

Conditional Waiver No. 4 – Discharges from Agricultural and Nursery Operations

Conditional Waiver No. 4 is for discharges from agricultural and nursery operations, which contain pollutants that can percolate to groundwater or runoff to surface waters. Discharges from agricultural and nursery operations include discharges resulting from growing operations, irrigation return flows, and storm water runoff which can transport pollutants from agricultural and nursery operations to surface waters and groundwater.

The following types of discharge not regulated or authorized under WDRs may be eligible for Conditional Waiver No. 4:

- Discharges of plant crop residues to land
- Discharges of storm water runoff
- Discharge/application of amendments or mulches to soil (
- Discharges of agricultural irrigation return water
- Discharges of nursery irrigation return water

Discharges from lands used for agricultural or nursery operations can be significant sources of sediment, dissolved solids, nutrients, pesticides, hydrocarbons, pathogens (i.e., bacteria, viruses, protozoa), and other pollutants which can adversely affect the quality of waters of the state if growing operations, irrigation return flows, and storm water runoff are not properly managed. Discharge from these types of operations can all originate from one land owner/operator, and have similar discharge sources, environmental settings, and/or waiver conditions. Therefore, these types of discharge were grouped together into one discharge classification. Agricultural and nursery operations that comply with the waiver conditions are not expected to pose a threat to the quality of waters of the state.

Agricultural and nursery operations can utilize composted materials and/or plant crop residues as soil amendments or mulches, as well as compost green wastes on site to be used later as a mulch or soil amendment. Agricultural and nursery irrigation return flows can produce surface runoff that may transport pollutants from soil (e.g., sediment, hydrocarbons, dissolved solids, pesticides) and soil amendments or mulches (e.g., nutrients, organics, pesticides, pathogens) to surface waters and can also leach pollutants into underlying groundwater.

Storm water and surface runoff that is allowed to come in contact with these wastes can leach pollutants to underlying groundwater, or transport pollutants to surface waters. Storm water runoff from agricultural activities and return flows from irrigated agriculture are exempt from federal NPDES regulations.¹ However, storm water runoff from agricultural activities and return flows from irrigated agriculture are subject to regulations in the state Water Code and may be regulated with WDRs, unless a waiver is issued. Agricultural and nursery operations that properly manage their growing operations, irrigation return flows, and storm water runoff are not expected to pose a threat to the

¹ Code of Federal Regulations Title 40 sections 122.3(e) and (f)

quality of waters of the state. Therefore, waiver conditions must require proper management and other measures to minimize or eliminate discharges of pollutants from agricultural and nursery operations to waters of the state.

Current San Diego Water Board resources would not be sufficient to issue general or individual WDRs and to enroll and regulate each agricultural or nursery operation in the Region. Additionally, the costs associated with annual fees and monitoring requirements for WDRs can require significant resources from agricultural and nursery operations, which would likely be a significant expense for smaller growing facilities. However, collective discharges from these smaller facilities can potentially have a significant impact on the quality of the waters in the Region. This, in turn, can increase the efforts required by cities and counties to comply with NPDES storm water requirements and/or TMDL compliance.

For discharges of irrigation return flows and storm water runoff from agricultural or nursery operations, the existing conditional waivers require implementation of MMs/BMPs, but no enrollment, monitoring, or reporting requirements. The San Diego Water Board has assumed that agricultural and nursery operations are complying with the existing waiver conditions. However, the existing waiver conditions for agricultural and nursery operations do not include any requirements that would compel the owner or operator of an agricultural or nursery operation to comply with waiver conditions. Also, because there are no requirements to compel compliance with waiver conditions, many of the agricultural and nursery operations are very likely unaware of their responsibilities under the existing conditional waivers, or the consequences of their actions on water quality and the environment. Educating these operators of their responsibilities is necessary to ensure that their practices do not adversely affect water quality.

The Central Coast, Central Valley, and Los Angeles Regional Water Boards have implemented waiver programs to control NPS runoff from irrigated lands (including agricultural and nursery operations) with conditions that require enrollment, implementation of MMs/BMPs, monitoring, reporting, and preparation of water quality management plans. The irrigated lands waiver programs from these other Regional Water Boards provide the option of enrolling as an individual discharger, or joining a group or coalition to share the cost of a monitoring and reporting program. Joining a monitoring group is a much more cost effective and affordable option, because the cost of monitoring and reporting is shared among the group members. Monitoring groups also require fewer resources and less oversight than individual dischargers for the other Regional Water Boards. Therefore, the irrigated lands waiver programs from other Regional Water Boards also include incentives to join a monitoring group in the form of reduced monitoring and/or reporting requirements for early enrollment, and discounted annual fees for group members.

