
Central Coast Regional Water Quality Control Board

December 14, 2012

Margarete Beth
San Francisco Regional Water Quality Control Board
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Oakland, CA 94612
email: Margarete.Beth@waterboards.ca.gov

VIA ELECTRONIC MAIL

Dear Ms. Beth:

COMMENT LETTER – CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SAN FRANCISCO REGION TENTATIVE ORDER NO. R2-2012-XXXX, WASTE DISCHARGE REQUIREMENTS AND WATER QUALITY CERTIFICATION FOR SANTA CLARA VALLEY WATER DISTRICT STREAM MAINTENANCE PROGRAM, SANTA CLARA COUNTY

Thank you for the opportunity to comment on the October 15, 2012 California Regional Water Quality Control Board San Francisco Region Tentative Order No. R2-2012-XXXX, Waste Discharge Requirements and Water Quality Certification for Santa Clara Valley Water District Stream Maintenance Program (Tentative Order). As you are aware, the Santa Clara Valley Water District (District) conducts maintenance activities associated with the Stream Maintenance Program (SMP) in waterbodies under the jurisdiction of the San Francisco Regional Water Quality Control Board (San Francisco Water Board) and the Central Coast Regional Water Quality Control Board (Central Coast Water Board). As a result, San Francisco Water Board staff and Central Coast Water Board staff have worked together to develop permit requirements that are consistent between the two Regions. Central Coast Water Board staff offers the following comments in the interest of this collaboration and after discussion with San Francisco Water Board staff.

Our comments focus on the guidelines the District will be required to use when determining the need for maintenance in channels. Maintenance decisions must be based on balancing a reasonable level of flood protection with protection of habitat and beneficial uses. Reasonable flood protection, in turn, should be based on 1) the design flow capacity for modified channels, and 2) natural channel conditions and the conditions which support stable geomorphic and hydrologic processes for unmodified channels. Finally, reporting requirements must provide Regional Water Board staff with sufficient information to determine that proposed maintenance avoids unnecessary environmental impacts.

1. Provision D.62 (p. 23)

This provision requires the District to use Maintenance Guidelines and Principles described in the SMP Manual. However, it is not clear what principles are intended. Since the Tentative Order requires the District to develop maintenance guidelines acceptable to the Regional Water Board Executive Officer, the phrase “maintenance guidelines and principles” seems redundant and confusing. Therefore we recommend deleting the words “and Principles” here and throughout the Tentative Order.

JEFFREY S. YOUNG, CHAIR | KENNETH A. HARRIS JR., INTERIM EXECUTIVE OFFICER

2. Provision D.63 (p. 23)

This provision requires the District to modify existing maintenance guidelines, but does not specifically require the District to develop maintenance guidelines for channels where such guidelines do not yet exist. In addition, the Tentative Order does not specifically require the District to submit new and updated maintenance guidelines for Regional Water Board approval, though this is the clear intent of Provision D.64. New and updated maintenance guidelines should be subject to Regional Water Board Executive Officer approval. Therefore we recommend making the following changes to Provision D.63:

The District shall modify the existing Maintenance Guidelines (MGs) and Principles, and shall develop new MGs for channels where they do not yet exist, so that quantifiable information will inform when maintenance is needed to provide for flood protection to incorporate numeric maintenance guidelines and thresholds to meet District goals and objectives while minimizing impacts to channels and natural resources. These Maintenance Guidelines and Principles MGs shall be developed and submitted for Regional Water Board Executive Officer approval according to the workplan description and implementation schedule described in Provision Nos. 64 and 65. The Regional Water Board Executive Officer will approve the new and modified MGs or indicate needed modifications.

3. Provision D.64 (p. 24)

This provision requires the District to develop a schedule for developing new and updated maintenance guidelines, but does not specifically require the schedule to include submitting the guidelines for Regional Water Board Executive Officer approval. In addition, this provision refers to channel maintenance needed due to the level of flood protection required to meet FEMA requirements. However, FEMA does not establish requirements for channel design or maintenance. Rather, FEMA sets requirements for development within floodplains and floodways that communities must implement to be eligible for federal flood insurance. Maintenance decisions should be based on balancing reasonable flood protection with protection of habitat and beneficial uses, not on flood insurance eligibility. Therefore we recommend the following changes to Provision D.64:

