

SHSTMP_PS_Floodplain_2016.shp data dictionary

This layer was developed by NOAA Fisheries to delineate geomorphic floodplain boundaries of major rivers within the Puget Sound region to be used as part of salmon and steelhead monitoring effort by Salmon Habitat Status and Trend Monitoring Program (SHSTMP). This layer represents the geomorphic floodplain, which is the relatively level surface extending laterally from the edge of the bankfull channel. Floodplain boundaries were manually digitized from lidar where possible. This allowed the exclusion of low terraces that hold little potential for development of salmon habitat (often 5 m or more above the channel elevation). Where there was no lidar coverage, floodplain boundaries were based on the National Elevation Data 10-m digital elevation model and 0.5-meter resolution true-color Google satellite and aerial imagery, collected from May 5, 2013 to August 17, 2016.

Within each river, floodplain extent was restricted to habitat upstream of delta boundaries and included all river reaches with drainages greater than 50 square kilometers, which typically have a bankfull width of 15-20 meters. Because this floodplain layer was used in salmon and steelhead habitat monitoring effort, reaches that were above natural salmon migration barriers and therefore not accessible to salmon or steelhead, were excluded. Reach breaks were created where apparent changes in geomorphic valley type were observed.

In several areas we limited floodplain extent to streams larger than 15 m in bankfull width because it was difficult to measure their habitat features from aerial imagery. Within Samish river, up to river km 13.3, we restricted floodplain extent to 1-kilometer buffer from the edge of bankfull channel, as it was difficult to place salmon habitat boundary in that section

| Field Name | Description | Units |
|------------|---|-------|
| Reach_ID | Unique reach identifier | |
| VT | Geomorphic valley type (Collins and Montgomery, 2011): GL – glacial valleys PGL – post-glacial valleys C – canyons MTN – mountain valleys | |
| LC | Dominant land cover developed using C-CAP 2010 data (NOAA, 2014) and aggregated into classes using methods described in Beechie et al. 2017: F – forest/wetland Ag – agriculture D – developed | |
| Ck_MPG | Puget Sound Chinook salmon major population groups (NMFS, 2007): | |

| | | |
|---------|--|----------|
| | Central/South Basin Hood Canal Strait of Georgia Strait of Juan de Fuca Whidbey Basin | |
| Stl_MPG | Puget Sound steelhead salmon major population groups (NMFS, 2011): Northern Cascades Olympic South-Central Cascades | |
| Area_ha | Polygon area | hectares |

References

- Beechie, T. J., O. Stefankiv, B. Timpane-Padgham, J. E. Hall, G. R. Pess, M. Rowse, M. Liermann, K. Fresh, and M. J. Ford. 2017. Monitoring Salmon Habitat Status and Trends in Puget Sound: Development of Sample Designs, Monitoring Metrics, and Sampling Protocols for Large River, Floodplain, Delta, and Nearshore Environments. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-NWFSC-137. <https://doi.org/10.7289/V5/TM-NWFSC-137>.
- Collins, B. D., and D. R. Montgomery. 2011. The legacy of Pleistocene glaciation and the organization of lowland alluvial process domains in the Puget Sound region. *Geomorphology* 126(1):174-185.
- NMFS (National Marine Fisheries Service). 2007. Puget Sound Salmon Recovery Plan, volume 1. Shared Strategy for Puget Sound, Seattle.
- NMFS (National Marine Fisheries Service). 2011. 5-Year Review: Summary & Evaluation of Puget Sound Chinook, Hood Canal Summer Chum, Puget Sound Steelhead. NMFS Northwest Region, Portland, Oregon.
- NOAA Coastal Services Center. 2014. Oregon and Washington 2010 Coastal Change Analysis Program Accuracy Assessment. Available: coast.noaa.gov/data/digitalcoast/pdf/ccap-assessment-oregon-washington.pdf. (August 2016).