

May 4, 2012

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The Water Resources Control Board

1001 I Street, 24th Floor

Sacramento, CA 95814

Attn: Clerk of the Board

Ms. Jeannie Townsend

commentletters@waterboards.ca.gov

Thank you for the opportunity to comment on the Final Draft of the Water Quality Control Plan for Siting, Design, Operation, and Maintenance of On-Site Wastewater Treatment Systems.

In the case of the above, I am directing comments pertinent to Silverado Canyon and Silverado Creek located in Orange County, CA, with building permits and oversight managed by the County of Orange and our water district, Irvine Ranch Water District.

We are supportive of efforts to clean the water in Silverado Creek which flows, ultimately, to the Santa Ana River and the Pacific Ocean. It is an important issue.

We would, however, like to make comments relative to the history of this area, the water quality study done ten years ago and the county's on-going land use approvals for this area under the Public Works Section, county of orange.

Silverado Canyon, a former coal and silver mining area in the late 1800 and early 1900s, was by the mid-1930s a cabin area. My particular area of the canyon was subdivided in approximately 1940 and consists of upgraded cabins later becoming full time homes. Many of the properties (like mine), thus, are small interspersed with larger properties.

There are no doubt older waste water systems throughout the canyon and we know that some were actually plumbed to drain laundry and other grey water directly into local creeks as was the practice of the day. We suspect some of these systems remain to this day. SOME of these will be outside of the 600 Tier 3 area while others will not be. **Therefore, in this document, we ask that the state work with the county to discover and correct these older systems and immediately bring them up to code throughout the Silverado Canyon NOT just within the 600 foot zone.**

Because many of the properties here are small, they will likely have trouble meeting current requirements for leach fields. Therefore, attempts MUST be made to except such properties from draconian standards rather seeking BMP practices.

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Water Quality Study [<http://www.coastkeeper.org/wp-content/uploads/2010/07/SAR-Final-Report.pdf>]

Silverado Canyon Creek is listed on the 303d list of impaired water bodies for pathogens, chlorides, total dissolved solids, and salinity. [Coastkeeper (hereafter CK), p. 31] Three areas were monitored along the creek beginning at the Cleveland National Forest gate, continuing downstream to the creek near Smisek Ranch Road, and finally downstream near the “slide area” sign.

Coliform

As expected, the various levels of pollutants rise as study tends downstream apparently accumulating along the way though total coliform was highest in the forest (Maple Springs, “Sil 1”) than in the housing areas [CK, p. 31]. Interestingly, the housing areas (Sil2 and Sil3) had NO exceedences. [CK, p. 31].

“Since it is difficult, time-consuming, and expensive to test directly for the presence of a large variety of pathogens, water is usually tested for coliforms and fecal streptococci instead. Sources of fecal contamination to surface waters include wastewater treatment plants, on-site septic systems, sewage infrastructure; human feces; livestock, pet and wild animal manure; and storm runoff.”

- (source: http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/cwt/guidance/3410.pdf)

Please note that there are NO on-site septic systems, sewage infrastructure, or livestock at Sil1 (in the forest). Therefore, some amount of continual downstream contamination is coming directly FROM the forest and should NOT be attributed to residential areas.

E.coli

We are unaware of any species identifiers indicating that E.coli was of human origin. As you may not be aware, Silverado Creek is home to many wild species and is used as a movement corridor for mammals including mountain lion, bobcat, coyote, fox etc. as well as a breeding area for many avian and duck species particularly in areas where year-around water is extent. Therefore, it would be helpful for this study to classify the extent to which natural/human additions are present. Human additions might include bovine species under care of humans as well. **To attribute the E.coli to human activities without understanding background pollution is unfair to residents and WILL result in unattainable goals at the expense and headache of residents.** ← 4

We note from the CK report, p. 31:

E.coli

E.coli levels in Silverado Canyon Creek were moderate. The average percentage of exceedences was 8%.

Also from the report:

Sil1 (forest): E.coli levels in Sil1 exceeded standards during 11% of the monitoring events. There were a total of 18 monitoring events with 2 exceedences. [CK p. 32]

Sil 2: E.coli levels in Sil2 exceeded standards during 4% of the monitoring events. There were a total of 23 monitoring events with 1 exceedence. [CK p. 33]

Sil 3: E.coli levels in SAR6 exceeded standards during 9% of the monitoring events. [CK p.35].

