

ITEM: 9

SUBJECT: Policy Issues in Granting Mixing Zones - *Informational Item*

BOARD ACTION: Informational item only

BACKGROUND: Discharges of wastewater to surface waters cannot be allowed to cause a body of water to exceed applicable water quality standards. However, the Board has the discretion to grant a mixing zone, which is a defined portion of the surface water body where water quality standards are allowed to exceed water quality standards. Granting of a mixing zone is done with the adoption of an NPDES Permit.

A mixing zone allows the discharger to utilize available assimilative capacity in the receiving water, resulting in less stringent effluent limits and lower compliance costs. Less stringent treatment standards will usually result in less chemical and electrical usage, so the “environmental costs” of providing wastewater treatment are also lessened.

There are state and federal criteria that a mixing zone must meet. Some of these conditions are technical, such as the mixing zone shall not cause acutely toxic conditions to aquatic life passing through the mixing zone or restrict the passage of aquatic life. Other conditions that must be met involve policy considerations, including the condition that the mixing zone shall be as small as practicable and shall not dominate the receiving water body.

A policy issue in several recent NPDES Permits has been the amount of available assimilative capacity that should be granted for a specific discharge. In other words, how large should the mixing zone be? Three options are discussed below:

1. Grant the largest possible mixing zone that complies with mixing zone criteria, even if the current effluent quality can achieve compliance with less dilution (smaller mixing zone). Effluent limits would be higher than the current effluent quality, so the discharger would have reduced risk of a permit violation (with less risk of a Mandatory Minimum Penalty) if an effluent sample had an unusually high result, or if the effluent quality degraded somewhat over time. For most trace constituents, the discharger has little day-to-day control over the effluent concentrations, so the less stringent limits would not mean that additional pollutants would be discharged to the receiving water even if the effluent limits are less strict. But does granting the largest possible mixing zone meet the condition of keeping the mixing zone “as small as practicable”?

CVCWA and some dischargers recommend this approach. A suggestion was made by the City of Tracy at the December 2012 Board meeting that the Board could set an effluent quality “goal” at the current discharge performance, which would cause the discharger and the Board staff to watch effluent quality for that constituent and initiate studies if effluent quality degrades.

2. Grant only enough dilution to allow the discharger to achieve compliance without upgrading the treatment process, which results in the smallest mixing zone. This should comply with the condition of “as small as practicable” for a mixing zone. However, since there is assimilative capacity that has not been granted, the discharge could exceed the effluent limit (and be in violation of the NPDES Permit and be subject to Mandatory Minimum Penalties), yet would not be causing a receiving water problem as long as the assimilative capacity of the receiving water was not exceeded.

CVCWA and some dischargers have objected to this approach as being more restrictive than needed to protect water quality, yet placing the discharger in jeopardy of a permit violation when there may be no water quality impact.

3. Grant some level of dilution between alternatives 1 and 2, yielding an intermediate sized mixing zone. Staff usually tries to allow some extra assimilative capacity beyond the minimum needed recognizing that effluent quality and laboratory analyses vary over time, however there is no guidance on how to do this or how much “factor of safety” should be provided to protect the discharger.

If granting the mixing zone results in an increase in constituent discharges over the amount already granted in an NPDES Permit, an anti-degradation analysis must be performed. Under the Anti-Degradation Policy, (State Board Resolution 68-16), pollutant discharges must be limited “to achieve highest water quality consistent with maximum benefit to the people of the State....[E]xisting high quality [water] will be maintained until it has been demonstrated...that any change will be consistent with the maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water, and will not result in water quality less than that prescribed in the policies.” This would include evaluation of whether or not the proposed discharge constitutes *Best Practicable Control or Treatment*. This is a balancing between the downstream impacts of the discharge to aquatic life and downstream water users against the cost savings (economic and environmental savings) to the discharger and the community served by the discharger.

Even if a proposed mixing zone fully complies with regulations, the Board may still deny the mixing zone. In denying a mixing zone, as with any decision of the Board, findings must be made explaining the bases for the decision.

RECOMMENDATION: Hear the information item. No action is necessary.

Mgmt. Review _____
Legal Review _____

31 January/1 February 2013 Board Meeting
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