

# THURSTON COUNTY SHORELINE MASTER PROGRAM UPDATE Inventory and Characterization Report

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Final Draft – June 30, 2013

## APPENDIX C: GIS DATA SOURCES

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The table within this Appendix outlines the GIS data that were utilized by reviewers during the Shoreline Analysis and Characterization process. The table contains three columns. The GIS data layer name column shows the name of the data layer. Columns two and three provide a description of the data layer as well as a reference for the data layer respectively. All of the information within these columns was obtained from the metadata attached to the data layers.

**Table 1.** GIS data sources for the Thurston County Shoreline Inventory and Characterization

| <b>GIS Data Layer Name</b> | <b>Description of Data Layer</b>  | <b>Reference for Data Layer</b>   |
|----------------------------|---|---|
| all_foragefish_data        | Forage Fish Data of Puget Sound shoreline for Thurston County, Washington. This data is compiled from surveys done by Washington Dept. of Fish and Wildlife between 1972 & 2004. Forage fish species include Sand Lance, Surf Smelt, Rock Sole & Herring. | Thurston County Regional Planning Council   |
| allmines                   | This data shows all known mines in Thurston County. The data was created on 09/15/1999.   | Thurston GeoData Center   |
| alluga                     | Thurston County Urban Growth Areas, Washington.   | Thurston GeoData Center   |
| anadpres                   | Anadromous Fish Presence, 07012002.   | WDFW  |
| anadrear                   | Anadromous Fish Rearing Areas, 07012002.  | WDFW  |
| anadspwn                   | Anadromous Spawning Areas, 07012002.  | WDFW  |
| barriers                   | Anadromous Fish Barriers, 07012002.   | WDFW  |
| basins                     | Thurston County Basins, Washington.   | Thurston GeoData Center; Stormwater Department; Thurston County Current Planning (1993) |

| <b>GIS Data Layer Name</b> | <b>Description of Data Layer</b>   | <b>Reference for Data Layer</b>  |
|----------------------------|--|--|
| bldg_ft_prn                | Dataset is a polygonal representation of structures within Thurston County.                                    | Thurston GeoData Center, and David C. Smith & Associates, Inc. (31 Jan 2003) |
| bridges                    | Bridges in Thurston County, Washington.  | Thurston County GeoData Center (1999)  |
| bulkheads                  | Marine bulkheads of Thurston County, Washington.   | Thurston Regional Planning Council   |
| BT_FCH_Streams_2010        | Bull Trout Federal Critical Habitat Areas  | USFWS  |
| BT_FCH_Lakes_2010          | Bull Trout Federal Critical Habitat Areas  | USFWS  |
| bulkhead_areas             | Estimated area of Thurston County beaches covered by bulkheads identified from aerial and oblique photographs. | Herrera Environmental Consultants, Bulkhead Areas (January, 2004)            |
| bullchar                   | WDFW Bull Trout/Dolly Varden Presence, Spawning and Rearing Areas. 07012002.                                   | WDFW   |
| Ckpug_chf1                 | Puget Sound Chinook Critical Habitat   | USFWS  |
| Ckpug_hab1                 | Puget Sound Chinook Habitat Areas  | USFWS  |
| Ckpug_nchf1                | Puget Sound Chinook Nearshore Critical HabitatAreas  | USFWS  |
| cities                     | Thurston County city boundaries.   | Thurston County Boundary Review Board and Thurston GeoData Center            |

| <b>GIS Data Layer Name</b> | <b>Description of Data Layer</b>   | <b>Reference for Data Layer</b>  |
|----------------------------|--|--|
| coastal_unstable_slps      | Unstable slopes as identified within the Coastal Zone Atlas.   | Washington State Department of Ecology, Shorelands and Coastal Zone Management Program (2004)              |
| contours                   | Two Foot Contours of Thurston County. This dataset was developed as part of the county's aerial program. It is comprised of black and white photography from a flight flown in June of 1996. | Thurston County Survey Office, Thurston GeoData Center, David Smith & Associates                           |
| cotrail                    | County Rails to Trails.  | Thurston GeoData Center and Thurston County Parks Department (M. Welter), (2000), Trails (Rails to Trails) |
| csites                     | Contamination sites in Thurston County, Washington.  | Thurston County Environmental Health Department  |
| culverts                   | GPS location of all culverts in the County.  | Thurston County Roads and Transportation   |
| damage96                   | Flood damage location points from 1996.  | Thurston GeoData Center  |
| drift                      | Drift cells  | Coastal Zone Atlas   |
| fch_61fr26256_brm_2009     | Marbled Murrelet Federal Critical Habitat  | USFWS  |
| Fch_73fr47326_stic_2009    | Northern Spotted Owl Federal Critical Habitat  | USFWS  |
| femapnls                   | Thurston County, Washington FEMA panels.   | FEMA   |

