STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

STAFF REPORT FOR REGULAR MEETING OF MARCH 18, 2010
Prepared February 23, 2010

ITEM NUMBER: 12

SUBJECT: Amending the Water Quality Control Plan for The Central Coast Basin to (1) Adopt Total Maximum Daily Loads For Fecal Coliform in Lower Salinas River Watershed, (2) Add the Lower Salinas River Watershed to the Domestic Animal Waste Discharge Prohibition, and (3) Add the Lower Salinas River Watershed to the Human Fecal Material Discharge Prohibition

KEY INFORMATION

Staff recommends adoption of proposed Total Maximum Daily Loads (TMDLs) for fecal coliform in the Lower Salinas River Watershed, including the Lower Salinas River, Old Salinas River, Tembladero Slough, Salinas Reclamation Canal, Alisal Creek, Gabilan Creek, Natividad Creek, Salinas River Lagoon (North), Santa Rita Creek, Quail Creek, Chualar Creek, and Towne Creek.

Staff also recommends adding the Lower Salinas River Watershed to the Domestic Animal Waste Discharge Prohibition and adding the Lower Salinas River Watershed to the Human Fecal Material Discharge Prohibition. If established, discharges of domestic animal waste that cause or contribute to exceedance of water quality objectives would be prohibited in the Lower Salinas River Watershed and all discharges of human fecal material would be prohibited in the Lower Salinas River Watershed. Staff is proposing that these two prohibitions be used to reduce or eliminate these sources of fecal coliform to waterbodies in the Lower Salinas River Watershed. The TMDL sets forth an implementation plan that includes actions taken by the Executive Officer, pursuant to delegated authority, or by the Central Coast Water Board to require implementation actions for parties responsible for domestic animal waste and human fecal material discharges to comply with the prohibitions.

The Salinas River is the receiving water for approximately 4,600 square miles of land. Depending upon seasonal flow conditions, the Salinas River may flow directly into Monterey Bay, or can flow into Moss Landing Harbor via the Old Salinas River. The Lower Salinas River watershed is the lower segment of the Salinas River, comprising approximately 350 square miles, from Gonzales Road near the city of Gonzales to Monterey Bay. Chualar Creek and El Toro Creek flow to the Lower Salinas River and Old Salinas River. Alisal Creek, Gabilan Creek, Towne Creek, Santa Rita Creek, and Salinas Reclamation Canal flow to Tembladero Slough and Old Salinas River.

These TMDLs establish the acceptable total load and allocations to parties responsible for sources of fecal coliform that protect the water contact recreation beneficial use in Lower Salinas River Watershed. Central Coast Water Board staff has identified sources of fecal coliform that are causing or contributing to impairment, has identified parties responsible for these sources, has proposed waste load and load allocations necessary to achieve the TMDLs, and has identified implementation and regulatory mechanisms to achieve the TMDLs. The proposed allocations to non-human sources of fecal coliform are equal to existing water quality objectives for fecal coliform protective of the

water contact recreation beneficial use; allocations for human sources of fecal coliform are zero—no loading from these sources is allowed.

SUMMARY

The Lower Salinas River, Old Salinas River, Tembladero Slough, Salinas Reclamation Ditch, Alisal Creek, Gabilan Creek, Natividad Creek, Salinas River Lagoon (North), Santa Rita Creek, Quail Creek, Chualar Creek and Towne Creek are located in the Lower Salinas River Watershed and are impaired by fecal indicator bacteria. The Lower Salinas River, Old Salinas River, Tembladero Slough, Salinas Reclamation Ditch, Alisal Creek, and Gabilan Creek are listed on Clean Water Act 303(d) list as impaired due to pathogens and do not meet the Basin Plan water quality objectives for fecal coliform.

Quail Creek and Chualar Creek are on the Water Board-approved Clean Water Act 303(d) proposed list (USEPA approval pending) of impaired waters for pathogens, and do not meet Basin Plan water quality objectives for fecal coliform.

