

## Appendix 2

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Mitigation Commitment List



# Mitigation Commitment List

This attachment describes project mitigation commitments. The mitigation measures are organized by elements of the environment, as presented in the January 2006 EA (Appendix H) and this Revised EA. This List of Commitments has been modified to incorporate additional commitments by Spokane County.

These commitments will be adopted as part of FHWA's final decision on the Proposed Action. They are listed to "assist with agency planning and decision-making" and to "aid an agency's compliance with NEPA when no Environmental Impact Statement is necessary" [40 CFR 1501.3(b) and 1508.9(a) (2)].

## List of Commitments Identified in the EA

Spokane County and Washington State Department of Transportation (WSDOT) have well-established design and construction practices for avoiding or minimizing impacts resulting from environmental conditions anticipated along the project alignment.

The following sections describe these construction and operation practices as well as more specific measures to minimize or mitigate impacts to environmental resources identified in this Revised EA.

## Project Measures to Avoid or Minimize Effects during Construction

Design elements, such as modifications to boundaries of areas that can be affected, will be incorporated into the project specifications, construction plans, and procedures, to help 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

#### *Design*

- Spokane County will undertake a detailed geotechnical investigation to address grading quantities, slopes, groundwater, and roadway fill and foundation. The investigation will include soils borings, testing, and final geometric data. Detailed design will allow for roadway alignment adjustments (horizontal and vertical alignment of the proposed road) to be incorporated into the final design

to minimize construction in areas of erodible soils and to minimize slope length and steepness.

- Based on the geotechnical investigation, Spokane County will prepare and implement a Geo-hazard Mitigation Plan defining the use of specialized methods to address unique conditions that cannot be addressed through standards identified in Section 11.20.070D(1).
- Slope stabilization/hillside reinforcement measures will be implemented to prevent movement or erosion of cut-slopes, including hillside cuts through the Forker and Progress roads area.

### *Construction*

- Spokane County will require the development of a Temporary Erosion and Sediment Control (TESC) plan, including construction best management practices (BMPs) required of the construction contractor.
- Spokane County will implement additional BMPs to minimize erosion, maintain water quality, and achieve the intended environmental performance.
- Spokane County will develop specific BMPs to be used for a variety of project site conditions.
- A Stormwater Pollution Prevention Plan (SWPPP) will be prepared as part of the National Pollution Discharge Elimination System (NPDES) construction stormwater general permit, and approved by Spokane County prior to project construction. The SWPPP will include specific elements to prevent erosion, divert runoff from exposed areas, limit the extent of clearing and maintain natural vegetation as much as possible, phase construction operations, reduce runoff velocities, prevent tracking of soil off-site, facilitate implementation of BMPs (same as those identified for the TESC), and establish contingency plans per the *Stormwater Management Manual for Eastern Washington* (Ecology 2004).
- Large areas of fill will be stabilized by placing the fill in lifts and compacting per the requirements of WSDOT Standard Specifications for Road, Bridge, and Municipal Construction.

## Measures for Groundwater

### *Groundwater*

- Spokane County will enforce the ASA Zone standards defined in chapter 14.706 of the Spokane County Zoning Code to prevent fuels, oils, solvents, and other potentially hazardous materials from entering groundwater (see section 4.15 for other mitigation measures regarding hazardous materials).

- Spokane County will prepare and implement a TESC plan as previously mentioned under Measures for Soils and Geology.
- Spokane County will prepare a Drainage Report, a Geotechnical Site Characterization Report, and a downstream/down-gradient analysis to complete the final stormwater design. Soil Cation Exchange Capacity (CEC) testing will be completed to substantiate the treatment soil composition. These reports will identify if treatment other than bio-filtration will be needed to protect groundwater resources.
- Spokane County will conduct pump tests prior to construction where recommended by the geotechnical engineer for the project to estimate the influence area from dewatering and develop a dewatering plan to monitor groundwater withdrawal, avoid groundwater contamination, and to collect and treat groundwater prior to discharge.
- Spokane County will prepare and implement a spill prevention, control and countermeasures plan (SPCC) following Washington State Department of Transportation (WSDOT) specification 1-07.15(1) for road, bridge, and municipal construction. Spokane County will use the *Critical Materials Handbook* to define BMPs to ensure that any construction-related materials spilled or leaked onsite are contained and cleaned up.

