

C O U N T Y O F N E V A D A

NEVADA COUNTY

SANITATION DISTRICT NO. 1

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Central Valley Region
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**SUBJECT: Response to Revised Tentative Cease and Desist Order
for Cascade Shores Wastewater Treatment Plant**

Dear Mr. McHenry:

Nevada County Sanitation District No. 1, Cascade Shores, Zone 8, (NCSD1CS) has received the revised Tentative Cease and Desist Order (CDO) for the Cascade Shores Wastewater Treatment Plant dated January 9, 2006, from the California Regional Water Quality Control Board - Central Valley Region (RWQCB) (copy enclosed). This letter constitutes the response from the NCSD1CS.

Background Information:

Cascade Shores is a small, unincorporated subdivision east of Nevada City in Nevada County. The subdivision is comprised of 375 parcels and is currently about 80 percent built-out. It was determined that 105 parcels had soils that were unsuitable for individual septic systems. These were required to connect to a centralized sewer system for wastewater collection, treatment and disposal. Nevada County Sanitation District No. 1 operates the system on behalf of the residents of the Cascade Shores, Zone 8, service area. There are 80 homes, a fire station, a local market, and a recreational facility restroom currently connected to the system.

The existing Cascade Shores Wastewater Treatment Plant (WWTP) and Collection System began operating in 1996 to serve the 105 connections within NCSD1CS as a result of Cease and Desist Order 89-118 issued by the RWQCB in June 1989. At the time of the Cease and Desist Order, the previous treatment facility (a pond system) was being operated by the now defunct Cascade Shores Water Company. The treatment facility and collection system operated by this company had deteriorated so badly that a proposal to build a totally new treatment facility and collection system was brought forward.

In order to obtain Small Community Grant No. 150-030 (\$1,736,180) and State Revolving Fund (SRF) Loan No. C-06-4030-110 (\$170,367) to build a new treatment facility and replace most of the collection system to alleviate the ongoing discharge violations, the Nevada County Sanitation District No. 1, Board of Directors approved annexation of the Cascade Shores, Zone 8, into the District on August 28, 1990. This was done because the former operator, Cascade Shores Water Company, requested assistance from Sanitation District No. 1 to obtain grants and loans to upgrade the sewer system. NCSD1CS also obtained loans from the County to help fund the project.

NCSD1CS began operation of the existing facilities on February 13, 1996, after construction was completed. After the annexation, the Cascade Shores Water Company ceased to exist. The Cease and Desist Order was rescinded by Order 96-097 on May 3, 1996, following a successful start-up and operation of the new facilities.

RWQCB has given consideration to economics relative to the level of treatment in the development of the existing treatment facility. This is evidenced by effluent limitations that were first adopted as Order 93-104 for the facility and later modified to the previous permit limitations adopted by Order 94-160. It was determined at that time that the facility could not be economically built or operated to meet the more stringent requirements as shown by State Water Resources Control Board (SWRCB) Resolution No. 95-18. Also, a December 30, 1998, letter from the Regional Board staff indicated support for several reductions in monitoring requirements for the proposed permit renewal based on operational and economic considerations. Recently the SWRCB determined that NCS D1CS qualified as a small community with a financial hardship. Connected customers currently pay annual sewer charges of \$1,795.

The treatment plant is located in the Bear River watershed. The plant currently discharges treated and disinfected wastewater into a small ephemeral stream, Gas Canyon, which flows approximately 1.5 miles into Greenhorn Creek, which in turn flows approximately 6.5 miles into Rollins Reservoir located on the Bear River. In the summer months and fall Gas Canyon is completely dry. The treated effluent flow of 11,000 gallons per day (8 gallons per minute) disappears into the bottom of the streambed a short distance downstream.

The existing tertiary treatment process consists of an activated sludge package plant with a comminutor, flow equalization, sludge holding, aeration, clarifier, multi-media filter, pH adjustment, chlorination, and dechlorination. The facility also has standby emergency power and the related pumps, blowers, meters, and laboratory equipment needed for operation.