| <b>GIS Data Layer Name</b> | <b>Description of Data Layer</b>  | <b>Reference for Data Layer</b>         |
|----------------------------|---|---|
| flood96                    | Visible flooded areas in Thurston County during 1996 flood.   | Thurston GeoData Center                 |
| flood99                    | Contour based flood information for 1999 event.   | Thurston GeoData Center                 |
| floodway                   | Water Channel or Flood Zone determined by FEMA.   | FEMA and Thurston GeoData Center        |
| Floodway_buffer            | Water Channel or Flood Zone determined by FEMA. The Floodway must be contained within floodzone.  | FEMA and Thurston GeoData Center (1992) |
| Floodway_optional          | Water Channel or Flood Zone determined by FEMA.   | FEMA and Thurston GeoData Center (1992) |
| floodzns                   | Flood Zones (FEMA 100 & 500 yr).  | FEMA                                    |
| govtland                   | Government owned lands in Thurston County.  | Thurston County Assessors Office        |
| hazslide                   | Thurston County, Washington landslide hazards/soils.  | Thurston GeoData Center                 |
| hazslope                   | Thurston County Hazardous Slopes, Washington.   | Thurston GeoData Center                 |
| herring                    | WDFW Herring Pre-Spawn Holding Areas and Spawning Grounds.  | WDFW                                    |
| hgw                        | High water and 300 foot buffers.  | Thurston GeoData Center                 |
| hydric                     | This coverage provides the county with the hydric soils data of the USDA.   | Thurston GeoData Center, SCS, and DNR   |
| hydro                      | The hydro data are a representation of the Thurston County's hydro network. It includes all water bodies: rivers, lakes, ponds, inlets. | Thurston GeoData Center                 |

| <b>GIS Data Layer Name</b> | <b>Description of Data Layer</b>  | <b>Reference for Data Layer</b>                              |
|----------------------------|---|--|
| SMP_Jurisdiction_2013      | Proposed Thurston County Shoreline Jurisdiction.  | Thurston County Planning Department                          |
| landfills                  | Landfills located in Thurston County, Washington.   | Thurston GeoData Center                                      |
| landslides                 | Landslides on marine shorelines in Thurston County  | WDNR   |
| Landslide_Erode            | Areas along Thurston County's shoreline that are eroding or have had landslides and associated information. | Herrera Environmental Consultants (January 2004)             |
| Land11_ResDev              | Future Development Potential in Thurston County   | Thurston Regional Planning Council. 2011.                    |
| launches                   | WDFW Boat Launches.   | Washington Department of Fish and Wildlife                   |
| lha                        | Thurston County Local Habitat Assessment  | WDFW, Habitat Program, 2008 (Draft)                          |
| military                   | Fort Lewis encompassing Thurston and Pierce Counties.   | Thurston GeoData Center                                      |
| mineral                    | Thurston County mines – 1997.   | Thurston County Current Planning and Thurston GeoData Center |
| nitpoly                    | Thurston County high nitrate area.  | Thurston County Environmental Health Department              |
| oakhabit                   | Oak Habitat (dominant, conifer mixed, conifer deciduous).   | Washington Department of Natural Resources                   |
| NWP48_Parcels              | Parcels with a NWP48 in Thurston County as of April 1, 2010.  | Washington Department of Ecology (April, 2010)               |

