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CENTRAL COAST FOREST WATCH

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August 27, 2010

Jeffrey Sh'u
State Water Resources Control Board
Division of Water Quality
P.o. Box 100
Sacramento, CA 95812-0100
Comments submitted via email:
JShu@waterboards.ca.gov

Re: San Vicente Creek, Santa Cruz County, 2012 Integrated Report, 303(d) List of Impaired Waters

Dear Mr. Sh'u,

We are pleased that the State Water Resources Control Board (SWRCB) voted to keep San Vicente Creek (Santa Cruz County) listed as impaired for sedimentation at their August 4, 2010 Board meeting.

Ordinarily, we would not be submitting any documentation to you at this point in time, as we are *not* proposing a change in listing. However, we have been informed that the proponents of delisting have again submitted turbidity data for the 2012 cycle in continuing hopes of getting San Vicente Creek delisted. We have been encouraged by state and regional Water Board staff to submit, prior to the August 30, 2010 deadline, whatever data we have in support of keeping this waterbody on the 303(d) list of impaired waterbodies, if we would like it reviewed alongside the delisting information.

We are also in receipt of the solicitation guidelines that seek peer-reviewed data with quality assurances. Our research efforts have located a series of studies, surveys, reports and photos reaching as far back as 1906. All seem to concur that this creek had then, and has now, problems with sediment loads that are problematic for salmonids.

We have reviewed these reports and have attached them to this letter. Some may be sent in a

separate email to keep the file size manageable.

While the surveys may not meet the strict data guidelines promulgated by the Water Board, we believe they present a compelling picture of a long-standing sediment problem in this watershed, going as far back as the clearcutting practices at the turn of the last century. Identified causes seem to include quarry operations, silviculture and logging roads, and other streamside roads.

Given that San Vicente Creek was designated as a key watershed in the March 2010 public draft of NMFS' Central California Coast Coho Salmon recovery plan. [1. NMFS 2010], we feel any efforts to delist it must be well documented and justified. Delisting must not be done lightly.

While we are aware that the original listing for sediment impairment was based in part on turbidity data (used as a surrogate for sedimentation/siltation) from the Davenport Sanitation District, we do not feel that delisting can properly be done based on more recent turbidity data just because it does not meet exceedence values. The fact that upstream waters (the intake for these turbidity readings is relatively far upstream) have not produced large quantities of turbid waters during the past several years (mostly drought years), does not indicate whether existing sediment loads have decreased sufficiently for the stream to no longer be impaired.

Recent turbidity data can only indicate a possible decrease in sediment inputs from above the intake. In order to make sense of turbidity data, they need to be paired with rainfall data. Without rain, as during most summer months in this region, turbidity will be low to non-existent. However, rainless summer months and drought winters also lead to lower flows, which are less able to move sediment through the system. Those data cannot provide valid information to conclude that the stream is free of impaired levels of sediment. According to the attached reports and photos, slides, bank failures and streamside roads can all be found below the intake that provides the water tested by the Davenport Sanitation District

We believe that the attached reports, letters, emails, surveys and photos highlight a long-standing and ongoing problem with high sediment loads in San Vicente Creek. While the geologic reports indicate that this stream geology is largely granitic and therefore more stable than that of other north coast streams, extensive quarrying, logging and the wide-spread road network in the watershed are all potential ongoing sources of sediment.

The upper reaches of San Vicente Creek tend to be steep, but the lower reaches where anadromy is not prohibited by barriers, are relatively low gradient. Steep streams scour fines and blow them downstream, so embeddedness will tend to be higher and remain higher in low gradient streams where sediment transport is slower. (Personal communication, Patrick Higgins, Fisheries Biologist)

Probably the most compelling and well-documented study was the one done by DFG in 1996. We submitted that document with our proposal to list San Vicente Creek during the 2006 cycle. We will resubmit it with this letter.

We have included a number of excerpts from the attached documents to show how past observations of this creek repeatedly led observers to conclude that sediment was a serious issue. These reports and studies were largely conducted by fisheries biologists and consultants. Some studies were done on behalf of the industrial landowner, yet all indicate long-standing, ongoing problems with sediment in San Vicente Creek.

