

# Near Surface and Mixed Surface Layer Assessment

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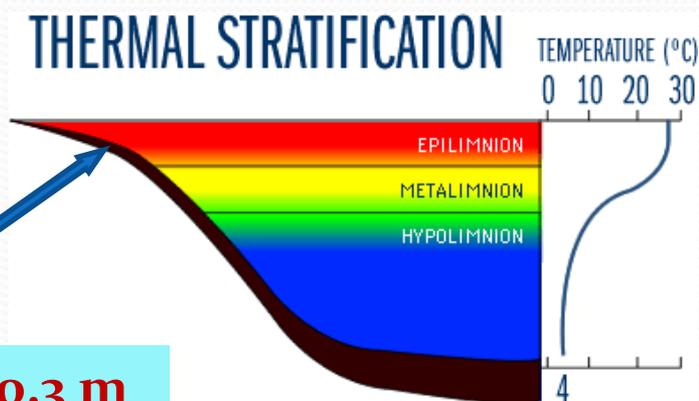
Guidance Advisory Workgroup Meeting

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# Surface/Profile Measurements

- Standards apply to the mixed surface layer for,
  - DO
  - pH
  - Chloride, Sulfate, TDS \*
  - Chlorophyll *a* \*

**Surface Measurements = 0.3 m**



- For WQS attainment a single sample (for pH, chloride, sulfate, TDS, and chlorophyll *a*) collected near the surface (0.3m) are considered representative. DO has been added to the 2010 WQS.

\*Apply to freshwater only

# Surface Measurements

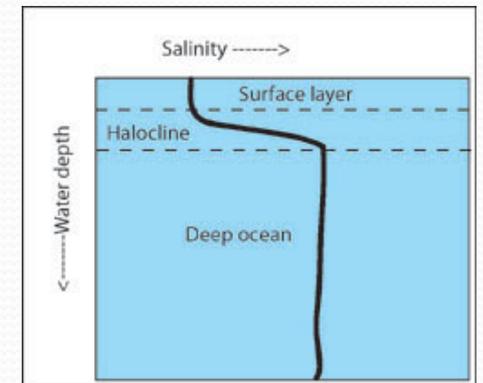
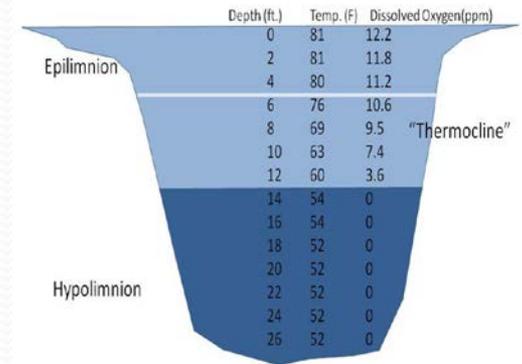
- The assessment of WQS attainment for *bacteria* and *water temperature* are done only using samples collected at 0.3 m in fresh or marine water.
- The 2010 WQS revision allows the use of near surface water samples for assessing standards attainment.

# Toxic Criteria

- **Aquatic Life Criteria**
  - Apply to samples collected at any depth.
- **Human Health Criteria**
  - The average concentration applies from the surface to bottom.
- **Standards attainment for both Aquatic Life and Human Health Protection**
  - Samples collected at 0.3 m are acceptable for assessing WQS attainment.

# Mixed Surface Layer Definitions

- **Freshwater** —Section of the water column from the surface to the depth where water temperature decreases by  $> 0.5\text{ }^{\circ}\text{C}$ .
- **Marine** —Section of the water column from the surface to the depth where specific conductance increases by  $> 6,000\text{ }\mu\text{S/cm}$ .



# Profile Measurements

- **DO** (mean) and **pH** (median) criteria apply to,
  - measurements made in the entire mixed surface layer when the water column *is not* stratified, or
  - measurements made in the mixed surface layer if the water column *is* stratified.
- \* Applies to both fresh and marine waters.