| <b>GIS Data Layer Name</b> | <b>Description of Data Layer</b>   | <b>Reference for Data Layer</b>  |
|----------------------------|--|--|
| parcels                    | Parcels of Thurston County, Washington.  | Thurston County Assessor's Office; Thurston County Survey Office; Thurston GeoData Center; Submissions by Property Owners or their Representatives, unknown, parcels |
| parkpnts                   | County Park Locations.   | Thurston GeoData Center (February 2000)  |
| parks                      | Thurston County Parks.   | Thurston GeoData Center, County and City Parks Department  |
| pcdcul                     | This coverage contains the Pierce Conservation District (PCD) Fish Passage Inventory Project site locations. PCD completed an inventory of culverts (and some small dams, fishways and natural barriers) in the Nisqually Watershed in 2002. | Pierce Conservation District (August 19, 2005)   |
| phsfish                    | PHS designated Resident and Anadromous Fish, 07012002.   | WDFW   |
| Pocketestuaries            | Pocket Estuaries   | Ecology  |
| Preservation_sites         | Specific sites with unique habitat-related characteristics that should be preserved or restored.   | Herrera Environmental Consultants (2004)   |
| Prioritization             | Reaches along the Thurston County shoreline that meet specific preservation or restoration criteria derived in this study. Reaches were designated high priority when the majority of the criteria were met.                                 | Herrera Environmental Consultants (2004)   |

| <b>GIS Data Layer Name</b> | <b>Description of Data Layer</b>  | <b>Reference for Data Layer</b>                           |
|----------------------------|---|---|
| Reach_Breaks_Lakes         | Lake reach breaks for SMP update.   | Thurston County Planning Department                       |
| Reach_Breaks_Marine        | Marine reach breaks for SMP update.   | Thurston County Planning Department                       |
| Reach_Breaks_Streams       | Stream reach breaks for SMP update.   | Thurston County Planning Department                       |
| roads                      | The road data are a representation of the Thurston County's ground transportation network. It includes the majority of the roads that serve four or more commercial or residential sites. | Thurston GeoData Center                                   |
| rocksole                   | Rock sole Spawning Areas.   | WDFW  |
| sandlance                  | Sand lance Spawning Areas.  | WDFW  |
| sasi                       | Anadromous fish species.  | WDFW  |
| seabirds                   | WDFW Seabird Colonies.  | WDFW  |
| sen_area                   | WDFW Priority Species (Sensitive Areas).  | WDFW  |
| sen_site                   | WDFW Priority Species (Sensitive Sites).  | WDFW  |
| shell                      | WDFW Shellfish Spawning, Rearing, and Harvesting Areas.   | WDFW  |
| shoremp                    | Current Shoreline Master Plan designation.  | Thurston County Current Planning; Thurston GeoData Center |
| skook_culv                 | Lewis County Conservation District's Skookumchuck Culverts Data.  | Lewis County Conservation District (2002)                 |

| <b>GIS Data Layer Name</b> | <b>Description of Data Layer</b>  | <b>Reference for Data Layer</b>   |
|----------------------------|---|---|
| smelt                      | WDFW Smelt Spawning Areas.  | WDFW  |
| soils                      | This coverage provides the county with the soil classification data of the USDA.  | Thurston GeoData Center, SCS, and DNR                                       |
| solidwaste                 | Solid Waste stations.   | Thurston GeoData Center   |
| streams                    | The hydro data are a representation of the Thurston County's hydro network. It includes all water bodies: rivers, lakes, ponds, inlets.   | Thurston GeoData Center (2003)  |
| thur_p2006                 | Thurston County, 2006 Aerials. Used to create the docks data layer.   | Thurston GeoData Center   |
| Thurston_p2012             | Thurston County, 2012 Aerials.  | Thurston GeoData Center   |
| Thurston_Shoreline_Geology | Polygon shapefile of surficial geology along the Thurston County shoreline digitized from the Coastal Zone Atlas of Washington published by the Washington State Department of Ecology in 1980. | Herrera Environmental Consultants (2004)                                    |
| utility                    | Utilities (Gas, Fiber Optics, and Power Transmission Lines).  | Thurston GeoData Center   |
| WA_ShoreZone_Inventory.mxd | ShoreZone Inventory Map Document  | WDNR  |
| wetlands                   | This dataset was created as a composite of the wetland delineations identified by the Thurston Regional Planning Council (TRPC) staff and the National Wetlands Inventory data.                 | Thurston Regional Planning Council and NWI, and the Thurston GeoData Center |
| wildculv                   | Thurston County Department of Fish and Wildlife fish passage culverts.  | WDFW  |