1906, An editorial in the Santa Cruz Surf (local newspaper) [2. Wiki 1906]: *"The San Vicente Creek, beloved of the angler and the artist, has its mouth stopped by a vast dyke, and its throat choked into a tunnel, a saloon on its border, and its bed for miles denuded of the granite cobbles and sand beds. A sawmill is swiftly cutting out the timber and dirt and debris defile the pools and clog the riffles where lurked the gamey trout."*

1984 Smith Report (3. Smith 1984): *"Eight sites on San Vicente Creek.... were evaluated for suitability of spawning substrates in 1981 by examining abundance of steelhead spawning substrate, its particle size percentages, and its degree of compaction. Sites...were also rechecked in 1982 and 1983."*

"No spawning redds (steelhead spawning sites, with eggs buried in gravel depressions) were located in any of the years. " "No ideal spawning substrate was located at any of the sites and it appears that high redd sand content and redd destruction from scouring are common."

"Spawning Conditions.... Most of the gravels were in a thin armoring layer, too shallow for good redd construction. Because of the high percentage of sand, oxygenation of redds and hatching success were probably poor. "

"In 1982, fine and coarse sediment eroded from a gully in an old quarry overburden site on the north side of Mill Creek..., producing a delta which caused undercutting and landsliding of the hillside south of the stream. The 12 to 15 foot high landslide and log jam which resulted, is now a complete barrier to adult steelhead migration..."

*"Spawning Conditions. **At every station investigated in 1982, spawning substrate was judged to be poor enough to reduce maximum potential hatching success.** (emphasis added) Sand made up at least 25% of the substrate of almost all riffles, and in most riffles the percentage of sand was even greater below a thin surface armor of gravels."*

*"Summer Rearing Habitat Conditions. Summer rearing habitat for yearling fish limits steelhead production in San Vicente Creek. Pools are generally shallow and stream substrate is weakly segregated. **It appears that large amounts of sediment are moved during frequent, extreme flood peaks, filling pools. Scouring at lesser flows is often insufficient to recut deep pools in the relatively coarse substrate...**" (emphasis added) "Although large cobbles are common, they are usually quite embedded in coarse granitic sand, reducing available hiding cover."*

"Pool development on Mill Creek¹ was the most limited in the watershed in 1981. Mill Creek also contained the highest percentages of substrate sand and lowest streamflows."

"Habitat Problems. The watershed may be producing very large amounts of sediment, due to erosion or landslide conditions..."

"It is possible that conditions may gradually improve in the San Vicente Creek watershed in the absence of severe peak flow events. However, recovery may be very slow."

"The substrate in Mill and San Vicente creeks is of primarily granitic origin. However, in 1982 an increased percentage of marble was found in the streambed at all sites. One major source of the marble is gully erosion of slopes at an old quarry overburden site, above channel mile 0.2 on Mill Creek..."

"However, the reasons for the high amounts fine sediment and lack of pool development are not fully known. Small scale logging appears, presently to be a source of sediment, but roads and clearcuts are reseeded with grass. The abandoned quarry and overburden sites in the San Vicente Watershed are contributing sediment..."

1991 DFG DEIR Review [4. DFG Hunter 1991]: *"The DEIR was prepared pursuant to a reclamation plan prepared by RMC Lonestar and submitted to the County of Santa Cruz as part of its application for a Certificate of Compliance with the County's Mining Regulations." "Quarrying and overall cement plant operations have resulted in significant impacts to the west, middle, and east branches of Liddell Creek~ as well as San Vicente and Mill creeks." "Additionally, overall quarry operations and operation of the cement plant require the use of water resources present at the site. RMC Lonestar presently diverts water from Liddell, San Vicente and Mill creeks. This has further degraded the aquatic habitat value of these creeks." "The presence of fill or instream structures (other materials) into the San Vicente and Mill Creek channels, and into the east, west, and middle branches of Liddell Creek channels whether as a result of water diversion projects, sediment catch basins, and/or overburden disposal sites is illegal."*

"These activities constitute a violation of Fish and Game Code Section 5650(f) (e.g. the deposition of deleterious materials into waters of the State, or in a location where it can pass into waters of the state) and Section 5937 (prevention of fish passage) and, as such, are subject to civil and/or criminal prosecution. This is also a violation of Section 404 of the Federal Clean Water Act. The consequences of these activities will be discussed in greater detail below."

