



Delineation / Mitigation / Restoration / Habitat Creation / Permit Assistance

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RE: The Shoreline Management Act, associated wetlands and how they related to the Gateway Pacific Terminal project (GPT).

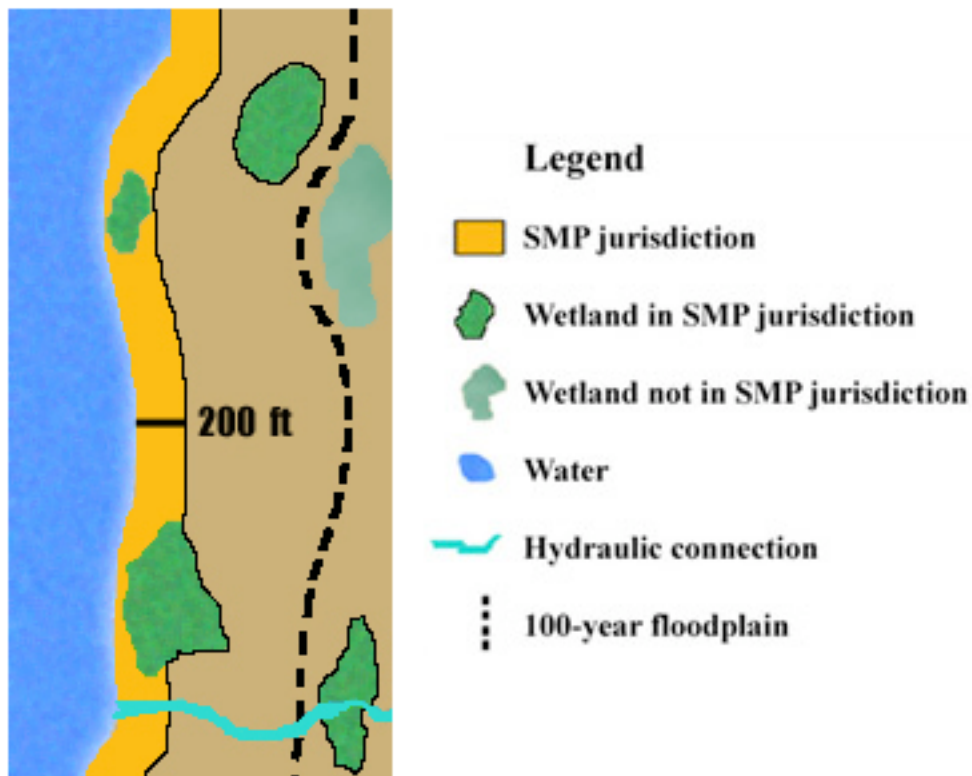
Wetland Resources, Inc (WRI) has conducted an exhaustive review of available materials to determine the applicability of the Whatcom County's Shoreline Management Program on some or all of the approximate 140 acres of wetland impacts associated with the proposed GPT development. This development is located in the Cherry Point industrial urban growth area. Wetlands within the GPT site were delineated by AMEC in 2006 and 2007 and are documented in the *Wetland Determination and Delineation Report, Gateway Pacific Terminal Property, Whatcom County, WA, dated February 22, 2008, prepared by AMEC* (Delineation Report). The *Preliminary Conceptual Compensatory Mitigation Plan, Gateway Pacific Terminal, Whatcom County, WA, dated February 28, 2001, prepared by AMEC* (Mitigation Plan) identifies 15 wetlands where impacts are proposed. WRI's efforts were concentrated on wetlands where impacts are proposed and that have a direct surface water connection to the Straight of Georgia. These wetlands are depicted in the attached map, Exhibit 1.

Whatcom County delineates the limits of Shoreline Jurisdiction in WCC 23.30.020(B) which states "... The lateral extent of the shoreline jurisdiction shall be determined on a case-by-case basis based on the location of the ordinary high water mark (OHWM), floodway and presence of associated wetlands." Associated wetlands are defined as "wetlands that are in proximity to tidal waters, lakes, rivers or streams that are subject to the Shoreline Management Act and either influence or are influenced by such waters. Factors used to determine proximity and influence include, but are not limited to location contiguous to a shoreline waterbody, formation by tidally geo-hydraulic processes, presence of a surface connection including through a culvert or tide gate, location in part or whole within the floodplain of a shoreline, periodic inundation, and or hydraulic continuity." (WCC 23 Chapter 11(25))