The WWTP is permitted to operate under National Pollutant Discharge Elimination System Waste Discharge Requirements Order No. 5-01-177 (Permit) adopted by the RWQCB on June 14, 2001. The 2001 Permit included a compliance milestone of June 14, 2006; to comply with new effluent limitations which the existing WWTP was not designed to meet. The WWTP must also provide continuous monitoring for several constituents, as well as composite sampling of several other constituents. The RWQCB has promulgated similar discharge requirements for other Central Valley WWTPs discharging to effluent dominated water bodies. The RWQCB has also required the discharger to characterize effluent compliance with the California Toxics Rule (CTR). It is expected that the permit renewed in 2006 will contain numerical limitations for CTR pollutants detected in the effluent. Compliance with the CTR will be required by 2010.

Landslide occurring in May 2005 adjacent to the existing WWTP created a safety hazard at the plant. NCS D1CS's geotechnical engineer, confirmed in a report that the "instability of the cliff and potential for continued landslides and location of the WWTP, pose a significant threat of the continued ability of the WWTP to treat wastes." Therefore, it is necessary to replace and upgrade the treatment processes needed to provide wastewater services to the residents of the service area in a manner that complies with the State and Federal regulations.

Noncompliance with Cleanup and Abatement Order (NCCAO):

NCCAO No. 3

Work Completed Since May 2005

- Work for interim compliance measures based on the geotechnical engineering report has been completed including surface water drainage improvements, regrading of access road bench, retaining walls, installation of rock fall netting, erosion control, and removal of potentially loose rock. Contracts are in place to provide ongoing maintenance of the interim compliance measures and construction engineering oversight and inspection of said maintenance work.
- Completed installation of culverts and erosion protection on access road to temporary pump station. Also installed a pump tank adjacent to manhole that was being used as the pump station.

The new tank was plumbed with controls, duplex pumping system, autodialer alarm, and standby emergency power generator.

- Contract was awarded for directional bore of two lines for permanent replacement of temporary sewer main and pump station. Temporary sewer main and pump station were constructed immediately after the landslide last May 2005, but were not considered to be adequate for long term use. It was the intent of the NCS D1CS to construct a permanent sewer main during the winter of 2006 to replace the temporary main and pump station.
- The temporary sewer main and pump station, interim compliance measures, ongoing maintenance, and oversight, and directional bore permanent replacement of the temporary sewer main and pump station project costs are estimated at \$794,000.

Emergency Plan (Contingency Backup Plan)

NCS D1CS prepared and submitted an emergency plan to comply with RWQCB Cleanup and Abatement Order. This plan identified what will be implemented for a number of different emergencies, including failure of interim compliance measures prior to completing the long-term measures identified in the Facilities Plan. This includes a truck parked on a rental basis at the wastewater collection system on Mountain View Drive so that hauling can be quickly implemented if needed. Other trucks would be used as needed. Some spare pipe is available at the plant site for repair, if needed, of the temporary pipeline that was installed last May 2005.

NCCAO No. 4

Treatment Plant Improvement Project

Cascade Shores Wastewater Treatment Plant Facilities Plan Update (October 2005), as prepared by ECO:LOGIC, consulting wastewater engineer, has been completed and submitted to RWQCB and funding agencies. This Plan identifies the long-term compliance measures that need to be implemented and defines the alternatives available for replacing and upgrading the treatment facilities needed to provide compliance with State and Federal regulations. The recommended alternative is continued discharge into Gas Canyon with advanced treatment. Projected completion of the project construction will occur on August 31, 2007, with a month needed for compliance testing. A copy of this plan is located at the project website www.mynevadacounty.com/cstreatmentplant.

All of the following have been completed or are in progress:

- The Mitigated Negative Declaration for project adopted by the District Board. Additional environmental documents are being prepared to satisfy Federal funding requirements.
- Report of Waste Discharge was submitted to RWQCB for renewal of Cascade Shores Permit.
- Design of the Cascade Shores Wastewater Treatment Plant Improvement Project by ECO:LOGIC is in progress.
- Completed the installation of soda ash tank improvements for better control of effluent pH adjustment during high flows. Old tank will be modified providing automatic influent pH adjustment for better process control.
- Completed repairs at two collection system manholes and a pump station wet well earlier this month to reduce infiltration and inflow into the collection system. These repairs appear to have reduced peak flow to plant by approximately 30 percent.
- NCS D1CS and ECO:LOGIC evaluated existing filters and implemented a plan that has improved their performance.