| <b>GIS Data Layer Name</b> | <b>Description of Data Layer</b>                            | <b>Reference for Data Layer</b>   |
|----------------------------|---|---|
| wqgauges                   | Thurston County water quality gauging stations locations.   | Thurston County Stormwater Department   |
| wria                       | Thurston County water resource inventory areas.             | Washington State Department of Ecology  |
| wria13_culverts            | Culverts located within WRIA 13.                            | South Puget Sound Salmon Enhancement Group and WDFW Data  |
| wria14_culvert             | Culverts located within WRIA 14.                            | South Puget Sound Salmon Enhancement Group  |
| zoning                     | Thurston County Zoning (Co, UGA, Lacey, Tumwater, Olympia). | Thurston County Current Planning (F. Knostman) and Thurston GeoData Center (KLB), (November 2002) |

**Table 2. GIS Data Layers used for Physical Features Review**

| <b>GIS Data Layer Name</b>                                   | <b>Description of Data Layer</b>                                     | <b>Reference for Data Layer</b>   |
|--|--|---|
| Aerials  | Thurston County, 2006 Aerials  | Thurston GeoData Center   |
| allgsa   | Geologically Sensitive Areas   | Thurston GeoData Center   |
| landslides   | Past landslides mapped on marine shorelines in Thurston County.      | Thurston County marine shore landslide mapping. 2009. WA Department of Natural Resources.   |
| Driftcell  | Net Shore-Drift in Washington State                                  | Washington State Department of Ecology, Shorelands and Environmental Assistance Program (SEA). Shapefile created in 2004. Data collected in 1975. |
| Floodzns   | Flood Zones (FEMA 100 & 500 yr). FEMA 100 is the 100-year floodplain | Thurston GeoData Center   |
| Geology  | Bedrock age and Lithology  | Washington State Department of Natural Resources. 1-100,000-Scale Digital Geology of Washington State. 2003.                                      |
| Hazslide<br>*For reach analysis, noted only in the narrative | Thurston County, WA landslide hazards/soils.                         | Thurston GeoData Center   |
| Hazslope<br>*For reach analysis, noted only in the narrative | Thurston County Hazardous Slopes, WA.                                | Thurston GeoData Center   |
| hotpoly  | Limited Groundwater Concern  | Thurston GeoData Center   |
| Jurisdiction_21Apr09_Final<br>3                              | Proposed Thurston County Shoreline Jurisdiction                      | Thurston County Planning Department   |
| pocket_estuaries   | Pocket Estuaries   | Viewed on WA Dept. of Ecology Coastal Atlas. Data from the Puget Sound Action Team (PSAT), 2002.  |

| GIS Data Layer Name                               | Description of Data Layer   | Reference for Data Layer  |
|---|---|---|
| Potential_CMZ                                     | Potential Channel Migration Zones. This shapefile was created for the 2009-2010 Thurston County SMP update. It is meant to inform where more detailed analysis and surveying should take place to identify actual channel migration zones. This data layer is based on the FEMA 100-year floodplain. The aerial extent of the FEMA 100-year floodplain was modified in locations where the mapped floodplain was identified as not matching physical stream channels by visual analysis of DEMs and 2009 aerial photos. This dataset is not intended to delineate all possible channel migration zones, only to serve as a guide for further investigation. | Thurston County Planning Department   |
| Segments_spft                                     | Salmon and Steelhead Habitat Inventory and Assessment (SSHIAP) - Salmonscape Stream Attributes. Stream gradient, confinement, and habitat.  | Washington State Department of Fish and Wildlife and the Northwest Indian Fisheries Commission.                   |
| Slope_DEM_25ft<br>*Noted only in the reach matrix | Steep slopes. Re-sampled to 25 ft cell size based on Thurston County CAO rise over run distance for slope calculation. Steep slopes were marked as "yes" if a single cell of 40% or greater slope was present anywhere within the SMP jurisdiction within that reach. The Thurston County Critical Areas Ordinance defines slopes greater than 40% to be steep slopes.  | PSLC 2002 - Bare Earth LiDAR DEM. Puget Sound LiDAR Consortium. 2002. LiDAR originally sampled at 6 ft cell size. |

