# 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

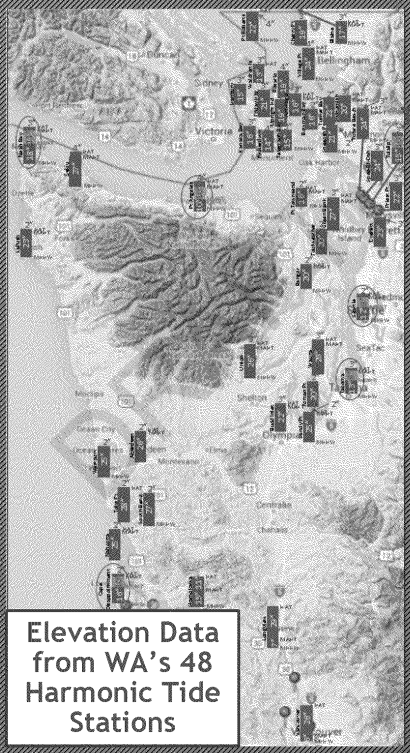
- Despite the unequivocal directive of the definition & stated intent, the Corps' Seattle District has [illegible]
- Region 10 has met no success in trying to convince the Corps to change
- [illegible] finally brought them to the table with us & NMFS in January 2016, at the direction of the agencies' 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

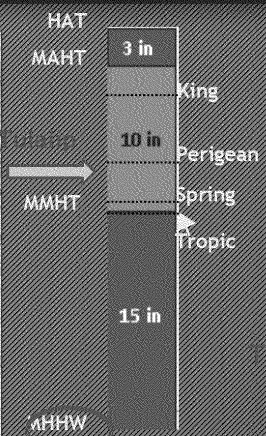
- **MHHW:** Average of the **daily** higher high tides
- **Mean Tropic High Tide:** Average of the higher tides that occur **twice monthly**, when the moon is highest or lowest in the sky
- **Mean Monthly Highest Tide (MMHT):**
- **Mean Spring High Tide:** Average of the higher tides that occur **twice 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)

