CHAPTER 3

Determining SMA Jurisdiction Boundaries

*NOTE: The following guidelines are intended for use in the field and office as a reference. **These guidelines are not official rules or regulations except as specifically provided in the SMA and related rules and regulations cited herein.** Always look to the RCW and WACs first and then use these rules as guidance in applying the regulations on a specific site.*

Ordinary High Water Mark Determinations

The SMA defines the ordinary high water mark (OHWM) as "that **mark** that will be found by examining the bed and banks and ascertaining where the presence and action of waters are **so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation...**" [RCW 90.58.030(2)(b) and WAC 173-22-030(6)].

Determining the OHWM, as evidenced from the preceding language of the SMA, is not exclusively an engineering calculation or a precise scientific endeavor. Although based on empirical evidence as much as is practical, an OHWM determination is a result of a consideration of a variety of biological and hydrological factors, historical patterns, observations and measurements in order to carry out the intent of the SMA. The OHWM on any particular site is **not a static line or level**, such as a surveyed mean tide elevation but rather is **the dynamic edge** of the waterbody under legal jurisdiction of the Act. As such, the OHWM (i.e. the waterbody edge) may change over time due to natural events or as a result of permitted actions. Examples would include: a

river changing course over the years (natural), or a landfill or shoreline excavation for a large marina (manmade).

Determination of the OHWM is of key importance in not only delineating shoreline jurisdiction (200 feet measured from OHWM) but also in applying regulations and establishing setbacks which are usually measured from the OHWM. Many master programs have separate regulations for projects based on whether they are located "upland" (of the OHWM) or are "over/in-water" (waterward of the OHWM).

Special Tip

Tip: For the purposes of the following section, the term "wetland" shall be synonymous with "marsh, bog or swamp" per WAC 173-22-030 (5).

I. General Guidelines For All Water Bodies

A. **Clear Vegetation Mark** - Look for the uppermost clear mark on the bank with respect to vegetation. Often this is where permanent upland vegetation begins at the edge of bare soil. The mark may be defined by a combination of soil, elevation, or channel development.

"Here's where the vegetation changes."

B. **Wetland/Upland Edge** - Look for a clear wetland-upland edge if the wetland is continuous from the water's edge with respect to soils, vegetation, or hydraulic continuity.

C. **Combination Changes** - If a mark is not obvious, look for a change as evidenced by:

1. Change in vegetation as one moves in an upland direction;
2. Increase in land elevation;
3. Landward limit of drift deposition;
4. Soil surface changes from algae or sediment deposition areas to areas where the soils show no sign of depositional processes from the water;
5. Changes in soil profile from wetter or drier conditions (low chroma, high organic matter, lack of mottling) to drier conditions (higher chroma, less organic matter, brighter mottles). Use Munsell Soil Chart.

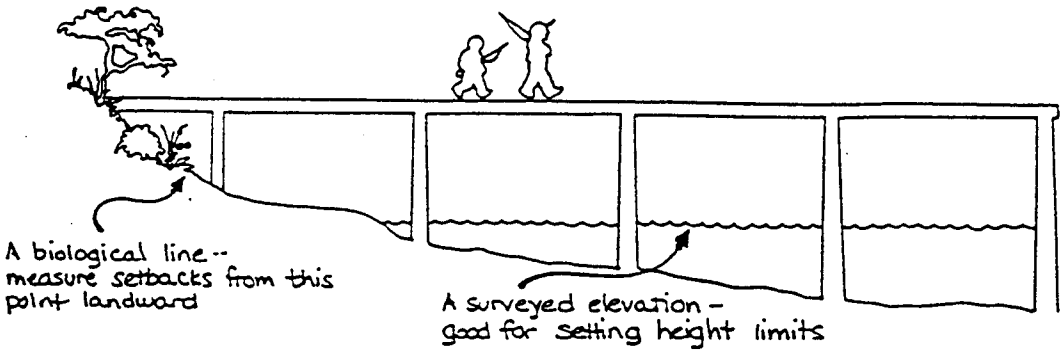
D. **Elevation** - Identify the elevation of the obvious mark and project where appropriate into areas where mark is unclear (such as where disturbance has occurred). Use either your eyes and estimate a level elevation or use a transit or pea level, or use the natural "level" of the water itself when it reaches the targeted benchmark during a high tide or event.