| <b>GIS Data Layer Name</b>   | <b>Description of Data Layer</b>  | <b>Reference for Data Layer</b>   |
|--|---|---|
| Slope_DEM_25ft<br>*Noted only in the reach matrix  | Potential landslide area. Re-sampled to 25 ft cell size based on Thurston County CAO rise over run distance for slope calculation. Potential landslide areas were marked “yes” if a single cell of 15% or greater slope was present anywhere within the SMP jurisdiction within that reach based on Thurston County’s CAO definition of potential landslide hazard areas. | PSLC 2002 - Bare Earth LiDAR DEM. Puget Sound LiDAR Consortium. 2002. LiDAR originally sampled at 6 ft cell size.   |
| slopestab  | Shoreline Slope Stability.  | Washington State Department of Ecology, Shorelands and Coastal Zone Management Program. Shapefile created in 2004. Data collected in 1975.  |
| Soils  | Hydric soils and soil names   | U.S. Department of Agriculture, Natural Resources Conservation Service, Soil Survey Geographic (SSURGO) database for Thurston County, WA. 2006. The Hydric soils layer was created for the SMP update by selecting all soil names listed in the TC CAO as Hydric soils. |
| Streams  | Streams   | Thurston GeoData Center   |
| swater   | High Groundwater Hazard   | Thurston GeoData Center   |
| szline   | Summarizes shoreline characteristics based on sediment type and slope. British Columbia (BC) ‘coastal class’ or ‘shoreline type’  | Washington State ShoreZone Inventory linear unit features. Nearshore Habitat Program, Washington State Department of Natural Resources, Aquatic Resources Division. 2001.   |
| Volcanic Lahar Hazard Areas * Described only in the narrative. Not listed in the reach matrix. | Volcanic Lahar Hazard Areas defined under the Thurston County Critical Areas Ordinance  | Thurston GeoData Center   |
| Wetlands   | Wetlands  | Thurston GeoData Center   |
| WRIA   | Thurston County water resource inventory areas.   | Thurston County Geodata Center  |

**Table 3. GIS Data Layers used for Public Access Review**

| <b>GIS Data Layer File Name</b> | <b>Description of Data Layer</b>  | <b>Reference for Data Layer</b>  |
|---------------------------------|---|--|
| Aerials                         | Thurston County, 2006 Aerials   | Thurston GeoData Center  |
| Basins                          | Thurston County Basins, WA.   | Thurston GeoData Center; Stormwater Department; Thurston County Current Planning, (1993) |
| bridges                         | Bridges in Thurston County, WA, USA.  | Thurston GeoData Center , 1999   |
| Cotrail                         | County Rails to Trails.   | Thurston GeoData Center and Thurston County Parks Department (M. Welter), 2000           |
| govtland                        | Government owned lands in Thurston County   | Thurston County Assessor's Office  |
| Jurisdiction_Final              | Proposed Thurston County Shoreline Jurisdiction   | Thurston County Strategic Planning Department  |
| launches                        | WDFW Boat Launches  | Washington State Department of Fish and Wildlife   |
| military                        | Fort Lewis encompassing Thurston and Pierce Counties  | Thurston GeoData Center  |
| parkpnts                        | County Park Locations   | Thurston GeoData Center, February 2000   |
| Parks                           | Thurston County Parks   | Thurston GeoData Center, County and City Parks Department                                |
| Roads                           | The road data are a representation of the Thurston County's ground transportation network. It includes the majority of the roads that serve four or more commercial or residential sites. | Thurston GeoData Center  |
| Shore_pub_ac_Thurston           | Shoreline public access for marine shorelines   | Washington State Department of Ecology   |
| WRIA                            | Thurston County water resource inventory areas.   | Washington State Department of Ecology   |