The Salinas River Lagoon (North), Santa Rita Creek, Natividad Creek, and Towne Creek are not on the Clean Water Act 303(d) list of impaired waters for pathogens, and do not meet USEPA water quality criteria for *E. coli*.

In this agenda item, staff recommends the Central Coast Water Board adopt three Basin Plan amendments that stem from the development of Total Maximum Daily Loads (TMDLs) for fecal coliform in Lower Salinas River Watershed. Staff recommends the following actions: (1) adopt Total Maximum Daily Loads for Fecal Coliform in Lower Salinas River Watershed, (2) add the Lower Salinas River Watershed to the Domestic Animal Waste Discharge Prohibition, and (3) add the Lower Salinas River Watershed to the Human Fecal Material Discharge Prohibition

Staff reviewed beneficial uses of water bodies in the watershed and determined that the water contact recreation beneficial use in the Lower Salinas River Watershed is impaired. In the public comment draft of the TMDL, staff proposed the removal of the shellfish harvesting beneficial use from the Salinas River Lagoon (north), the Old Salinas River Estuary, and the Tembladero Slough. Upon receiving and considering public comment regarding the shellfish use proposal, and after discussing the issue internally and with USEPA, staff concluded not to propose removal of the shellfish harvesting beneficial use at this time. Staff determined that the Salinas River Lagoon (North), the Old Salinas River, and Tembladero Slough do not meet the Basin Plan water quality objectives for total coliform for shellfish harvesting beneficial use. The current shellfish harvesting beneficial use definition broadly encompasses recreational harvesting for consumption, harvesting for bait, and commercial aquaculture. The State Water Resources Control Board (State Board) is conducting a task force project to re-assess the areas designated for the shellfish harvesting beneficial use. As a result of this project, State Board may separate out the commercial from the other components of the shellfish definition, potentially resulting in a water quality standards action. Consequently, at this time, staff recommends that the Central Coast Water Board not require implementation measures related to the shellfish harvesting beneficial use water quality standard in the proposed Implementation Plan. Staff proposes that waterbodies designated with shellfish harvesting beneficial use in Lower Salinas River Watershed be addressed in a separate shellfish harvesting beneficial use TMDL and/or standards action pending the outcome of the work of the State Board shellfish harvesting task force project.

Water Board staff determined that a human fecal material discharge prohibition and a domestic animal waste discharge prohibition for the Lower Salinas River Watershed should be developed to include specific non-point sources of fecal indicator bacteria.

Staff developed the TMDLs, load and wasteload allocations, and implementation plans to reduce fecal coliform loading to waterbodies in the Lower Salinas River Watershed.

The technical report that supports the Basin Plan Amendment is the Project Report for the TMDLs. The Project Report (Attachment 2 to this Staff Report) is available at the Central Coast Water Board website at

http://www.waterboards.ca.gov/centralcoast/board_info/agendas/2010/2010_agendas.shtml

Click on "view agenda" for March 18, 2010; then click on Item 12, TMDLs for Fecal Coliform in the Lower Salinas River Watershed.

DISCUSSION

Project Development for TMDLs

The data and information staff used to develop the TMDLs were obtained from the Central Coast Ambient Monitoring Program, the U.S. Department of Agriculture, and Water Board TMDL program monitoring activities to assess pathogen conditions in surface waters of the Lower Salinas River Watershed. Staff also used discharger data and reports, land use data, field reconnaissance work, USEPA-recommended or recognized empirical load assessment methods, and conversations with staff from other agencies to complete the source analysis.

Problem Statement and Numeric Target

The beneficial use of water contact recreation is not protected in the impaired reaches of the Lower Salinas River Watershed, including Lower Salinas River (from the Chualar River Road downstream to the Salinas River Lagoon (North)), Old Salinas River, Tembladero Slough, Salinas Reclamation Canal, Alisal Creek, Gabilan Creek, Natividad Creek, Salinas River Lagoon (North), Santa Rita Creek, Quail Creek, Chualar Creek, and Towne Creek, because fecal indicator bacteria concentrations exceed existing Basin Plan numeric water quality objectives and/or USEPA guidelines protecting this beneficial use. All reaches in these waterbodies are impaired.

