Water Boundaries
A Review of Basic Principles With Specific Reference to Oregon
Part 1
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General Principles
The Cliff Notes

• Ambulatory. They move!
  • State owns the beds of navigable waters
  • Upland owners own the beds of non-navigable waters

General Principles
The Cliff Notes

• Littoral boundary along Pacific Shore
  • Mean high tide line (MHTL) if patented after 07/05/1947
  • Ordinary low water mark (OLWM) if before 07/05/1947.

• Riparian boundary along Inland, navigable waters is the ordinary high water mark (OHWM).
General Principles
The Cliff Notes

• **Meander are not boundaries***. They are approximations of the OHWM.

• *Oregon exception to general rule that title to accretions attaches to title of adjacent riparian parcel: On meandered, navigable lakes, only accretions which accumulated prior to 05/25/1921 go with title to adjacent riparian parcel. If no superior evidence of the natural location of the shore on 05/25/1921 exist, the meander lines would be the best or only evidence and would be held as the boundary.

General Principles
The Cliff Notes

• **Public Use** along the dry sand beaches of the Pacific Shore up to the vegetation line.

• **Public Use** of inland, navigable waterways up to the OHWM.

• Limited **Public Use** (Navigational Easement) of certain inland, non-navigable waterways up to the OHWM.

General Principles
The Cliff Notes

What is the Boundary? It’s a matter of law.

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*State retains title to dry land as result of accretion, reliction, etc. after 05/25/1921
**Based on Prescriptive Rights of the public recognized and codified by legislature in ORS 390.605 to 390.620
***Public navigational easement if waterway has “the capacity to afford the length, width and depth to enable [small] boats… to make successful progress” or If “capable of being navigated by oar or motor propelled small craft.”
General Principles - The Cliff Notes

Where is the Boundary?
It’s a matter of facts.
- Documents & Maps
  - Filed, agency, private survey maps
  - Navigability Reports, Exploration Journals, News accounts
- Physical Evidence
  - Bank location, edge of vegetation, change in character of soil.
- Historic Aerial Photos
- Historic Ground-Level Photos showing use.

General Principles - The Cliff Notes

Is a water boundary always ambulatory?
Not always...
Express or implied call for water boundary or call along meanders?

- Is shore in its natural state?
  - Yes
  - No
  - Has shore moved since parcel was created/patented?
    - Yes
    - No
    - Has movement been slow and imperceptible?
      - Yes
      - No
      - No Artificial Influence
- No Artificial Influence

General Principles - The Cliff Notes

Putting the basics all together and visualizing the terms.
General Principles
The Cliff Notes

That’s it! The basic principles in 10 minutes or less.

Now, into the details...

History, Major Milestones

• 1770± BC – The Code of Hammurabi
  • Outlined landowners responsibility to maintain levees.

• 533 AD – The Institutes of Justinian
  • Book II, Parts 1 through 5.
  • Declared the waterways to be public highways
  • Root of the Public Trust Doctrine.
  • Sovereign ownership up to the highest wash of the waves in Winter.

• 1215 AD – The Magna Charta
  • One of the earliest documents of civil rights “legislation”.

• 1350± AD – Las Siete Partidas
  • Declared the King to be owner of lands up to the highest extent of the tides, whether in Winter or Summer

History, Major Milestones

• 1550 ± AD – English Common Law
  • The primary source of most common law principles in US Jurisprudence

• 1666 AD – De Jure Maris
  • Lord Hale opined the ordinary high water mark to be defined by the extent of the neap tides.
  • Neap tide definition rejected by British courts prior to 1800, nevertheless adopted by the California Supreme Court in 1866. Since ignored by most California cases, all federal cases and by all other states.

• 1789 AD – Begin US Court system. Adopted English Common Law.
**Oregon History - Exploration & Sovereign Claims**

- **1500s to Early 1800s** – Exploration & claims by Spain, Great Britain, France, Russia, & U.S. By 1824, only Great Britain & U.S. retained claims.
- **1804/1806** – Lewis & Clark Expedition
- **1810s/1840s** – Early U.S. Pioneers. Great Britain attempts to establish local gov't through the Hudson Bay Company. Battles associated with War of 1812.
- **1818** – Joint Occupancy Treaty with Great Britain
- **1843/1849** – Oregon Provisional Government made up of mostly U.S. citizens and a few British subjects.
- **June 15, 1846** – Oregon Treaty with Great Britain. U.S. relinquishes all claims North & retains claim on all lands South 49th parallel. U.S. only non-native nation to retain a claim on the Oregon Territory (OR, WA, ID, por. MT, por. WY)

