



ODOT MEMORANDUM

TO: MR. JOHN RAASCH, ENVIRONMENTAL PROJECT
MANAGER

SUBJECT: WETLANDS AND WATER RESOURCES BASELINE, OR
138E: DIAMOND LAKE CORRIDOR STUDY

FROM: MR. BRAD LIVINGSTON, ODOT WETLAND SPECIALIST

DATE: DECEMBER 15, 2006

FIGURES: 1) AREA OF POTENTIAL IMPACT, 2) RESOURCE MAP

INTRODUCTION

The purpose of this memorandum is to provide baseline information on the presence and extent of wetlands and water resources within the OR 138E Diamond Lake Corridor project area, herein referred to as the Area of Potential Impact (API). This report is a first step toward compliance with the National Environmental Policy Act (NEPA) procedure for assessing potential impacts to the human environment resulting from federal projects, with regards to wetlands and water resources. Recommendations for additional study to be completed regarding the characterization and functional assessment of wetlands and water resources within the API are included.

METHODS

Information gathering included review of aerial photographs, United States Geologic Survey (USGS) Quadrangle Maps, Official Soil Series Descriptions, the Natural Resources Conservation Service (NRCS) Soil Survey Report and Maps, National Wetland Inventory Maps and classifications, local ordinances and FEMA Floodway Maps. USGS Quadrangle Maps provided topographic information, major drainage features and general land uses. The Official Soil Series Descriptions provided detailed information on soil forming processes, climate, geology and geography. ODOT's GIS system provided aerial photographs, general location/presence of hydrologic features, land use and development information, digitized National Wetland Inventory data, and other spatial data. The FEMA Floodway map indicated the extent of the 100-year floodplain.

Mr. Brad Livingston, ODOT Wetlands Specialist, conducted a site visit on December 14, 2006. The purpose of the site visit was to document land uses and make general observations of plant communities and ecological condition of wetlands and water resources within the API using best professional judgment. Wetlands and water resources viewed during the site visit were characterized by observed vegetation, hydrology, substrate, landscape position, hydrogeomorphology, observed fish and wildlife habitat attributes, adjacent land uses and likely stressors to functional capacity.

API DESCRIPTION

The API traverses a portion of the City Center of Roseburg in Douglas County, Oregon (**Figure 1**). Dominant land uses include commercial, residential and industrial development. Two major water resources, the South Umpqua River and Deer Creek, are identified within the API. Riparian wetlands are identified adjacent to the South Umpqua River.

The API is located at an elevation of approximately 500 feet within the Klamath Mountains Ecoregion. The topography of the API is a relatively level to gently sloping historic stream terrace. The NRCS Soil Survey identifies 9 soil types within the API. Of the 9 identified soils, Bashaw clay was the only listed hydric soil. Several other soil types may contain hydric properties due to landscape features such as low wet spots, swales, alluvial fans, or floodplain associations. Hydric soil inclusions may also be present in soils not identified as hydric. (USDA NRCS 1999)

Two water resources, the South Umpqua River and Deer Creek, traverse the API. Deer Creek is a tributary to the South Umpqua River. The main stem of the South Umpqua River is classified as riverine, upper perennial, rocky shore, permanently flooded (R3RSH). The South Umpqua River also contains a recurring seasonal channel classified as riverine, upper perennial, rocky shore, seasonally flooded (R3RSC) within the API. When flooded the South Umpqua becomes a bifurcated channel divided by Elk Island. This seasonal channel provides valuable fish and wildlife habitat. The confluence of Deer Creek with the South Umpqua River is located within the API. Deer Creek is classified as riverine, upper perennial, unconsolidated bottom, permanently flooded (R3UBH). Both water resources are designated Essential Salmonid Habitat (ESH) by DSL. Both water resources are listed on DEQ's 303 (d) list of water quality limited water bodies for temperature, fecal coliform and dissolved oxygen. The South Umpqua River is also on the 303 (d) list for aquatic weeds and algae, chlorine, arsenic, cadmium, biological criteria, phosphorous, pH and sedimentation. (2002)

