20 feet high.
- Along the western edge of the I-405 right-of-way between NE 132nd Street and 113th Avenue NE. The noise wall (NW3) will be approximately 1,680 feet long and 18 feet high.
- Along the western edge of the I-405 right-of-way between the north end of the existing wall west of I-405 in the NE 95th Street vicinity and NE 100th Street. The noise wall (NW4) will be approximately 920 feet long and 16 feet high and have no gap between it and the existing noise wall.
- Along the eastern edge of the I-405 right-of-way between NE 80th Street and the off-ramp to NE 85th Street. The noise wall (NW7) will be approximately 735 feet long and 20 feet high.
- Along the eastern edge of the I-405 right-of-way between NE 60th Street and the existing noise wall south of NE 67th Place. The noise wall (NW8) will be approximately 500 feet long and 18 feet high and have no gaps between it and existing noise walls.

Noise walls will be relocated at:

- Along the western edge of the I-405 right-of-way between NE 144th Street and the vicinity of NE 149th Street. The noise wall (NW2) will be approximately 1,565 feet long and 16 feet high.
- Along the eastern edge of the I-405 right-of-way between the end of the northbound on-ramp at the NE 85th Street interchange and NE 97th Street. The noise wall (NW5) will be approximately 1,325 feet long and 16 feet high and have no gaps between it and the remaining existing noise wall.

- In the vicinity of NE 92nd Street on the west side of I-405 where the existing noise wall was constructed in a depression, the new section of noise wall (NW6) will be 390 feet long and 16 to 20 feet high.
- Along the western edge of the I-405 right-of-way between NE 53rd Street and NE 65th Street. The noise wall (NW9) will be approximately 700 feet long and 8 feet high and have no gaps between it and the remaining existing noise walls. The replacement wall will be situated closer to the right-of-way line.

Measures for Hazardous Materials

Known or Suspected Contamination within the Project Right of Way

- The contractor will prepare a spill prevention control and countermeasure (SPCC) plan that provides specific guidance for managing contaminated media that may be encountered within the right of way.
- WSDOT may be responsible for the remediation and monitoring of contaminated properties that will be acquired for this project. In such cases, WSDOT will further evaluate the identified properties to assess their condition before acquisition or construction occurs.
- Prior to construction, the contractor will have a thorough asbestos containing materials/lead-based paint (ACM/LBP) building survey completed by a certified building inspector on all property structures that will be acquired and/or demolished.
- If WSDOT acquires a portion or all of a property (building, structure) suspected of containing ACM/LBP, the contractor will properly abate and dispose of any existing ACM and LBP contamination prior to construction activities. Depending on the concentration of lead in the demolition debris, some debris may need to be disposed of as dangerous waste, which will require Ecology to be notified and that appropriate regulations are followed.
- If the contractor encounters an underground storage tank (UST) within the right of way, WSDOT will assume cleanup liability for the appropriate decommissioning and removal of the UST. If this occurs, WSDOT and the contractor will follow all applicable rules and regulations associated with UST removal activities.
- Construction waste material, such as concrete or other harmful materials' disposal/treatment, will take place at approved sites.
- WSDOT may acquire the responsibility for cleanup of any soil or groundwater contamination encountered during construction within WSDOT right of way. Contamination will be evaluated relative to Model Toxics Control Act (MTCA) cleanup levels.
- The contractor will be required to meet all regulatory conditions imposed at contaminated properties (e.g., Consent Decree) associated with construction.

These conditions could include ensuring that the surrounding properties and population are not exposed to the contaminants on the site; i.e., the contractor will ensure that the site is properly contained so that the health and safety of all on-site personnel are protected during work at the site and after construction so that contaminants will not migrate offsite.

- WSDOT will consider entering into a pre-purchaser's agreement for the purposes of indemnifying WSDOT against acquiring the responsibility for any long-term cleanup and monitoring costs.

Known or Suspected Contamination Outside of the Project Right of Way

- Contaminated groundwater originating from properties located up-gradient of the right of way could migrate to the project area. WSDOT generally will not incur liability for groundwater contamination that has migrated into the project footprint as long as the agency does not acquire the source of the contamination. However, WSDOT will manage the contaminated media in accordance with all applicable rules and regulations.

Unknown Contamination

- If WSDOT acquires a property that has unknown contamination, the agency could incur liability for any contamination discovered after acquisition, as well as liability for the removal of any stored materials remaining onsite at the time of the acquisition. WSDOT could be responsible for cleanup or disposal of these unknown substances, for example, USTs and contaminated media (including ACM and LBP). If unknown contamination is discovered during construction, the contractor will follow the SPCC plan as well as all appropriate regulations.

Worker and Public Health and Safety

The contractor will comply with the following regulations and agreements:

- State Dangerous Waste Regulations (Chapter 173-303 WAC);
- Safety Standards for Construction Work (Chapter 296-155 WAC);
- National Emission Standards for Hazardous Air Pollutants (NESHAP) (Code of Federal Regulations, Title 40, Volume 5, Parts 61 to 71);
- General Occupational Health Standards (Chapter 296-62 WAC); and
- Implementing Agreement between Ecology and WSDOT Concerning Hazardous Waste Management (April 1993).