Again, the E.coli levels were highest in the Cleveland National Forest which is UPSTREAM from all housing. It is the major entryway for Orange County visitors to the Trabuco section of the Cleveland. There are NO bathrooms or other

sanitary facilities in this section of the forest/watershed AT ALL. Again, this area of the forest is home to as huge number of native animal and avian species. There are also NO trash receptacles provided in the forest in this watershed.

E. coli is a type of fecal coliform bacteria commonly found in the intestines of warm blooded animals and humans. E. coli is short for Escherichia coli. The presence of E. coli in water is a strong indication of recent sewage or animal waste contamination.

--Source:

http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/cwt/guidance/3410.pdf

In other words, in Sil 1, the area of highest contamination, this is coming from animals/humans IN the forest not from downstream residents and septic tanks.

Orthophosphates

Sil1 (forest): Orthophosphate levels at Sil1 were high. The average level was .304mg/L. The minimum reading was .01mg/L and the maximum reading was 1.1mg/L [CK p. 33]

Sil2: Orthophosphate levels at Sil2 were high. The average level was .451mg/L. The minimum reading was 0.08mg/L and the maximum reading was 1.4mg/L [CK p. 34]

Sil3: Orthophosphate levels at Sil2 were high. The average level was .451mg/L. The minimum reading was 0.08mg/L and the maximum reading was 1.4mg/L [CK p. 35]

While the Forest (Sil1) did not provide the highest overall averages in this field, they were NATURALLY high at 0.304 mg/L. Both downstream test sites measured an average of 0.147 mg/L greater at 0.451 mg/L each.

Something IN the forest, existing naturally, and likewise elsewhere is creating this background of 0.304 mg/L.

WHAT is it? Is it created through natural erosion of rock/soil? If so, that would be naturally added to downstream, as well.

Additionally:

Orthophosphate is a commonly used corrosion inhibitor that is added to finished drinking water. Source:

<http://www.cityofcordova.net/city%20forms/Information%20about%20Orthophosphate%20.pdf>

Did former water provider Santiago County Water District add orthophosphate to drinking water and does the current district, Irvine Ranch Water District, add it?

Detergents and fertilizers are also a source of orthophosphates. Source:

<http://bcn.boulder.co.us/basin/data/NEW/info/TP.html> (USGS water monitoring) Is grey water allowed by law to be dispersed subsurface/surface in the area? If so, should it be allowed? Are residences who are illegally dumping laundry water into the creeks driving this level up or is it failed tanks OR is it irrigation water/fertilizers? **Until we know WHERE it is coming from and** ← 5

how, it makes no sense to require an entire community of people to adhere to any standard or solution. If we want to stop this pollution, we need to know where the additional 0.147 mg/L is coming from.

Conductivity/Total Dissolved Solids

Sil1 (forest): Conductivity at SIL1 was high with an average reading of 1230us. Total Dissolved Solids average was 820mg/L. This result exceeds standards set by the RWQCB. [CK p. 33]

Sil2: Conductivity at SIL2 was high with an average reading of 1291us. Total Dissolved Solids average was 861mg/L. This result exceeds standards set by the RWQCB. [CK p. 34]

Sil3: Conductivity at SIL3 was high with an average reading of 1359us. Total Dissolved Solids average was 906mg/L. This result exceeds standards set by the RWQCB. [CK p. 36]

Again, background within the Cleveland National Forest is high and exceeds standards so naturally, any downstream additions just add to the problem. However, understand that given the natural background, we will NEVER be able to comply with the standards given that there is NO feasible way to alter downwards natural rates from the forest. ← 6

There are no specific data indicating where this conductivity problem may originates, but, again, we need to know. It is obviously natural and may arise from normal erosion of soil (and groundwater replenishment) and no doubt varies seasonally.

In terms of total dissolved solids (TDS), we do not know the chemical makeup of the problem, but obviously, the forest numbers exceed RWQCB standards. Again, the specifics of this and why and how it is existing naturally may, indeed, help solve the problem, however, since all of the basin drains into Silverado Creek at one point or another (most of which remains in natural state), clearly one cannot suggest that the additional downstream figures are exclusively human related or, for that matter, human related at all.

Conclusion: There is absolutely NO factual basis to require Tier 3 or 4 Septic standards. There is not enough data to support ANY kind of action at this time other than performance action of possible overt violators.

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We assert that further study on source water pollution from the forest (which completely surrounds the community) be performed in detail prior to any further action.

Sincerely,

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