**Table 1.** GIS Data Layers used for Priority Habitats/Critical Area review

| GIS Data Layer Name         | Description of Data Layer   | Reference for Data Layer   |
|-----------------------------|---|--|
| Aerials                     | Thurston County, 2006 Aerials   | Thurston Geodata Center  |
| All_foragefish_data         | Forage Fish Data of Puget Sound shoreline for Thurston County, Washington. This data is compiled from surveys done by Washington Dept. of Fish and Wildlife between 1972 & 2004. Forage fish species include Sand Lance, Surf Smelt, Rocksole & Herring | Thurston County Regional Planning Council  |
| anadpres                    | Anadromous Fish Presence, 07012002  | WDFW   |
| anadrear                    | Anadromous Fish Rearing Areas, 07012002   | WDFW   |
| anadspwn                    | Anadromous Spawning Areas, 07012002   | WDFW   |
| barriers                    | Anadromous Fish Barriers, 07012002  | WDFW   |
| Basins                      | Thurston County Basins, WA.   | Thurston GeoData Center; Stormwater Department; Thurston County Current Planning, (1993)     |
| bullchar                    | WDFW Bull Trout/Dolly Varden Presence, Spawning and Rearing Areas. 07012002   | WDFW   |
| coastal_unstable_slps       | Unstable slopes as identified within the Coastal Zone Atlas   | Washington State Department of Ecology, Shorelands and Coastal Zone Management Program, 2004 |
| Contours                    | Two Foot Contours of Thurston County, Washington used for shaded relief map. This dataset was developed as part of the county's aerial program. It is comprised of black and white photography from a flight flown in June of 1996.                     | Thurston County Survey Office, Thurston GeoData Center, David Smith & Associates             |
| floodzns                    | Flood Zones (FEMA 100 & 500 yr).  | FEMA   |
| Hazslide                    | Thurston County, WA landslide hazards/soils.  | Thurston GeoData Center  |
| Hazslope                    | Thurston County Hazardous Slopes, WA.   | Thurston GeoData Center  |
| herring                     | WDFW Herring Pre-Spawn Holding Areas and Spawning Grounds.  | Washington State Department of Fish and Wildlife   |
| Hgw                         | High water and 300 foot buffers   | Thurston GeoData Center  |
| hydric                      | This coverage provides the county with the hydric soils data of the USDA.   | Thurston GeoData Center, SCS, and DNR  |
| hydro                       | The hydro data are a representation of the Thurston County's hydro network. It includes all water bodies: rivers, lakes, ponds, inlets.   | Thurston GeoData Center  |
| Jurisdiction_21Apr09_Final3 | Proposed Thurston County Shoreline Jurisdiction   | Thurston County Strategic Planning Department  |
| landslide_Erode             | Areas along Thurston County's shoreline that are eroding or have had landslides and associated information.   | No data reference available  |
| oakhabit                    | Oak Habitat (includes the following designations: dominant, conifer mixed, conifer deciduous)   | Thurston GeoData Center, Thurston Regional Planning Council                                  |

| GIS Data Layer Name        | Description of Data Layer   | Reference for Data Layer  |
|----------------------------|---|---|
| phsfish                    | PHS designated Resident and Anadromous Fish, 07012002   | WDFW  |
| rocksole                   | Rock sole Spawning Areas  | WDFW  |
| sandlance                  | Sand lance Spawning Areas   | WDFW  |
| sasi                       | Anadromous fish species   | WDFW  |
| seabirds                   | WDFW Seabird Colonies   | WDFW  |
| sen_area                   | WDFW Priority Species (Sensitive Areas)   | WDFW  |
| sen_site                   | WDFW Priority Species (Sensitive Sites)   | WDFW  |
| shell                      | WDFW Shellfish Spawning, Rearing, and Harvesting Areas.   | Washington State Department of Fish and Wildlife                                |
| smelt                      | WDFW Smelt Spawning Areas   | Washington State Department of Fish and Wildlife                                |
| soils                      | This coverage provides the county with the soil classification data of the USDA.  | Thurston GeoData Center, SCS, and DNR   |
| streams                    | The hydro data are a representation of the Thurston County's hydro network. It includes all water bodies: rivers, lakes, ponds, inlets.   | Thurston GeoData Center, 2003   |
| Thurston_Shoreline_Geology | Polygon shapefile of surficial geology along the Thurston County shoreline digitized from the Coastal Zone Atlas of Washington published by the Washington State Department of Ecology in 1980. | Herrera Environmental Consultants, 2004   |
| wetlands                   | This dataset was created as a composite of the wetland delineations identified by The Thurston Regional Planning Council (TRPC) staff and the National Wetlands Inventory data.                 | The Thurston Regional Planning Council and NWI, and The Thurston GeoData Center |
| WRIA                       | Thurston County water resource inventory areas.   | Washington State Department of Ecology  |