Hazardous Materials Spills During Construction

- The contractor will prepare and implement a SPCC plan to minimize or avoid effects on soil, surface water, and groundwater as described in Chapter 5.9, Water Resources.

Measures for Traffic and Transportation

- The contractor will prepare and implement a traffic management plan prior to making any changes to the traffic flow. The public, school districts, and emergency service providers will be informed of the changes ahead of time through a public information process.
- Prior to and during construction, WSDOT will implement strategies to manage the demand on transportation infrastructure. These transportation demand management strategies will form an important part of the construction management program and will be aimed at increasing public awareness and participation in HOV travel.

Measures for Visual Quality

- The contractor will follow the I-405 Urban Design Criteria being developed as part of the Context Sensitive Solutions program. Where local terrain and placement of light poles allow, the contractor will reduce light and glare effects by shielding roadway lighting and using downcast lighting so light sources will not be directly visible from residential areas and local streets.
- The contractor will restore (revegetate) construction areas in phases rather than waiting for the entire project to be completed.

Measures for Communities, Neighborhoods, and Businesses

To reduce the effects of construction activities on neighborhoods and businesses, the following measures will be incorporated into construction plans and specifications.

Communities and neighborhoods

- The contractor will be required to prepare and implement a traffic management plan (TMP). If local streets must be temporarily closed during construction, detour routes will be provided and clearly marked with signs.
- The contractor will coordinate with the school districts before construction. The TMP will be implemented and coordinated with all emergency services organizations prior to any construction activity.
- The contractor will coordinate with utility providers prior to construction to identify conflicts and resolve the conflicts prior to or during construction.

Businesses

- The contractor will be required to maintain access to businesses throughout the construction period.
- Because it can be difficult to determine whether a business is open, or how to access the site during the construction period, the contractor will make provisions for posting appropriate signs to communicate the necessary information to potential customers.

- The contractor will keep daytime street closures to a minimum.
- In those situations where it is necessary to acquire property, WSDOT will conform to the requirements set forth in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended and implemented by FHWA under 49 CFR Part 24, and according to Chapter 468-100 WAC Uniform Relocation and Assistance and Real Property Acquisition. This will ensure just compensation of all properties and have a minimal effect on the current owners and residents. Relocation resources are available, without discrimination, to all eligible residential and business relocates.
- WSDOT will prepare a relocation plan in advance of actual displacements. Additional information will be collected, possibly through property owner interviews, to identify the specific needs of any business that will be relocated.

Measures for Public Services and Utilities

WSDOT will coordinate several efforts with the contractor prior to and during construction of the project. These efforts will ensure that:

- The contractor will prepare and implement a traffic management plan (TMP). Signs will be posted to show detour routes if periods of closure are needed.
- Coordination with the school districts will occur before construction. The TMP will be implemented and coordinated with all emergency services providers prior to any construction activity.
- Coordination with utility service providers will identify conflicts and resolve them prior to or during construction.
- Prior to removal of the park-and-ride facility at NE 116th Street and 112th Avenue NE, signs will be posted at the lot to announce closure, and the location of nearby lots will be identified.
- Potential utility conflicts within WSDOT right of way will be relocated at the utility's expense prior to construction.

Measures for Recreational and Cultural Resources

- WSDOT will prepare an Unanticipated Discovery Plan for the project that the contractor will be required to follow. This will avoid or minimize effects to historic, cultural, and archaeological resources.

Project Measures to Avoid or Minimize Effects During Operation

WSDOT has well-established design, operational, and maintenance practices for managing long-term operation issues associated with the types of soil, geologic, and groundwater conditions anticipated along the project alignment. The following sections describe the measures that WSDOT will implement during operation.

Measures for Water Resources

Groundwater

- The SPCC plan will address the project's long-term operational phases. Permanent stormwater collection, conveyance, and discharge systems will capture and control spills and prevent contamination of the groundwater aquifers.

Water Quality

- Permanent controls for the mitigation or containment of spills will be provided for new pavement (or equivalent pavement areas) within the project area. Stormwater treatment facilities for flow control and water quality runoff treatment will provide successive levels of protection for downstream conveyance systems by intercepting and retaining spilled contaminants. Subsequent maintenance activities would remove the contaminants from the treatment facilities and restore normal operation to the system.
- Scheduled maintenance programs developed for the stormwater treatment system will include provisions for the regular removal of contaminants and restoration of treatment operations.
- Oil and other petroleum products will be removed with oil treatment facilities.

Measures for Fish and Aquatic Resources

The following measures will be used to avoid or minimize impacts to fish and aquatic resources during operation of the project:

- Stormwater will be controlled so peak and base flows in Yarrow Creek, Forbes Creek, Juanita Creek, and Sammamish River are not adversely affected by treated stormwater discharge from the expanded impervious surface areas created by the project. The sheet flow from the roadway surfaces will be captured and held in detention facilities prior to its controlled discharge into streams within the same drainage basin. As a result, peak and base stream flows will not be adversely affected by the increase in impervious surfaces.
- Off-site flow to unnamed stream KL14 will be managed so peak and base flows are not adversely affected by the new stormwater treatment and detention facilities in the vicinity of this stream.
- Ongoing maintenance of stormwater treatment and detention facilities will not include the application of any chemical weed control agents (e.g., herbicides).

