

STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL COAST REGION  
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**PUBLIC COMMENTS AND STAFF RESPONSE**

Staff received comments following public comment period for the March 21, 2008 board meeting and following public comment period for the May 8, 2009 board meeting. Comments received for both public comment periods and staff responses to these comments, are included in this document.

**DURING THE PUBLIC COMMENT PERIOD FOR THE MAY 8, 2009 BOARD MEETING, WATER BOARD STAFF RECEIVED COMMENTS FROM:**

John Ricker, County of Santa Cruz in two emails dated March 15, 2009

Below are staff responses to these comments. All comments are direct transcriptions from the email unless otherwise noted.

**Comments and Responses**

**Comment 1– Santa Cruz County Environmental Health Services**

Although the goal of reducing human fecal contamination to zero is a good goal that we share, it is unclear whether it is a realistic goal. As a short-term goal, all wasteload allocations should only be required to be attained to the maximum extent practicable (MEP). Are water bodies not subject to the human fecal material discharge prohibition allowed to have fecal coliform originating from human sources as long as the fecal coliform level does not exceed 200 mpn/100ml?

**Response to Comment 1**

Staff acknowledges that zero loading from human sources will be a difficult goal to achieve. As the commenter suggests, however, it is a good goal because human fecal material typically poses a greater health risk than most bacteria of other origins. Therefore, staff concluded that the wasteload allocation of zero was necessary to protect water contact recreation beneficial uses to the fullest extent. Staff also notes that TMDLs must be approved by the State Water Resources Control Board; State Board staff recommends zero allocations for human sources of fecal indicator bacteria.

Additionally, the time period to achieve the TMDLs is 13 years, and staff concluded this was a realistic long-term TMDL attainment timeframe.

Regarding whether water bodies not currently named in the Human Fecal Material Discharge Prohibition are allowed fecal coliform loading from human sources: the Water Code requires any person who discharges waste that could affect water quality to file a report of waste discharge (Water Code §13260). Unregulated discharges containing human waste threaten water quality, and are therefore not allowed, unless first permitted by the Water Board.

Further, the standard of "maximum extent practicable" (MEP) applies to Municipal Separate Storm Sewer Systems (MS4s), not to TMDLs, which require actions to address the impairment.

**Comment 2– Santa Cruz County Environmental Health Services**

The wording regard Wasteload Allocation Attainment Programs (not Plans) needs to be amended to reflect the wording we agreed to in the Stormwater Management Plan for the County.

**Response to Comment 2**

Staff updated the language to reflect the wording in TMDLs recently adopted by the board on March 20, 2009, and as shown in Attachment 1 of this Staff Report, in the Implementation Program section, Storm Drain Discharges to Municipally Owned and Operated Separate Storm Sewer Systems. The wording was changed to "Progam" as the commenter suggests.

**THE FOLLOWING ARE PUBLIC COMMENTS AND STAFF RESPONSE FROM THE  
MARCH 21, 2008 BOARD MEETING**

**DURING THE PUBLIC COMMENT PERIOD FOR THE MARCH 21, 2008 BOARD MEETING, WATER BOARD STAFF RECEIVED COMMENTS FROM:**

1. Teri Caddell, A-1 Septic Service, Inc. in a letter dated December 6, 2007.
2. John Ricker, Water Resources Division Director, Santa Cruz County Environmental Health Services, in an email dated January 23, 2008.

Below are staff responses to these comments. All comments are direct transcriptions from the letters unless otherwise noted.

**Comments and Responses – A-1 Septic Service**

**Comment 1**

...with regards to individual septic tank systems on private properties, we know that failing septic systems is one of the major contributors to the discharges with fecal coliform concentration exceeding water quality objectives in the Aptos Creek Watershed... We also know that one of the main reasons for septic system failures is lack of maintenance, or pumping of the septic tanks every 2-5 yrs to remove the solids and prevent them from entering the drainfield trench and contaminating the ground and ground water, and to prevent surfacing effluent over the tank and drainfield areas that eventually end up in our waters. Enforcing regular pumping of these septic tanks would require notifying the property owners of their responsibility to do this. The following are ideas to put such notification into action:

