

Agenda Item 21: Late Revisions – 5 December 2012

**WASTE DISCHARGE REQUIREMENTS GENERAL ORDER
FOR
GROWERS WITHIN THE EASTERN SAN JOAQUIN RIVER WATERSHED
THAT ARE MEMBERS OF THE THIRD-PARTY GROUP**

Attachment E – Definitions

Attached are the pages with proposed late revisions for the above document.

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

**ATTACHMENT E TO ORDER R5-2012-XXXX
DEFINITIONS, ACRONYMS & ABBREVIATIONS**

**WASTE DISCHARGE REQUIREMENTS GENERAL ORDER
FOR
GROWERS WITHIN THE EASTERN SAN JOAQUIN RIVER WATERSHED
THAT ARE MEMBERS OF THE THIRD-PARTY GROUP**

The following definitions, acronyms and abbreviations apply to this Order as related to discharges of waste from irrigated lands. All other terms shall have the same definitions as prescribed by the Porter-Cologne Water Quality Control Act (California Water Code Division 7), unless specified otherwise.

1. Antidegradation Policy– State Water Board Resolution 68-16, "*Statement of Policy with Respect to Maintaining High Quality Waters in California*," requires existing high quality water to be maintained until it has been demonstrated that any change will be consistent with maximum benefit to the people of the state, will not unreasonably affect present and anticipated beneficial use of water, and will not result in water quality less than that prescribed in Resolution 68-16. The Central Valley Water Board must ~~require that establish standards in its orders for~~ discharges to high quality waters ~~be subject to that result in the implementation of~~ best practicable treatment or control of the discharge necessary to avoid pollution or nuisance and to maintain the highest water quality consistent with maximum benefit to the people of the state. Resolution 68-16 has been approved by the USEPA to be consistent with the federal anti-degradation policy.
2. Aquifer – A geologic formation, group of formations, or portion of a formation capable of yielding usable quantities of groundwater to wells or springs (40 CFR Part 257.3-4).
3. Back flow prevention devices– Back flow prevention devices are installed at the well or pump to prevent contamination of groundwater or surface water when fertilizers, pesticides, fumigants, or other chemicals are applied through an irrigation system. Back flow prevention devices used to comply with this Order must be those approved by USEPA, DPR, DPH, or the local public health or water agency.¹
4. Basin Plan – The Basin Plan is the Central Valley Regional Water Quality Control Plan for the Sacramento River and San Joaquin River Basins. The Basin Plan describes how the quality of the surface and groundwater in the Central Valley Region should be managed to ensure reasonable protection of beneficial uses. The Basin Plan includes beneficial uses, water quality objectives, and a program of implementation.
5. Certified Nitrogen Management Specialist – Certified nitrogen management plan specialists include Professional Soil Scientists, Professional Agronomists, Crop Advisors² certified by the

¹ California Department of Public Health, Approved Backflow Prevention Devices List at <http://www.cdph.ca.gov/certlic/drinkingwater/pages/publications.aspx>. Requirements for backflow prevention for pesticide application are located in 6 CCR §6610.

² Should the California Department of Food and Agriculture and the California Certified Crop Adviser's establish a specific nitrogen management certification, any Certified Crop Adviser who certifies a nitrogen management plan must have a nitrogen management certification.

American Society of Agronomy, or Technical Service Providers certified in nutrient management in California by the National Resource Conservation Service (NRCS); or other specialist approved by the Executive Officer.

