

## Key to Level-1 Wetland/ Riparian Hydrogeomorphic (HGM) subclasses of Oregon

This information comes from the Guidebook for Hydrogeomorphic (HGM)-based Assessment of Oregon Wetland and Riparian Sites: *Statewide Classification and Profiles*. Some sites, especially altered sites, may not fit the descriptions in the key below and consulting the statewide guidebook will be necessary: <https://www.oregon.gov/dsl/wetlands-waters/Documents/HGMGuide.pdf>

Note: Frequently, areas belonging to one HGM subclass will be situated within or adjacent to an area belonging to another HGM subclass. Normally, each area should be assessed separately. However, for practical purposes the areas may be combined into one site (assessment unit) if the smaller of the two areas comprises less than 20% of their total combined acreage. An example is a perennial channel (Riverine Flow-through subclass) that bisects an ash swale (Slope subclass) and which, even including the channel's 2-year floodplain, occupies less than 20% of their combined acreage. In this example, for most purposes the entire site should be classified as Slope.

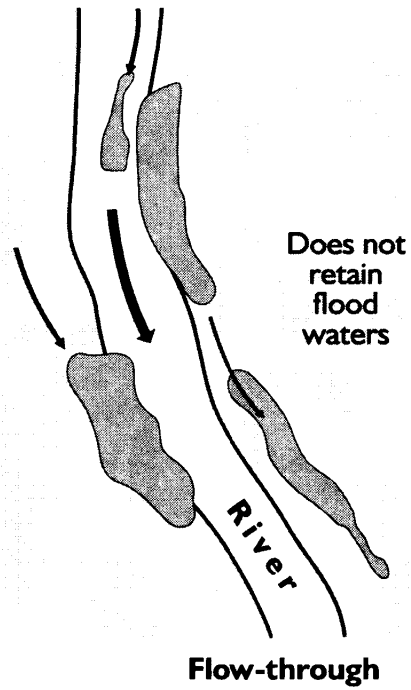
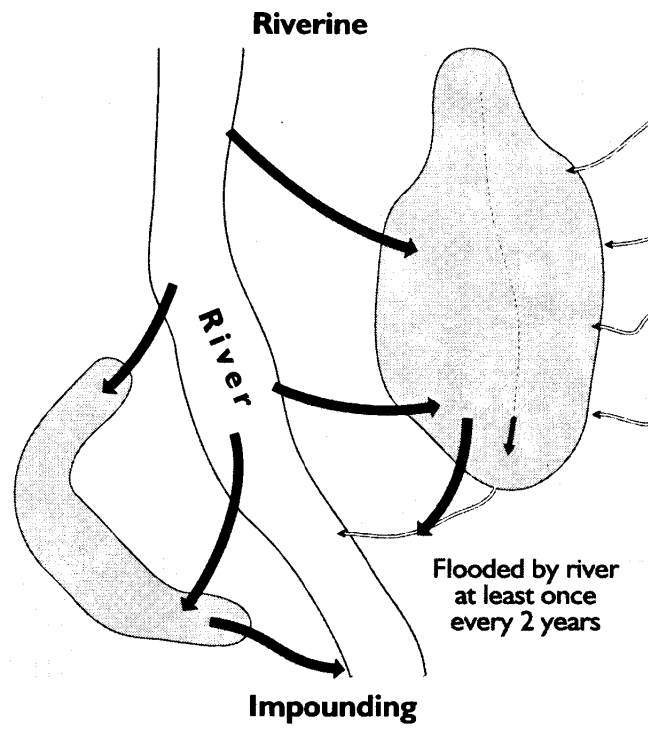
1. Water levels visibly controlled by daily tidal cycles. Note that salinity is not considered in this determination.  
YES: Estuarine class, go to 2 (Note that salinity is not considered in this determination).  
NO: Go to 3
2. Water levels not visibly affected by 24-hour storm runoff events; usually fringes a bay; salinity always brackish or saline.  
YES: Estuarine Fringe Embayment (EFB) subclass  
NO: Estuarine Fringe Riverine (EFR) subclass
3. Closely associated with a channel or floodplain. Upland wetted edge of site expands at least once every other year (biennial flood) primarily as a result of overbank flow, channel inflow, or pumped water from a nearby and/or connected or bisecting channel. Includes active(2-yr) floodplain wetlands, sloughs, and riparian areas. On NWI maps, includes many sites labeled R or PUB, PEM, PSS, or PFO with -A, -C, -F, or -H water regime codes appended, and others.  
YES: **Riverine** class, Go to 4  
NO: Go to 5
4. Water throughout most of site flows visibly during most of wet season. The site may be a channel, an island in a channel, or border a channel or ditch. It should include any channel to the 2 m depth. It often bisects or is bordered by a wetland in another HGM subclass.  
YES: Riverine Flow-through (RFT) subclass, Figure 1  
Includes scoured floodplains with no seasonal ponding of floodwater, wetlands that comprise entire islands within channels, and some ditches and channels.  
NO: Riverine Impounding (RI) subclass, Figure 1  
Includes sloughs connected (seasonally or permanently) to main channels, channels dammed by beavers or humans (such wetlands may be broader at their downhill/ outlet side), wetlands sustained primarily by water diverted or pumped from offsite channels, river alcoves with seasonally stagnant conditions, and depressions or temporarily ponded areas within active biennial floodplains.
5. Consists mostly of permanent or seasonal standing water with pH>8. Situated in a depression or lake basin without an outlet channel. Includes areas that are shallower than 2 m during annual maximum inundation.  
YES: Depressional Alkaline (DA) subclass  
NO: Go to 6

