High Tide Line

Interpreting the Extent of Clean Water Act Jurisdiction in Tidal Waters in Washington State

Definition & Intent of "High Tide Line" (HTL)

- Promulgated by Corps of Engineers in 1977, after DC District Court ruled their definition of waters of the U.S. (WOTUS) was too narrow
  - Previously extended jurisdiction only to the mean higher high water mark (MHHW)
- Definition:
  - **Maximum height** reached by a rising tide
  - Encompasses **spring high tides** & other high tides that occur with **periodic frequency**,
  - But ***not*** storm surges or other departures from the **usual or predicted** reach of the tide
- Intent (from the Preamble): include sandflats, mudflats, & similar aquatic areas that are **above MHHW**

How We Got Here

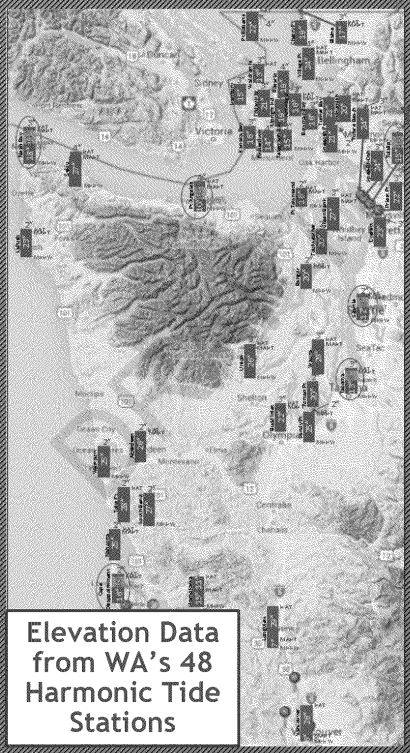
- Despite the unequivocal directive of the definition & stated intent, the Corps' Seattle District has changed from using MHHW
- Region 10 has met no success in trying to convince the Corps to change
- TRAR concerns & a [illegible] finally brought them to the table with us & NMFS in January 2016, at the direction of the agencies' regional leaders
- The charge to the [illegible] of technical, legal, & managerial staff was to assess alternative tidal elevations & recommend a change, if appropriate

Tidal Elevations Considered

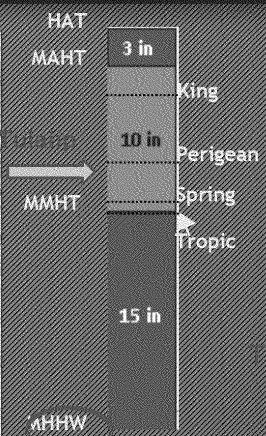
- **MHHW:** Average of the **daily** higher high tides
- **Mean Tropic High Tide:** Average of the higher tides that occur **twice monthly**, when the moon is highest or lowest in the sky
- **Mean Monthly Highest Tide (MMHT):**
- **Mean Spring High Tide:** Average of the higher tides that occur **twice monthly**, when the moon is full or new
- **Mean Perigean High Tide:** Average of the higher tides that occur **monthly**, when the moon is closest
- **Mean King Tide:** Average of the higher tides that occur **seasonally**, when spring & perigean tides coincide
- **Mean Annual Highest Tide (MAHT):**
- **Washington Ordinary High Water Mark:** Based on physical indicators of the presence of salt water (similar to wetland & freshwater delineation)
- **Highest Astronomical Tide:** Highest tide predicted during the **18.6-year** cycle of tidal influences (tidal epoch)