**Oregon History - Settlement of Oregon**

- **Aug. 14, 1848** – Oregon declared a U.S. Territory. Governor doesn’t arrive until 1849. Provisional Gov't continues until then.
- **1830s/70** – Steady influx of U.S. pioneers over Oregon Tr. & other established trails.
- **1850** – Donation Land Claim Act to encourage settlement and agricultural production.
- **1851** – GLO Surveys begin
- **Nov. 9, 1857 - 1st Constitution of Oregon**
- **Feb. 14, 1859** – Oregon admitted as a US State

**Oregon History - State & Federal Laws**

- **September 28, 1850** – Arkansas Swampland Act granted swamp & overflowed lands of the PLSS to the states they were within.
- **Mar. 12, 1860** – Swampland Act of 1850 extended to Oregon
- **May 25, 1921** – Oregon asserts ownership to lake accretions.
- **July 5, 1947** – Oregon asserts public use rights beyond OHWM to line of vegetation.
- **May 22, 1950** – Submerged Lands Act passed to override US v CA and restore state ownership of bed of Pacific Ocean.
The Equal Footing Doctrine

• Sovereignty passed from the Crown of England to the original 13 states upon independence. *Martin v. Waddell*, 41 US 367 (1842)

• The federal government is sovereign over territories.

• States later admitted do so on an *Equal Footing* with existing states. **No Sr./Jr. rights** between states. *Pollards Lessee v. Hagan*, 44 US 212 (1845)

• Sovereignty passes from federal government to state government at time of statehood.

Sovereign Lands

• Owned in trust by the government for use by the public. *Illinois Central RR v. Illinois*, 146 US 387 (1892)

• Navigable waterways regarded as public highways since the Roman Empire. *Institutes of Justinian*, Book II, Title I, Parts 1 - 5.

• Beds (submerged & submersible lands) of all tidal waters, and other navigable waterways are sovereign lands of the State.

Oregon Admission Act, Feb. 14, 1859

Section 2

“[S]aid rivers and waters, and all the navigable waters of said State, shall be common highways and forever free…”
Sovereign Lands
Primary Statutes

ORS 390.615: “Ownership of the shore of the Pacific Ocean between ordinary high tide and extreme low tide... is vested in the State of Oregon”

ORS 274.025: “The title to the submersible and submerged lands of all navigable streams and lakes in this state now existing or which may have been in existence in 1859 when the state was admitted to the Union, or at any time since admission... is vested in the State of Oregon.”

Sovereign Lands
Landmark Cases

The State can’t dispose of lands in a way that alienates the Public Trust from those lands. Illinois Central Railroad v. Illinois, 146 US 387 (1892)

The State may dispose of trust lands as long as the public’s use is not unduly impaired. Shively v. Bowlby, 152 US 1 (1894)

Navigability

• Many forms:
  • Admiralty – maritime activities
  • Jurisdictional/regulatory – permitting. Many agencies at several levels of govt may have jurisdiction over different, or even the same activities along any particular waterway.
  • Title – who owns the land under the water
  • Public Use – full Public Trust rights over (Title) navigable waters; navigational easement over some waters not navigable for title, but navigable in fact by small craft.

• Oregon State Land Board asserts ownership based upon finding of navigability by court or upon navigability studies by Dept. of State Lands.

Navigability

Navigable waterway?

Not for title. Maybe by some jurisdictional definitions.

Navigability

• Navigable in **fact** = navigable in **law**

• **Susceptible** to navigation = navigable in **fact**

  • **The Daniel Ball**, 77 US 557 (1870)

• Tidal waters are **presumed navigable**
  even if not used nor susceptible use for navigation.