### *Water Wells*

To address and mitigate the potential impact of project construction on water wells, Spokane County will:

- identify and locate in the field, any well and/or spring located within 1,000 feet of the roadway alignment;
- evaluate the water supply source hydrogeology to estimate source vulnerability where recommended by the geotechnical engineer for the project or as requested by applicable property owners;
- establish pre-construction baseline groundwater quality and quantity at the subject water wells, including capacity testing and flow measurements of spring sources provided that owner consent can be obtained;
- post-construction, measure the groundwater quality and quantity of the wells and springs and compare with baseline testing results; and
- provide an alternate source of water (e.g., new well or extension of water supply from nearest irrigation district) for wells impacted by the project.

## Measures for Floodplains

- Spokane County Code will conduct a hydrologic study to detail floodplain functions, including base flood elevation, water storage and quality, and infiltration as part of the project design and permitting process.
- The proposed project will be designed so that the following conditions are met:
  1. Base flood elevations (i.e., the water surface elevation during a 100-year flood event) will not increase at any point by more than 1 foot within the unnumbered “A Zone” areas. The requirement of no increase in base flood elevation greater than 1 foot will be demonstrated through hydraulic modeling and calculations of flood elevations. Modifications to design would be used as necessary to meet the requirements.
  2. Floodwaters will enter and exit in the same manner as under pre-project conditions. The proposed alignment will not alter the flow of floodwaters into or out of the area, because the roadway will not alter flood flow conveyance and will maintain or increase the capacity of culverts along the alignment.
  3. Floodplain functions (e.g., water storage, infiltration, water quality, wetland functions) will be preserved or restored to the highest degree possible where the project encroaches into floodplains.
- Design of conveyance channels and floodplains on streams 8, 9, and 10 to convey and store flows equivalent to the 100-year flood event and projected stormwater contribution from the roadway.
- Spokane County will comply with all conditions set forth in the Floodplain Development Permit.

## Measures for Wetlands

- Preliminary design of the Urban Connector project has included the mitigation sequencing steps of avoidance, minimization, and compensation. Based on preliminary design, 0.71 acre of wetland would be impacted by the proposed Urban Connector. Approximately 2.01 acres of mitigation for direct impact to wetlands would be provided per Spokane County Code 11.20.050.
- Spokane County will prepare a wetland mitigation plan and buffer averaging plan per Spokane County Code requirements.
- Any adjustments to the wetland mitigation requirements as a result of final topographic survey and wetland delineation will be made during final design and project permitting, in compliance with Spokane County Code 11.20.050 and the Corps of Engineers Section 404 requirements.

- Per the TESC plan, Spokane County will control discharge of stormwater runoff from construction sites to wetlands (see Soils and Geology).
- The potential for chemical contamination of wetlands from mechanized equipment will be reduced through implementation of the SPCC Plan (see Measures for Groundwater).

## Measures for Streams

- Spokane County will implement a TESC plan to minimize construction impacts to stream water quality, and which would include BMPs in design such as:
  - installing temporary sediment ponds;
  - installing sediment traps;
  - installing silt fences;
  - creating filter berms and other stormwater filtration devices; and
  - cleaning streets, dust watering, and establishing stabilized construction access points.
- Spokane County will prepare and implement an SPCC (see Measures for Groundwater).
- Spokane County will comply with conditions of the HPA issued by WDFW and comply with the conditions of the national pollution discharge elimination system (NPDES) general permit for construction issued by the Washington State Department of Ecology.
- Stormwater treatment systems will be installed that meet the requirements of the *Spokane County Guidelines for Stormwater Management* (Spokane County 2005 draft or 1998, as amended) and *Stormwater Management Manual for Eastern Washington* (Ecology 2004).
- Spokane County will prepare a management plan in consultation with the Spokane County Soil Conservation District and WDFW to address mitigation for impacts to stream buffers. Mitigation will include the variety of measures designated in Section 11.20.60(2) Riparian Habitat Performance Standards, such as enhancement of the riparian buffer using native plants and fencing. The plan will include numbers and species of plants, a planting schedule, and a maintenance agreement to ensure long-term survival.
- Reconstruction of the stream channels will follow *Aquatic Habitat Guidelines: An Integrated Approach to Marine, Freshwater, and Riparian Habitat Protection and Restoration* (WDFW 2004) and *Fish Passage Design at Road Culverts Guidelines* (WDFW 2003) if fish are found in the portions of creeks impacted by the proposed project.