6. Located on margin of or within a lake, i.e., a body of permanent standing water that is deeper than 2 m over an area of >8 hectares (20 acres).  
On NWI maps, includes most sites labeled “L” and others with –A, -C, -F, or –H water regime codes that border an L site.  
YES: **Lacustrine Fringe** class, go to 7  
NO: Go to 8
7. Located in headwater position (i.e., closer to a region’s major drainage divides than to lowlands in the region) and usually higher than the mean elevation of the region<sup>1</sup>.  
YES: **Lacustrine Fringe Headwater (LFH)** subclass  
NO: **Lacustrine Fringe Valley (LFV)** subclass
8. Consists of >10% cover of Sphagnum moss over an area of >0.25 acre, and has a mean annual water pH of <5.5. Usually situated in a depression with little if any standing water.  
YES: **Depressional Bog (DB)** subclass  
NO: Go to 9
9. Lacks permanent inlet channel. Has a surface water outlet that connects to a permanent river or lake less than once every 2 years. Not located on a noticeable slope. Water level fluctuations are mainly in response to runoff and direct precipitation.  
YES: **Depressional Outflow (DO)** subclass  
NO: Go to 10
10. Located on, or near base of, a slope, but the slope may be barely perceptible. Inlet channel absent or very short. Outlet channel frequently present. Downhill-flowing sheet flow may be visible at land surface, especially during wet months. Downhill side of site sometimes partly blocked by berm or dam (natural or manmade). Fed by runoff and precipitation but with a proportionally large (compared with other wetlands) component of lateral subsurface flow or discharging groundwater. Soil moisture (and surface water, if present and shallow) tends to persist more into the summer than in other wetlands of similar size, depth, climate, and soil type. Ratio of wetland surface area to area of the apparently contributing watershed is relatively large. Includes springs, seeps, sites sustained in summer mainly by seepage (not runoff) from upslope irrigated fields, some sites with water impounded seasonally by push-up dams at their downhill side, and some ash swales.  
On NWI maps, includes many sites labeled PEM, PSS, or PFO with –B water regime codes, and less often with –A, -C, or –F codes.  
YES: Slope class, Go to 11  
NO: Go to 12.
11. Outlet channel is present (but may be small and partly dammed by beaver, roads, slides). Slope may be slight but is always noticeable. No inlet channel. Located in topographically high or intermediate positions such as stream heads, montane wet meadows, avalanche chutes. Usually closer to a region’s major drainage divides than to lowlands in the region, and usually higher than the average elevation of the region.  
YES: Slope Headwater (SH)  
NO: Slope Valley (SV)

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<sup>1</sup> Approximate mean elevations of regions (in ft.): Blue Mountains= 1351, Basin & Range= 1515, Columbia Basin= 539, Coast/Range= 256, East Cascades Slope= 1435, Klamath Mountains= 734, High Lava Plains= 1179, Owyhee Uplands= 1269, West Cascade Slope= 1037, Western Interior (Willamette) Valley= 191.

12. Fed mainly by direct precipitation, secondarily by lateral subsurface flow or surface runoff. Precipitation may be “ponded” at the site due to surrounding natural levees, ridge-swale topography, hummocks or constructed dikes; and/or due to soils with subsurface layers that strongly impede infiltration; and/or due to high water table due to subsurface seepage from nearby river, lake, or irrigated fields. Usually in a shallow (<2 ft.) basin situated on a broad flat terrace. Includes wet prairie, wet wooded flats, some fens and some ash swales. On NWI maps, includes many sites labeled PUS, PEM, PFO, or PSS with -A, -B, or -C water regime codes.  
YES: Flats class. No subclasses defined yet.  
Many are inundated only seasonally. Altered (diked) flats sites may function similar to depressional class sites, but their only significant water comes from runoff from dike surfaces and precipitation.  
NO: Depressional class, Go to 13  
Fed mainly by overland runoff (sheet flow) which enters from all 3 or 4 compass directions, and/or by stormwater pipes, drainage ditches. Usually in a deep (>2 ft.) basin, which may have been deepened by excavation. Usually is inundated permanently. Often in natural depressions in rolling or mountainous terrain. On NWI maps, includes many of the sites labeled PUB or PAB, some L, and a few others.
13. More than 0.25 acre of standing water remains in the basin during the driest season of most years.  
YES: Depressional Closed Permanent (DCP) subclass  
NO: Depressional Closed Nonpermanent (DCNP) subclass



**Figure 1. Riverine Impounding and Riverine Flow-through subclasses (from Hruby et al. 1999)**