Central Valley Regional Water Quality Control Board
9/10 October 2014 Board Meeting

Response to Comments
for the
City of Colfax Wastewater Treatment Plant
Cease and Desist Order Rescission

At a public hearing scheduled for 9/10 October 2014, the Central Valley Regional Water Quality Control Board will be asked to consider the rescission of Cease and Desist Order (CDO) R5-2011-0097 for the City of Colfax Wastewater Treatment Plant (WWTP). Notice to rescind this CDO was posted for public comment on 23 July 2014. Written comments were due by 22 August 2014. Written comments from Michael Garabedian, representing Friends of the North Fork, were received on 4 August 2014 and 22 August 2014.

Background:

CDO R5-2011-0097 required the City of Colfax (Discharger) to complete several projects in order to achieve compliance with Waste Discharge Requirements (WDRs) Order R5-2007-0130. The CDO required the City of Colfax to, in part:

Inflow and Infiltration (I/I) Reduction
- Continue I/I rehabilitation in areas identified during 2008 and 2010 closed circuit television (CCTV) inspections and smoke testing.
- Implement a new ordinance to address I/I from private laterals.
- Submit annual I/I reports documenting peaking factors and I/I work completed in the previous year.

Dewater Pond 3
- Optimize treatment plant operations.
- Conduct a geotechnical investigation to identify seepage into the pond and eliminate those seepage points.
- Install and operate a dam seepage treatment system.
- Install and operate an enhanced evaporation system to reduce Pond 3 volume.

Line Pond 3
- Following dewatering of Pond 3, install a liner to eliminate seepage into and out of the pond.

Storage Capacity Evaluation
- Prepare a revised water balance analysis following completion of I/I rehabilitation and pond lining to ensure determine whether the facility has adequate capacity to meet WDR requirements.

Complete a copper Water Effects Ratio (WER) study

Conduct a stress test to identify the plant's actual treatment capacity.

All items required by the CDO were completed by the due dates set in the CDO.

Response to Comments:

4 August 2014 Comments from Michael Garabedian representing Friends of the North Fork

Comment 1: "Existing, under construction and proposed City of Colfax I/I controls are inadequate. Order-permitted use of economic factors regarding whether to continue with I/I control are a fatal weakness of this regulatory effort."

Response to Comment 1: The 2011 CDO resulted in the repair or replacement of approximately 10,451 feet of sewer mains (which equates to 21% of sewer mains in the City's system), 180 lateral connections, 146 laterals, and 30 manholes between December 2011 and July 2013. In addition, the CDO also required the City to continue to implement its private lateral program (Ordinance No. 499) which requires owners of businesses and residences to inspect and if necessary replace their private laterals prior to a property sale or major remodel. Furthermore, economic factors were not used to determine whether or not to the City's I/I reduction efforts were sufficient to meet the requirements of the CDO. Instead, the City made proposals to the Central Valley Water Board, and the Board staff determined that those proposals were a reasonable and adequate way of addressing the City's I/I problems and meeting applicable permit requirements.

Comment 2: **"**Colfax industrial pollution information, controls, and fees for industrial sewer hookup, regulation and penalties are inadequate and absent. The street industrial survey we submitted several years ago included major obvious and likely sources of interference and upset."

Response to Comment 2: The City of Colfax conducted a survey of all commercial properties to verify the sewer Equivalent Dwelling Unit (EDU) in 2011. During this survey, 96 commercial and five potential industrial users were identified. The City inspected the five potential industrial users. These potential users include the two printing operations that Mr. Garabedian included as "major obvious sources" of interference in his street survey. Upon inspection of these five facilities, it was determined that the discharges from four of them into the City's wastewater collection system are limited to facility restrooms and no industrial discharges were identified at these four facilities. The fifth potential user, Crispin Cider Company, was confirmed to have an industrial discharge to the City's wastewater collection system.

