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



- 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



- 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?



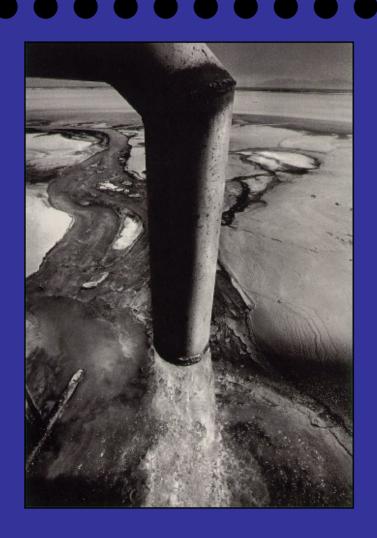
- How can WARM or COLD mean the same thing in Region 1 (North Coast) and Region 7 (Santa Ana)?
- How can we compare two streams designated WARM with the current definition?
- We need to account for regional differences. Variability complicates actions on use designations at the statewide level.
- When 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?



- 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.