- Finalizing a finance plan that includes substantial grant funding from a number of sources, obtaining a SRF loan and/or insurance settlement, and needed sewer charge increases.

NCCAO No. 5

The new treatment facilities are being designed to be located away from the landslide area.

See additional NCSD1CS comments under NCCAO Nos. 4 and 5.

NCCAO No. 6

The compliance schedule shown under Tentative CDO No. 9 shows a construction completion date of August 31, 2007, and compliance demonstration date of September 30, 2007. This month will be needed for the new facility to come into compliance after the completion of construction.

Noncompliance with WDRs (NCWDR):

NCWDR No. 7

Several corrections need to be made to the effluent limitations shown in the Tentative CDO to reflect what is actually shown in WDR Order No. 5-01-177 Effluent Limitations No. B.1A. They are as follows:

- Chlorine Residual should only be listed once (not twice as shown).
- Settleable Solids should be corrected to show Monthly Median of 0.1 ml/l (nothing shown) and Daily Maximum of 0.2 ml/l (shown as 0.1).

NCWDR No. 10

The 151 violations are identified as violations of WDR Order No. 5-01-177 Effluent Limitations No. B.1A. Some of those violations were actually violations of Effluent Limitations B.4 and B.5 and not B.1A.

NCWDR No. 12

NCSD1CS identified in its May 30, 2001, comments on the permit renewal that significant treatment facility improvements would be needed in order to comply with WDR Order No. 5-01-177 Effluent Limitations No. B.1B. NCSD1CS is having the new treatment facility designed to comply.

NCWDR No. 13

The existing treatment facility was not designed to comply with the new requirements shown under WDR Order No. 5-01-177 Provision E.4 and Effluent Limitations No. B.2. NCSD1CS having the new treatment facility designed to comply.

See additional NCSD1CS comments under NCWDR No. 16.

NCWDR No. 14

The filters were previously taken off-line during the winter months, because of their inability to handle the high winter flows. The high flows cause a wash-out of solids from the clarifier. This led to both filters needing to be backwashed at the same time. The simple control system would not prioritize this function and the result was neither filter fully backwashed. When flows were above the capacity of the filters during storms, the filters would be in an almost constant backwash condition. The backwash

water returning to the plant for treatment exacerbated the high flow problem. Under all conditions the flow was chlorinated and dechlorinated before discharge.

See additional NCSD1CS comments under CDO No.1.

NCWDR No. 15

NCSD1CS has submitted all of the following documents and written reports since April 2005:

<u>Document</u>	<u>Date</u>
• Facility Plan (March 2005)	April 2005
• Sewer Spill Report	May 13, 2005
• Response to NOV	June 24, 2005
• Comments on Draft CAO	August 17, 2005
• Geotechnical Report on Landslide	September 2005
• Response to Preliminary ACL	September 2, 2005
• Interim Compliance Measures Work Plan	September 15, 2005
• Emergency Plan (Contingency Backup Plan)	October 14, 2005
• Updated Facility Plan (October 2005)	October 14, 2005
• First CAO Quarterly Compliance Report	October 14, 2005
• Preliminary ROWD	December 1, 2005
• Response to First Draft of Tentative CDO	December 19, 2005
• Mitigated Negative Declaration	December 20, 2005
• Second CAO Quarterly Report	January 13, 2006

NCWDR No. 16

The March 2005 Facility Plan that was submitted to RWQCB identified that the existing filters did not have sufficient capacity to filter all flows entering the plant during the winter. This was reiterated in the October 2005 Updated Facility Plan that was also submitted to RWQCB. Repairs to wastewater collection system have been made that effectively reduced peak flows and modifications to the filter system have been recently completed and improved performance as identified under NCSD1CS comments under CDO No. 1.