1. Environmental Health Departments of Santa Cruz and Surrounding areas experiencing problems with overflowing septic systems that cause water quality problems could implement a program using the information already in the county databases. Example; Every property that is on an Individual Septic System pays a CSA12 Property Tax. With that information, the Environmental Health Department could join forces with the Tax Assessor and determine, a.) Properties paying CSA12 Tax, and b.) Properties that have not had a pumpers report filed showing the tank has been pumped in the last 2-5 years. The properties that have not pumped in 2-5 years should be sent a notice with their property tax bill stating that they need to get into compliance.
2. Another way to enforce this maintenance; every property owner paying CSA12 Tax would be required to submit a current pumpers report showing their individual septic tank system is functioning properly. (not contributing to the water quality problem)

**Response to Comment 1**

Water Board staff did not agree that onsite wastewater system (septic system) failures was one of the major contributors to the fecal coliform concentration exceedance of water quality objectives in the Aptos Creek Watershed. Staff concluded there was not enough evidence in this particular watershed to link onsite wastewater system failure with impaired water quality. Commenter was questioned as to why they "know that failing onsite wastewater systems is one of the major contributors...in the Aptos Creek Watershed". Commenter referred staff to a website maintained by Santa Cruz County that contained water quality data, but did not provide evidence linking onsite wastewater system failures to impaired water quality. Commenter also had visual evidence of onsite wastewater system failure, but this took place in the San Lorenzo Watershed.

Staff also questioned Santa Cruz County Environmental Health Services Water Resources Division Director, John Ricker, who said he did not know of any septic problems in the Aptos Creek Watershed.

As described in the project report, staff determined there was one of five locations in the Watershed where a very small percentage of human input (two percent) was detected through a ribotyping study. Staff concluded that at least one of the other upstream stations would have had human input if onsite wastewater systems were a contributor.

Water Board staff researched the soils in which onsite wastewater systems were located in the Watershed. Staff found that in some areas near the Creeks soils were unsuitable for onsite wastewater system leachfields. Staff plans further research into onsite wastewater systems in these areas as staff resources allow. Furthermore, Water Board staff is currently updating onsite wastewater system criteria for the Water Quality Control Plan for the Central Coastal Basin (Basin Plan; see below).

Regarding the comments that refer to enforcement, the Water Board cannot dictate the specific manner in which private or public property owners ensure there is no discharge from their onsite wastewater systems. Therefore staff cannot use the ideas suggested by A-1 Septic Service.

The Water Board can, however, use a broad approach to regulate onsite wastewater system use. Water Board staff is in the process of developing revisions to existing Basin Plan criteria for onsite wastewater systems. The proposed criteria include recommendations and requirements for proper siting, design, maintenance and management of onsite wastewater systems. The proposed Basin Plan revisions also will require municipalities to develop onsite wastewater management plans (which the current criteria only recommend). In addition Water Board staff is in the process of developing a waiver of waste discharge requirements for owners of onsite wastewater systems that will ensure proper siting, design, maintenance and management. All owners of new onsite wastewater systems will have to enroll in the waiver if they plan to operate in areas without onsite wastewater management plans approved by the Executive Officer. Local permitting agencies will be required to characterize and address water quality impacts from existing onsite wastewater systems in management plans.

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**Comments and Responses – Santa Cruz County**

**Comment 1**

p. 18, Table 5, It would help to have the specific criteria for impairment identified in the table and not just the narrative. Also it would be good to have more info on the criteria for impairment that is mentioned in the footnote of the table. Why isn't this made more clear in all the TMDL's? Based on the narrative it would imply that about 16-17% of the samples would need to exceed standards to be considered impaired. This criteria appears to have been applied appropriately for Aptos Valencia, but not as clearly for San Lorenzo and Soquel.

**Response to Comment 1**

Staff did not intend to give a detailed description of how water bodies are listed as impaired. The table was intended to give the reader a quick glance at the level of exceedance of existing water quality objectives.

However, Water Board staff modified Table 5 to include the specific numeric criteria for the geometric mean and maximum water quality objectives for fecal coliform in the Water Quality Control Plan for the Central Coast Basin (Basin Plan). Water Board staff removed the footnote from beneath Table 5, but included similar text as in the footnote, in the first paragraph in Section 3.4 *Data Analysis and Impaired Reaches Conclusions*. The criteria noted in the footnote cited the Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (Listing Policy) in the text of Section 3.4 and listed in Section 12 *References*. Staff provided a web link to the criteria to commenter via email on October 9, 2007.

