

**STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401-7906 ***

PUBLIC COMMENTS AND STAFF RESPONSE

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 Soquel 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 septic system failures was one of the major contributors to the fecal coliform concentration exceedance of water quality objectives. Soquel Creek was impaired up to the Soquel Creek at Porter St. Bridge sampling location. This sampling location indicated no impairment. Upstream of this station for approximately 0.5 mile, residences and business were on the Santa Cruz Sanitary Sewer Collection System. Any septic systems would have been located upstream of this unimpaired reach. Therefore, staff concluded septic systems were not a major contributor to the impairment in Soquel Creek.

The entire reach of Noble Gulch was impaired. Dwellings not connected to the Santa Cruz Sanitary Sewer Collection System begin at approximately the north end of Ashwood Way, north of Soquel Drive, and adjacent to Noble Gulch. Staff found approximately nine dwellings within 125 feet of the Gulch and of those, three were within about 50 feet of the Gulch. Staff assumed that each dwelling had an associated septic system. The soil mapping units in which the dwellings were located (identified in the USDA Soil Survey for Santa Cruz County, California, 1980) had slow permeability with the potential for septic tank absorption fields to not function properly. However, staff contacted John Ricker, Santa Cruz County Environmental Health Services, Water Resources Division Director, who said that there were no problem areas that he knew of in the entire Soquel Watershed.

Staff determined septic systems were not a source in the Watershed Assessment Project Report because: (1) Nobel Gulch was impaired downstream of these septic systems; (2) this was a small number of suspect systems; and (3) there was no other evidence of failing systems. However, if staff finds evidence during the implementation phase of the TMDL that septic systems are a source causing exceedance of water quality objectives, staff will address this source accordingly.

Additionally, 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

Staff report, P. 5 – Staff suggests that future work could show that natural sources are causes of impairment. That was already demonstrated in the Beach Water Quality Report and is not likely to be repeated unless more grant money is provided. That report looked at the loading and contribution from natural sources and found that it would cause levels to exceed 200.

Response to Comment 1

Staff acknowledged the estimates of the total bacterial load in Soquel 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, therefore, staff also disagreed with 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 inherent error 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." Staff concluded this is even more reason not to use source percentages derived from ribotyping in an equation for determining load.

Comment 2

I don't believe it is likely that controlling controllable sources will ever result in attainment of current bacteria objectives in the lagoon. See the calculation of loading and projected bacteria levels in the Prop 13 report. The lagoon cannot be compared directly to undeveloped watersheds. 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 2

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. To date, there are

no TMDLs and corresponding implementation plans in the state that have progressed through their entire implementation period. Therefore, staff has not observed the affects of any other implementation plans on water quality, and staff cannot predict that the TMDLs and allocations cannot be achieved. Also, because this is a 303(d) listed waterbody, the Water Board is mandated to develop TMDLs and allocations.

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 Soquel Lagoon 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 not. 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 point at which we can test for the actual disease causing organism rather than an indicator organism. This may lead staff to determine it is necessary to change the direction of the implementation efforts and/or monitoring during one of the three year evaluations. The change may more successfully mitigate the effects of urbanization.

Comment 3

It is unclear why livestock are considered a significant source of pathogens to the impaired areas of Soquel Creek when septic systems are not. Similar to septic systems, the only livestock occurs in areas that are not considered impaired. Only one isolate

from horses out of 331 isolates (0.3%) was found in the ribotyping in Soquel Creek (not including Noble Gulch). Aptos/Valencia had 3 detections and San Lorenzo had substantially more. Similar to septic systems, livestock does not seem to be a significant source of impairment in Soquel Creek, with the contribution much less than Aptos or San Lorenzo.

Response to Comment 3

Please see Response to Comment 1 from A-1 Septic Service (above) for staff's conclusion on septic systems.

Staff agreed that livestock only occurred upstream of reaches of Soquel Creek that are not considered impaired. Therefore, staff will only require owners/operators of lands underlying livestock/domesticated animals within the Noble Gulch subwatershed to comply with the Aptos-Soquel Subbasin prohibition.

Staff concluded livestock were a source in the Noble Gulch Subwatershed for the following reasons, Water Board staff observed cattle on Cunnison Lane West of Noble Gulch (personal observation, June 26, 2006). Staff found several corrals adjacent to and in proximity of the Gulch on aerial imagery from Google Earth (Google Earth, 2008). The corrals were between approximately Highway One and the north end of Victory Lane/Coyote Canyon. The same imagery also showed pastures along the Gulch or in close range of it.

Additionally, water quality data from four stations within a 0.75 mile reach north of Highway One that encompassed the above describe locations, exceeded the maximum water quality objective in nine of nine samples (collected in February and March of 2005).

Comment 4

Given the very low level of apparent contribution to impairment from livestock, if they are [sic] 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).

Response to Comment 4

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.

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.

Also, all sources that are likely contributing to impairment, regardless of how significantly they are contributing to the impairment, must receive an allocation and, in turn, responsible parties must be required to implement actions to eliminate their loading.

Staff disagreed that the amount of additional work for livestock owners cannot be supported by the level of impairment (please see response to comment three for evidence that livestock led to the impairment). Staff concluded that compliance with the prohibition is appropriate for owners and/or operators of land used for/containing livestock/domesticated animals in the Noble Gulch Subwatershed. Compliance does not necessarily require a nonpoint source pollution control implementation program to be developed. Options for compliance with the prohibition include submitting documentation demonstrating there are no discharges from fecal sources by livestock/domesticated animals into waters of the Noble Gulch Subwatershed.

Comment 5

The use of the EPA target for *E. coli* should be qualified. There are significant problems with this target that need to be evaluated prior to application. The EPA work which resulted in this recommendation was conducted in waters affected by point source discharge of treated sewage and potentially has little bearing on waters influenced by non-point sources on the west coast. This is an argument being made with regard to marine water quality, where west coast epidemiologic studies have shown little or no correlation of illness to EPA standards. Additionally, parallel testing by Santa Cruz County has shown that in our area, fecal coliform results and *E. coli* results are not statistically different and can be used interchangeably. Again there is no local basis for changing the standard from 200 to 126.

Response to Comment 5

Water Board staff chose to eliminate use of *E. coli* concentration values as numeric targets and as part of the TMDLs and allocations. Staff made this change prior to posting the public review versions of the documents associated with this project.

Comment 6

The discussion of costs for stormwater program should indicate that there is presently no mechanism to collect the costs from individual property owners short of a prop 218 vote, which may or may not be approved.

Response to Comment 6

Staff edited the stormwater section in the project report to reflect comment six.

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