NCWDR No. 17

See NCSD1CS comments under CDO No. 6.

NCWDR No. 18

The following list of correspondence, documents, written reports, and milestones demonstrates the NCSD1CS's ongoing commitment to plan, fund, design, and construct improvements needed to improve effluent monitoring, upgrade the existing facility to full tertiary treatment with nitrification and denitrification to assure compliance with the effluent limitations:

- August 27, 2001, letter to RWQCB requested deferral of some of the new requirements while we explored the feasibility of another alternative to stream discharge using plant effluent to irrigate and revegetate an area that had been hydraulically mined. NCSD1CS was attempting to procure funding through Nevada County Resource Conservation District. We also reported that our attempt to increase fees had been unsuccessful.
- A work plan was submitted on September 13, 2001, in response to Provision E.5.
- November 2001 Discharger Self-Monitoring Reports (DSMRs) identified that we were testing equalization basin adjustments to allow the filters to be run on a year-round basis.
- November 27, 2001, letter identified staffing changes that may result in potential future requests for extensions of the implementation schedules on projects.

- December 2001 DSMRs identified that we were continuing testing equalization basin adjustments to allow the filters to be run on a year-round basis. We continued to provide updates on our progress on the alternatives to creek discharge.
- January 2002 DSMR identified planned field testing for land application alternative.
- February 2002 DSMR identified that field-testing for land application alternative was being done.
- March 2002 DSMR identified that field-testing for land application alternative was completed.
- April 2002 DSMR identified that we were scheduling a meeting with geotechnical engineering consultant to discuss the result of the field testing as it related to feasibility for land application.
- May 2002 DSMR identified that results of the field-testing at the site were not satisfactory. We were rethinking our options and would provide a future update to RWQCB.
- June 2002 DSMR identified that we would be providing a status update on the project.
- August 27, 2002, District Board adopted increase in annual sewer charge for Cascade Shores from \$680 to \$910.
- Met with RWQCB staff on October 16, 2002, to discuss the treatment facility.
- October 29, 2002, letter that was follow-up to October 16, 2002, meeting with RWQCB staff that discussed a number of items including the monitoring and reporting program, subsurface disposal alternative field testing results, minor improvements that have already been completed at the facility, and limitations imposed by Proposition 218 as it relates to raising sewer charges for future improvements. Said letter included an updated progress report for the Cascade Shores Projects including DO, NTR/CTR Constituents and EPA priority pollutants, ammonia and nitrates, tertiary treatment, nitrification and denitrification, influent and effluent BOD and TSS composite samplers, continuous turbidity monitoring device, continuous chlorine monitoring device, chronic toxicity monitoring, and cost impacts of improvements. This letter also included an updated work plan for Provision E5.
- September 2002 DSMR confirmed monitoring changes for Turbidity, Chlorine Residual, BOD, and TSS identified at the October 16, 2002, meeting.
- December 2002 DSMR noted that the District requested proposals from consultants to provide study, analysis, and design of upgrade improvements needed. Modifications to composite sampler making it flow proportional were completed.
- April 8, 2003, Board authorized Solicitation of Proposals for Priority Pollutant Sampling Contract awarded to Basic Labs on May 13, 2003 (Resolution SD03-09).
- July 22, 2003, Board adopted Resolution SD03-25 requesting special consideration be given to Cascade Shores regarding wastewater treatment and disposal compliance under new regulations, because of site-specific factors and the associated financial hardships, and grant funding be made available to assist with the funding of Cascade Shores wastewater treatment and disposal facilities improvements needed for compliance.
- August 12, 2003, Majority Protest under Proposition 218 did not allow District to increase rates and pursue the planned project upgrade of the treatment facilities. The issues associated with this were reported to the RWQCB.
- September 2003 DSMR identified that District was working with the Cascade Shores community to see if it could come to an agreement on a rate structure that will allow us to move forward. CTR testing tentatively scheduled.
- February 3, 2004, Board adopted Resolution SD04-01 amending budget and directing DOTS to bill Cascade Shores Zone 8 properties for increased sewer charges. This increase raised the annual connected sewer charge to \$1,795 and standby charge to \$735. Also adopted Resolution SD04-02 deferring payment on existing County loans for three years. These two actions provided some funds for project upgrade planning.
- July 13, 2004, awarded contract to ECO:LOGIC for engineering services for Cascade Shores Wastewater Treatment Plant Improvement Project.
- June 2004 DSMR identified several planned experiments to be done to assist ECO:LOGIC in their evaluation of needed plant upgrades.
- July 2004 replaced sulfur dioxide control system for improved reliability and wider range of control.