The numeric targets for the TMDLs are equal to the water quality objectives protecting water contact recreation (REC-1), which are:

"Fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200 MPN per 100 mL, nor shall more than 10 percent of samples collected during any 30-day period exceed 400 MPN per 100 mL." (from: Water Quality Control Plan for the Central Coastal Basin)

Source Analysis

The controllable sources contributing pathogens, listed in order of decreasing contribution, to the Lower Salinas River, Old Salinas River, Tembladero Slough, Salinas Reclamation Canal, Alisal Creek, Gabilan Creek, Natividad Creek, Salinas River Lagoon (North), Santa Rita Creek, Quail Creek, Chualar Creek, and Towne Creek are:

Salinas Reclamation Canal, Lower: 1) discharges from Municipal Separate Storm Sewer Systems (MS4s), 2) domestic animals/livestock discharges in areas that do not drain to MS4s, 3) illegal dumping, 4) homeless person/encampment discharges in areas that do not drain to MS4s, 5) sanitary sewer collection system leaks.

Reclamation Canal, Upper/Alisal Creek: 1) Domestic animals/livestock discharges in areas that do not drain to MS4s, 2) illegal dumping, 3) homeless person/encampment discharges in areas that do not drain to MS4s, 4) discharges from MS4s.

Old Salinas River: 1) Domestic animals/livestock discharges in areas that do not drain to MS4s, 2) illegal dumping, 3) discharges from MS4s.

Tembladero Slough: 1) Domestic animals/livestock discharges in areas that do not drain to MS4s, 2) discharges from MS4s, 3) illegal dumping, 4) sanitary sewer collection system leaks.

Santa Rita Creek: 1) Domestic animals/livestock discharges in areas that do not drain to MS4s, 2) discharges from MS4s, 3) illegal dumping, 4) homeless person/encampment discharges in areas that do not drain to MS4s, 5) sanitary sewer collection system leaks.

Salinas River Lagoon (North): 1) Domestic animals/livestock discharges in areas that do not drain to MS4s, 2) illegal dumping 3) discharges from MS4s.

Lower Salinas River: 1) Domestic animals/livestock discharges in areas that do not drain to MS4s, 2) discharges from MS4s, 3) illegal dumping.

Gabilan Creek: 1) Domestic animals/livestock discharges in areas that do not drain to MS4s, 2) discharges from MS4s, 3) illegal dumping, 4) homeless person/encampment discharges in areas that do not drain to MS4s, 5) sanitary sewer collection system leaks.

Natividad Creek: 1) Domestic animals/livestock discharges in areas that do not drain to MS4s, 2) discharges from MS4s, 3) illegal dumping, 4) homeless person/encampment discharges in areas that do not drain to MS4s, 5) sanitary sewer collection system leaks.

Quail Creek: 1) Domestic animals/livestock discharges in areas that do not drain to MS4s, 2) illegal dumping.

Chualar Creek: 1) Domestic animals/livestock discharges in areas that do not drain to MS4s, 2) illegal dumping.

Towne Creek: 1) Domestic animals/livestock discharges in areas that do not drain to MS4s, 2) illegal dumping.

Natural uncontrollable sources of fecal coliform in the listed waterbodies are present and likely contributing to impairment at varying degrees by season and location.