Navigability

“**For state title under the equal-footing doctrine, navigability is determined at the time of statehood ... and based on the ‘natural and ordinary condition’ of the water.”**

• “admiralty jurisdiction extends to water routes made navigable even if not formerly so”

• “federal regulatory authority encompasses [a whole lot more] [my words, not the court’s]

Navigability

• Navigability need not be continuous along a stream.
• Navigability need not be without difficulty.
• Present state of navigability does not matter.
  • Need only have been susceptible to navigation in ordinary condition at time of statehood.
  • *United States v. Holt State Bank*, 270 US 49 (1926)

The Public Trust

• Public Trust Easement, referred to as the Public Use Doctrine in Oregon, is right of the public to use the waterway and (sometimes) the adjacent shore.
• Government holds title to sovereign lands in trust for benefit of its people.
• Historically, public had rights of use of navigable waters for travel, commerce, and fishing.
• More recently, trust uses expanded to include recreation, habitat improvement, conservation, and scientific study.

• The Public Trust is a matter of common (case) law rather than statutory law, although certain uses may be asserted or clarified in statute.
• States may not allow the Public Trust to be alienated from the lands it holds in trust.
  • *Illinois Central RR v. Illinois*
• The Public Trust up to the OHWM of navigable (in fact) waters regardless of the extent of sovereign ownership asserted by the State. This equates to a navigational easement over some waters which are non-navigable for title yet navigable in fact by small craft.
• The State test of navigability rather than the federal test determines the existence of the Public Trust on a waterway.
The Public Trust

- **A water body may not be navigable by state standards for asserting title, but still be navigable for (limited) Trust purposes.**

- **With regard to floating logs:** "[A] stream of water which is of sufficient extent and capacity to float logs... to market,... is... a public navigable stream for such purposes."

- **But...** "[N]ot willing to extend it so as to include every little rivulet or brook... although its waters may be swollen for a short time each year"

  *Haines v. Hall*, 17 OR 165 (1888)

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The Public Trust

- **With regard to recreational use:** "The test of navigability of a stream... is the capacity to afford the length, width and depth to enable boats and vessels to make successful progress through its waters."

- "We fail to see why commerce should not be construed to include the use of boats and vessels for the purposes of pleasure."

  *Guilliams v. Beaver Lake Club*, 90 OR 13 (1918)

- Waters are navigable for trust purposes "which are capable of being navigated by oar or motor-propelled small craft."


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Shore Movement

**Generally**

- **Accretion** (also erosion) = slow & imperceptible

- Movement due to accretion = ambulatory boundary on coast and on streams.

- **Oregon exception:** Title to lands formed by accretion or reliction attaches to upland title if prior to May 25, 1921, but claimed by State if after. *ORS 274.430, 274.440*

- **Avulsion** = sudden & violent

- Movement due to avulsion = fixed boundary at the last natural location before the avulsion.

- Islands formed by an avulsive change to the channel fixes the boundary at the old channel. Title to new island remains with upland parcel it was formerly a part of.
Tidal Waters
Primary Statutes

What is the boundary? It’s a matter of law.

• ORS 390.615: “Ownership of the shore of the Pacific Ocean between ordinary high tide and extreme low tide... is vested in the State of Oregon”

• ORS 93.310(5) When tidewater is the boundary, the rights of the grantor to low watermark are included in the conveyance, and also the right of this state between high and low watermark.

Tidal Waters
Primary Statute

Question

So which is the boundary? Is it the Ordinary High Tide Line (ORS 390.615) or the low watermark (ORS 93.310)?

Tidal Waters
Primary Statute

Answer

It depends! Rights to the low watermark are conveyed only if the grantor has such rights.

• What was the date of the patent?
  • If before 07/05/1947, the boundary may be the LWM.
Tidal Waters
Definitions

• Ordinary high water mark (OHWM): “[T]he line of high water as determined by the course of the tides”, Borax Consolidated Ltd. v. Los Angeles, 296 US 10 (1935).

• Low Water Mark (LWM): “The intersection of the land with the water surface at the elevation of mean low water”, Tide and Current Glossary, NOAA

• Mean High Tide Line (MHTL): “The intersection of the land with the water surface at the elevation of mean high water”, Tide and Current Glossary, NOAA

Tidal Waters
more Definitions

• Tide lands: Coastal lands lying below the OHWM and above the LWM

• Submerged lands: Below the ordinary low water mark. ORS 274.005 (7)

• Submersible Lands: Between the ordinary high water mark and the ordinary low water mark. ORS 274.005 (8)

• Littoral: “Of or pertaining to the shore, especially of the sea. A coastal region.” Glossary of BLM Surveying and Mapping Terms

Tidal Waters
Ordinary High Water Mark

• OHWM defined by the intersection of the shore with the plane of high tide based upon all high tides.