- July 2004 DSMR identified upgrade repairs to replace grinder at the head of the plant. We also modified flow box splitter to provide more flexibility in maintaining a more uniform flow through the plant.
- November 9, 2004, Board adopted Resolution SD04-24 authorizing application for a SWRCB Small Community Wastewater Grant.
- 2004 Annual Report identified that NCSD1CS was having ECO:LOGIC develop a Facility Plan. It also identified that NCSD1CS was developing financing options. Also identified the results of the income survey at a \$35,681 median income. It also identified that NCSD1CS had established a project website.
- May 10, 2005, Resolution SD05-11 approving the Cascade Shores Wastewater Treatment and Disposal Facilities Plan (March 2005) that was submitted to RWQCB for review and approval. This plan identified that the existing filters did not have sufficient capacity to filter all flows entering the plant during winter. It had been previously submitted to SWRCB in combination with a Small Communities Wastewater Grant application for review and approval. The project was also submitted for a Community Development Block Grant. We are also developing an application for a State Revolving Fund loan.
- May 13, 2005 submitted detailed report regarding sewer spill that occurred as a result of landslide.
- June 2005 DSMR identified that both of the effluent filters have had the media replaced.
- June 24, 2005 submitted detailed response to Notice of Violation (NOV).
- July 2005 DSMR described the repair and maintenance done to the filters and chlorine contact tank.
- August 2005 DSMR identified plans for the replacement of the temporary pump station.
- August 17, 2005 submitted comments on draft Cleanup and Abatement Order (CAO).
- September 2005 submitted geotechnical report on landslide.
- September 2, 2005 submitted detailed response to preliminary Administrative Civil Liability Complaint (ACL).
- September 15, 2005 submitted Interim Compliance Measures Work Plan.
- September 2005 DSMR identified completion of the new temporary pump station to replace the one that was installed last May 2005.
- October 14, 2005 submitted Emergency Plan (Contingency Backup Plan).
- October 14, 2005 submitted first CAO quarterly compliance report.
- October 14, 2005 submitted Facilities Plan Update (October 2005) to RWQCB for review and approval. It also identified that the existing filters did not have sufficient capacity to filter all flows during the winter.
- November 2005 DSMR identified the completion of the 400-gallon soda ash tank system for better pH control. Also identified the repair plan for the filters.
- November 14, 2005 met with RWQCB staff to discuss first draft of tentative CDO.
- December 2, 2005 submitted preliminary Report of Waste Discharge (ROWD) to RWQCB.
- December 6, 2005, District Board approved Mitigated Negative Declaration.
- December 19, 2005 submitted response to first draft of tentative CDO.
- December 20, 2005 submitted Mitigated Negative Declaration and additional information to complete ROWD to RWQCB.
- December 2005 DSMR identified the filter repairs that were made in January 2006. Also enclosed a revised Emergency Plan.
- January 13, 2006 submitted second CAO Quarterly Report.
- January 20, 2006 submitted report on filter repairs.

NCWDR No. 19

NCSD1CS has planned completion of construction of new WWTP by August 31, 2007, and concur with RWQCB proposed date to demonstrate full compliance by September 30, 2007, as shown under Tentative CDO No. 9.

NCWDR No. 20

See NCSD1CS comments under CDO No 4.

NCWDR No. 21

See NCSD1CS comments under CDO No 4.

