Introduction

Wetlands are biologically diverse and dynamic ecosystems. They can perform a variety of unique physical, chemical, and biological functions that benefit both humans and the environment. Wetland areas are also used for a broad range of recreational, educational, and aesthetic activities including bird watching and hunting. This fact sheet summarizes the potential impacts the proposed project would have on wetlands.

What was studied?

The study examined the potential impacts from construction and operations to individual wetland functions and values and changes to wetland buffers.

What was the study area?

- Proposed project site (see Figure 3.5-1 of the draft EIS)
- Proposed wetland mitigation site
- An area within 300 feet of the rail corridor (Anacortes Subdivision)

See the Proposed Project Fact Sheet for a map of the site.

Wetland near the proposed project

How were impacts analyzed?

Impacts on wetlands at the proposed project site were evaluated by overlaying the project footprint onto delineated wetland boundaries and buffers. The study used excavations and shallow groundwater monitoring wells to evaluate site soils and local hydrology in order to determine wetland function and disturbances. Potential impacts on wetlands at the proposed wetland mitigation site and along the rail corridor (Anacortes Subdivision) were qualitatively evaluated using existing available information.

What are the potential impacts?

Construction Impacts

The proposed project would:

- Permanently fill and/or excavate six of the 23 wetlands (21.21 acres) identified on the proposed project site
- Convert approximately 1.22 acres of the forested and scrub-shrub wetlands into emergent habitats

These conversions would occur due to the relocation and construction of underground natural gas and water pipelines and would be considered permanent impacts. These areas would have a temporal loss of habitat function because it may take some time to reestablish the functional levels lost during the conversions. However, after the new emergent habitats are established, the capacity of these areas to treat runoff would likely be increased from their previous functions.

Both short-term and long-term temporary impacts would result from clearing to allow for construction access and the re-routing and installation of underground gas and water pipelines.

Temporary buffer impacts would occur at 11 wetlands as a result of clearing to allow for construction access and the rerouting and installation of underground gas and water pipelines. The temporary affected area totals 6.76 acres, which includes 1.88 acres of forested and shrub buffers and 4.88 acres of grazed pasture dominated by nonnative grasses. These temporary cleared areas would be restored to pre-construction contours and planted with native species to comply with permit requirements.

Operation Impacts

Permanent impacts to buffers generally result from the loss of vegetated buffer areas. The proposed project would permanently remove 5.2 acres of forested buffers on five wetlands and 7.38 acres of grazed pasture wetland buffers at eight wetlands.

Cumulative Impacts

Reasonably foreseeable future actions with the potential to impact wetlands include the Tesoro Clean Products Upgrade Project, which would impact about 0.0105 acre, and the Old Highway 99N Overpass of BNSF Railroad, which would impact 0.071 acre. Historically, there has also been significant agricultural, industrial, commercial, and residential development in the study area. It is assumed that with this growth and construction, wetlands have been affected.

The impacts from the proposed project would be mitigated by the creation of an approximately 73-acre wetland mitigation site. Mitigation would also be required for the impacts from the reasonably foreseeable future actions through mitigation plans. Because the mitigation plans are required to achieve the goal of no net loss of wetlands, the potential cumulative impacts would be minimized.

What mitigation measures are proposed?

Avoidance and Minimization

Impacts to wetlands would be minimized by the implementation of the best management practices required as part of various permitting processes.

PERMITS REQUIRED

- Clean Water Act Section 401 Water Quality Certification
- Clean Water Act Section 404 Individual Permit
- Hydraulic Project Approval
- National Pollutant Discharge Elimination System (NPDES) Construction Stormwater Permit
- Shoreline Substantial Development Permit
- Skagit County Grading Permit

For example, erosion control mats, silt fences, and straw bales would be installed as part of the NPDES Construction Stormwater Permit. They will help to stabilize exposed soils to prevent sediment runoff into adjacent wetlands.

In addition, Shell has incorporated engineering and operational measures into the design of the proposed project to avoid and minimize wetland impacts.

Mitigation

Shell would provide compensatory mitigation for 25.83 acres of permanent wetland impacts, 0.23 acre of long-term temporary impacts, and 12.58 acres of permanent wetland buffer impacts at the wetland mitigation site approximately 2 miles east of the project site at the south end of Padilla Bay. The total area for the wetland mitigation site is 100 acres, of which approximately 73 acres would be restored to tidal estuary. The site is expected to reestablish a range of estuarine habitats from mud flats to salt marsh to marine riparian zone.

Out of approximately 73 acres, approximately 40.06 acres of the site would be used as compensatory mitigation for the current proposal, and the remaining approximately 32.94 acres would be available for unanticipated wetland or buffer impacts during or after construction of the project. These acreages are preliminary and will be finalized in consultation with the Washington State Department of Ecology and the U.S. Army Corps of Engineers.

Construction at the wetland mitigation site would begin concurrently with that of the rail unloading facility and is expected to take approximately four years to complete. The wetland mitigation site would be monitored and maintained by Shell for approximately 15 years after construction is complete.

Are there unavoidable significant adverse impacts?

If mitigation is implemented as proposed there would be no unavoidable significant adverse impacts.

WHERE CAN I FIND MORE INFORMATION ABOUT THIS TOPIC?

Chapter 3.5 – Wetlands of the draft EIS

The information in this fact sheet summarizes content from the draft Environmental Impact Statement; please review the full document for more detailed and complete information.

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