E. **Non-SMA ditches, streams, and pipes** entering SMA waters:

1. Project the OHWM elevation up the channel.
2. For pipes or culverts, project the OHWM elevation through the pipe or culvert if the OHWM elevation connects with another water body at that elevation. Otherwise, cut off OHWM at the downstream end of the pipe or culvert.
3. Tidegates and/or flapgates may complicate the determination and require special evaluation and analysis. Indirect water level influence may be enough to establish associated wetlands in some instances.

Special Tip

Tip: Remember that fresh water can be tidally influenced.



The ordinary high water mark (OHWM) should not be confused with other measures of elevation, water level or tides.

II. Additional Instructions

A. Rivers, Streams, and Creeks are defined as: A naturally occurring body of periodic or continuously flowing water contained within a channel (an open conduit either naturally or artificially created). Excluded are artificially created irrigation, return flow, or stockwatering channels [WAC 173-22-030(8)].

1. Use the general guidelines and,

2. Braided streams - the OHWM is found on the banks forming the outer limits of the depression within which the braiding occurs [WAC 173-22-030]. The outer limit is usually interpreted to mean the outermost channel which has been active within the last ten years. Also note that there may be "islands" of land not subject to inundation within these outer limits and having their own OHWM.

3. River Deltas - those lands formed as an aggradational feature by stratified clay, silt, sand and gravel deposited at the mouths of streams where they enter a quieter body of water. The upstream extent of a river delta is that limit where it no longer forms distributary channels [WAC 173-22-030(7)]. Excluded are lands which can reasonably be expected to be protected by governmental flood control devices [WAC 173-22-040(3)(d)].

4. Where the OHWM cannot be found, use the line of mean high water (WAC 173-22-030). Sometimes gauging station data is useful.

Special Tip

Tip: Use caution in evaluating undercutting or accretion areas that may be the result of abnormal events such as floods, landslides, etc.

B. Lakes - a body of standing water in a depression of land or expanded part of a river, **including reservoirs** (20 ac).

1. Use the **general guidelines** and,

2. If the mark is unclear in a reservoir, use the maximum pool elevation then add as appropriate for the effects of waves or other modifiers.

3. In the unlikely event that the OHWM CANNOT be found, use the line of mean high water [WAC 173-22-030 (6)(b)]. Sometimes gauging station data is useful.

C. Estuarine Area

1. Use the **general guidelines** and,

2. "The OHWM is coincident with the landward limit of salt tolerant vegetation where such is present." **"Salt tolerant vegetation"** means vegetation which is tolerant of interstitial soil salinities greater than or equal to 0.5 parts per thousand. See WAC 173-22-030(6)(a)(ii).

3. Tidal systems often have dendritic channels (sloughs) which clearly fluctuate and overflow with tidal action. Observing the site during high tide can help in delineating the OHWM.

D. Marine

1. Low energy marine: "The OHWM is coincident with the landward limit of salt tolerant vegetation." "Salt tolerant vegetation" means vegetation which is tolerant of interstitial soil salinities greater than or equal to 0.5 parts per thousand. [See WAC 173-22-030(6)(a)(ii)].

2. High energy marine:

   a. "Where there is no vegetation cover for less than 100 feet parallel to the shoreline, the OHWM is the average elevation of the adjacent lines of vegetation" [WAC 173-22-030].

   b. If no vegetation occurs on site, look for water marks on piers, pilings, rock or cliff faces. On rocky substrates look for algae, lichen and thalamus species (barnacles) which may be an expression of annual cycles. The upper edge of the black lichen usually coincides with the OHWM.

   c. In the unlikely event that the mark cannot be found, the elevation of mean higher high tide [WAC 173-22-030] may be used. Do not use mean or average tide, mean high tide, or mean sea level. Be certain that there is no mark to be found.

   d. If no vegetation occurs at a site with drift logs, the OHWM tends to be at the landward edge of the drift pile. Careful evaluation of accretion features and processes (e.g. dunes) is needed prior to making this determination.

   e. Do not use "outliers," annual plant species, or isolated tufts to determine the line of vegetation, since these die back in winter. Look for the line of persistent vegetation.

Special Tip

Tip: Be sure to take pictures and make notes to substantiate your OHWM determination. It also can be useful to revisit the site at different tide levels and seasons.