6. Degradation – Any measurable adverse change in water quality.
7. Durov Diagrams – A graphical representation of water quality. The Durov diagram is an alternative to the Piper diagram. The Durov diagram plots the major ions as percentages of milli-equivalents in two base triangles. The total cations and the total anions are set equal to 100% and the data points in the two triangles are projected onto a square grid which lies perpendicular to the third axis in each triangle. This plot reveals useful properties and relationships for large sample groups. The main purpose of the Durov diagram is to show clustering of data points to indicate samples that have similar compositions.
8. Exceedance – For the purposes of this Order, an exceedance is a reading using a field instrument or detection by a California state-certified analytical laboratory where the detected result indicates an impact to the beneficial use of the receiving water when compared to a water quality objective for the parameter or constituent. Exceedances will be determined based on available data and application of the appropriate averaging period. The appropriate averaging period may be defined in the Basin Plan, as part of the water quality criteria established by the USEPA, or as part of the water quality criteria being used to interpret a narrative water quality objective. If averaging periods are not defined as part of the water quality objective or the water quality criteria being used, then the Central Valley Water Board may use its best professional judgment to determine an appropriate period.
9. Farming Operation – A distinct farming business, organized as a sole proprietorship, partnership, corporation, limited liability company, cooperative, or other business entity that owns or operates irrigated lands.
10. Farm Operator – The person or entity, including, but not limited to a farm/ranch manager, lessee or sub-lessee, responsible for or otherwise directing farming operations in decisions that may result in a discharge of waste to surface water or groundwater. If a person or entity rents land to others or has land worked on shares by others, the person or entity is considered the operator only of the land which is retained for their own operation.
11. Fertigation – The process of applying fertilizer through an irrigation system by injecting the fertilizer into the irrigation water.
12. Groundwater – Water in the ground that is in the zone of saturation. The upper surface of the saturate zone is called the water table.
- ~~13. High vulnerability area (groundwater) – Areas that meet the requirements for the preparation of a Groundwater Quality Management Plan (see section VIII.H of the Order).~~
13. High vulnerability area (groundwater) – Areas identified in the approved Groundwater Quality Assessment Report “...where known groundwater quality impacts exist for which irrigated agricultural operations are a potential contributor or where conditions make groundwater more vulnerable to impacts from irrigated agricultural activities.” (see section IV.A.3 of the MRP) or areas that meet any of the following requirements for the preparation of a Groundwater Quality

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Management Plan (see section VIII.H of the Order): (1) there is a confirmed exceedance³ (considering applicable averaging periods) of a water quality objective or applicable water quality trigger limit (trigger limits are described in section VIII of the MRP) in a groundwater well and irrigated agriculture may cause or contribute to the exceedance; (2) the Basin Plan requires development of a groundwater quality management plan for a constituent or constituents discharged by irrigated agriculture; or (3) the Executive Officer determines that irrigated agriculture may be causing or contributing to a trend of degradation of groundwater that may threaten applicable Basin Plan beneficial uses.

14. High vulnerability area (surface water) – Areas that meet any of the following requirements for the preparation of a Surface Water Quality Management Plan (see section VIII.H of the Order): (1) an applicable water quality objective or applicable water quality trigger limit is exceeded (considering applicable averaging periods⁴) twice in a three year period for the same constituent at a monitoring location (trigger limits are described in section VIII of the MRP) and irrigated agriculture may cause or contribute to the exceedances; (2) the Basin Plan requires development of a surface water quality management plan for a constituent or constituents discharged by irrigated agriculture; or (3) the Executive Officer determines that irrigated agriculture may be causing or contributing to a trend of degradation of surface water that may threaten applicable Basin Plan beneficial uses.
15. Hydraulic conductivity – The volume of water that will move through a medium (generally soil) in a unit of time under a unit hydraulic gradient through a unit area measured perpendicular to the direction of flow (a measure of a soils ability to transmit water).
16. Hydraulic gradient – The change in total hydraulic head per unit distance in a given direction yielding a maximum rate of decrease in hydraulic head.
17. Hydraulic Head - The height relative to a datum plane (generally sea level) of a column of water that can be supported by the hydraulic pressure at a given point in a groundwater system. For a well, the hydraulic head is equal to the distance between the water level in the well and the datum plane (sea level).
18. Impaired water body – A surface water body that is not attaining water quality standards and is identified on the State Water Board's Clean Water Act section 303(d) list.
19. Irrigated lands – Land irrigated to produce crops or pasture for commercial purposes;⁵ nurseries; and privately and publicly managed wetlands.

³ A "confirmed exceedance of a water quality objective in a groundwater well" means that the monitoring data are determined to be of the appropriate quality and quantity necessary to verify that an exceedance has occurred.

⁴ Exceedances of water quality objectives or water quality triggers will be determined based on available data and application of the appropriate averaging period. The averaging period is typically defined in in the Basin Plan, as part of the water quality standard established by the USEPA, or as part of the criteria being used to interpret narrative objectives. If averaging periods are not defined in the Basin Plan, USEPA standard, or criteria, or approved water quality trigger, the Central Valley Water Board will use the best available information to determine an appropriate averaging period.

⁵ For the purposes of this Order, commercial irrigated lands are irrigated lands that have one or more of the following characteristics:

- The landowner or operator holds a current Operator Identification Number/ Permit Number for pesticide use reporting;