## Measures for Vegetation and Wildlife

- Spokane County will decommission and remove impervious surface and unsuitable subgrade material on 7.8 acres of old roadway. These restored areas will provide an incremental benefit as additional wildlife habitat.
- Spokane County will also designate approximately 6.6 acres of ponderosa pine/ Douglas-fir forest east and north of Palmer Road as open space and wildlife habitat.
- Spokane County will plant native, drought-tolerant grasses in disturbed areas and road shoulders to provide habitat.
- Spokane County will evaluate the feasibility and benefits of installing a wildlife undercrossing associated with the Bigelow Gulch Creek culvert crossing at Palmer Road. The evaluation will utilize research conducted as a part of a study titled *Interaction between Roadways and Wildlife Ecology* (Transportation Research Board 2002).
- Signs warning motorists of the presence of deer and elk will be installed along the alignment, the most common approach to reducing deer-vehicle collisions.
- Line-of-sight improvements with shallow sloped road shoulders and limited vegetation will improve drivers' ability to see wildlife and avoid collisions.
- All appropriate wetlands within the project area will be surveyed for the presence of water howellia during the spring/summer prior to construction. If water howellia were documented within any wetlands within the project area, ESA consultation would be reopened with the USFWS.

## Measures for Land Use and Displacement

- Refer to the Transportation Environmental Commitments for a discussion of temporary traffic control measures to be implemented to minimize traffic congestion and maintain access to existing land uses during construction.
- Refer to the Noise and Air Quality Environmental Commitments for best management practices that would be used to help reduce noise and dust from construction activities.
- Spokane County will plan for and acquire property for new right-of-way (ROW) in accordance with *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*, as amended.
- Spokane County will enter into agreements with landowners for temporary construction easements.

### *Agricultural Uses*

- Based on the results of the farmland conversion impact rating process, no farmland meets the NRCS requirements for consideration for protection; therefore, no mitigation is required. Acquisition of farmland would follow the same guidelines established for other properties.
- Spokane County will consult and coordinate with affected farmers to ensure that disruptions to farming are minimized and adequate advanced notice of potential disruptions is given.
- Any topsoil removed from areas of prime farmland will be removed and stockpiled rather than covered over. The topsoil can then be used for erosion control and in areas of planting.
- Some farmland within the right-of-way would be available for continued farming on a lease basis so long as the crops and farming activities were compatible with the clear zone requirements of the project.

### Measures for Environmental Justice

- Since the project will result in no disproportionate significant adverse impacts to minority or low-income persons, no activities to avoid or minimize adverse effects related to Executive Order 12898, Environmental Justice, will be necessary.

### Measures for Traffic and Transportation

- Spokane County will prepare and implement a Traffic Management Plan that will include traffic control signing consistent with the Manual on Uniform Traffic Control Devices (MUTCD) (USDOT 2000) and State standards for road construction.
- Spokane County will inform the public, school districts, emergency service providers, and transit agencies of changes in traffic flow or lane closures ahead of time through a public information process. A wide spectrum of techniques and media should be used to convey planned construction activities, such as a website with the planned construction schedule regularly updated.
- Spokane County will initiate an intersection improvement project at Sullivan and Euclid to address projected LOS E operations projected for 2025 with the proposed project in place, which exceeds the adopted County standard of LOS D. The intersection improvement project would consist of an additional westbound lane with a dedicated left-turn lane, a left-through lane, and a dedicated right-turn lane to mitigate conditions to LOS C.

## Measures for Air Quality

### *Construction*

- Spokane County will require the construction contractor to implement BMP control measures for County review and approval, as required under SCAPCA regulations for fugitive dust.
- Spokane County will require the construction contractor to specify BMPs (for County review and approval) to minimize MSAT impacts during construction, including but not limited to the following:
  - locate stationary diesel-powered equipment as far as practical from structures occupied during the construction period;
  - to the extent practical, minimize idling of mobile construction equipment while not in active use; and
  - park mobile construction equipment that must be kept idling as far as practical from structures occupied during the construction period.