• The Appeals Court discussed the science of tide levels, and the Supreme Court agreed that there was no sound reason to use only the neap tides when determining the MHTL.

• OHWM = MHTL

* Borax Consolidated Ltd. v. The City of Los Angeles, 296 US 10 (1935)
Tidal Waters

Tidelands, Salt Marsh, Tidal Inland Waters

• For title purposes, all waters subject to tides are navigable.
• Tidelands lie between the OHWM and the LWM.
• Salt marsh is swampy land lying below the OHWM.
• Tidelands held by State as sovereign land (Weber v. Harbor Commissioners, 38 Wall. 65, 1873), and covered by the Public Trust.
• Oregon further has recognized and since codified a prescriptive right of the public up to the vegetation line. ORS 390.605 to 390.620

Tidal Waters

Offshore Boundary

• Supreme Court ruled that the federal government owned the bed of the oceans up to the shore.
• Reasoned that federal responsibility to defend the territorial seas of the US was greater than sovereign rights of the states.
  • United States v. California, 332 US 19 (1947)
• Note: WWII (U.S. involvement) 1941 - 1945

Tidal Waters

Offshore Boundary

• Submerged Lands Act (43 USC, Ch. 29), May 22, 1953.
• Enacted by Congress in response to US v. California.
• Curative act to override Supreme Court and restore states’ sovereignty over submerged coastal lands.
• Offshore boundary lies 3 nautical miles seaward from the line of mean lower low water (MLLW).
• 1 nautical mile = 1° of arc of latitude = 6076 ft.
Tidal Waters
Determining the MHTL

Where is the boundary?
It’s a matter of facts.

• Locate nearest tide station(s) with similar shore & current conditions as site.

• Retrieve average tide level data for tide station(s) using current tidal epoch. (current epoch 1983 – 2001; superseded 1960-1978 & 1941-1959)

• Convert MHW tidal datum elevation to elevation of fixed datum you are working in (NGVD29, NAVD88).

Tidal Waters
Determining the MHTL

• If between applicable stations, interpolate MHW for site.

• If only one proximate applicable station, use MHW elevation for that station.

• By differential leveling, beach topo, or staking to elevation, determine location on beach that matches MHW elevation for site.
Tidal Waters - Tide Station Data

Mouth of the Columbia River

Tide Station Jetty A  
Tide Station Ft. Stevens

- Note that the difference in MHW elevation is several tenths of a foot different.
- Within bays and other inland tidal waters differences can be quite drastic. MHW for Ft. Stevens is 0.90’ higher than MHW for Jetty A, only 5 miles away.
- Choosing the right station(s) is important!
Non-Tidal Navigable Waters
Primary Statute

What is the boundary? It's a matter of law.

- ORS 274.025 (1): The title to the submersible and submerged lands of all navigable streams and lakes in this state now existing or which may have been in existence in 1859 when the state was admitted to the Union, or at any time since admission, and which has not become vested in any person, is vested in the State of Oregon.

Non-Tidal, Navigable Waters
Boundary of Sovereign Title

- Federal Common Law = OHWM
- Sovereignty succeeded to the OHWM
- ORS 274.025: OHWM on streams
- Oregon exception: OHWM of 05/25/1921 or meander line on lakes. ORS 274.430 & 274.440

Non-Tidal, Navigable Waters
Boundary of Sovereign Title

- Sovereign ownership may be a separate question from existence & limit of Public Trust (Public Use).
- States may define limits of title at a line other than OHWM. Many states set it at the OLWM. Many states set it at a different location depending on nature of waterway (tidal vs. non-tidal, lake vs. stream)
- Many states have changed the line defining the boundary of sovereign/upland title at some point since statehood.
- Oregon recognizes title of the upland owner to the OLWM, MHTL, OHWM, or meander line, depending upon several factors.
Non-Tidal, Navigable Waters

Definitions

• Ordinary High Water Mark (OHWM): "Where the presence and action of the water are so common and usual, and so long continued in all ordinary years, as to mark upon the soil of the bed a character distinct from that of the banks, in respect to vegetation, as well as respects the nature of the soil itself." Tilden v. Smith, 113 So. 708 (1927)

• Low Water Mark (LWM): The intersection of the bed with the surface of the water at its low stage in ordinary years, not including times of drought or times of flooding.