NCWDR No. 22

The WWTP is currently staffed 19 hours per week. Alarm systems are in place to remotely identify the following: power failure, generator running, generator failure, chlorine or sulfur dioxide leak, unauthorized entry into control building, equalization tank high water, filter high water, and low process water pressure. The District has an answering service and operator on paid standby for alarm responses after regular business hours.

The description of the tank overflow during higher flow conditions from the equalization tank to the waste (sludge) storage tank, and subsequently to the aeration tank is incorrect. The equalization tank does not overflow to the sludge storage tank. The equalization tank is designed to overflow to the aeration tank during high flows. The aeration tank flows to the clarifier and sludge is periodically returned from the clarifier to the aeration tank or wasted from the clarifier to the sludge storage tank as determined by the plan operator depending on sample results.

See additional NCSD1CS comments under CDO Nos. 1, 3 and 5.

Since overflow from the sludge storage tank to the aeration tank does not occur, and with the improvements to the filters and reduced infiltration and inflow from the collection system, bypass of the filtration system is unlikely, the additional monitoring identified in the Tentative CDO would be an unlikely occurrence.

NCWDR No. 26

The existing treatment facility cannot meet new requirements for ammonia, nitrate, turbidity, and 7-day median total coliform. Mandatory minimum penalties deadline needs to be extended to coincide with the September 30, 2007 deadline to demonstrate full compliance by the new treatment facility with effluent limitations as shown in the schedule in Tentative CDO No. 9.

Cease and Desist Order (CDO):

With the adoption of this CDO all of the items identified in CAO Order No. R5-2005-0714 are either already addressed or are now included in this order. NCSD1CS requests that CAO Order No. R5-2005-0714 be rescinded with the adoption of this CDO.

CDO No. 1

Historical flow data indicates that if the filters could filter all of the flow the wastewater treatment facility could meet the requirements of WDR Order No. 05-01-177 Effluent Limitations No. B.1.A. The problems occur during higher flow conditions. Not all flow could be filtered resulting in violations of Biochemical Oxygen Demand, Total Suspended Solids, and Total Coliform.

NCSD1CS had previously experimented with several alternatives in an attempt to develop a technique where the filters could be kept on-line year round. The results of these experiments have been previously identified in letters to RWQCB. We also identified that we had previously completed repairs and maintenance on the filters this summer, but did not achieve any successful improvement in performance.

NCSD1CS completed repairs at a wastewater collection system manhole and pump tank last month to reduce infiltration and inflow into the collection system. These repairs appear to have reduced flow by approximately 15,000 gallons per day (gpd) from 55,000 gpd down to 40,000 gpd based on plant flow chart. We have also completed repair at another collection system manhole that appears to have further reduced flow by an estimated 5,000 to 7,000 gpd.

NCSD1CS and ECO:LOGIC evaluated existing filters and implemented a plan that has improved their performance. A copy of their evaluation and recommendation was previously submitted to RWQCB. ECO:LOGIC recommended replacement of the existing media that was previously replaced in June 2005. NCSD1CS has also modified the backwash flows to better clear the filters and removed and inspected the backwash pumps. We rebuilt one and serviced the other. We also lifted the backwash pumps off of their bases and tried to force more flow through the filters with no improvement. All of this was part of the filter evaluation.

The new media recommended by ECO:LOGIC has been installed. We also inspected the underdrain/backwash system, flushed it and, repaired as needed. We simulated a flow of 55,000 gpd for 15 minutes and the filters successfully passed it. We have had several Turbidity test results since the filter repairs that were 2 Nephelometric Turbidity Units (NTUs) or less from the new filters with flows of 24,000 to 28,000 gpd during moderate rain and saturated ground conditions. We have also received two air relief devices to prevent air being trapped in the piping and will install them if needed.

These improvements should allow compliance with WDR Order No. 05-01-177 Effluent Limitations No. B.1.A.

Recent completion of the installation of a 400-gallon soda ash tank will allow consistent compliance with WDR Order No. 05-01-177 Effluent Limitations No. B.4.

The reaeration method for outfall was modified and has allowed compliance with WDR Order No. 05-01-177 Effluent Limitations No. B.5. with only one Dissolved Oxygen violation during the past two years.

