

North Coast Regional Water Quality Control Board

Irrigated Lands Discharge Program Development

Advisory Sub-Group Meetings

February 16, 17, 28, 29, 2012

Presentation Overview

- Scope of program
- Terms and definitions
- Principles
- Goals
 - Water quality goals for receiving waters in the region
 - Ideas for farm water quality management goals

Scope of Program

- *Irrigated* lands is too narrow
- Other non-irrigated ag activities can pose a risk to water quality
- Act of irrigating not the determining factor in risk
- Need to address discharges and other controllable factors from agriculture

Scope of Program (cont.)

- Proposed name change from 'Irrigated Lands Discharge Program' to 'Agricultural Lands Discharge Program'
- Scope will not include activities already covered by other programs
 - Dairies/CAFO's
 - USFS grazing allotments
 - Timber harvest
- Scope will not include dryland grazing
 - Being addressed through ongoing statewide effort

Proposed for Inclusion in Scope

- Vineyards and orchards
 - Irrigated and dry farmed
- Row crops and forage crops
 - Irrigated and dry farmed
- Irrigated pasture
- Marijuana grows
- Associated facilities and operations
 - Drainage systems, roads, reservoirs
 - Chemical applications and stream-riparian management

Definitions

- Legal definitions from the California Water Code
- Describe Regional Board's jurisdiction

Water and Water Quality

Waters of the State

Any surface water or groundwater, including saline waters, within the boundaries of the state, including wetlands.

Water Quality

Refers to the chemical, physical , biological, bacteriological, radiological, and other properties and characteristics of water which affect its use

Water Quality Standard

A law or regulation that

1. Identifies the designated beneficial use or uses of a water body or its segment
2. The water quality criteria (objective) necessary to protect the use(s) of that water body.
3. Must also contain an anti-degradation policy

1. Beneficial Uses

Beneficial uses of the waters of the state that may be protected against water quality degradation include:

- Municipal and Domestic Supply (MUN)
- Agricultural (AGR) and Industrial Supply (IND)
- Recreation: Contact (REC-1) and Non-Contact (REC-2)
- Aquatic habitat related uses
 - Cold Freshwater Habitat (COLD)
 - Migration of Aquatic Organisms (MIGR)
 - Spawning, Reproduction, and/or Early Development (SPWN)
- Native American Culture (CUL)

2. Water Quality Objectives

The limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specified area.

Can be Numeric or Narrative

- Average Dissolved Oxygen > x mg/L
- Temperature must not be altered above natural receiving water temperature

3. Anti-Degradation Policy

Requires that existing high quality waters be maintained to the maximum extent possible

Requires protection of water quality even if it is better than the objective

Waste Discharges

Discharge

The discharge or release of waste to land, surface water, or ground water

Waste

Waste includes sewage and all other waste substances, liquid, solid, gaseous, or radioactive including:

1. Waste associated with human habitation
2. Wastes of human or (domestic) animal origin
3. Wastes associated with any producing, manufacturing, or processing operation

Program Principles

- Improve and protect water quality in the North Coast Region
- Set requirements to ensure discharges from agriculture do not cause or contribute to water quality degradation
- Protect Beneficial Uses of water in the North Coast Region
- Require implementation of management practices to control human-caused discharges of waste

Water Quality Goals for Receiving Waters

- Water is safe for recreation and drinking - i.e. is not toxic nor contains pathogens above safe levels
- Provide water quality supportive of salmon and steelhead life cycles – i.e. cold water and high dissolved oxygen levels
- Water is free of pesticides and ammonia in toxic amounts
- Nutrients levels are low enough so they do not promote algae blooms
- Sediment loading is controlled to maintain channel and habitat integrity

Ideas for Farm Water Quality Management Performance Goals

- Management concepts presented for discussion by the group
- Represent goals to work towards over time
- Many are already being achieved
- Looking for input and refinement from subgroup
 - Which are relevant to your area?
 - What is relative risk level for a given land use?
 - Are these accurate and are there any missing?

Ideas for Farm Water Quality Management Performance Goals

- Riparian Area Management
- Tailwater and Tile Drain water Management
- Stormwater Quality and Erosion Control
- Road Erosion and Maintenance
- Pesticide Application

Riparian Area Management

- Riparian areas are managed in a manner that
 - does not prevent natural establishment and persistence of vegetation (including tillage practices)
 - maintains essential functions such as pollutant filtering, streambank stabilization, and surface erosion control
- Stream channels are managed in a manner that doesn't result in excessive human caused erosion at the site or downstream
- Livestock access and crossings are managed to minimize erosion and animal waste in the stream

Tailwater/Tile Drain Water Management

- Minimize heating tailwater
- Manage timing and quantity of fertilizer and pesticide applications to reduce pollutant concentrations
- Prevent excess irrigation water from reaching surface waters or recycle tailwater
- Manage drainage ditches and tile drains to minimize erosion

Storm Runoff Quality and Erosion Control

- Prevent erosion from cultivated lands, e.g. cover crops
- Prevent eroded sediment and other pollutants from reaching surface waters, e.g. use of buffer/filter strips next to streams
- Do not stockpile manure, soil, plant waste, and other debris in areas where they could be washed or eroded into stream channels
- Stabilize and repair human-caused sediment delivery sites such as gullies, rills, and landslides

Road Maintenance

- Roads and related infrastructure are constructed and maintained to minimize erosion and sediment discharges
 - Improve road drainage to prevent concentrated road runoff, e.g. waterbars, outsloping, ditch relief culverts
 - Repair or replace poorly functioning road and stream crossings
- Stabilize and repair road-related sediment delivery sites

Pesticide and Fertilizer Application

- Pesticides, fertilizers and other chemical substances are applied in a manner that prevents them from reaching groundwater and surface waters

Advisory Group Discussion

Looking for input and refinement from subgroup

- Which risks/practices are relevant to your area?
- What is relative risk level for a given land use?
- Are these accurate and are there any missing?