Non-Tidal, Navigable Waters

more Definitions

• Submerged lands: Below ordinary low water mark (OLWM). ORS 274.005 (7)

• Submersible Lands: Between the ordinary high water mark (OHWM) and the ordinary low water mark (OLWM). ORS 274.005 (8)

• Shorezone: Area containing submersible lands.

• Riparian: “Belonging or relating to the bank of a river or stream.” Black’s Law Dictionary, 6th Ed.

• Lacustrine: Of, or relating to lakes.

Non-Tidal, Navigable Waters

still more Definitions

• Littoral: “Of or pertaining to the shore, especially of the sea. A coastal region.” Glossary of BLM Surveying and Mapping Terms

• Left and Right Banks of a river: “Facing downstream, the bank on the left hand is termed the left bank and that on the right hand the right bank.” Manual of Surveying Instructions, 2009

• River Miles: The distance in statute miles measured from the mouth of the river going upstream along the center of the river.
Non-Tidal, Navigable Waters
Visualizing the terms
River or Lake Section

Non-Tidal, Navigable Waters
Oregon’s Lakes – Primary Statutes

• ORS 274.025 (1): The title to the submersible and submerged lands of all navigable streams and lakes in this state ..., is vested in the State of Oregon.

• ORS 274.430 (1) All meandered lakes are declared to be navigable and public waters. The waters thereof are declared to be of public character. The title to the submersible and submerged lands of such meandered lakes, which are not included in the valid terms of a grant or conveyance from the State of Oregon, is vested in the State of Oregon.

• (3) Nothing in this section impairs the title of any upland or riparian owner to or any vested rights in land which was added prior to May 25, 1921, by natural accretion or reliction to the lands of such upland owner. [Amended by 1967 c.421 §132]

Non-Tidal, Navigable Waters
Oregon’s Lakes – Primary Statutes

• ORS 274.440 (1) ... No person shall acquire any right, title or interest in or to the submerged or submersible lands of any such lakes, or any part thereof, by reliction, accretion or otherwise...

• (2) Upon [lawful] drainage of meandered lakes, the title of owners ... shall extend to ... fill out the least fractional subdivision or subdivisions of any section ..., and the title of such owners shall be so limited when the receding lake waters uncover the submersible and submerged lands. Where by reason of natural accretion or reliction, such fractional subdivision or subdivisions of such upland owners were filled out thereby prior to May 25, 1921, such upland owners shall hold to the line of such lands as extended by the natural accretion or reliction.
Non-Tidal, Navigable Waters
Defining the OHWM & OLWM

• Does not include stages of flood or stages of drought. *United States v. Claridge*, 416 F 2d 933 (1969)

• OHWM at location where water leaves impression on bank; where regular action of water removes terrestrial vegetation; where terrestrial vegetation gives way to aquatic vegetation.

• First defined in *Howard v. Ingersoll*, 54 US 381 (1851) and refined in subsequent federal cases.

Non-Tidal, Navigable Waters
Determining the OHWM

Physical indicia of the OHWM
From ODOT field form "Field Determination of Ordinary High Water (OHWM)"

Field Indicators Observed (choose from list) check all that apply:

- Clear surface (impression on the bank)
- Presence of litter and debris
- Widened leaves, soil lines on tree trunks
- Lowest extent of woody vegetation
- Top of the zone of washed sediments (soils exposed in the bank)
- A break in the slope angle of the bank
- The top of point bars or other sediment deposits (this is typically considered the lowest elevation to be considered as, genetically, the OHWM surface)
- The elevation of flat debris R located in combination with above features
- The area of washed rock if used in combination with the above features
- Change in vegetation (exposure e.g. willow to upland ex. oak, fir) dominated
- Textural change of depositional sediment or changes in the character of the soil (e.g. from sand, sand and cobble, cobbles and gravel, to upland soils)
- Elevation below which no flat debris deposits, changes, occurs
- Other appropriate means that consider the character of the surrounding area

Non-Tidal, Navigable Waters
Determining the OHWM

Water Boundaries OR - EAP
Non-Tidal, Navigable Waters
False Indicators of the OHWM

OHWM appears to be edge of upland grasses, but artificial influences (dams & canals) fix boundary at last natural OHWM.

The presence of debris carried by water and deposited on shore or in brush can be an indicator of the OHWM. In this instance, it is an indicator of flood stage. Note upland trees at same level as bush with hanging debris.