*"The mitigations that are proposed in the DEIR are designed to prevent and/or lessen future impacts to a level of insignificance. **However, little attention has been given to rectifying the impacts resulting from past and current operations which have primarily occurred to the aquatic habitats associated with the quarrying sites, as a result of excessive sedimentation and summertime water diversions. The impacted areas also include those areas***

¹ Mill Creek is a tributary to San Vicente Creek

downstream of the quarry sites (Coast Dairies property) all the way to the ocean. There are some recommendations to reduce the impacts relative to water diversions, but these are incorporated as proposed mitigations. **No mitigations are proposed for removing the massive amounts of sediment and fill from these creek channels.** The proposed mitigations address preventing additional sediments from entering the stream channel." (emphasis added)

" This particular segment of the DEIR has identified major on-going non-mitigated impacts to stream channels in and downstream of present and past quarry sites. These impacts are the unchecked movement of sediments into these creeks; i.e.; primarily Liddell and San Vicente creeks."

" Quarry operations have significantly degraded this resource in affected streams as a result of erosion, sedimentation, and water diversions. Steelhead and silver salmon population levels have undoubtedly lowered as a result of these activities."

"It would take many years of high-stream flows in succession to clean out the sediment that is currently present in these streams (i.e., Mill, San Vicente, and Liddell creeks) and that, only if quarry operations ceased today and if successful revegetation of all bare and exposed hillsides were achieved immediately." (emphasis added)

1996 DFG Stream Inventory, Mill Creek Tributary to San Vicente Creek [5. DFG 1996 Mill SIR]: "The depth of cobble embeddedness was estimated at pool tail crests. Of the 11 pool tail crests measured, 0 had a value of 1; 1 had a value of 2 (9%), 2 had a value of 3 (18%), 4 had value of 4 (36%) and 4 had a value of 5 (36%) (Graph 6). On this scale, a value of 1 indicates the highest quality spawning substrate."

"The dominant elements composing the structure of the stream banks consisted of 4.5 % bedrock, 27.3 % cobble/gravel, and 68.2 % sand/silt/clay (Graph 10)."

1996 DFG Stream-Specific Coho Salmon Habitat Deficiencies and Limitations [6. DFG 1996 SSC]: "E. San Vicente Creek: Sedimentation of the creek from improper grading and placement of private roads."

1996 DFG Stream Inventory, San Vicente Creek [7. DFG 1996 San Vicente SIR] (submitted with 2006 listing request): "The depth of cobble embeddedness was estimated at pool tail crests. Of the 70 pool tail crests measured, 1 had a value of 1 (1.4%); 12 had a value of 2 (17.1%); 51 had a value of 3 (72.8%); 1 had a value of 4 (1.4%); and 5 (7.1%) were unsuitable for spawning (Graph 6). On this scale, a value of 1 indicates low embeddedness or a low percentage of fines at spawning sites."²

² 1 (0-25%), 2 (26-50%), 3 (51-75%), 4 (76-100%)

*Fifty-seven of the 70 pool tail-outs measured had embeddedness ratings of 3, 4, or 5. **Only 1 had a 1 rating. Cobble embeddedness measured to be 25% or less, a rating of 1, indicates quality spawning substrate for salmon and steelhead.*** (emphasis added)

2006 DFG PHI Report, 1-05-187SCR [8. DFG 2006 PHI THP 1-05-187SCR]: "Recently delivered fine sediment was observed in the channel downstream of the culvert crossing. Rilling and cutbank erosion was observed on the northern road approach to the crossing."

"Use of pick-up trucks by the review team resulted in rutting and splashing of turbid water into road ditches in these locations. It is not known, but presumed likely, that these ditches deliver to class III tributaries of class I and II watercourses down slope."

"Rilling was observed on the northern approach to the unmapped culvert crossing between dd and hh." Water and sediment are transported down the road surface from the cutbank at the break in slope. Fresh deposits of fine sediments were observed in the channel downstream of the crossing."

"Rilling was observed on the northern approach to crossing cc. Signs of fine sediment delivery to a drainage relief ditch and to crossing dd were observed."