The District shall develop a workplan and implementation schedule for developing and submitting for approval new and updated Maintenance Guidelines (MGs) and Principles incorporating numeric maintenance guidelines and thresholds that allow the District to meet its goals and objectives while also minimizing impacts to channels and avoiding degradation of beneficial uses. The new and updated MGs shall describe describing general stream functions and characteristics, high flow capacity objectives and estimates of flood stage-discharge relationships for creek reaches each year, so that quantifiable information will inform when maintenance is needed to provide for flood protection. The workplan shall be submitted to the Regional Water Board by April 1, 2013, and The workplan and any modifications shall be acceptable to the Regional Water Board Executive Officer. The workplan shall include a 10-year implementation schedule that addresses all channels covered by this Order. The level of detail for each MG shall be commensurate with the level of maintenance needed for the specific channel reach; either due to the level of flood protection required to meet FEMA and/or design requirements, the complexity/simplicity of the area, or the ecological function of that area within the larger stream system. Specifically, the District will collect the data necessary to generate the following information to aid the development of Maintenance Guidelines:

4. Provision D.64.b (p. 24)

This provision requires the District to develop maintenance objectives that provide “necessary flood flow conveyance.” However, this provision relates to modified channels, which have been designed to achieve particular flood flow objectives. Maintenance of modified channels should therefore not exceed the original design objectives. In addition, maintenance activities should be protective of natural resources by balancing achievement of design flow rates with protection of habitat and beneficial uses. Therefore we recommend the following changes to Provision D.64.b:

b) Modified Channels

- i. For each modified reach, identify clear design discharge objectives and how they were derived.
- ii. Roughness objectives for each modified reach will be developed to determine the tolerance for loss of freeboard in engineered flood control channels. Roughness objectives will incorporate both sediment deposition and vegetation objectives ~~while still providing the necessary flood flow conveyance~~ and must strike a balance between the reach-specific design flow capacity and the protection of habitat and beneficial uses.
- iii. Sediment objectives for each modified reach will be developed to establish how much deposition can occur before the tolerance for loss of flood flow capacity is exceeded. Sediment objectives will include consideration for vegetation objectives ~~while still providing the necessary flood flow conveyance~~ and must strike a balance between the reach-specific design flow capacity and the protection of habitat and beneficial uses.
- iv. Vegetation management objectives for each modified reach will be developed. Vegetation objectives shall be derived from identified roughness objectives and must strike a balance between the reach-specific design flow capacity and the protection of habitat and beneficial uses. ~~and shall describe the desired vegetation condition (e.g., vegetation type, density, etc.) that optimizes environmental values for the reach (e.g., habitat, complexity, shade, etc.) for the given roughness while still providing the necessary flood flow conveyance.~~

5. Provision D.64.c (p. 25)

This provision addresses maintenance of unmodified channels, which have not been engineered to achieve specific flow capacity objectives. To determine whether the District’s maintenance proposals effectively balance reasonable flood protection with protection of habitat and beneficial uses, Regional Water Board staff needs sufficient information to determine whether the proposed maintenance is necessary and sufficiently avoids environmental impacts. In particular, Regional Water Board staff needs to be able to compare proposed channel conditions with existing and natural conditions. Therefore we recommend the following changes to Provision D.64.c:

c) Unmodified Channels

- i. Roughness and sediment objectives for unmodified reaches subject to routine maintenance activities shall be developed based on the District’s best estimate of the condition of each reach needed to support stable geomorphic and hydrologic processes and beneficial uses. The District shall document assumptions used to estimate the ~~natural~~ conditions needed to support stable geomorphic and hydrologic

processes and beneficial uses. The District shall provide the following information to support identified roughness and sediment objectives:

1. A description of the District's best estimate of the natural condition of the reach and the assumptions used to develop the estimate.
 2. A description of the District's best estimate of conditions that will support stable geomorphic and hydrologic processes, and optimize habitat and beneficial uses. This description will illustrate the proposed changes in conditions created by maintenance with before and after cross-sectional sketches, and compare existing and proposed roughness, velocities, shear stresses, creekside multistory vegetative layers and habitat conditions. Permissible velocities and allowable shear stresses required to protect existing habitat and beneficial uses will be compared against proposed conditions.
 3. A demonstration that the proposed changes in channel conditions will not require armoring of bed or banks, or substantive reduction in channel and vegetation complexity.
 4. A demonstration that the proposed channel conditions are not in compensation for backwater effects caused by a downstream hydraulic constriction.
- ii. Vegetation management objectives for unmodified reaches subject to routine maintenance activities shall be derived from roughness objectives and shall describe the desired vegetation condition (e.g., vegetation type, density, etc.) that optimizes environmental values for the reach (e.g., habitat, complexity, shade, etc.) for the given identified roughness.