CDO No. 2

Contingency Backup Plan (Emergency Plan) is in place to supplement the substantial interim compliance measures that were recently completed. NCSD1CS submitted a copy of the Emergency Plan to RWQCB staff on October 14, 2005 with some subsequent revisions to insure compliance with WDR Order No. 05-01-177.

CDO No. 3

The existing treatment facility was designed for filtering 26,000 gpd. The filters were not designed for peak winter flows. Testing after the media replacement this summer indicated that the filters could only handle about 15,000 gpd if the clarifier effluent turbidity was below 4 NTU. During winter, because the turbidity was usually higher than 4 NTU, the filters could only handle about 10,000 gpd when the total flow was 30,000 gpd. Previously, as much flow as possible was put into the filters with the rest bypassed around the filters. When the filters were on-line during the wet weather flows, the plant could go into continuous backwash and flood out sections of the plant, thereby causing excessive solids to be discharged into the effluent.

As previously detailed under NCS1ICS comments on CDO No. 1, NCS1ICS has completed repairs at two collection system manholes and a pump station wet well earlier this month to reduce infiltration and inflow into the collection system by approximately 30 percent. NCS1ICS and ECO:LOGIC recently evaluated existing filters and implemented a plan that has significantly improved their performance as previously detailed. These improvements should eliminate bypass of the filters during higher flows and compliance with WDR Order No. 05-01-177 Provision E.4 and Effluent Limitations No. B.2.

CDO No. 4

Chronic toxicity survival tests results reported by NCS1ICS are as follows:

Date	Flathead Minnow	Ceriodaphnia	Algal
11/02	100%	100%	Cell density not significantly reduced
04/03	100%	100%	Cell density not significantly reduced
01/04		100%	
04/04	96.7%	100%	Cell density not significantly reduced
12/04	96.7%	0%	Cell density not significantly reduced
04/05	100%	100%	Cell density not significantly reduced
10/05	96.7%	100%	Cell density not significantly reduced

Also, NCS1ICS review of the acute bioassay test results covering the same period did not show any significant reduction in the survival of organisms. WDR Order No. 05-01-177 Effluent Limitations No. B.7 show the following survival rates: 70 percent for any one test and 90 percent as the median for any three or more consecutive tests. We significantly exceeded both of those requirements.

NCS1ICS is currently doing chronic toxicity testing twice a year as specified in Monitoring and Reporting Program No. 05-01-177. We are also doing acute toxicity testing twice a year. It is premature at this time to conduct a toxicity identification evaluation based on the December 2004 test result. As such, NCS1ICS is requesting that the toxic identification evaluation be deferred until after the new treatment facility upgrade is completed and only if future toxicity test results then indicate that a toxicity identification evaluation is warranted.

CDO No. 5

The Tentative CDO incorrectly identifies that there is overflow from the waste (sludge) storage tank to the aeration tank. This does not occur. See NCS1ICS comments under NCWDR No. 22.

The equalization tank overflow to the aeration tank should not be considered a problem. It is not a violation of the discharge requirements and it is designed to operate that way. The plant is run in overflow mode during winter flows, because the equalization tank capacity is 18,000 gallons and the flows could reach 50,000 gpd. Also, the related high water alarm does not mean that there is a problem with effluent quality. The equalization tank previously had overflow going to the aeration tank almost every time there was rain. The short history since the collection system repairs to reduce infiltration and inflow (I&I) indicates that this does not occur as frequently.

The amount of flow that is pumped into the aeration tank from the equalization tank as opposed to the excess amount that is returned back to the equalization tank is adjusted by a weir device that is manually adjusted. The flow rate to the aeration tank is set by the plant operator to dampen the effects of influent flow increasing or decreasing to the equalization tank. When the operator sets the flow to the aeration tank, a subsequent rain event can force the flow to increase to a point that there is overflow to the aeration tank. If the flow is set too high to the aeration tank, the equalization tank will be pumped down at low flow time and cause reduction of flow that results in hydraulically under-loading the treatment process. It also causes control problems with the pH and disinfection systems.