OHWM appears to be edge of upland grasses, but artificial influences (dams & canals) fix boundary at last natural OHWM.

Non-Tidal, Navigable Waters
False Indicators of the OHWM

Mixed upland and riparian grasses may require help from a botanist to identify the OHW level.

Dual indicators of change in nature of soil from granular to fine, and edge of upland vegetation farther up.

OHWM appears to be edge of upland grasses, but artificial influences (dams & canals) fix boundary at last natural OHWM.

Non-Tidal, Navigable Waters
Determining the OHWM

Water stains on upland tree species is an indicator of flood stage, not OHWM.

OHWM appears to be edge of upland grasses, but artificial influences (dams & canals) fix boundary at last natural OHWM.

Mixed upland and riparian grasses may require help from a botanist to identify the OHW level.

Dual indicators of change in nature of soil from granular to fine, and edge of upland vegetation farther up.

OHWM appears to be edge of upland grasses, but artificial influences (dams & canals) fix boundary at last natural OHWM.
Non-Tidal, Navigable Waters Recap

• Boundary along navigable streams at OHWM
• Boundary along shores of navigable lakes at OHWM as it existed on 05/25/1921 or at meander line and are no longer ambulatory.
• Lake boundaries will retain an ambulatory nature if lawfully drained, but only so far to fill out the least aliquot subdivision of the parcels adjoining the lake.
• The State owns natural accretions & relictions and may sell or lease those lands. The owners of parcels adjacent to the accreted lands have preference to purchase accreted lands if State offers them for sale.

Non-Tidal Non-Navigable Waters Primary Statutes

• ORS 274.025 applies only to navigable waters. Since this nor any other ownership statute declare the disposition of the beds of non-navigable streams, common law controls.
• Common law places the boundary of the upland owner at the center of the waterbody, unless the conveyance declares a different intent. (e.g. along one of the banks)
• The statute pertaining to construing descriptions (ORS 93.310) comports with common law.

Non-Tidal Non-Navigable Waters Primary Statutes

• ORS 93.310 Rules for construing description of real property. The following are the rules for construing the descriptive part of a conveyance of real property, when the construction is doubtful, and there are no other sufficient circumstances to determine it:
  (4) When a road or stream of water not navigable is the boundary, the rights of the grantor to the middle of the road, or the thread of the stream, are included in the conveyance, except where the road or bed of the stream is held under another title.
Non-Tidal Non-Navigable Waters Definitions

• **Middle**: “The equidistant point in the main channel of a river between the well defined banks on either shore.” [Black's Law Dictionary, 6th Ed.]

• **Center or Thread**: Same as Middle.

• **Thalweg** (tálvéyk): The middle of the deepest part of the most navigable channel. It has been described as the path the water would take in a stream if the flow were reduced to a mere trickle.

Non-Tidal Non-Navigable Waters Lakes

• Non-meandered lakes are generally not considered to be navigable.

• Title of the upland parcels at the perimeter of the lake goes to the middle of the lake per common law.

• Titles to the beds of Mud & Malhuer Lakes were meandered yet found to be non-navigable in Federal Court. ORS 274.480 addresses boundary & title on those lakes. State conceded accretions to fill out least aliquot division or riparian parcels.

Non-Tidal Non-Navigable Waters Public Trust May Exist

• Although not navigable for sovereign title, or not claimed as sovereign lands, a Navigational Easement exists to the OHWM if the waterway has “the capacity to afford the length, width and depth to enable boats and vessels to make successful progress through its waters.”

  • [Guilliams v. Beaver Lake Club, 90 OR 13 (1918)]
Meanders Corner Designations

• Regular Meander Corners (MC) were to be set at the banks of navigable waterways along the surveyed section lines.

Meanders Corner Designations

• Special Meander Corners (SMC) were to be set on islands and on the banks of lakes that fell entirely within a section at a convenient aliquot division line.

Meanders Corner Designations

• Auxilliary Meander Corners (AMC) were to be set at a convenient point on the bank of a meanderable lake entirely within the smallest legal subdivision within a section and tied to the nearest regular corner.
Meanders

What Do They Represent?