TMDLs and Allocations

The TMDLs for pathogens in the Lower Salinas River (from the Salinas River at Chualar River Road, downstream to the Salinas River Lagoon), Old Salinas River, Tembladero Slough (the entire Slough), Salinas Reclamation Canal, Alisal Creek, Gabilan Creek, Natividad Creek, Salinas River Lagoon (North), Santa Rita Creek, Quail Creek, Chualar Creek, and Towne Creek are equal to the Basin Plan REC-1 water quality objective for fecal coliform. Staff recommends the allocation to sources of fecal indicator bacteria from human fecal material be zero. Staff recommends this because there is a higher probability that fecal material from humans has a higher proportion of pathogens relative to fecal material from other organisms. Additionally, the regulatory mechanisms used to regulate sources of human fecal material do not allow any loading to surface waters, which, in effect, equates to a zero allocation to these sources. The allocations to all other sources of fecal indicator bacteria are equal to the Basin Plan water quality objective for fecal coliform.

The responsible parties for controllable sources are City of Salinas, County of Monterey, Castroville Community Services District, owners and operators of land used for or containing illegal dumping, owners and operators of land used for or containing domestic animals (including pets, farm animals,

and livestock), and owners and operators of land that includes homeless persons and encampments. Natural sources are assigned an allocation equal to the Basin Plan water quality objective for fecal coliform. The parties responsible for the allocations to controllable sources are not responsible for the allocation to natural sources. The Implementation Table (Table IX – L – 1) in the Resolution (Attachment 1) shows these allocations to the responsible parties.

Implementation Plan
The proposed Implementation Plan in the Resolution (Attachment 1 of this staff report) describes the responsibilities of each responsible party and the steps the Central Coast Water Board or the Executive Officer will take to require actions by the responsible parties.

Staff developed an implementation strategy (Plan) to implement these TMDLs that reflects staff's current understanding of fecal coliform loading in the Lower Salinas River Watershed. The Plan establishes that the Executive Officer or Central Coast Water Board will require responsible parties to implement identified actions that will reduce fecal coliform loading, monitor fecal coliform source reductions, and report progress and results of monitoring to the Central Coast Water Board.

Implementation is required pursuant to existing regulatory authority through currently held waste discharge requirements and NPDES permits, the NPDES General Permit for stormwater discharges from municipalities, the proposed Human Fecal Material Discharge prohibition, and the proposed Domestic Animal Waste Discharge prohibition.

The Implementation Plan explains that if responsible parties demonstrate that controllable sources of fecal coliform are not contributing to the exceedance of water quality objectives in receiving waters, staff will re-evaluate the TMDL, targets and allocations and propose revisions to the Central Coast Water Board. For example, staff may propose a site-specific objective for Lower Salinas River Watershed waters. A site-specific objective would be proposed as a Basin Plan amendment through the appropriate adoption and public review procedures required by the Central Coast Water Board, State Water Resources Control Board, and United States Environmental Protection Agency.

Monitoring Plan
The Implementation Plan establishes that the Executive Officer will require responsible parties to monitor fecal coliform source reductions and report progress and results of monitoring to the Central Coast Water Board. Staff developed a recommended set of locations and will work with responsible parties to establish on-going monitoring at these locations. Responsible parties will conduct the monitoring and submit results to the Central Coast Water Board. Staff will evaluate the monitoring data on an on-going basis, as well as during three-year assessments to determine progress towards achieving the allocations and TMDLs.

Staff proposes storm drain sampling to evaluate reductions in fecal coliform loading from storm drains and effectiveness of stormwater management plans. The City of Salinas and County of Monterey will work with staff to identify which stormwater outfalls to monitor based on representative flows and the volume of discharge (loading potential), among other factors. The Executive Officer will review and approve the final monitoring plan, request modifications if necessary, or may require specific monitoring.

Time Schedule For Tracking Progress and Achieving the TMDLs
Staff will evaluate implementation and numeric target monitoring data every three years to determine if changes to implementation actions or monitoring are warranted.

The target date to achieve the TMDLs is 13 years after the effective date of the TMDLs, which is the date of approval by the Office of Administrative Law. This projection is based on anticipated

implementation schedules of the responsible parties, which are in turn based on economic and logistic considerations.