**Table 6.** GIS Data Layers used for Shoreline Modifications Review

| GIS Data Layer Name         | Description of Data Layer  | Reference for Data Layer   |
|-----------------------------|--|--|
| Aerials                     | Thurston County, 2006 Aerials  | Thurston Geodata Center  |
| allmines                    | This data shows all known mines in Thurston County. The data was created on 09/15/1999   | Thurston GeoData Center  |
| barriers                    | Anadromous Fish Barriers, 07012002   | WDFW   |
| Basins                      | Thurston County Basins, WA.  | Thurston GeoData Center; Stormwater Department; Thurston County Current Planning, (1993) |
| bridges                     | Bridges in Thurston County, WA, USA.   | Center, Thurston GeoData , 1999  |
| bulkheads                   | Marine bulkheads of Thurston County, Washington  | Thurston Regional Planning Council   |
| Csites                      | Contamination sites in Thurston County, WA   | Thurston County Environmental Health Dept.   |
| Culverts                    | GPS location of all culverts in the county   | Thurston County Roads and Transportation   |
| Damage96                    | Flood damage location points from 1996.  | Thurston GeoData Center  |
| Docks_2006                  | This layer contains the locations of docks, piers, boat ramps, and floating platforms on marine, lake, and river shorelines. Structures were identified and marked as points using the 2006 aerial imagery of Thurston County. | Thurston County Planning   |
| Flood96                     | Visible flooded areas in Thurston County during 1996 flood.  | Thurston GeoData Center  |
| Flood99                     | Contour based flood information for 1999 event.  | Thurston GeoData Center  |
| floodzns                    | Flood Zones (FEMA 100 & 500 yr).   | FEMA   |
| Hazslide                    | Thurston County, WA landslide hazards/soils.   | Thurston GeoData Center  |
| Hazslope                    | Thurston County Hazardous Slopes, WA.  | Thurston GeoData Center  |
| Hgw                         | High water and 300 foot buffers  | Thurston GeoData Center  |
| Jurisdiction_21Apr09_Final3 | Proposed Thurston County Shoreline Jurisdiction  | Thurston County Strategic Planning Department  |
| landfills                   | Landfills located in Thurston County, WA, USA  | Thurston GeoData Center  |
| landslide_Erode             | Areas along Thurston County's shoreline that are eroding or have had landslides and associated information.  | No data reference available  |
| mineral                     | Thurston County mines - 1997   | Thurston County Current Planning and Thurston GeoData Center                             |
| NWP48_Parcels               | Parcels with a NWP48 in Thurston County as of April 1, 2010.   | Washington Department of Ecology (April, 2010)   |

| <b>GIS Data Layer Name</b> | <b>Description of Data Layer</b>   | <b>Reference for Data Layer</b>                     |
|----------------------------|--|---|
| pcdcul                     | This coverage contains the Pierce Conservation District (PCD) Fish Passage Inventory Project site locations. PCD completed an inventory of culverts (and some small dams, fishways and natural barriers) in the Nisqually Watershed in 2002. | Pierce Conservation District, August 19, 2005       |
| roads                      | The road data are a representation of the Thurston County's ground transportation network. It includes the majority of the roads that serve four or more commercial or residential sites.  | Thurston GeoData Center                             |
| skook_culv                 | Lewis County Conservation District's Skookumchuck Culverts Data.   | Lewis County Conservation District 2002             |
| utility                    | Utilities (Gas, Fiber Optics, and Power Transmission Lines).   | Thurston GeoData Center                             |
| wildculv                   | Thurston County Department of Fish and Wildlife fish passage culverts.   | Washington State Department of Fish and Wildlife    |
| wqgauges                   | Thurston County water quality gauging stations locations.  | Thurston County Stormwater Department               |
| WRIA                       | Thurston County water resource inventory areas.  | Washington State Department of Ecology              |
| wria13_culverts            | Culverts located within WRIA 13  | South Puget Sound Salmon Enhancement Group          |
| wria14_culvert             | Culverts located within WRIA 14  | South Puget Sound Salmon Enhancement Group and WDFW |
| 303d_list_County.shp       | Ecology 303d list for Thurston County  | Washington Department of Ecology, 2008              |