“The traverse that approximates the margin of a permanent natural body of water, e.g., the bank of a stream, lake, or tidewater... meander lines are run... (1) for the purposes of ascertaining the quantity of land remaining after segregation of the bed of the water body from the adjoining land, (2) for defining the sinuosities of the water body for platting purposes, and (3) for closing the survey to allow for acreage calculations. The ordinary high water mark (OHWM), or line of mean high tide (line of MHT) of the stream, or other body of water, and not the meander line as actually run on the ground, is the actual boundary.”

Manual of Surveying Instructions, 2009, §3-159

Meanders

What Do They Represent?

Edge of S&O Lands

Bank of River

Meanders

Fixed or Ambulatory?

• “Such riparian boundaries are ambulatory, not fixed in position.” Manual of Surveying Instructions, 2009, §3-162

• The question of navigability for title, and the interpretation of federal patents adjacent to waterways is a matter of federal law, not of state law. U.S. v. Oregon, 295 US 1 (1935)

• Courts have ruled that lines of non-federal surveys depicting a boundary adjacent to water are meander lines and represent the ambulatory boundary rather than fixed courses. Lechuza Villas West v. CA Coastal Comm., 60 Cal App 4th 218 (1997), regarding a private tract map. (Id no OR case on this question)

• Unless falling within one of few exceptions, meander lines approximate the ambulatory statutory riparian boundary.
Meanders
What Do They Represent in Oregon?

- Meander lines may be the best or only evidence of the location of the lakeshore on or before 05/25/1921, in which case the State would claim all lands, dry or wet, waterward of the meander lines.

- ORS 274.430 (1) The title to the submersible and submerged lands of meandered lakes, not included in grant or conveyance from the State of Oregon, is vested in the State of Oregon.

- ORS 274.430 (3) Nothing in this section impairs the title... in land added prior to May 25, 1921, by natural accretion or reliction.

- ORS 274.440 (1) No person shall acquire any right, title or interest in or to the submersed or submersible lands of any such lakes, or any part thereof, by reliction, accretion or otherwise.

- ORS 274.440 (2) the title of owners shall extend to fill out the least fractional subdivision or subdivisions of any section which is rendered fractional by the meander line; and the title of such owners shall be so limited when the receding lake waters. Where by natural accretion or reliction such fractional subdivisions were filled out prior to May 25, 1921, such upland owners shall hold to the line of such lands as extended by the natural accretion or reliction.

Meanders
What Do They Represent in Oregon?

- The existence of meander lines along a stream are evidence of navigability and a potential basis for the State’s claim of sovereign title.

- The existence of meander lines on a lake are the statutory basis for the State’s claim of sovereign title.

- The meander line will be considered the boundary on navigable lakes if no superior evidence of the location of the shore on or before 05/25/1921 exists.
Islands in Lakes and Streams

• An island **existing at the time of statehood** was part of the **federal public domain lands**.
• An unsurveyed island is considered **unsurveyed lands of the public domain**.
  
  • *Scott v. Lattig*, 227 US 229 (1912)
  • *US v. Hutchings*, 252 F. 841

Islands in Lakes and Streams

• Certain exceptions may apply on non-navigable waters.
  
    • Government chose not to survey island of a non-navigable lake.
    • Court considered comparative area of riparian parcel to island.
    • Court ruled riparian owner cannot be divested by way of later survey.
    • Court ruled that if government chose not to survey an island due to perceived lack of value, owner of riparian parcel cannot be divested of title due to government’s later reconsideration of island’s value.

Islands in Lakes and Streams

• ORS 274.005 (8) “Submersible lands,” except as provided in ORS 274.705 [lands by artificial fill] means lands lying between the line of ordinary high water and the line of ordinary low water of all navigable waters and **all islands**...

• Islands **formed** from the bed of a navigable river by accretion or reliction (receding of the water) **after the date of statehood** belong to the State.

  • “If the island is **formed by gradual deposits in midstream**, it is equally well settled under the common law that the **island belongs to the owner of the river bed in the place where the island arose**.”

  *Port of Portland v. An Island in the Columbia River*, 479 F.2d 549 (1973)
Islands in Lakes and Streams

• The underlying principle stated in *Port of Portland v. Island* is equally applicable in non-navigable streams.

• Islands formed from the bed of a non-navigable stream by accretion or reliction belong to the upland owner(s).

• An island formed to one side of the main channel of a non-navigable stream belongs to the upland owner on the same side of the main channel as the island.

• Islands forming at the center of the stream belong to both, separated at the center of the island.

