Introduction

Surface water moves over land as sheet flow and as channelized flow within streams and ditches. It serves as habitat for wildlife, a source of hydrology for wetlands, a place for recreation, and a source of industrial process water and irrigation. This fact sheet summarizes the potential impacts the proposed project would have on surface water.

What was studied?

This study examined the impacts of the proposed project's construction and operations on surface water flows and surface water quality in the receiving waters. Stormwater is the primary potential distribution mechanism for spills and other pollutants from the project vicinity to adjacent receiving waters. Therefore, stormwater management and spill containment is a major focus of the surface water discussion.

What was the study area?

Ditches, streams, wetlands, and marine shorelines associated with Padilla and Fidalgo bays. These features are crossed by or could receive runoff and stormwater discharge from the:

- Proposed project site
- Proposed wetland mitigation site
- Rail corridor (Anacortes Subdivision)

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

How were impacts analyzed?

Historical and current information about existing conditions of surface water bodies and floodplains in the study area were reviewed to characterize the resources and determine how they came to be in their current configuration. Stormwater management, treatment, and spill containment were also studied.

What are the potential impacts?

Construction Impacts

During construction, direct impacts to stormwater patterns and water quality could occur from flows that cause erosion and sedimentation downstream of soil disturbance activities, runoff that has been in contact with uncured concrete that may have high pH values, or release of pollutants from equipment. Because no construction would take place along the rail corridor (Anacortes Subdivision), there would be no direct or indirect impacts to surface water flows or water quality.

Operation Impacts

During operations, contamination of surface water from leaks or spills from tank cars or petroleum products, lubricants, and chemicals from locomotive engines could occur. Above-ground leaks that occur within the area of the rail unloading facility would be captured by a concrete platform with curbs and drains. These leaks would then be routed to the oil/water separation pond system for treatment.

If any leaks occur on site at the unloading facility, but outside of the unloading platform, they would be routed into the North and South stormwater ponds. The oil/water separation vaults designed as part of the stormwater pond system are intended to capture any releases that could occur during daily operations. Direct impacts from stormwater runoff from additional impervious surfaces could cause a reduction in water quality.

The proposed development of the wetland mitigation site would restore a tidal connection between the approximately 73-acre-site and Padilla Bay, which would have a beneficial impact on the wetland mitigation site.

Increased train traffic on the rail corridor (Anacortes Subdivision) has the potential to increase incidents involving trains traveling along the corridor, and would require continued maintenance of the rail corridor. There could also be leaks or spills from tank cars or leaks of petroleum products, lubricants, and chemicals from locomotive engines along the subdivision from daily operations. These releases are not treated along the Anacortes Subdivision.

Cumulative Impacts

Within the study area, there has been significant agricultural, industrial, commercial, and residential development. It is assumed that with this growth and construction, surface water resources have been affected. In addition, construction and operation of the proposed Tesoro Clean Products Upgrade Project has the potential to impact surface water resources. The Tesoro project and the proposed project could have cumulative impacts on surface water resources. These impacts would be minimized by construction best management practices (BMPs) and localized to the Tesoro Anacortes Refinery site and the proposed project and wetland mitigation sites.

What mitigation measures are proposed?

Avoidance and Minimization

Impacts to surface water would be minimized by implementing the BMPs 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 Construction Stormwater Permit
- Shoreline Substantial Development Permit
- Skagit County Grading Permit

For example, to minimize a possible release of turbid or alkaline waters, water would be sampled for both turbidity and pH. This activity would occur at both the discharge points for the stormwater ponds and the exit points of the culverts under East March's Point Road, or other applicable discharge locations. This monitoring and reporting of water quality would be conducted during construction.

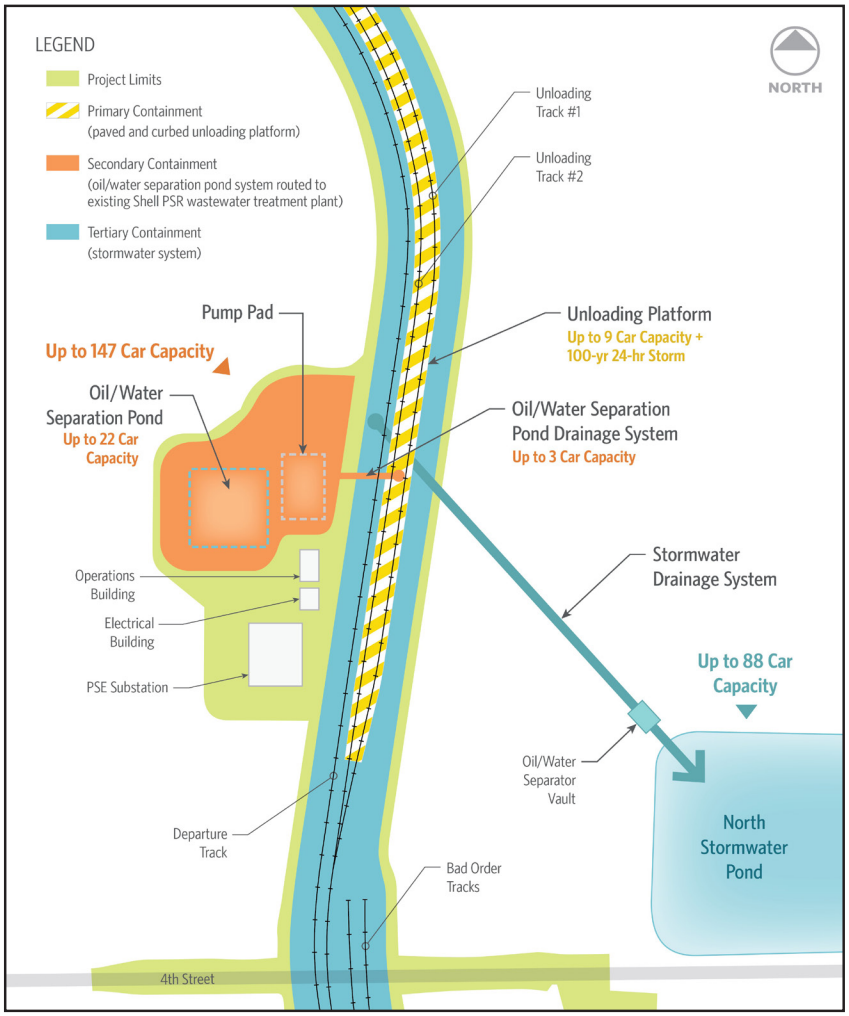
In addition, Shell has incorporated engineering and operational measures into the design of the proposed project to avoid or minimize the potential for impacts on surface water.

Mitigation

No additional mitigation measures are proposed beyond the avoidance and minimization measures that would be developed and enforced as part of the permitting process.

Are there unavoidable significant adverse impacts?

No unavoidable significant adverse impacts were identified.



Surface water and spill containment system plan view

WHERE CAN I FIND MORE INFORMATION ABOUT THIS TOPIC?

Chapter 3.3 – Surface Water 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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