Riparian wetlands associated with the South Umpqua River are located within the API. The riparian wetlands are classified as palustrine, emergent, seasonally flooded (PEMC); palustrine, scrub-shrub, temporarily flooded (PSSA); and palustrine, forested, temporarily flooded (PFOA) using Cowardin classification (1979). The Hydrogeomorphic classification of the riparian wetlands is Riverine Flow-through (Adamus 2001). The NWI Map for Roseburg East, Oregon (USFWS, 1977) is the basis for the spatial wetlands data presented in **Figure 2**. The primary source of wetland hydrology is the water table of the South Umpqua River. Riparian and wetland vegetation identified within the API includes black cottonwood (*Populus balsamifera*; FAC), red alder (*Alnus rubra*; FAC), incense cedar (*Calocedrus decurrens*; NI), Douglas-fir (*Pseudotsuga menziesii*; FACU), Oregon ash (*Fraxinus latifolia*; FACW), various willows (*Salix* spp.), red osier dogwood (*Cornus stolonifera*; FACW), Douglas' spiraea (*Spiraea douglasii*; FACW), Armenian blackberry (*Rubus armeniacus*; FACU), snowberry (*Symphoricarpos albus*; FACU), reed

canary grass (*Phalaris arundinacea*; FACW-), blue wild rye (*Elymus glaucus*; FACU), and English ivy (*Hedera helix*; NI).

The functional capacity of wetlands and water resources identified within the API is impaired by roadways, ditches, and urban land uses. Roadways, ditches and urban impervious surface areas alter natural hydroperiods and surface water movement, and contribute to untreated stormwater runoff, higher peak flows and lower base flows in receiving waters. Channelization of the South Umpqua River and Deer Creek has eliminated connectivity with flood plains and stream terraces. Habitat fragmentation associated with dense urban development impedes wildlife habitat function and migration corridors.

Despite the adjacent stressors to the functional capacity of wetlands and water resources identified within the API, the resources do provide valuable functions. Various waterfowl were observed resting and feeding within the riverine wetlands and seasonal channel of the South Umpqua. Resident and anadromous fish habitat is supported by the riverine wetlands and water resources. The shoreline of the South Umpqua is stabilized by riverine wetlands. Educational opportunities, park lands and open spaces, fishing and swimming, and many other recreational activities are provided by the wetlands, water resources and riparian corridors within the API.

REGULATORY OBLIGATIONS

Federal Regulatory Obligations: The NEPA process requires an alternatives analysis to identify potential environmental, cultural and socio-economic resources within APIs for avoidance, minimization and mitigation planning. The U.S. Army Corps of Engineers (COE) regulates wetlands and waterways via section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. A section 404 fill permit must be obtained if impacts to regulated wetlands or water resources are proposed. National Marine Fisheries Service (NMFS) is responsible for protecting anadromous and ocean species protected under the Endangered Species Act and the Magnuson-Stevens Act. NMFS may recommend conditions to protect essential fish habitat if impacts are proposed. The Oregon Department of Environmental Quality (DEQ) monitors and regulates water quality via Section 401 and 402 of the Clean Water Act. A section 401 water quality certification must be obtained if impacts to wetlands or waters will occur. A 401 certification will likely require an ODOT stormwater management plan. Project design must comply with the ODOT's NPDES 1200CA permit, which addresses compliance with section 402. The Federal Emergency Management Agency (FEMA), acting through the local planning authority, regulates development within floodplains.

State Regulatory Obligations: The Oregon Department of State Lands (DSL) via the Oregon Removal/Fill Law regulates removal and fill activities within wetland and water resources in Oregon. DSL will require the local planning authority to review and sign the joint removal/fill permit application. All in-stream work must be completed during the in-water work window for the area as established by The Oregon Department of Fish and Wildlife (ODFW). ODFW may require fish passage in all waters of the State of Oregon

in which native migratory fish are currently or were historically present, as long as a portion of their historical range is present upstream and the economical costs are not extreme. Mitigation can be substituted for fish passage, if providing passage is not practical at a given location, subject to the approval of the state Fish and Wildlife Commission.