Associated Marshes, Bogs and Swamps Designation Criteria (or, How to Identify Biological Wetlands subject to the SMA)

Special Tip

Tip: In administering the SMA, it is important to distinguish between **jurisdictional** and **biological** wetlands. Jurisdictional wetlands are the "*associated wetlands*" defined in RCW 90.58.030(2)(f), and include both the non-water areas subject to the requirements of the Act and related rules and the marshes bogs and swamps, associated with SMA bodies of water. In other words, these **jurisdictional** "wetlands" are essentially all of the upland areas and marshes, bogs and swamps "associated" with SMA bodies of water. The "associated marshes, bogs and swamps" are actual **biological** wetlands and are a subcategory of the jurisdictional "associated wetlands". Knowing which "wetland", biological or jurisdictional, is intended becomes critical, for example, when a SMP provision "prohibits filling in a wetland area."

The **biological wetlands**, identified as "**marshes, bogs and swamps**" per WAC 173-22-040 (5), are what most people think of when you say "wetland". In this biological context, "associated wetland" means "marshes, bogs and swamps" "associated" with SMA bodies of water. Much confusion in shoreline administration results from difficulty or uncertainty in identifying the marshes, bogs, and swamps "associated" with the streams, lakes and tidal waters of the state. **These guidelines are intended to assist in the designation of marshes, bogs, and swamps that fall under the jurisdiction of the SMA.**

Special Tip

Tip: For the purposes of this section, "wetland" shall mean "marsh, bog or swamp" per WAC 173-22-030 (5).

I. General Guidelines

A. A marsh, bog or swamp is associated if it falls **within 200 feet as measured on a horizontal plane from the OHWM or the floodway**, whichever is more inclusive, of a water body under shoreline jurisdiction. See WAC 173-22-030(10).

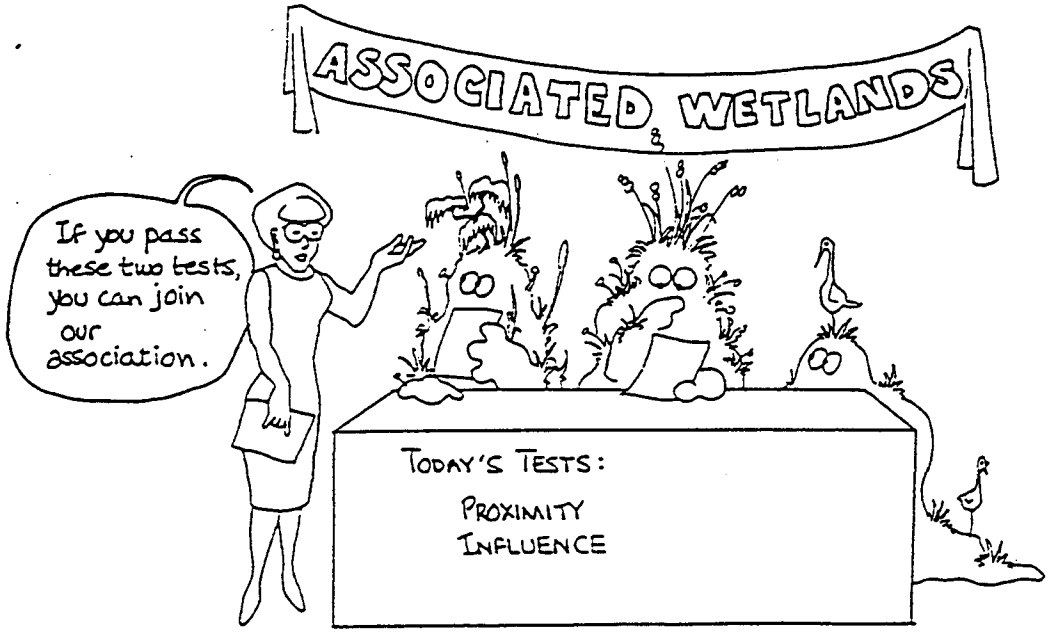
B. The **entire marsh, bog or swamp is associated if any part of it is within the area** described in A., above.

C. The entire marsh, bog or swamp is associated **if any part of it lies within the 100-year floodplain** of a shoreline.

D. The entire marsh, bog or swamp is associated when it is in proximity to and either influences or is influenced by the water body. See WAC 173-22-040(3)(c).