### *Operation*

- No mitigation measures will be necessary, because analysis indicates that CO concentrations with the project would remain well below the NAAQS limits, and EPA's MSAT regulations and nationwide programs for emission reductions will prevent future air toxics impacts.

## Measures for Noise

### *Construction*

- Ensure that all equipment is fitted with mufflers, engine air intake silencers, and engine enclosures at least as effective as the original factory-installed devices.
- Park inactive mobile equipment away from homes while the engines are running.
- Operate loud stationary equipment as far away as practical from the nearest homes. Otherwise, portable noise barriers should be placed around loud stationary equipment that must be operated near homes.
- Train workers to avoid, to the extent practical, unnecessarily loud activity near homes (e.g., dropping large loads of rebar onto pavement, or dragging steel plates across pavement).

### *Operation*

- Noise abatement along the proposed Urban Connector would not be eligible for WSDOT funding, however during the design phase, Spokane County will work with property owners close to the road to provide visual screening.

## Measures for Visual Quality

### *Construction*

- Construction mitigation measures will include hydroseeding exposed soils and steep slopes to help preserve the landscape character immediately following construction, to prevent erosion and provide a cover until final seeding and landscaping.

### *Operation*

- Spokane County will work with residents to determine feasibility and function of berms and landscape planting to mitigate for visual impact.
- Lights would be installed at the lowest height allowed under applicable design standards, and the lowest allowable wattage would be used for the roadway. The amount of nighttime lights installed would be minimized to the highest degree possible under applicable standards.
- Approximately 53.5 acres of the ROW would be reseeded or replanted to reduce the visual impact of vegetation removal for travelers on the roadway and adjacent residences. The species composition would reflect species that are native and indigenous to the project area.
- Spokane County will replace fencing and landscaping removed from residential properties during construction.

## Measures for Cultural and Historic Resources

- If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the context and integrity of the find.
- If significant cultural resources are discovered (e.g., human skeletal remains), Spokane County, and if necessary, any affected Native American Tribe and DAHP should be immediately contacted. All Native American graves on private or public lands are protected under Washington State law (RCW 27.44).

## Measures for Hazardous Materials

- Spokane County will prepare and implement an SPCC (see Measures for Groundwater).

- Spokane County will survey structures for asbestos, lead-based paint, and heating oil tanks prior to demolition.
- Spokane County will require construction contractor to implement worker awareness training and hazardous materials contingency plan as per the SPCC Plan and as required under Section 1-07.15(1) of the WSDOT Standard Specifications for Road, Bridge and Municipal Construction 2006 Edition and applicable Washington State RCWs and WACs.

## Measures for Socio-economics

### *Design*

- Spokane County will work with the individual property owners during the final engineering design phase to address site-specific aspects of the Urban Corridor, such as access points, retention or installation of landscaping or construction of an earth-berm to create a visual barrier where the roadway is being relocated closer to an existing residence.
- Spokane County will work with East Valley School District regarding recreation and access mitigation defined in Chapter 5, 4(f) Evaluation.

### *Construction*

- Spokane County will inform the public, school districts, emergency service providers, and transit agencies of changes in traffic flow or lane closures ahead of time through a public information process (see Measures for Transportation).
- Spokane County will provide a contact person whom the public may contact to submit complaints, problems and suggestions related to construction.
- Spokane County will maintain access to businesses and homes during construction. Please see Measures for Transportation, Air Quality, and Noise for additional mitigation measures.

## Measures for Section 4(f)

- Spokane County will hire a Recreational Architect to assist East Valley School District with the remodeling of the sports fields to mitigate the affected facilities. These mitigation measures are anticipated to include the following but may be modified through ongoing discussions with the District:
  1. addition of an exit-only at the high school to Wellesley Ave. to improve bus movement;
  2. relocate the northeastern ball field and unmarked practice football field at the middle school;

3. plan regarding pedestrian tunnel or pedestrian bridge between the middle and high school with the school district;
4. providing additional land (1.4 acres) for the middle school along its northern property line to provide additional land for recreational resources and offset the Section 4(f) use of the existing sports field;
5. conduct necessary geotechnical studies to address soils and groundwater conditions; and
6. ensure that alternative parking is an element of planning, design, and construction if so desired by the School District.