The San Diego Water Board is also proposing to implement a waiver program that includes enrollment, monitoring, and reporting. In the other regions most of the agricultural and nursery operations are on large 100-acre and greater size parcels that can be easily located, have easily identified owners and/or operators, and operate on a

full-time and/or year-round schedule. Thus, the Regional Water Boards from these other regions can easily identify and contact owners and/or operators that are not enrolled in their irrigated lands conditional waiver programs. Identifying larger operations such as these in the San Diego Region and enrolling them in a similar waiver program should not be very difficult.

However, many of the growers in the San Diego Region are very small (10 acres or less) operations. There are thousands of these small growing operations in the San Diego Region. The small operations have owners and/or operators that do not occupy the parcels or are present only part of the year, and/or operate on a seasonal, part-time, or sporadic schedule. Contacting and convincing them to join a monitoring group or enrolling them as individual dischargers may be difficult and will likely require significant time and resources. Available data suggest that the collective discharges from these smaller facilities may be impacting the quality of the waters in the Region, and therefore need to be identified and brought into compliance with the waiver conditions.

The owners/operators of agricultural or nursery operations will be given an opportunity to form and/or join a monitoring group. Owners/operators of agricultural and nursery operations that form and/or join a monitoring group and file a Notice of Intent with the San Diego Water Board will be allowed to divide the cost of a monitoring and reporting program among the group members. A monitoring group that has good spatial coverage will likely require fewer sampling locations on a per operation basis than if an individual operations were to conduct a monitoring and reporting program on its own.

Owners/operators of agricultural and nursery operations that choose not to be a member of a monitoring group/coalition will also be required to file a Notice of Intent and perform monitoring. Responsibility for implementing the requirements of the monitoring program would be the sole responsibility of each individual operation that has not joined a monitoring group, which would likely be a significant expense for an individual operation. Enrolling as part of a monitoring group would reduce the enrollment, monitoring, and reporting requirements, as well as divide the financial responsibility among the members in the monitoring group. For these reasons, enrollment in a monitoring group is in the best interest of all agricultural and nursery operators, and is encouraged by the San Diego Water Board. Owners/operators of agricultural or nursery operations that do not comply with the conditional waivers may be issued individual WDRs and/or have other enforcement actions taken against them, which will likely require their participation in a monitoring group, as well as additional fees and/or fines.

Reaching out and informing all the agricultural and nursery operations about the conditional waiver in the Region would exceed the resources currently available to the San Diego Water Board. Additionally, contact from a regulatory agency is often met with an ambivalent or negative response by agricultural and/or nursery owners/operators. Therefore, assistance from non-regulatory agencies and organizations is required to reach out and educate these owner/operators about the conditional waiver and steps needed to comply with the waiver conditions.

The San Diego Water Board has already contacted the San Diego County Farm Bureau (Farm Bureau), UCCE, NRCS, and regional resource conservation districts (RCDs) about reaching out to owners/operators of agricultural and nursery operations. These organizations, and others, can help the San Diego Water Board educate the owners/operators of agricultural and nursery operations about the conditional waiver and waiver conditions, and prepare them for the enrollment, monitoring and reporting requirements of this conditional waiver. These organizations can also provide guidance to agricultural and nursery operators to help them form and/or join monitoring groups.

In addition to the outreach efforts from the Farm Bureau, UCCE, NRCS, and regional RCDs, the municipalities (i.e., cities and counties), government agencies, and San Diego Water Board can encourage agricultural and nursery operators to implement MMs/BMPs and join a monitoring group. When municipalities, government agencies, and/or the San Diego Water Board perform a compliance inspection, as authorized by state, county or local ordinances, or in response to a complaint or a reported violation of waiver conditions, during the inspection they can inform owner/operator of the agricultural and nursery operation of their responsibilities to be included in the conditional waiver program. Agricultural and nursery operators can be issued Notices of Violation, or other enforcement actions for not implementing waiver-required MMs/BMPs and can be encouraged to form and/or join a monitoring group.

Agricultural or nursery operators that violate waiver conditions by not implementing MMs/BMPs and that allow the degradation of water quality should be notified of their responsibilities and required to comply with waiver conditions. Agricultural or nursery operations that repeatedly violate waiver conditions should be required to file a RoWD and be regulated with WDRs. Enforcement actions could also be taken against facilities that fail to comply with waiver conditions.

