**SEAKFHP Functional Definitions**

**(name is brackets is the NWI equivalent name, Cowardin et al. 1979)**

**(4/5/2017 by Sean Eagan)**

**Estuary (Estuarine Wetland)**: A mixed terrestrial/aquatic area of varying salinity created by a perennial stream entering the marine environment.

* The stream must have moved enough material to significantly change the shoreline and local bathymetry since the glaciers receded. (even without a stream layer, you could identify it on a topographic/bathometric map)
* The stream bed must currently have a slope that allows for deposition of fine material. At least 100 meters of length with less than .05% slope.
* Stream channel shifts back in forth over whole area within a century (Stands of trees over 50 years old dis quality the area).
* 10 + hectares area exists between the MHW and MLW (matches TNC map cutoff)

Three subsections of estuaries.

1. **Fresh Water Marsh (Riverine – Lower Perennial)**: This area is dominated by fresh water and is a deposition zone for the stream. On a monthly basis there is some salt water inundation and soils are salty.
   * Area from the HAT (High Astronomical Tide) to the MHW.
2. **Brackish Classic Estuary (Estuarine Intertidal):** Large daily swings in salinity, usually protected from heavy surf, and generally highly biologically productive.
   * Area from the MHW to MLW
   * Often a long flat valley just above mean sea level
3. **Estuary Fringe (Estuarine – Subtidal)**: Submerged in saltwater to a significant depth every day. Area which normally has a salinity similar to seawater at depth, but with bottom substrate, temperature and clarity influence by the perennial stream. Allochthonous food source may predominate.
   * MTL to LAT (Low Astronomic tide) submerge to a significant depth every day or always submerged.
   * Sean Eagan would prefer estuary fringe be considered Nearshore Habitat.

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**Nearshore Habitat (Marine –Subtidal and Intertidal):** An area that provides significantly different (better) habitat for a suite of fish species (especially juvenile life stages) compared to deep open water. Habitat improvement can be from: 1) cover created by submerged aquatic vegetation (SAV); 2) greater variety of food sources. 3) cover provide by uneven bottom or coral 4) greater amounts of light increasing primary production.

* This generally extend from MTL line to the 5 M below Lowest Astronomical Tide (LAT)(tends to be 10 M below MLW)
* If the landscapes transitions from HAT to LAT in less than 10 m this does not count as nearshore for SEAKFHP ( So narrow and steep that it’s value as habitat is much reduced)

Subsections are divided by predominant physical/biological bottom features. (Each section of coastline gets only one designation)

1. **Submerged Aquatic Vegetation (Marine - Subtidal - aquatic bed – rooted vascular):**
   * Dominated by submerged Aquatic vegetation (canopy kelp, seagrass beds or similar)
   * A section of shoreline is counted as SAV even if some area is too shallow for SAV and some too deep.
2. **Coral (Marine –Subtidal - Reef):**
   * Oceanic conditions exist to facilitate coral growth.
   * A section is counted as Coral/reef even if only 1/3 of the total land area is coral.
3. **Rocky substrate (Marine- Subtidal - rock bottom):**
   * Dominated by bottom surface with areas for juvenile fish to hide from predation.
   * May contain small areas of SAV or cobble or sand.
4. **Smooth Bottom Benthic Marine Habitat (Marine – Subtidal - unconsolidated bottom):**
   * Mud, silt, sand or gravel bottom with very little cover
   * There is lots of overlap with “estuary fringe” but this could exist without a perennial stream.