Local Regulatory Obligations: The API traverses the 100 year floodplain of the South Umpqua River and Deer Creek (FEMA 1986). The project must not result in a rise of the floodplain elevation. Roseburg's land use development ordinances specify a need for riparian setbacks for significant waterways from their respective top of bank, as determined by the planning department. The city has designated a 50' riparian buffer for the South Umpqua River. Deer Creek's riparian setbacks are designated as 25' or 50' depending on zoning and development plans (URL: <http://www.ci.roseburg.or.us/comdev/documentation/LUDO.doc>). A local wetland inventory has not been completed for Roseburg. Roseburg's planning department will require adherence to applicable state and federal rules and regulations prior to signing the joint removal fill authorization and/or conditional use permit.

RECOMMENDATIONS

Wetland Delineation and Functional Assessment: The routine on-site method of delineating wetlands (Environmental Laboratory, 1987), and supporting information, should be used to conduct the field investigation once alternatives to be addressed are known. The wetland delineation and Wetland Delineation Report should then be completed in accordance with OAR 141-090-0005 through 141-090-0055.

Mitigation Planning: Upon completion of the wetland delineation, a functional assessment utilizing a methodology acceptable to DSL and COE should be conducted to determine avoidance, minimization and mitigation priorities. Impacts to wetlands and water resources must be avoided and minimized to the greatest extent practicable via alternatives analysis. Temporary impacts to wetlands, water resources and riparian zones should be addressed via site restoration/rehabilitation plans. If impacts to wetlands and/or water resources are unavoidable, compensatory wetland mitigation will be required.

Compensatory Wetland Mitigation: Compensatory Wetland Mitigation (CWM) need is determined by the area of impact and the functions lost. Typically, CWM is performed in-kind and on-site; however, the urban API may not be a suitable place to mitigate for wildlife habitat. The Cow Hollow Mitigation Bank's service area includes the API; however, they currently do not have wetland credits for sale.

Compensatory Riverine Mitigation: Should impacts to riverine or riparian areas occur compensatory mitigation commensurate with the nature of the impact area should be planned. Common riverine compensatory mitigation concepts include the addition of aquatic habitat complexity by placement of large woody debris or "fish rocks" within the active channel where appropriate, native plant establishment within riparian corridors, in-

stream fish passage improvement where needed, creation of hydraulic refugia, or restoration of off-channel habitat.

Stormwater Management: The DEQ will require a Stormwater management plan (SWMP) if there are to be impacts to wetlands or water resources, and there is an increase of impervious surface area. A hydraulics engineer will be needed to develop the SWMP. SWMP's address water quality and quantity.

Joint Permit Application: If wetlands or water resources will be impacted by the project, a Joint Permit Application (JPA) must be submitted to DSL and the COE. Depending on the volume and area of impacts, obtaining authorization from the regulatory agencies may take up to 180 days once the application is submitted and deemed complete.

REFERENCES

- Adamus, P.R. 2001. *Guidebook for Hydrogeomorphic (HGM)-based Assessment of Oregon Wetland and Riparian Sites: Statewide Classification and Profiles*. Oregon Division of State Lands, Salem, Oregon.
- City of Roseburg Land Use Ordinances. URL: <http://www.ci.roseburg.or.us/comdev/documentation/LUDO.doc>.
- Cowardin, L.M., Carter, V., Golet, F.C., and LaRoe, E. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Fish and Wildlife Service, Washington, D.C.
- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*, Technical Report Y-87-1, US Army Engineer Waterways Experiment Station, Vicksburg, Miss.
- Federal Emergency Management Agency. 1986. Flood Insurance Rate Map for Roseburg, Douglas County, Oregon.
- Oregon Department of Environmental Quality. 2002. *Water Quality Program 303(d) list*. URL: <http://www.deq.state.or.us>.
- Oregon Department of State Lands. October 10, 2001. *Essential Salmonid Habitat map for Douglas County*. URL: <http://www.oregonstatelands.us/maps/coos.pdf>.
- United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 1999. *Hydric Soils List, Douglas County Area, Oregon*. URL: <http://www.or.nrcs.usda.gov/technical/soil/hydric.html>.
- USDA, NRCS. 2001. *Soil Survey of Douglas County, Oregon*. Soil Conservation Service. 589 pp., illus., maps.
- U.S. Fish and Wildlife Service (USFWS). 1977. *Roseburg East, Oregon National Wetlands Inventory Map*. USFWS, Washington, D.C.