Therefore, waiver conditions should be developed to encourage the education of agricultural and nursery operators, and encourage agricultural and nursery operators to form and/or join monitoring groups. The waiver conditions should also provide explicit requirements that the owners/operators of agricultural and nursery operations are expected to meet in order to be eligible for this conditional waiver. However, if the owner/operator of an agricultural or nursery operation violates any waiver conditions, the San Diego Water Board has the option to terminate the conditional waiver for the operation and begin regulating the agricultural or nursery operation with individual WDRs and/or take other enforcement actions.

In order to be eligible for Conditional Waiver No. 4, discharges must comply with certain conditions to be protective of water quality. The waiver conditions applicable to discharges from agricultural and nursery operations include the following:

- 4.I.A. General Facility Design and Management Waiver Conditions
- 4.I.B. General Enrollment and Education Waiver Conditions

- 4.I.C. General Waiver Conditions for Application of Compost as a Fertilizer, Amendment, or Mulch to Soil
- 4.I.D. General Waiver Conditions for Application of Products Used in Agricultural and Nursery Operations
- 4.I.E. General Inspection and Reporting Requirements
- 4.II.A. Specific Waiver Conditions for Agricultural Operations
- 4.II.B. Specific Waiver Conditions for Nursery Operations

Discharges from agricultural and nursery operations that comply with the general and specific waiver conditions in Conditional Waiver No. 4 are not expected to pose a threat to the quality of waters of the state.

4.I.A. General Facility Design and Management Waiver Conditions

1. Agricultural and nursery operations must comply with any local, state, and federal ordinances and regulations and obtain any required approvals, permits, certifications, and/or licenses.
2. Agricultural and nursery operations must implement management measures (MMs) and/or best management practices (BMPs) to minimize or eliminate the discharge of pollutants that may adversely impact the quality or beneficial uses of waters of the state. Recommended MMs/BMPs are available in the State Water Board's Nonpoint Source (NPS) Program Plan and/or available from University of California Cooperative Extension (UCCE), Natural Resources Conservation Service (NRCS), and/or regional resource conservation districts (RCDs).

4.I.B. General Enrollment and Education Waiver Conditions

1. Agricultural and nursery operators must perform a self assessment to identify the pollutants present on the site and assess the potential for runoff and/or infiltration to adversely affect the quality or beneficial uses of the waters of the state. Annual self assessments must be available on site for inspection. If an agricultural or nursery operator does not have proof available during an inspection, the operator must submit proof to the inspecting agency and the San Diego Water Board within 45 days from the date of inspection. Self assessment questionnaires are available from the UCCE.
2. Agricultural and nursery operators must complete at least 2 hours of water quality management related training annually. Training may include formal classroom training or meetings with a training component. Proof of training must be available on site for inspection. Agricultural and nursery operators who do not have proof available during an inspection must submit proof to the inspecting agency and the San Diego Water Board within 45 days from the date of inspection.
3. Agricultural and nursery operators must be in regular contact with the local Farm Bureau, UCCE, NRCS, and/or regional RCDs so they can be informed of the latest MMs/BMPs and developments with water quality issues. Proof of contact (e.g., newsletter addressed to facility, NRCS conservation plan, UCCE self assessment) must be available on site for inspection. Agricultural

and nursery operators who do not have proof available during an inspection must submit proof to the inspecting agency and the San Diego Water Board within 45 days from the date of inspection.

4. Agricultural and nursery operations must implement MMs/BMPs to minimize or eliminate the discharge of pollutants that may adversely impact the quality or beneficial uses of waters of the state. Recommended MMs/BMPs are available in the State Water Board's NPS Program Plan and/or available from UCCE, NRCS, and/or regional RCDs.
5. Agricultural and nursery operators shall maintain records pertaining to the water quality management efforts for the operation. The records shall include the following information:
 - a) Site map showing locations of MMs/BMPs and nearby surface water bodies and/or water wells
 - b) List of hazardous materials kept on the property
 - c) Location and amount of waste materials (e.g., green wastes, trash) generated and composted and/or reused on site, or disposed of off site
 - d) Pesticide use reports and records
 - e) Fertilizer, soil amendment, and mulch use records
 - f) Irrigation management records (i.e., water use, irrigation system, irrigation schedule, etc.)
 - g) Equipment maintenance records
 - h) List of MMs/BMPs implemented to minimize and/or eliminate runoff to surface waters and/or infiltration to groundwater
 - i) Owner, operator, and employee education and training records
 - j) Inspection reports
 - k) Self assessments
 - l) Contacts with Farm Bureau, UCCE, NRCS, regional RCDs, and/or other organizations
 - m) Copies of any permits, licenses, and certifications required for the operation
 - n) Water quality monitoring data (if any)Recommended water quality record keeping documentation is available from the UCCE. Water quality management records must be available on site for inspection.
6. **No later than December 31, 2010**, agricultural and nursery operations must form or join a monitoring group. The function of the monitoring group is to perform water quality monitoring and report the results to the San Diego Water Board. Monitoring groups will be allowed to divide the costs associated with the water quality monitoring and reporting requirements in 4.I.F among its members. Individual operations not in a monitoring group will be solely responsible for the costs associated with the water quality monitoring and reporting requirements in 4.I.F.
7. **No later than January 1, 2011**, owners/operators of agricultural and nursery operations must file a Notice of Intent, as either an individual operation or as part of a monitoring group, with the San Diego Water Board.

