

California's Aquatic Life Beneficial Uses: Current Status and Novel Approaches




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Uses that protect aquatic life or rely on aquatic ecosystems

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- Warm freshwater habitat
 - Cold freshwater habitat
 - Migration
 - Spawning
 - Wildlife habitat
 - Rare and endangered species
 - Marine habitat
 - Wetland
 - Inland saline water habitat
 - Estuarine habitat
 - Contact recreation (fishing)
 - Non-contact recreation
 - Shellfish harvesting
 - State Water Quality Protected Areas (3 versions)
 - Cultural uses
 - Limited warm water habitat
 - Commercial/sport fishing

Consistency between regions

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- Currently several Regional Boards have uses that are unique (LWARM in Region 8, Region 5's definition of SPWN, CUL in Region 1, etc.).
 - There is some concern that adding tiers to current uses will create an unmanageable system.
 - Some standardization is needed. If all 9 Regional Boards define each of 5 tiers differently, we'll have 45 uses.
 - Biocriteria or other metrics could add needed specificity to a system of broader tiers.

Can we accommodate each region's unique features?

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- How can WARM or COLD mean the same thing in Region 1 (North Coast) and Region 7 (Santa Ana)?
 - How can we compare two streams designated WARM with the current definition?
 - We need to account for regional differences. Variability complicates actions on use designations at the statewide level.
 - When evaluating use attainment, we currently have to identify what "attainment" means on a case-by-case basis.
 - Bioassessments and biocriteria, particularly if reference sites are available, are a promising option.

Can we provide a motivation to improve water quality?

- Can tiers be misused to justify a degraded condition?
- What about waters that have been modified to achieve other goals?
- What biocriteria would we assign to waters that are deliberately stocked with non-native fish?
- Can we acknowledge the influence of land use?
- A system that recognizes competing interests is needed.




How will this affect permits and TMDLs?



- Would different classes have different priority pollutant criteria? The California Toxics Rule doesn't make a distinction.
- Tiers or biocriteria could be the best way to set numeric goals to evaluate success in TMDL implementation.
- Could we include stressor trading?

What about tributaries?

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- Regional Boards designate uses for unnamed tributaries through the “tributary rule”.
 - Currently, this system affords protection for downstream waters.
 - Resources do not exist to identify uses for every water body.
 - What if we have an unnamed A level tributary to a C level river?
 - Tiers or biocriteria could lead to an underprotective situation if the current tributary rule is left in place.

Application: nutrient objectives

- The task is to set appropriate nutrient objectives for all of California that protect against eutrophication while not starving more productive habitats.
- It will be difficult to assign nutrient criteria with the current system of aquatic life use designations.
- Nutrient objectives could be incorporated directly into biocriteria or other measures.
- If sufficiently specific, tiers would identify other important characteristics that determine nutrient capacity.