

## Tidal Wetlands of the Yaquina and Alsea River Estuaries in Oregon: GIS layer development and recommendations for National Wetlands Inventory revisions

Geographic Information Systems (GIS) layers of current and likely former tidal wetlands in two Oregon estuaries were generated by enhancing the 2010 National Wetlands Inventory (NWI) data with expert local field knowledge, LiDAR-derived elevations, and 2009 aerial orthophotos. The data were generated for two purposes: First, to enhance the NWI by recommending revised Cowardin classifications for certain NWI wetlands within the study area; and second, to generate GIS data for the 1999 Yaquina and Alsea River Basins Estuarine Wetland Site Prioritization study (Brophy, 1999). Two sets of GIS products were generated: 1) enhanced NWI shapefiles; and 2) shapefiles of prioritization sites. The enhanced NWI shapefiles contain recommended changes to the Cowardin classification (system, subsystem, class and/or modifiers) for 286 NWI polygons in the Yaquina estuary (1,133 acres) and 83 NWI polygons in the Alsea estuary (322 acres). These enhanced NWI shapefiles also identify likely former tidal wetlands that are classified as upland in the current National Wetlands Inventory (64 NWI polygons totaling 441 acres in the Yaquina estuary; 16 NWI polygons totaling 51 acres in the Alsea estuary). The former tidal wetlands were identified to assist strategic planning for tidal wetland restoration. Cowardin classifications for the former tidal wetlands were not provided, because their current hydrology is complex due to dikes, tide gates, and drainage ditches. This project's scope did not include the field evaluation that would be needed to determine whether the former tidal wetlands are currently wetlands, and if so, their correct Cowardin classification. The prioritization site shapefiles contain 49 prioritization sites totaling 2,177 acres in the Yaquina estuary, and 39 prioritization sites totaling 1,045 acres in the Alsea estuary. The prioritization sites include both current and former (e.g., diked) tidal wetlands, and provide landscape units appropriate for basin-scale wetland restoration and conservation action planning. Several new prioritization sites (not included in the 1999 prioritization) were identified in each estuary, consisting of NWI polygons formerly classified as nontidal wetland or upland. The GIS products of this project improve the accuracy and utility of the NWI data, and provide useful tools for estuarine resource management.