ENVIRONMENTAL SUMMARY

The California Resources Agency has certified the basin planning process in accordance with section 21080.5 of the Public Resources Code. The process is therefore exempt from Chapter 3 of the California Environmental Quality Act (CEQA). The analysis contained in the Final Project Report (Attachment 2), the CEQA Substitute Environmental Document (Attachment 3, this staff report), and the responses to comments complies with the requirements of the State Water Board's certified regulatory CEQA process, as set forth in California Code of Regulations, Title 23, section 3775 et seq. Furthermore, the analysis fulfills the Central Coast Water Board's obligations attendant with the adoption of regulations "requiring the installation of pollution control equipment, or a performance standard or treatment requirement," as set forth in section 21159 of the Public Resources Code. All public comments were considered.

Public Resources Code section 21159 provides that an agency shall perform, at the time of the adoption of a rule or regulation requiring the installation of pollution control equipment, or a performance standard or treatment requirement, an environmental analysis of the reasonably foreseeable methods of compliance, and an analysis of the reasonably foreseeable environmental impacts of the methods of compliance, an analysis of reasonably foreseeable mitigation measures to lessen the adverse environmental impacts, and an analysis of reasonably foreseeable alternative means of compliance with the rule or regulation that would have less significant adverse impacts. Section 21159(c) requires that the environmental analysis take into account a reasonable range of environmental, economic, and technical factors; population and geographic areas; and specific sites.

The CEQA Substitute Document Report (Attachment 3), provides the environmental analysis required by Public Resources Code section 21159. The CEQA Report identifies reasonably foreseeable methods of compliance with the TMDL and specified in the CEQA checklist whether there were any impacts to the environment associated with the reasonably foreseeable methods of compliance. The CEQA Report found no significant impacts to the environment associated with the reasonably foreseeable methods of compliance. The CEQA Report identifies some areas where there may be an impact that is less than significant and identified the basis for that conclusion. Some actions needed to implement the TMDL could result in actions that might have an impact on the environment. The Central Coast Water Board may not specify the manner of compliance and, therefore, cannot know for certain whether some actions in the future to implement the TMDL could have a significant impact on the environment. The Water Board is not required to speculate beyond evaluating reasonable foreseeable methods of compliance. Public agencies responsible for implementing or approving actions in the future may be required to conduct CEQA review of those actions. The CEQA Report identified some potential mitigation measures that could lessen adverse environmental impacts. The CEQA Report also analyzed alternative methods of compliance that could be considered by the responsible parties in complying with the TMDL.

The Project Report (attachment 2) evaluated environmental, economic, and technical factors, including the water quality of the project area, the impacted population, the technical issues affecting the reasons for the impairment and that would affect the ability to comply with the TMDL, and the reasonably expected cost of compliance and economic impacts of the impairment.

ANTI-DEGRADATION

These basin plan amendments are consistent with the provisions of the State Water Resources Control Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California" and 40 CFR 131.12. The Basin Plan Amendments require actions that will

result in improved water quality throughout the Watershed and maintenance of the level of water quality necessary to protect existing and anticipated beneficial uses.

SCIENTIFIC PEER REVIEW

The peer reviewer provided comments to staff in May 2009. Staff prepared responses and revised the Project Report in response to these comments in June 2009, prior to distributing for public comment. Peer review comments and staff responses are included in Attachment 5. As a result of these comments, staff made several changes to the Project Report, as follows: 1) addition of mass-based daily load expressions in accordance with 2007 USEPA draft guidance, 2) identification of sediment-associated bacteria as a distinct source load and assessment of its potential load contribution, 3) assessment of the potential load contribution of wildlife, and 4) additional assessments of the spatial and flow-based variation in bacteria loads. These changes are discussed in staff responses described in Attachment 5.

PUBLIC INVOLVEMENT

Staff conducted stakeholder outreach efforts throughout the project process. Staff worked with county, state, and federal agencies during the data collection and data analysis phases. Results of coordinated efforts were publicized in newspapers and television media.