8. A Notice of Intent submitted by a monitoring group on behalf of its members must contain the following information:
 - a) Identify the representative(s) authorized to sign reports submitted on behalf of the group.
 - b) An electronic list of landowners and/or operators participating in the monitoring group including: (a) assessor parcel number(s), (b) parcel size, (c) parcel owner or operator name, (d) types of crops grown on each parcel, (e) number of irrigated acres, and (f) parcel owner or operator mailing address.
 - c) A detailed map of the area included within the monitoring group, preferably in GIS format, identifying individual parcels and/or districts that are participating in the monitoring group.
 - d) A detailed description of irrigation, storm water runoff, nutrient, pesticide, erosion control, composting, and other site-specific MMs/BMPs that have been implemented by each participant in the monitoring group, which must be provided as a written description, on a map, and/or using pictures.

Monitoring group members are not eligible for this waiver until a complete Notice of Intent is filed. The monitoring group must inform the San Diego Water Board when any member ceases to participate in the monitoring group within 30 days of the cessation of participation. Any member who ceases to participate in a monitoring group must file a Notice of Intent as an individual agricultural or nursery operation, in accordance with waiver condition 4.I.B.9, within 30 days of ceasing to participate in the monitoring group.

9. A Notice of Intent filed by an individual agricultural or nursery operation must contain the following information:
 - a) Information about the agricultural or nursery operation including: (a) assessor parcel number(s), (b) parcel size, (c) parcel owner and operator name(s), (d) types of crops grown on each parcel, (e) number of irrigated acres, and (f) parcel owner and operator mailing address(es).
 - b) A detailed map of the operation, preferably in GIS format, with locations of operation boundaries, nearby surface waters and water wells.
 - c) A detailed description of irrigation, storm water runoff, nutrient, pesticide, erosion control, composting, and other site-specific MMs/BMPs that have been implemented by the operation, which must be provided as a written description, on a map, and/or using pictures.

An individual agricultural or nursery operation is not eligible for this waiver until a complete Notice of Intent is filed.

4.I.C. General Waiver Conditions for Application of Compost as a Fertilizer, Amendment, or Mulch to Soil

1. Prevent the direct or indirect discharge of amendments or mulches to any surface waters of the state (including ephemeral streams and vernal pools).
2. Plant crop residues may be utilized as soil amendment or mulch.
3. Amendments or mulches applied to soil cannot include any of the following additives, unless sufficient information is provided to demonstrate that the waste does not pose a potential threat to water quality: (a) municipal solid

- wastes; (b) sludges, including sewage sludge, water treatment sludge, and industrial sludge; (c) septage; (d) liquid wastes; (e) oil and grease; and (f) hazardous, designated, and any other wastes determined by the San Diego Water Board to pose a potential threat to water quality.
4. The amount of soil amendment or mulch materials that can be applied to soil must be reasonable for the crop or plant, soil, climate, special local situations, management system, and type of soil amendment or mulch. Application rates must take into account storm events during the rainy season (October-May). Application rates must not allow soil amendment or mulch materials to be transported off the property in storm water runoff during the rainy season. Resources are available from the NRCS, UCCE, and other organizations. A copy of the calculations and/or estimate of the application rate must be available on site for inspection.
 5. Apply amendment or mulch materials to soil at site-specific rates appropriate to the season (i.e., dry vs. rainy).
 6. Implement MMs/BMPs in areas with soil amendment or mulch materials to minimize or eliminate runoff and leachate to surface waters and groundwater.