6. Provision D.66 (p. 25)

This provision addresses maintenance activities in channels for which the District does not yet have approved updated or new maintenance guidelines. As result, Regional Water Board staff needs additional information to determine that maintenance proposals balance a reasonable level of flood protection with protection of habitat and beneficial uses. This information should be comparable to the kind of information used to develop maintenance guidelines. In addition, Provision D.66.a is not necessary because it is included in the Tentative Order's requirements for what must be included in Notices of Proposed Work. Therefore we recommend the following changes to Provision D.66:

For routine sediment removal or vegetation management work being performed in channels without updated or new Maintenance Guidelines, the District will provide analytical documentation for work line items on the Notice of Proposed Work. Analytical documentation shall include the following:

- a) ~~The specific location of each channel reach, including channel station and observable landmarks (such as street crossings);~~
- b) Classification of the channel reach as modified or unmodified or natural;
- c) Statement as to whether the channel reach is part of a PMA, and if so, maintenance activities covered under the PMA;
- d) For modified channel reaches, the design flood return period for each reach (e.g., the one-hundred-year flood) and the design flow rate;
- e) For unmodified channel reaches, a description of the District's best estimate of the natural condition of the reach, and the assumptions and rationale used to develop it;
- f) Roughness and sediment objectives for the proposed maintenance, where available and the rationale used to develop them;
- g) Vegetation objective for the proposed maintenance, where available and the rationale used to develop it;

- h) Determination of whether the work site is a hydraulic constriction, or is subject to backwater effects caused by a downstream constriction;
- i) Evaluation of alternative approaches that could achieve the same result (e.g., removing a hydraulic constriction, removing sediment instead of instream vegetation, etc.);
- j) General channel reach dimensions; and
- k) Anticipated frequency of maintenance; and

7. Provision D.9 (p. 12)

We recommend the following changes to this provision to make it consistent with recommended changes to Provision Nos. 63 through 66:

In modified channels, ~~only~~ sediment removal shall be conducted within the as-built design shall be allowed per the reach-specific thresholds and criteria specified in the Maintenance Guidelines. If maintenance thresholds and criteria have not yet been updated or developed according to Provision Nos. 63 and 64 of this Order for the reach where sediment removal will be conducted, sediment removal shall not expand the channel dimensions beyond the original channel design.

8. Provision D.10 (p. 12)

We recommend the following changes to this provision to make it consistent with recommended changes to Provision Nos. 63 through 66:

In unmodified channels, sediment removal shall be conducted per the reach-specific thresholds and criteria specified in the Maintenance Guidelines. If maintenance thresholds and criteria have not yet been updated or developed according to Provision Nos. 63 and 64 of this Order for the reach where sediment removal will be conducted, sediment removal shall not expand the channel capacity beyond the natural contours.

9. Provision D.54.a.vi (p. 18)

We recommend the following changes to this provision to make it more consistent with Provision Nos. 63, 64, and 66:

- vi. The rationale for the proposed maintenance activity which effectively demonstrates that the proposed maintenance is necessary, and no more than necessary, to achieve objectives that balance a reasonable level of flood protection with protection of habitat and beneficial uses;
 - 1. For reaches where the Regional Water Board Executive Officer has approved new or modified Maintenance Guidelines (as described in Provision Nos. 63 and 64 of this Order) Where the information is available, the rationale shall be based on numeric maintenance guidelines and thresholds developed in accordance with Provision Nos. 64 and 65 of this Order the approved Maintenance Guidelines;
 - 2. For reaches where the Regional Water Board Executive Officer has not yet approved new or modified Maintenance Guidelines Where numeric maintenance guidelines and thresholds are not yet available, the rationale shall be based on the analysis and documentation District's best estimate of roughness and sediment objectives, vegetation objectives, and channel dimension estimates, as described in Provision No. 66 Nos. 64 and 65 of this Order;

If you have questions please contact **Jon Rohrbough** at (805) 549-3458 or via email at jrohrbough@waterboards.ca.gov, , or Phil Hammer at (805) 549-3882. Please mention the above certification number in all future correspondence pertaining to this project.

Sincerely,

for

Kenneth A. Harris
Interim Executive Officer

Cc: Shin-Roei Lee, San Francisco Water Board, Shin-Roei.Lee@waterboards.ca.gov
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