*"The site of proposed landing DD includes an unstable and eroding class III. (see Figure 3) Flow currently runs across the haul road." "The in-lieu use of landing DD is not acceptable to DFG. **This site is already part of a larger road drainage problem.** Use of the site as a landing....is likely to perpetuate erosive conditions and result in a sediment load increase to watercourses."*(emphasis added)

*"Water from the saturated road section continues down the road and combines with another seep and continues down the road to a waterbar. The waterbar directs water to an outfall on the bank of a class I watercourse. The outfall has a significant drop, presenting a risk of headward migration of the outfall. DFG recommends abandoning this section of road, packing it with slash, maintaining the waterbar, and armoring the outfall with rock (**Recommendation 13**)."*

*"....The number of existing erosion hazard sites and the incompleteness of the THP's assessment of these sites and sensitive receptors suggest that a property-wide road maintenance and planning effort would be beneficial. This was discussed during the PHI and agreed to by the RPF (**Recommendation 15**)."*

2006 DFG PHI Report, 1-06-080SCR (timber harvest plan review) [9. DFG 2006 PHI 1-06-080SCR]: "Observations of road rutting by pick-up vehicles during the PHI.... provide clear evidence of likely impacts associated with winter period and wet weather road use. "

*"Rilling was observed on the northern approach to the unmapped culvert crossing..... This section of the haul road is in a through cut. Water and sediment are transported down the road surface from the cutbank at the break in slope. **Fresh deposits of fine sediments were observed in the channel downstream of the crossing.**" (emphasis added)*

*"The cumulative impacts section does not address potential or on-going sediment delivery associated with the existing road system or its use. The haul road and appurtenant roads associated with this THP are subject to all-season use. The maintenance of all-season access may promote successful erosion control by facilitating identification, monitoring and remediation of erosion hazards and sensitive receptors. " **"The number of existing erosion sensitive receptors suggest that a property-wide road maintenance and planning effort would be beneficial."** (emphasis added)*

In addition to the above references, we are submitting some photographs from Santa Cruz County Planning Department files illustrating turbid conditions during 2000 and some problem areas identified in 1997 (3 sets). All photos were taken below the intake for the Davenport Sanitation District. Therefore, the slides and bank failures depicted in the photos would not have registered in the turbidity data collected by the Sanitation District.

Thank you for the opportunity to provide input regarding the long-standing sediment problems on San Vicente Creek. Please feel free to contact us with any questions. We urge you to continue to recommend that San Vicente Creek remain 303(d) listed for sedimentation/siltation. The coho salmon and steelhead trout that depend on this watershed deserve no less. We also encourage you to reinstate 'silviculture' as a source along with 'quarrying'. The citizens of Davenport, who get their drinking water from this creek, also deserve a clean drinking water supply. As of the winter of 2009-2010 they continued under a Boil Water Order for the winter months.

Sincerely,

A handwritten signature in black ink that reads "Jodi Frediani". The signature is written in a cursive, flowing style.

Jodi Frediani

Support Documents

1. [NMFS] Ambrose, Jonathan, NMFS May 28, 2010 email to State Water Quality Control Board re San Vicente Creek delisting proposal 2010 cycle.
2. [Wiki] Taylor, Arthur (2 February 1906) *The Surf* (Santa Cruz) (from Wikipedia)
3. [Smith] Smith, J.J. 1984, Liddell Creek Baseline and Watershed Study: Fisheries Section. Prepared for Lonestar Industries by Creegan & D'Angelo, Consulting Engineers and Harvey and Stanley Associates.
4. [DFG] Department of Fish and Game. 1991. RMC Lonestar's Bonny Doon Shale and Limestone Quarries. Report by Brian Hunter
5. [DFG] Department of Fish and Game. 1996. Mill Creek Stream Survey, March 8. Report by Jennifer Nelson
6. [DFG] Department of Fish and Game. 1996. Stream-Specific Coho Salmon Habitat Deficiencies and Limitations. Report by Patricia Anderson and Jennifer Nelson
7. [DFG] Department of Fish and Game. 1996. Stream Inventory Report, San Vicente Creek. Report by Jennifer Nelson.
8. [DFG] Department of Fish and Game. 2006. THP 1-05-187SCR_PHI-DFG.pdf
9. [DFG] Department of Fish and Game. 2006. THP 1-06-080SCR_PHI-DFG.pdf

Photos from Santa Cruz County Planning Department Archives

San Vicente Turbidity 2-14-2000
San Vicente Slide 1997
San Vicente Bank Failure 1997