4.I.D. General Waiver Conditions for Application of Products Used in Agricultural and Nursery Operations

1. Prevent the direct or indirect discharge of products used in agricultural or nursery operations to any surface waters of the state (including ephemeral streams and vernal pools).
2. The application of any products used in agricultural or nursery operations that contain pollutants that may be transported in surface runoff to surface waters or may infiltrate to groundwater must be applied in accordance with manufacturer instructions and guidelines, and must not have an adverse effect on the quality of any waters of the state.
3. Excessive amounts of any products used in agricultural or nursery operations spilled to land must be contained and properly disposed.
4. Any products used in agricultural or nursery operations applied to land must not adversely impact the quality or beneficial uses of groundwater in any water wells.

4.I.E. General Inspection and Reporting Waiver Conditions

1. The San Diego Water Board and/or other local regulatory agencies must be allowed reasonable access to the site in order to perform inspections and conduct monitoring.
2. Owners/operators must submit a Notice of Intent or technical and/or monitoring program reports when directed by the San Diego Water Board.
3. **By March 31, 2011**, each monitoring group and each individual operation not participating in a monitoring group must contact the San Diego Water Board to begin developing a Monitoring and Reporting Program Plan (MRPP) and a Quality Assurance Project Plan (QAPP).
4. **By January 1, 2012**, each monitoring group and each individual operation not in a monitoring group must submit one MRPP/QAPP to the San Diego Water

Board. The MRPP/QAPP must include the monitoring locations, frequency of monitoring, constituents of concern to be monitored, documentation of monitoring protocols, and sufficient information about the agricultural and/or nursery operations to demonstrate that the proposed MRPP/QAPP will adequately document water quality and pollutant loadings, and demonstrate compliance with waiver conditions.

5. **By December 31, 2012**, each monitoring group and each individual operation not participating in a monitoring group must submit one Monitoring Program Report (MRP) to the San Diego Water Board consistent with the MRPP/QAPP.

4.II.A. Specific Waiver Conditions for Agricultural Operations

1. Minimize or eliminate the discharge of any pollutants that could adversely affect the quality or beneficial uses of any waters of the state.
2. Agricultural operators cannot alter surface waters of the state on or off the property, unless the proposed alteration has received a Clean Water Act section 401 Water Quality Certification, individual WDRs, or individual waiver from the San Diego Water Board.

4.II.B. Specific Waiver Conditions for Nursery Operations

1. Prevent the direct or indirect discharge of nursery irrigation return water to any surface waters of the United States.
2. Nursery operations must minimize or eliminate the discharge of any pollutants that could adversely affect the quality or beneficial uses of any waters of the state.
3. Nursery operators cannot alter surface waters of the state on or off the property, unless the proposed alteration has received a Clean Water Act section 401 Water Quality Certification, individual WDRs, or individual waiver from the San Diego Water Board.

The following list of references provides additional information that is available regarding appropriate MMs/BMPs for minimizing pollutants in runoff and other discharges from agricultural and nursery operations.

1. Industrial Storm Water Program, State Water Resources Control Board <http://www.swrcb.ca.gov/stormwtr/industrial.html>
2. Construction Storm Water Permit, State Water Resources Control Board http://www.swrcb.ca.gov/stormwtr/gen_const.html
3. Agricultural Management Measures, State Water Resources Control Board <http://www.swrcb.ca.gov/nps/docs/guidance/agricmms.pdf>
4. California Nonpoint Source Encyclopedia, State Water Resource Control Board <http://www.swrcb.ca.gov/nps/docs/encyclopedia/agriculture.pdf>
5. Developing a Management Plan for Irrigation Runoff, Dept. of Horticultural Sciences, Texas A&M University <http://aggie-horticulture.tamu.edu/greenhouse/nursery/environ/wmplan1.html>

6. Management Options for Nonpoint Source Pollution for Greenhouse and Container Crops, UC Cooperative Extension, San Diego
<http://commserv.ucdavis.edu/CESanDiego/Stormwater/index.htm>
7. BMPs Nurseries And Greenhouses, County of Orange
http://www.ocwatershed.com/StormWater/documents_bmp_existing_development.asp#ind
8. Electronic Field Office Technical Guide (eFOTG), Natural Resources Conservation Service <http://www.nrcs.usda.gov/technical/efotg/>
9. Grower Resources (including self assessment questionnaires and water quality record keeping notebook), San Diego County University of California Cooperative Extension http://cesandiego.ucdavis.edu/Clean%5FWater/Grower_Resources.htm