**Comment 2**

A significant amount of bird, wildlife and pet waste may all come from direct deposition in the creek. Valencia creek dries and flows intermittently and fecal material has been observed in the creek bed.

**Response to Comment 2**

Staff agreed that a significant amount of bird, wildlife, and pet waste may all have come from direct deposition in the creek. As a part of the San Lorenzo TMDL staff is proposing a modification to the Basin Plan that will prohibit owners and operators of land used for or containing domesticated animals (including pets) from discharging their waste. This prohibition will also cover the Aptos/Soquel subbasin and is named in the implementation plan as the regulatory mechanism for controlling this source of pathogens.

Staff determined there were no stakeholders responsible for the control of wildlife waste, unless it was within a storm drain discharge to municipally owned and operated storm sewer systems required to be covered by an NPDES Permit. Storm Drain Discharge Implementation is described in section 10.1.1. Storm Drain Discharges to Municipally Owned and Operated Storm Sewer Systems Required to be Covered by an NPDES Permit (MS4s)

Should all the control measures required in the implementation plan be in place, pathogen indicator organism concentrations remain high, and a TMDL not be met, staff may investigate (e.g., genetic studies to isolate sources or other appropriate monitoring) to determine if the high level of indicator organisms is due to uncontrollable (including wildlife) sources. If this is the case, staff may consider re-evaluating the targets and allocations. For example, staff may propose a site-specific objective to be approved by the Central Coast Water Board. The site-specific objective may be based on evidence that natural (wildlife), or background sources alone were the cause of exceedances of the TMDLs.

**Comment 3**

It is not unexpected that no human source showed up in ribotyping downstream of homeless camps, as those are only intermittent sources of contamination.

**Response to Comment 3**

Staff agreed that homeless sources were intermittent and that a continual human source would be generated, for example, from a leaking or spilling sewer. Staff determined that homeless contribution would be more noticeable during high flows, or the wet weather, when human waste is washed from the banks of the Creek into the water. Staff would generally not expect homeless contribution during dry weather unless homeless were defecating directly into the water. This type of activity was noted by Water Board staff in a nearby watershed.

**Comment 4**

p. 32 - I don't believe it is likely that controlling controllable sources will ever result in attainment of current bacteria objectives in the lower Aptos Cr. See the calculation of loading and projected bacteria levels in the Prop 13 report. Lower Aptos Cr and Valencia cannot be compared directly to Scott or Waddell as those are much less developed, with much less disturbance or human presence in the watershed. We can do more to reduce the controllable sources, but I don't believe we can ever fully mitigate the impacts of urbanization. Certainly not without an unlimited budget.

**Response to Comment 4**

Staff determined that there was uncertainty as to whether uncontrollable sources alone were causing the impairment. As a result, staff was also uncertain as to whether controlling all controllable sources per the implementation plan would result in enough of a reduction in pathogens to achieve the TMDLs and allocations. Please see the last paragraph of Response to Comment-2, above.

Also, to date, there are no TMDLs and corresponding implementation plans in the Central Coast Region that have progressed through their entire implementation period. Therefore, staff has not observed the full affects of other implementation plans on water quality, and cannot yet use this experience to definitively predict whether the TMDLs and allocations can be achieved.

Staff agreed that a large percentage of pathogens could have been calculated as coming from the lower watershed. However, input in this part of the Creek was partly due to stormwater. Stormwater is made up of various pathogen sources, some of which are controllable.

Staff agreed that Scott's and Waddell Creeks were different than lower Aptos and Valencia Creeks because they had less urban influence. In the project report, staff used these two Creeks to show that Creeks with natural sources such as wildlife could achieve the proposed numeric target.

Staff agreed that municipalities and private property owners could do more to reduce controllable sources. However, staff did not know that the allocations could not be achieved, and staff determined it was better to try to achieve the allocations than to not

do anything. Furthermore, because this is a 303(d) listed waterbody, the Water Board is mandated to develop TMDLs and allocations. Also, the Basin Plan states that:

“Controllable water quality shall conform to the water quality objectives contained herein. When other conditions cause degradation of water quality beyond the levels or limits established as water quality objectives, controllable conditions shall not cause further degradation of water quality.”

As stated in the resolution, responsible parties may also demonstrate that controllable sources of pathogens are not contributing to exceedance of water quality objectives in receiving waters. If this is the case, staff may consider re-evaluating the targets and allocations. For example, staff may propose a site-specific objective to be approved by the Central Coast Water Board. The site specific objective would be based on evidence that natural, or background sources alone were the cause of exceedances of the Basin Plan water quality objective for pathogen indicator organisms.

