

REGIONAL BOARD AUTHORITY

Discharge Limits on Nonpoint Source Discharges

Can discharge limits be applied to nonpoint source discharges?

The Nonpoint Source Policy does not prohibit regional boards from imposing discharge requirements on nonpoint sources.

The Nonpoint Source (NPS) Policy includes a discussion of the tools available under the Water Code to regulate NPS discharges, including waste discharge requirements. The discussion identifies effluent limitations as a potential component of waste discharge requirements:

“The RWQCBs have primary responsibility for issuing WDRs. The RWQCBs may issue individual WDRs to cover individual discharges or general WDRs to cover a category of discharges. WDRs may include effluent limitations or other requirements that are designed to implement applicable water quality control plans, including designated beneficial uses and the water quality objectives established to protect those uses and prevent the creation of nuisance conditions.” (p.4).

While neither the Water Code nor the NPS Policy preclude the use of discharge limitations to control nonpoint source discharges, the water boards’ nonpoint source permits have traditionally relied on requirements for management practice implementation as the core of the permit, while requiring monitoring and reporting to verify that the management practices are leading to required water quality results. This approach was recently acknowledged in the ESJ order in its discussion of the NPS Policy. (See pp. 18-19.) However, in this fourth iteration of the Central Coast agricultural permit, where water quality improvements have been slower than desirable under previous iterations, staff proposes to use discharge limitations as one of the tools in the permit toward meeting water quality objectives.

Fertilizer Application Limits – Rationale and Precedent

Can the regional board impose fertilizer application limits?

Yes, if the regional board determines that an excess application could result in a discharge that could affect water quality.

Nitrogen applied to a crop that is not removed from the field through harvest or other means has the potential to adversely impact groundwater quality and exceed the relevant water quality objectives. The primary source of nitrogen remaining in the field is nitrogen applied in excess of the nitrogen removed from the field. Fertilizer nitrogen applied in excess of the nitrogen removed results in a discharge of waste to land, with little potential for retrieval or treatment in the soil profile. The Water Board has the authority to regulate discharges that have the potential to affect water quality. Here, fertilizer nitrogen applied in excess of nitrogen removed may either run off to surface waters or ultimately migrate to groundwater. Because these scenarios constitute discharges of waste that may affect the quality of waters of the State, the Water Board may prescribe fertilizer application limits through waste discharge requirements. Examples of where nitrogen application rates have been adopted include:

- Statewide Cannabis General Order¹: “*Cannabis cultivators shall not apply nitrogen at a rate that may result in a discharge to surface water or groundwater that causes or contributes to exceedance of water quality objectives, and no greater than 319 pounds/acre/year unless plant tissue analysis performed by a qualified individual demonstrates the need for additional nitrogen application*” (p.45).
- The Central Valley Regional Board’s (Region 5) General WDRs for Existing Dairies²: Some dairies may grow feed for their dairy operation. Except as allowed through certain exceptions, the permit states: “*application rates shall not result in total nitrogen applied to the land application areas exceeding 1.4 times the nitrogen that will be removed from the field in the harvested portion of the crop*” (p.C-11).

In the ESJ Order, Order WQ 2018-0002, the State Water Board stated that additional data collection and research is warranted prior to using A/R ratios or A-R differences as regulatory limits. For that reason, in the proposed framework for the 4.0 Ag Order, the A-R difference is imposed initially as a target, with its use as a limit projected to phase in only after multiple years of implementation of the permit conditions.

TMDLs and Individual Surface Water Discharge Limitations

The Los Angeles Water Board’s conditional waiver for irrigated lands³ states, “*if TMDL-associated Water Quality Benchmarks are not attained by the deadlines in Table 2, then Dischargers shall comply with discharge limitations, using individual discharge monitoring as described in [the order]*” (p. 23). The time schedules identified in the permit are taken from adopted TMDLs.

Riparian Setbacks and Vegetation

Can the regional board impose creek setback requirements and vegetative buffer requirements?

Yes, the California Water Code allows regional boards to adopt requirements and take into consideration the beneficial uses to be protected, including aquatic life beneficial uses.

Section 13263 of the California Water Code (CWC) authorizes regional water boards to issue waste discharge requirements that implement any relevant basin plan and take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the factors in Water Code section 13241. Accordingly, WDRs may include requirements that are designed to implement applicable water quality control plans.

¹ Statewide Cannabis General Order:

https://www.waterboards.ca.gov/water_issues/programs/cannabis/docs/finaladoptedcango101717.pdf

² Region 5 Dairy Order:

https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0122.pdf

Riparian setbacks and vegetation implement the basin plan by protecting aquatic life beneficial uses by regulating temperature through shading, which helps achieve water quality objectives for dissolved oxygen and pH; provides the primary energy input (food source) vital to lower trophic levels of the aquatic ecosystem, which is the building block for the aquatic ecosystem; increases infiltration which provides a longer and regular stream flow regime; reduces the potential for biostimulation by reducing solar radiation, thereby regulating dissolved oxygen levels and stabilizes stream banks to prevent erosion by reducing the erosive force of rain and holding soil in place.

Setbacks help to minimize human disturbance along stream banks, which can increase the risk of erosion, and provides a footprint for riparian vegetation establishment. Soil disturbance within setback areas increases the risk of soil particle entrainment, increasing the risk of erosion and sedimentation to adjacent creeks. Soil disturbance can increase soil compaction thereby increasing the risk of rill and gully erosion and decreases the likelihood of establishing riparian vegetation. Stream setbacks provide the area needed for riparian vegetation establishment.

Similarly, the Basin Plan includes several TMDLs that rely heavily on the presence of riparian vegetation to protect aquatic life-related beneficial uses.

Finally, section 13243 authorizes a regional board, in a waste discharge requirements, to specify certain conditions or areas where the discharge of waste or certain types of waste will not be permitted.

In Order WQ 2013-0101, the State Water Board found that the water quality buffer plans required under Ag Order 2.0 did not illegally dictate the manner of compliance with permit requirements and did not constitute a regulatory taking. (State Water Board Order WQ 2013-0101 (*In the Matter of Central Coast Ag Order*), pp. 55-57.)

The State Board and other regional boards have issued orders requiring compliance with setbacks to reduce the risk of erosion and sedimentation and protect and enhance riparian vegetation. Examples include:

- The San Francisco Bay Regional Board's (Region 2) General WDRs for Vineyard Properties⁴ requires vineyards to establish and maintain stream setbacks that are "*on average >= 1.5 times the bankfull width*" OR implement active and/or passive restoration measures in a reach-based habitat enhancement project or other tributary scale stewardship plan reviewed and approved by the Water Board (p.A-6).
- The Statewide Cannabis General Order requires compliance with riparian setbacks that range from 50 to 150 feet from the waterbody's bankfull stage or top of the incised channel. No cannabis cultivation-related activities may occur within the riparian setbacks (p.24-25 of Attachment A). Pages 33-34 of Attachment A include requirements stating that cannabis cultivators shall:

⁴ Region 2 Vineyard Order:

https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/agriculture/vineyard/final_docs/Vineyard%20General%20WDRs%20-%207-17.pdf

- *“Avoid damage to native riparian vegetation. All exposed or disturbed land and access points within the stream and riparian setback with damaged vegetation shall be restored with regional native vegetation of similar native species.”*
- *“Revegetate soil exposed as a result of cannabis cultivation activities with native vegetation by live planting, seed casing, or hydroseeding within seven days of exposure.”*