Special Tip

Tip: When a road, dike, or other built barrier is between the marsh, bog or swamp and shoreline, the marsh, bog or swamp is still associated if it meets the general designation guidelines and the tests of influence and proximity. Don't assume that SMA jurisdiction ends just because a marsh, bog or swamp is separated from the shoreline by a road or other structure.



"In proximity" means that the marsh, bog or swamp is close enough to the shoreline to affect or be affected by that shoreline. Proximity is not limited to horizontal distance but can also include consideration of vertical distance. Proximate shorelines can include such situations as:

- a one hundred acre wetland in the floodplain that is two miles away from a water body but that intercepts flood runoff and dampens the flood surge that eventually enters that water body;

- or, a wetland in an overflow channel adjacent to a stream which acts as a flood storage area.

Factors to use in deciding if **"influence"** exists include:

1. Hydraulic continuity, which includes surface and ground water, can be perennial or intermittent and can be a ditch, culvert, or pipe. Intermittent streams flow at some time during a normal year. Indicators of hydraulic continuity include direct surface or subsurface water connection, continuous undrained hydric soil (particularly organic soils), or continuous hydrophytic vegetation. These indicators are evidenced by:

    a. Periodic inundation occurring in a normal year.

        i. Inundation (standing water) or fully saturated soils observed during a normal or drier year.

        ii. Hydrologic gauging data from period record which indicates periodic overbank flows.

        iii. Drift lines, sediment or other materials deposited on vegetation by water.

    b. Tidally influenced geohydraulic features such as:

        i. Dunal systems.

        ii. Spits and jetties.

        iii. Beaches.

c. Tidal inundation as indicated by:

i. Presence of salt-tolerant vegetation.

ii. Interstitial soil salinity of greater than 0.5 parts per thousands.

iii. Tidally formed dendritic channels, particularly with tidal waters in them (fresh or salt).

iv. Drift lines or piles.

d. Connection by a tide gate or a culvert (determine whether the tide gate is functioning).

2. Groundwater recharge and discharge.

a. Spring systems discharging into shoreline.

b. Continuous organic soils with shoreline.

c. Augmentation of low flows in shoreline.

d. Wetlands recharging into sole source aquifer.

3. Stormwater and floodwater detention, such as:

a. Wetland located close to mouth of system.

b. Wetland is significant percentage of detention capacity of watershed.

4. Water quality improvement, filtration and assimilation of sediment, nutrients, and pollutants.

a. Wetland discharges directly into shoreline.

b. Ambient water quality of the shoreline susceptible to degradation, and wetland buffers potential adverse impacts.

c. Specific pollutant source in watershed (point or non-point source) which the wetland is effectively buffering.

d. Is there an unstable sediment source which the wetland is effectively buffering?

5. Erosion control and buffering, such as stability of banks (presence of headcutting or bank erosion), sediment accretion, evidence including:

a. System in hydrologic equilibrium (watershed currently functioning at capacity, without bank cutting or deposition occurring from altered watershed characteristics).

b. Urbanization in watershed, altering flow patterns.

c. Agricultural or forestry development in watershed (particularly with related road systems) altering flow patterns.

6. Food chain support, important to a particular species or habitat within the affected shoreline area, which may include:

a. Plant species diversity.

b. Invertebrate diversity.

c. Faunal diversity.

d. Fish spawning, overwintering, and rearing habitat (anadromous, wild strain).

e. Structural diversity-terrestrial: presence of stratified horizontal and vertical canopy layers, including snags and downed wood.

f. Structural diversity-aquatic: large organic debris, pool: riffle: run ratio, bank overhang.

7. Wildlife habitat important to a particular species or group that use the affected shoreline area.

a. Habitat available for individual species.

b. Breeding/spawning habitat.

c. Overwintering habitat.

8. Wildlife corridors.

a. Connectivity and conductivity of shoreline watershed.

b. Fractionalization of habitat in watershed.

c. Availability of habitat and water in adjacent landscape.

d. Disturbance (noise, presence of people, development in watershed).

II. Special Situations

A. When a wetland is adjacent to or potentially impacted by both a shoreline and a non-shoreline, the rules for determining association with the shorelines apply (see I. General Guidelines, above). If the hydraulic gradient of the wetland is clearly away from the shoreline, then other indications of association must be strongly present.

B. When a non-SMA water body enters the floodplain of an SMA shoreline, the associated wetland extends above the floodplain to the outer limit of continuous hydric soils, hydrophytic vegetation, and/or surface or subsurface hydrology.