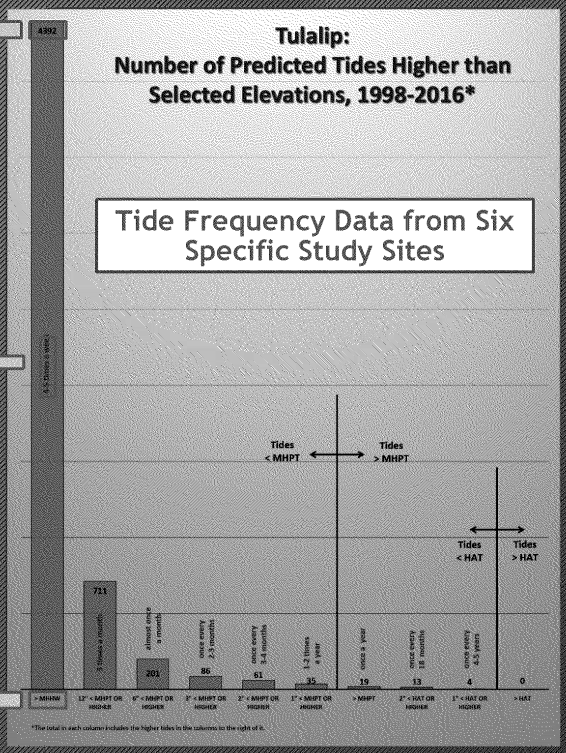
Highest

Workgroup's Analysis of Tide Data

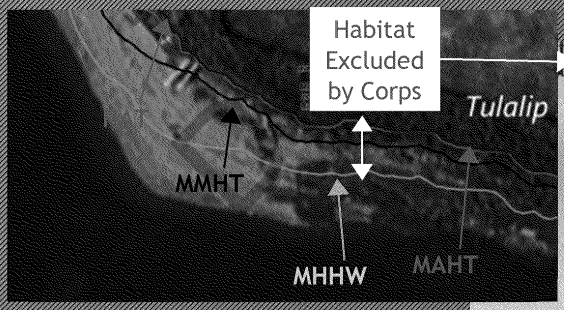


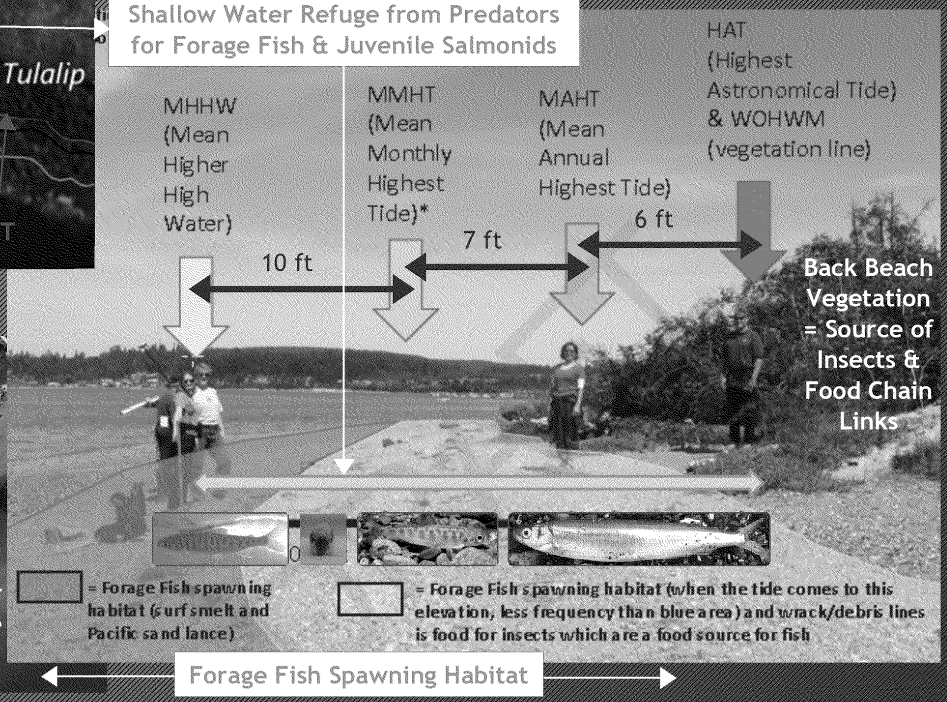
Elevation Data from WA's 48 Harmonic Tide Stations





And Habitat Data



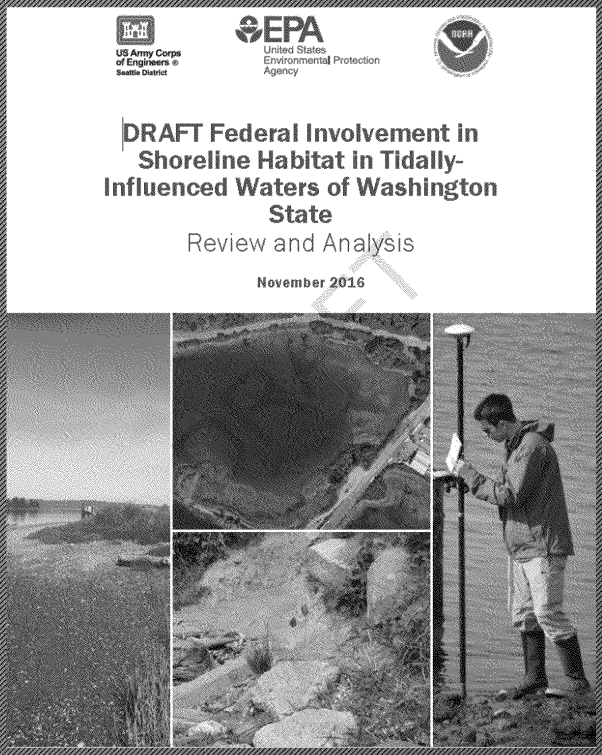


Alternatives Analysis

(Unanimous conclusions, except where noted.)

- Tropic: No longer calculated by NOAA, so not accessible by public
- MMHT: Too low (exceeded 2-3x/month)
- Spring: No longer calculated by NOAA, so not accessible by public
- Perigean: No longer calculated by NOAA, so not accessible by public
- King: Not calculated by NOAA, so not accessible by public
- WOMWM: Not acceptable to Corps because requires field verification
- HAT: Not acceptable to Corps because insufficiently frequent; also, available for only 48 harmonic tide stations
- MAHT:
  - Close to maximum height (~3" lower than HAT)
  - Relatively frequent (tides within 3" or higher on average 5x/year)
  - Easy to calculate & update
  - Available for all 171 tide stations
  - More responsive to sea level rise than all others but MMHT

Workgroup Recommendation to Corps Leaders


US Army Corps of Engineers
Seattle District

EPA
United States Environmental Protection Agency

DRAFT Federal Involvement in Shoreline Habitat in Tidally-Influenced Waters of Washington State

Review and Analysis

November 2016

Ex. 5 - Deliberative Process

- office endorsed change (Dec)