

# Floodplains

## Floodplain area and function

### Progress Toward the 2020 Target

- Restore, or have projects underway to restore, 15 percent of degraded Puget Sound floodplain area.
- Have no net loss of floodplain function in any watershed.



No Data

### Is There Progress Toward the 2020 Target?

The analysis of progress toward the 2020 target is pending until the characterization of floodplains and the definitions of what "to restore" mean are completed. A working group comprised of floodplain experts is developing definitions and data for this target, which will be available in late 2013.

The Puget Sound Partnership Leadership Council established a target for recovery of the ecological connectivity and condition of 15 percent of the degraded floodplains in our region by 2020. Because floodplains support a

variety of functions and are impacted by human uses in different ways (e.g., disconnected from a river, converted to farms, pavement, and buildings) that affects functions, the floodplain recovery target does not translate simply into a single number for restoration. As a result, it may be necessary to consider targets for individual functions to recover the two key ecological attributes of floodplains: connectivity and condition. The current status of floodplain condition and connectivity are currently being assessed as part of the "Floodplains by Design" project, a collaboration between the Puget Sound Partnership and other

agencies and organizations, to provide a basis for calculating the extent of action needed to achieve the floodplain recovery target.

There are about 2,500 square kilometers of valley bottom where floodplains could occur along the 17 major rivers in the Puget Sound basin. The widest valleys with the largest floodplains are in the eastern lowlands between Puget Sound and the Cascade Range where glaciers carved troughs that were subsequently filled with glacial and alluvial (river) sediments.

Not all of the valley bottom would have functioned as floodplains at any single point in time. Based on topographic analyses, there are about 1,500 square kilometers of valley bottom along the 17 major rivers that could be inundated periodically (about every decade) and, thus, represents one measure of potential floodplain area. The remaining 1,000 square kilometers of valley bottom is either too high or otherwise isolated from smaller flood events.

Preliminary analysis is beginning to indicate the extent of degradation of floodplain connectivity and condition across Puget Sound. About 950 square kilometers of the potential floodplain area has no roads or levees separating it from a river. It is likely that much of the other 550 square kilometers floodplain area is “disconnected,” meaning that floodwater is not able to flow freely into and out of these areas because of roads or levees.

Currently about 75 square kilometers of the potential floodplain area has medium to high levels of urban development, which makes recovery of many ecological functions costly and more challenging due to the extent of the disturbance. Medium and high development areas are based on NOAA Coastal Change Analysis Program (C-CAP) data, which classified Landsat imagery from 2006. High development area contains little or no vegetation. This subclass includes heavily built-up urban centers as well as large constructed surfaces in suburban and rural areas. Large buildings (such as multiple family housing, hangars, and large barns), interstate highways, and runways typically fall into this subclass. Medium development area contains substantial amounts of constructed surface mixed with substantial amounts of vegetated surface. Small buildings (such as single family housing, farm outbuildings, and large sheds), typically fall into this subclass. Impervious surfaces account for 50-79 percent of the total cover.

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**For more in-depth information,  
please see:**  
[www.psp.wa.gov/vitalsigns/flood\\_plains.  
php](http://www.psp.wa.gov/vitalsigns/flood_plains.php)