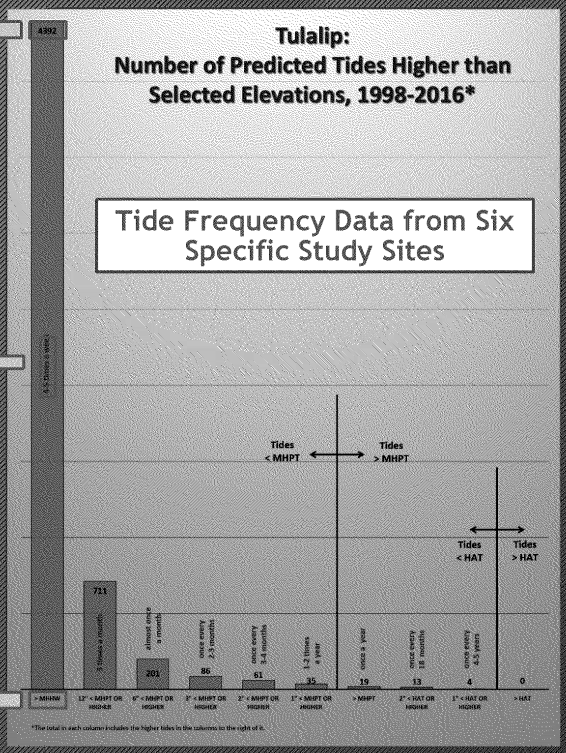
Highest

# Workgroup's Analysis of Tide Data

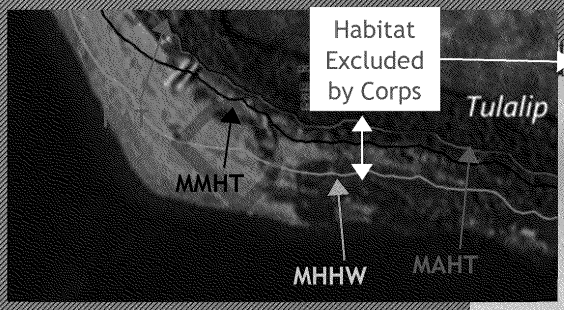


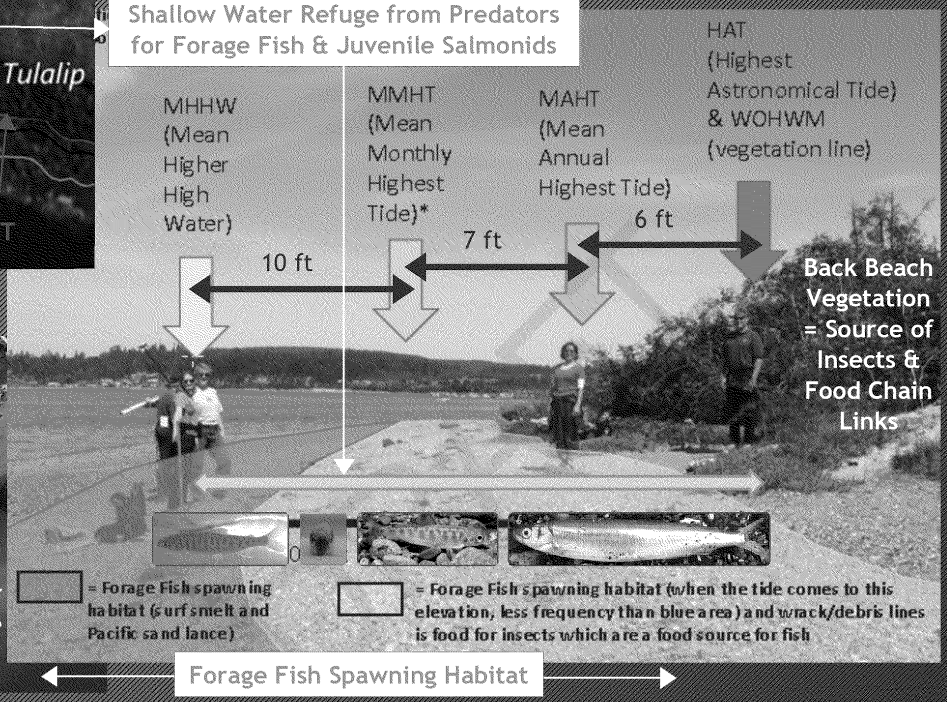

Elevation Data from WA's 48 Harmonic Tide Stations



# And Habitat Data





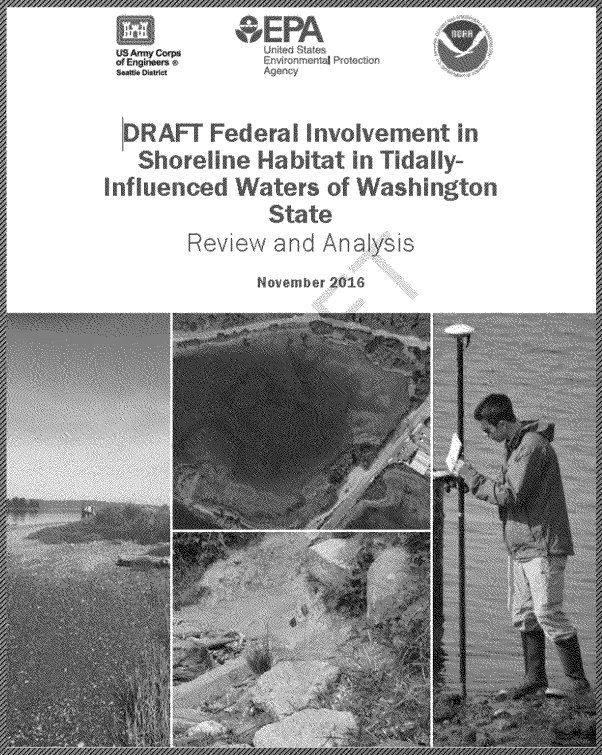

Forage Fish Spawning Habitat

# 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




**Ex. 5 - Deliberative Process**

- office endorsed change (Dec)