Islands, Navigable Streams

Islands, Non-Navigable Streams
Water Boundaries
In Descriptions

• Expressly called for: “along the bank”, “along the shore”, or “along the edge of the Rogue River”

• Implied calls: “Lot 99 of the map of Blissful Shores”, where Lot 99 shows to be a waterfront lot on the map, “along the meanders of”, “with the meander line”, or a recitation of courses identical to surveyed meander lines.

• Express or implied, all are calls to the statutory water boundary.

Water Boundaries
Practice Questions

Based upon the CLSA, Sacramento Chapter Land Surveyor Exam Review Course, Mock Exam, 2006.

Adapted to reflect Oregon law, where appropriate.

1a. Assume the channel of the Salmon River moved gradually. Identify the boundary between Lots B & E. Cite applicable statute(s).

1b. Assume the channel moved suddenly. Identify the boundary between Lots B & E. Cite applicable statute(s).

Bonus Question: Identify case law demonstrating applicable principle(s).
Water Boundaries
Practice Questions
Answers

1a. If the channel moves gradually, it moves by erosion and accretion and title lines move with it. Since the Salmon River is non-navigable, the boundary is at the center or thread of the stream as it now exists.

1b. Sudden movement of the channel is called avulsion. After an avulsive event, title lines remain fixed at the location of the channel prior to the event (1934 channel).

Water Boundaries
Practice Questions

1c. Lot A was patented to Smith by the State of Oregon in 1952. Identify the westerly boundary of Lot A. Cite applicable statute.

1d. Trout Lake was meandered by the GLO in 1873. No other surveys exist prior to 1948. Identify the southerly boundary of Lot C.

Bonus Question: Identify case law demonstrating applicable principle(s).

Water Boundaries
Practice Questions - Answers

1c. The westerly line of Lot A is along the Pacific Shore. Since Lot A was patented after 07/05/1947, the boundary is located at the Mean High Tide Line. ORS 390.615

Bonus: The US Supreme Court ruled that the ordinary high water mark is most commonly synonymous with the MHSTL, and that the MHSTL is where the plane of mean high water as determined by the average of all tides over a full tidal epoch intersects the shore. Borax v. Los Angeles, 296 US 10 (1935)

1d. The southerly boundary of Lot C is at the ordinary high water mark of Trout Lake as it existed on 05/25/1921, if that location can be positively ascertained. The GLO meander lines may be the best or only evidence of the pre-1921 OHWM in which case, the meander line is the boundary. ORS 274.430 & 274.440
Water Boundaries
Practice Questions

Bear Creek was meandered by the GLO, but later found to be non-navigable.

1e-1. Identify the easterly boundary of Lot C.

Bonus Question: Identify case law demonstrating applicable principle(s).

Water Boundaries
Practice Questions

You find that Lot D was conveyed before Lot C and its westerly boundary is described as being the meandered westerly bank of Bear Creek.

1e-2. Identify the easterly boundary of Lot C.

Bonus Question: Identify case law demonstrating applicable principle(s).

Water Boundaries
Practice Questions, Answers

1e-1. Since Bear Creek is non-navigable, the easterly boundary of Lot C is the thread of the stream. Meanders are evidence of navigation but are not proof of navigation.

1e-2. Lot D was conveyed first and is senior to Lot C. The description for Lot D calls to the meandered westerly bank of Bear Creek. However, a grantor may define the boundary otherwise as long as it is clearly described in the conveyance. A call to the bank or to the meander line are each calls to the riparian boundary; therefore the easterly boundary of Lot C is the westerly OHWM of Bear Creek. For it to be the meander line, the description must be clear that the intent is to fix the line.
**Water Boundaries OR - EAP**

**Practice Questions**

1f. The riparian parcel on the northerly bank of the Shark River adjacent to Pike Island is owned by Smith. To whom, or to which entity does Pike Island belong?

What information, if any do you need to ascertain before answering? How might that information affect the answer?

**Bonus Question:** Identify case law demonstrating applicable principle(s).
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Many of the images herein were found on the websites of public agencies or public organizations. The painting of Lewis & Clark on the Lower Columbia on Slide 13 is by C.M. Russell. The painting on Slide 14 is called Surveyor's Wagon in the Rockies and is by Albert Berstadt (1830-1902). Most color aerial images are from Google Earth.

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