These definitions were used to determine which, if any, of the impacted wetlands are associated with the Shoreline of the Straight of Georgia. Wetlands 2, 3, and 8A are wetlands proposed for impact and are headwaters or direct tributaries to Stream 1, which flows into Wetland 12. Wetland 12 is identified in the Delineation Report as a Coastal

Lagoon that is influenced by both saltwater input from the Straight and freshwater input from Stream 1. Upstream of Wetland 12, and along Stream 1, riparian wetlands (Wetlands 11 A and 11B) are present until the culvert crossing under Henry Road. The Delineation Report indicates that between Henry Road and Lonseth Road, Stream 1 is located within a ravine with no associated wetlands. Upstream of Lonseth Road, Stream 1 flows through the large wetland complex that makes up Wetlands 2 and 3. Based on the Site Area Topography Map, prepared by AMEC, the grade associated with the stream is very minor, at approximately 2 percent. Given the direct connection of Stream 1 to the Straight and its low gradient, Stream 1 has the presumed presence of Coho salmon (WSDFW-Salmonscape). In addition, the intertidal zone waterward of Wetland 12 is mapped as having potential for intertidal forage fish spawning habitat (WSDFW-Salmonscape). Neither of these important facts is documented in the Delineation Report.

In determining if the impacted wetlands are associated with the Shoreline the key elements are: if the wetlands are within 200 feet of the Shoreline and/or if the wetlands are in proximity to, and either influence or are influenced by the tidal water. WAC 173.22.040 states that “influence includes but is not limited to one of more of the following: Periodic tidal inundation; hydraulic continuity; formation by tidally influenced geohydraulic processes; or a surface connection through a culvert or tide gate”. At a minimum, wetlands 2, 3, and 8A have a direct surface water connection to the Straight via Stream 1. This surface water connection clearly establishes hydraulic continuity with the marine shoreline. It is also important to note that since the gradient of the stream is approximately 2 percent, there is no obvious topographic break that would preclude these wetlands from being associated. The following graphic taken from the Washington State Department of Ecology (DOE) depicts a scenario similar to that of Wetlands 2, 3, and 8A on the GPT site. Note the wetland located in the lower right corner of the graphic is identified within the legend as having a hydraulic connection and as being part of the SMP jurisdiction.



Graphic taken from DOE Shoreline Management Website:

http://www.ecy.wa.gov/programs/sea/sma/st_guide/jurisdiction/shorelands.html

Not only do wetlands 2, 3, and 8A have a clear and distinct hydraulic connection with the marine shoreline, they also are important to its function. They reduce excess nutrients (fertilizers) and toxicants (pesticides and heavy metals) used in the agricultural and industrial land uses upstream, improving water quality in the marine area. The vegetation composition and hydroperiod identified within the Delineation Report also will produce organic matter allowing Stream 1 to export detrital material and invertebrates to Wetland 12 (Coastal Lagoon) and the nearshore area. This detrital and invertebrate export is essential to support the food web in the Straight of Georgia. In addition, hydrology from the Wetlands 2, 3, and 8A likely transports sand and gravel downstream to the marine area where it is deposited in Wetland 12, the beach area and in the nearshore. The deposition of the material assists in maintaining the beach and nearshore conditions that provided crucial habitat for intertidal fish spawning. We note that there is on-site potential for intertidal forage fish spawning habitat and documented spawning habitat for surf smelt in the immediate vicinity of the site. This information is mapped on the Washington State Department of Fish and Wildlife Salmonscape mapping system: <http://fortress.wa.gov/dfw/gispublic/apps/salmonscape/default.htm>

In conclusion, it is my opinion that at a minimum, Wetlands 2, 3, and 8A meet the definition of Associated Wetlands per the Whatcom County Code. This conclusion is based on their hydraulic continuity with the Straight of Georgia identified above, their direct influence on biota along the shoreline and in the nearshore, and their direct influence on coastal processes. As Associated Wetlands, any proposed impacts need to be evaluated for

compliance with Whatcom County's Shoreline Master Program and the state Shoreline Management Act. While it is beyond the scope of this report to identify specific impacts of the proposed development, it appears from review of the Mitigation Plan that the applicant is proposing development within these associated wetlands.

This opinion is based on review of existing available Critical Area information on the GPT project, of Whatcom County's Shoreline Master Program, and the Shoreline Management Act. No site visit was conducted as part of this evaluation because the site is on private property. *Wetland Resources, Inc.* welcomes the opportunity to conduct a site visit in support of this opinion.

Wetland Resources, Inc.

Scott Brainard, PWS
Principal Ecologist