
Central Valley Regional Water Quality Control Board

7 October 2015

Donald Ikemiya
Kaweah Basin Water Quality Association
P.O. Box 2840
Visalia, CA 93279

CONDITIONAL APPROVAL OF SEDIMENT DISCHARGE AND EROSION ASSESSMENT REPORT, KAWEAH BASIN WATER QUALITY ASSOCIATION

Thank you for the 4 February 2015 submission of the Kaweah Basin Water Quality Association (Coalition) Sediment Discharge and Erosion Assessment Report (SDEAR) in accordance with the Waste Discharge Requirements General Order R5-2013-0120 (Order).

Based on Central Valley Water Board staff review, the SDEAR partially achieves the Order objective to identify Member parcels subject to sediment discharge which may impact surface water quality. I am conditionally approving the Coalition's SDEAR until issues identified in the enclosed memorandum are resolved.

By **8 February 2016** the Coalition must submit a revised SDEAR that expands the assessment to include all surface waters meeting the definition in the Order, and provides justification for any excluded areas (e.g., areas further than 500 meters from a water body). If acceptable justification for exclusion cannot be provided, the assessment area must be expanded. By **8 February 2016** the Coalition also must provide a work plan and time schedule to address proximity to surface waters as a risk factor that increases the potential for discharge of sediment that may degrade surface water. Appropriate rationale must be provided for all evaluation criteria. Final approval will follow submittal of an acceptable revised SDEAR addressing proximity to surface waters.

In accordance with Section VII.C of the Order, growers with parcels within areas currently identified in the conditionally approved SDEAR are required to prepare and certify a Sediment and Erosion Control Plan using a template provided by the Executive Officer. Based on the date of this conditional approval, the deadline to complete and implement the Sediment and Erosion Control Plan is **7 October 2016** for members with small farming operations, and **4 April 2016** for all other members.

If you have any questions, please contact Eric Warren at (559) 445-5035 or by e-mail at eric.warren@waterboards.ca.gov.

Sincerely,

Original Signed by Clay L. Rodgers for

Pamela C. Creedon
Executive Officer

cc: Sue McConnell, Central Valley Water Board, Rancho Cordova

Central Valley Regional Water Quality Control Board

TO: David Sholes, C.E.G. 1687
Senior Engineering Geologist
Irrigated Lands Regulatory Program

FROM: Eric Warren
Water Resource Control Engineer
Irrigated Lands Regulatory Program

DATE: 7 October 2015

**SUBJECT: SEDIMENT DISCHARGE AND EROSION ASSESSMENT REPORT REVIEW,
KAWEAH BASIN WATER QUALITY ASSOCIATION**

On 4 February 2015 the Kaweah Basin Water Quality Association (Coalition) submitted a report entitled *Sediment Discharge and Erosion Assessment Report*. The Coalition is currently approved under Waste Discharge Requirements General Order R5-2013-0120 (Order) to serve as a third-party entity representing owners and operators of irrigated lands located within the Tulare Lake Basin Area. A Sediment Discharge and Erosion Assessment Report (SDEAR) is required of the Coalition to identify irrigated agricultural areas which are subject to erosion and have the potential to discharge sediment that may degrade surface waters. The report must also provide a description of the sediment and erosion areas as a series of ArcGIS shapefiles with a discussion of the methodologies utilized to develop the report (Order Attachment B, section VI).

Submittal

The SDEAR utilized the Revised Universal Soil Loss Equation (RUSLE) method in conjunction with a geographic information system (GIS) to estimate the long-term average annual soil loss potential for irrigated lands within the Coalition area. The RUSLE model was developed to estimate annual sheet and rill erosion due to rainfall. As part of the Construction Storm Water Program, the California State Water Resources Control Board has produced geospatial datasets approximating the combined slope-length factors and soil erodability factors to be used in the RUSLE model. In addition, the U.S. Department of Agriculture (USDA) evaluated historical rainfall and soil data to produce a map of estimated rainfall erosivity factors throughout the state. Using these datasets, the Coalition estimated the annual average soil loss for Member parcels. An annual erosion potential of 5 tons/acre/year was used as a preliminary threshold to identify member parcels which may need a Sediment and Erosion Control Plan. The threshold is based on a benchmark used by the Natural Resources Conservation Service to sustainably maintain soil for long-term agricultural use.¹ The RUSLE modeling results were further refined using Coalition-defined criteria.

¹ USDA Natural Resources Conservation Service. 2010. From the Surface Down. An Introduction to Soil Surveys for Agronomic Use, Second Edition: http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053238.pdf

Review of the shapefile provided with the SDEAR shows that approximately 31% (about 297,000 acres) of the Coalition area is considered high risk based on the proposed assessment. Growers with parcels in areas designated to be at risk for discharge of sediments to surface water are required to complete a Sediment and Erosion Control Plan; about 6% of the member parcels are within the area subject to the requirement.

Recommendations

In general, the Coalition's approach to identify member parcels subject to sediment discharge due to rainfall which may impact surface water quality in an assessed water body is reasonable. However, several items were identified as incomplete, and staff recommends a conditional approval until the following issues are addressed:

Item 1 – Assessment Methodology

The methodology proposed by the Coalition provides information regarding the relative potential soil loss due to precipitation events, but does not address the effect of irrigation practices on sediment discharge and erosion potential. The evaluation of factors other than rainfall is necessary to ensure the SDEAR accounts for all contributing sources of sediment discharge, and properly identifies the Member operations that are required to complete a Sediment and Erosion Control Plan. The most notable issue in the proposed assessment approach is that proximity to surface waters is not considered as a factor that increases the potential for discharge of sediments that may degrade surface water. All areas, including those estimated to have a potential for sediment erosion less than 5 tons/acre/year due to rainfall, should be evaluated for risk for sediment discharge based on the proximity to water bodies.

Item 2 – Evaluation Criteria

The SDEAR includes additional steps to refine the RUSLE modeling results and excludes parcels based on Coalition-defined criteria. Parcels further than 500 meters from a stream or artificial path were excluded regardless of the potential erosion values estimated by the RUSLE model. Areas downhill from waterbodies, or with known barriers to surface runoff (such as levees), were excluded from the final risk determination. The report should provide justification for all exclusion criteria, including any evidence that parcels further than 500 meters from waterbodies do not pose a risk for sediment discharge to surface waters. If justification cannot be provided, the assessment area should be expanded sufficiently to evaluate all irrigated lands with potential to discharge sediment which may impact surface waters.

Item 3 – Waters of the State

The SDEAR includes an evaluation of streams, rivers and artificial pathways defined by the United States Geological Survey National Hydrography Dataset (NHD). This dataset contains a separate classification for canals and ditches which was not included in the SDEAR. Section VI of the MRP states that the goal of the report is to determine which areas within the Tulare Lake Basin Area are subject to erosion and may discharge sediment that may degrade surface waters. Surface waters are defined in attachment E of the Order, and include natural streams, lakes, wetlands, creeks, constructed agricultural drains, agricultural dominated waterways, irrigation and flood control channels, or other non-stream tributaries. All surface waters meeting this definition should be included in the assessment report.