The equalization tank overflow to the aeration tank should not have a significant impact on effluent water quality in the plant. Just because there is overflow does not necessarily mean there is excessive nitrates, ammonia, pH, or toxicity. The primary reason for the equalization tank at this site is to maintain flow during low flow times (usually late night to early morning), not to limit flows during higher flow times. Since overflow from the equalization tank to the aeration tank should not happen as frequently due to the reduced I&I previously describe under CDO No. 1, additional sampling for all of the listed constituents should not be needed.

Also, as previously identified under NCSD1CS CDO No. 3 comments, bypass of the filters should no longer occur due to higher flows.

NCSD1CS is requesting that the requirement for the extra effluent sampling and testing during a high water alarm for the equalization tank or overflow from the equalization tank to the aeration tank be removed. NCSD1CS will provide a grab sample of the effluent for the testing as shown, if and when, a bypass of the filters occurs. If the bypass occurs when regular scheduled monitoring of any the constituents identified under this Tentative CDO No. 5, we would not do a second sample and test for the same constituent.

CDO No. 6

NCSD1CS is requesting to continue current grab samples for chlorine. The new treatment facility will utilize ultra violet disinfection (UV) and will not be able to use the equipment. The grab samples would be instead of installing a continuous chlorine analyzer. Also, continuous chlorine analyzer may not work during low flows. The continuous monitoring is especially difficult to accomplish, because, at times, the effluent flow is equivalent to a kitchen faucet opened to a dribble. So, the amount of sample that is needed for mixing with the chlorine analyzer's reagents is at times more than the plant's effluent flow.

NCSD1CS will install a continuous pH monitoring and alarm system within three months after adoption of the CDO. This equipment will be able to be used at the new WWTP.

CDO No. 7

Effluent Limitations B.1.B cannot be met until September 2007 after construction of the new WWTP. The existing WWTP was not designed to remove nitrogen or ammonia. It also cannot meet the new 7-Day Median Total Coliform requirement. An anoxic zone is planned in the new treatment facility, but it is not practical to install one at the existing facility for the short-term deadline. In fact, the compliance schedule identified under Tentative CDO No. 9 shows completion of plans and specifications by July 15, 2006, with compliance by September 30, 2007. NCSD1CS requests that the compliance deadline for Effluent Limitations B.1.B be revised to reflect the schedule that is shown under Tentative CDO No. 9.

CDO No. 8

The existing facility cannot consistently meet the new turbidity requirements shown under Effluent Limitations B.1.B. The existing facility was not designed to maintain such a low turbidity. NCSD1CS requests that the compliance for installation of the continuous monitoring and recording device to monitor turbidity be revised to reflect the schedule shown under Tentative CDO No. 9 for the new WWTP.

CDO No. 9

Preparation of the design plans and specifications for the new WWTP is in progress.

Schedule shown in CDO can be met if all planned financing including SRF loan comes together. NCSD1CS may need to request additional time after the insurance carrier has made a final determination regarding settlement.

The quarterly progress report submission dates shown under Tentative CDO No. 9 should supercede those shown in the CAO.

CDO No. 10

The planned location of the new WWTP away from the slide area will not require stabilizing the hillside.

See previous NCSD1CS comments under CDO No. 9.

CDO No. 11

NCSD1CS will provide a quarterly compliance report. Can RWQCB clarify that this quarterly compliance reporting would replace what was previously specified in Cleanup and Abatement Order No. R5-2005-0714?

We appreciate your consideration and assure the RWQCB that we are fully committed to water quality.

Sincerely,

MICHAEL P. HILL-WELD, Director of the Department of Transportation and Sanitation

Gordon Plantenga
Wastewater Operations Manager

GP:ms
Enclosure

cc: Nevada County Sanitation District Board of Directors
Sanitation District Advisory Committee
Cascade Shores Working Group
County Counsel, Attention: Leanne Mayberry
RWQCB, Attention: Melissa Hall
RWQCB, Attention: Alex Baillie
ECO:LOGIC, Attention: Dan Rich
Holdrege & Kull, Attention: Tom Holdrege