Staff also predicted that methods for detecting pathogens will have advanced from those currently in use, making it easier to determine those sources that post the greatest risk to human health. Also, technology may advance to the stage in which we can test for the actual disease causing organism rather than an indicator organism. If this is the case, during one of the three-year evaluations staff may determine a change is required to the implementation efforts and/or monitoring.

**Comment 5**

p.35 – The project report and resolution suggest that future work could show that natural sources are causes of impairment. That work has already been done in the Beach Water Quality Report and is not likely to be repeated unless more grant money is provided. That report included the best estimates of loads possible, which indicated that objectives could not be met in lower Aptos Creek even if all controllable sources were addressed.

**Response to Comment 5**

Staff acknowledged the estimates of the total bacterial load in Aptos Creek at the mouth after controlling for controllables that appear in the Beach Water Quality Report. However, staff disagreed with the method used to arrive at the load. The method was partially based on ribotyping results. Although ribotyping is useful for identifying sources, there is inherent error in this method. There is also error inherent in fecal coliform measurements and the statistics derived from them. Multiplying the ribotyping percentage of a source with an average bacterial load compounds the error. Additional multiplication by an estimate of the controllable percentage of that source further compounds the error. Thus, staff did not want to rely on the calculations in the Beach Water Quality Report.

Additionally, our State Scientific Peer Reviewer stated that, “Ribotyping is not a quantitative method. A certain number of isolates per water sample are analyzed and it is unknown whether the same numerical distribution of microbial host species would be

obtained if 10 or 100 times as many isolates from the same water sample had been analyzed.”

**Comment 6**

I question the need for a full livestock nonpoint source approach in Aptos/Valencia, given that the ribotyping indicating horse contribution in only 4 out of 359 isolates analyzed for the watershed (1%).

**Response to Comment 6**

The ribotyping analysis in this particular watershed was conducted on only three days within 72 hours of a rain event. Staff concluded that had there been more wet season ribotype sampling, the horse contribution may have been higher. Stormwater could have come in contact with horse fecal matter and carried it to surface waters.

As staff wrote in the project report, staff is not solely relying on the ribotyping analysis as the only basis for identification of sources of pathogens in the watershed. Staff also utilized land use and observations made during field reconnaissance to make their decision. Staff noted a polo ground adjacent to Valencia Creek and observed horse, emu, chicken, and goats in the watershed. Stakeholders also reported to staff that livestock were present in the watershed and that there was an absence of management practices on some of the properties with livestock along Freedom Boulevard. Additionally, staff found livestock facilities along Freedom Boulevard in aerial imagery from 2008. Therefore, staff will continue to name livestock as a source of pathogens.

**Comment 7**

Given the very low level of apparent contribution to impairment from livestock, if they are to be called out as a source, I would recommend that implementation be limited to endorsing and supporting existing efforts by Ecology Action, RCD, Horsemen's Assoc. and the County, similar to the recommendation for maintaining current efforts for sewer maintenance. The draft recommendation for preparation of non-point source control plans, and the amount of additional work for livestock owners and regional board staff cannot be supported by the level of impairment (or lack thereof). I do recognize that the current efforts are acknowledged in the narrative, but it would be appropriate to carry that forward to implementation recommendations.

**Response to Comment 7**

The permit governing the sanitary sewer district requires specific actions by certain dates, i.e., there is currently a specific regulatory mechanism in place to address the sewer source. If the sanitary sewer district does not adhere to the permit, the Water Board can impose fines or take enforcement actions against them.

Conversely, there is not a specific mechanism in place to regulate sources from livestock. However, as the modified prohibition and Non-point Source Policy suggest, the organizations mentioned in the comment (Ecology Action, RCD, Horsemen's



Assoc.) could act as third parties to develop and implement a non-point pollution control program for a collective group of responsible parties.

Finally, the Water Board cannot designate the types of actions necessary to reduce pathogen discharge in a Watershed Assessment Report. Specific actions that are described can only be suggestions. Each implementation action must be based on a regulatory mechanism that is already a part of the Basin Plan or the Clean Water Act, or that is proposed as an amendment to the Basin Plan simultaneous to the TMDLs and implementation plan.

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