



## Introduction

Fish and aquatic species, including marine mammals, and their habitat can be found near the proposed project. This fact sheet summarizes how the proposed project would affect fish and aquatic species and habitat.

## What was studied?

The study examined impacts from site construction and operations to waterways and riparian habitat, as well as the effect of changes to these areas on fish and other aquatic species. The impact of normal operations along the rail corridor (Anacortes Subdivision) and the project site were also evaluated.

## What was the study area?

- Waterways associated with Padilla and Fidalgo bays (see Figure 3.4-2 of the draft EIS)
- Proposed wetland mitigation site
- Rail corridor (Anacortes Subdivision)

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



Swinomish Channel Swing Bridge

## How were impacts analyzed?

Maps of streams, ditches, and other waterways were reviewed and compared to the project's proposed construction and operations activities. These maps, site visits, and existing information were used to determine how the project would impact fish and aquatic species and habitat.

## What are the potential impacts?

### Construction Impacts

Construction at the proposed project site would impact fish and aquatic resources through the loss or reconfiguration of drainage channels, streams, and riparian habitat. The project would result in the reconfiguration of all drainages crossing the project area. Changes to available fish habitat, introduction of turbid (cloudy) water, and fish handling associated with site isolation and in-water construction activities in Stream S may temporarily affect fish during construction.

Construction at the proposed wetland mitigation site would impact fish and aquatic resources. By removing portions of the perimeter dike and supporting tidal exchange within the site, fish would gain access to habitat previously unavailable to them. The entire extent of habitat that would develop on the wetland mitigation site is presumed to be accessible to fish from Padilla Bay, as well as support a diverse mix of estuarine wetland habitats and vegetation. A tidal channel would be constructed within the site to support flow and fish access. These restored habitats would contribute prey resources and organic matter to Puget Sound and valuable nursery habitat for juvenile salmon.



Stream S along the southeast corner of the proposed project site

### Operation Impacts

During operations, water from ditches (except water directed to Stream S) would be captured and conveyed across the study area by either a culvert or stormwater system to one of the two new stormwater ponds. The ponds include pre-treatment oil/water separation systems and provide for detention and controlled release into Padilla Bay. Discharge from the stormwater ponds

would be through spreaders that allow for infiltration during appropriate levels of inundation. When the ground is saturated, the discharge is presumed to form sheet flow into a drainage ditch, wetland, or stream. The reconfiguration of Stream S would provide long-term beneficial impacts to fish through the creation of new habitat.

## 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, fish and aquatic species and habitat have been affected. In addition, construction and operation of the proposed Tesoro Clean Products Upgrade Project has the potential to impact fish and aquatic species and habitat. The Tesoro project and the proposed project could have cumulative impacts on fish and aquatic species and habitat. These impacts would be minimized by construction best management practices (BMPs) and localized to the Tesoro Refinery site and the proposed project and wetland mitigation sites.

## What mitigation measures are proposed?

### Avoidance and Minimization

Impacts to fish and aquatic species and habitat would be minimized by the implementation of 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, stormwater and erosion control BMPs would be implemented to reduce sediments discharging into surface waters. The measures would also be implemented at the proposed restoration site to reduce sediments discharging into ditches and wetlands. Stockpiled soils would be covered during construction to reduce erosion during precipitation events.

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

Specific design measures would also minimize the potential for impacts from a release of oil at the proposed rail unloading facility. They are described in detail in Chapter 3.3 – 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 processes.

## Are there unavoidable significant adverse impacts?

No unavoidable significant adverse impacts were identified

### WHERE CAN I FIND MORE INFORMATION ABOUT THIS TOPIC?

Chapter 3.4 – Fish and Aquatic Species and Habitat 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.