Staff made several presentations and engaged with stakeholders during the development of the TMDL. Attendees of the presentations included representatives of the following:

- United Fresh Fruit and Vegetable Association
- Monterey County Department of Environmental Health
- State of California Department of Public Health
- United States Department of Agriculture
- United States Food and Drug Administration
- Monterey County Cattlemen's Association
- The City of Salinas
- Commercial Ranches
- Commercial Farms
- Monterey County Water Resources Agency
- Monterey Bay National Marine Sanctuary
- Monterey County Farm Bureau
- Monterey County Agricultural Commissioner's Office
- Resource Conservation District of Monterey County
- Central Coast Agricultural Task Force
- California State University Monterey Bay, Watershed Institute
- Central Coast Agricultural Water Quality Coalition

Staff conducted a CEQA stakeholder scoping meeting on June 20, 2007. Staff addressed questions and comments from attendees.

Staff held another stakeholder meeting on August 18, 2009, prior to the formal public comment period preceding the Central Coast Water Board public hearing to consider adoption of the TMDL. Staff responded orally to public comments and questions at the stakeholder meeting.

This Staff Report, Resolution, and other attachments were made available for formal public comment on December 7, 2009.

Comments were received from:

1. Tom and Terry Bengard, Salinas, in an email attachment received January 20, 2010.
2. Brian Finegan, Attorney at Law, Salinas, representing Tom and Terry Bengard in an email attachment received January 21, 2010.
3. Celeste Settrini, Settrini Ranch LLC, Salinas, in an email attachment received January 21, 2010.
4. Pete Silacci Ranch, Salinas, in an email attachment dated January 19, 2010, and received January 21, 2010.
5. Bill Massa, Salinas, in an email attachment received on January 21, 2010.
6. Justin Oldfield, California Cattlemen's Association, in an email attachment received January 21, 2010.
7. Steve Shimek, Monterey Coastkeeper, in an email attachment received on January 21, 2010.
8. Aaron P. Johnson, Monterey County Cattlemen's Association, in an email attachment received on January 21, 2010.
9. Scott Violini, in an email attachment received on January 21, 2010.
10. Kay Mercer, Central Coast Agricultural Water Quality Coalition, in an email attachment received on January 21, 2010.
11. Dorothy Giannini, Christensen Cattle Company, in an email attachment received on January 21, 2010
12. Traci Roberts, Monterey County Farm Bureau, in an email attachment received on January 21, 2010.
13. Robert M. Swanson, Jim Bardin Ranch, Salinas, in a letter dated January 19, 2010. and received on February 1, 2010.

Staff made minor changes to the proposed Basin Plan amendment documents as a result of these comments. Public comments and staff responses are included in Attachment 6 to this Staff Report.

RECOMMENDATION

Adopt Resolution No. R3-2010-0017 as proposed to amend the Basin Plan to Adopt Total Maximum Daily Loads for Fecal Coliform in Lower Salinas River, Old Salinas River, Tembladero Slough, Salinas Reclamation Canal, Alisal Creek, Gabilan Creek, Natividad Creek, Salinas River Lagoon (North), Santa Rita Creek, Quail Creek, Chualar Creek, and Towne Creek; to add the Domestic Animal Waste Discharge Prohibition for the Lower Salinas River Watershed; and to add the Human Fecal Material Discharge Prohibition for the Lower Salinas River Watershed.

ATTACHMENTS

The attachments are available at:

http://www.waterboards.ca.gov/centralcoast/board_info/agendas/2010/2010_agendas.shtml

Click on "view agenda" for March 18, 2010; then click on Item 12, TMDLs for Fecal Coliform in Lower Salinas River Watershed

1. Resolution No. R3-2010-0017
2. Final Project Report: "Total Maximum Daily Loads for Fecal Coliform in Lower Salinas River Watershed"
3. CEQA Substitute Document

4. Notice of Public Hearing / Notice of Filing
5. Scientific Peer Review Comment
6. Public Comment and Staff Response