Since adoption of the CDO, the City identified that the Crispin Cider plant was the cause of multiple upsets. The City has not been required by the Board to implement a formal industrial pretreatment program; however, the City developed and implemented a new sewer use ordinance to provide the City with the legal authority to regulate industrial users. Following implementation of this ordinance, the City created and implemented an industrial user permit in October 2013 for Crispin to regulate discharges into the collection system from this user.

Federal regulations, 40 CFR 403, require facilities with design flow greater than 5 million gallons per day (mgd) to have a pretreatment program in place. 40 CFR 403 also allows the Central

Valley Water Board to impose a pretreatment program on facilities that discharge less than 5 mgd, where necessary. The City of Colfax's WWTP treatment capacity is 0.8 mgd.

The Central Valley Water Board took the City's efforts into consideration when adopting the City's 2013 WDRs. A provision was added to the WDRs to allow the Board to reopen the permit and add pretreatment requirements if necessary. If future plant upsets and/or effluent limitation violations indicate that a formal pretreatment program is necessary, the Board has the authority to require implementation of a pretreatment program in accordance with 40 CFR 403.

At the request of the Regional Board, on 22 April 2014, a USEPA contractor conducted a pretreatment program compliance inspection on the City of Colfax. The contractor made several recommendations on how to improve the program. The City responded to the USEPA Contractor's inspection and is implementing corrective actions to improve its program. At this time, a pretreatment system is being constructed by Crispin and they are currently storing and hauling all industrial waste to another WWTP to avoid causing another upset at the City's WWTP until the pretreatment system is in place.

Board staff is currently working with the USEPA to schedule a more comprehensive inspection to evaluate all potential industrial discharges in the City and to determine if additional industrial discharges should be regulated under an industrial user permit. At this time, no other sources of industrial interference are suspected. It is noted, however, that the Board has never required Colfax to implement a pretreatment program and the CDO does not address the need for pretreatment.

Comment 3: "The actions and inaction by the State Water Resources Control Board, the Central Valley Regional Water Quality Control Board and the City of Colfax fail to implement and undermine the Clean Water Act, the Porter Cologne Act, USEPA regulations, and the NPDES and Industrial Pretreatment delegations to the State of California by USEPA, and all public information, public involvement and public disclosure requirements. On this last point, in spite of requests to do so, the Regional Board seems unable to create a map in permit documents and orders that shows the relationship of the Colfax POTW to the North Fork."

Response to Comment 3: Comment noted. Board staff disagrees with the assertions related to inaction by the Regional Board. Since 2008, the Regional Board has issued five ACLs, adopted three stringent CDOs, and renewed the facility's WDRs in compliance with all applicable regulations. All applicable public involvement and disclosure requirements were met in adopting these regulatory measures. These regulatory measures have resulted in significant upgrades to the treatment plant. During this period, the plant was upgraded from a secondary treatment plant that regularly violated WDR effluent limitations to a modern, tertiary treatment plant that produces very high quality effluent generally in compliance with WDR effluent limitations. In addition, the 64 million gallon storage pond that previously seeped partially treated wastewater to surface waters has been lined to prevent wastewater discharge. The City has also repaired or replaced roughly 40% of its sewer mains, 29% of its manholes, 27% of its laterals, implemented a private lateral inspection/replacement ordinance, implemented a grant program to repair/replace private laterals for homeowners that cannot afford the costs, conducted an industrial user survey, and implemented an industrial pretreatment permit for the one industrial user that was identified. There has been absolutely no inaction on the part of the Regional Board or the Discharger in the past six years. In addition, this comment has no

bearing on the matter at hand, which is consideration of a rescission of a CDO for which all tasks have been completed.

In response to the map request, Compliance and Enforcement staff does not recall being asked for a map showing the North Fork of the American River in relation to the effluent discharge point. The City of Colfax discharges to an unnamed tributary of Smuthers Ravine which flows to Smuthers Ravine, then to Bunch Canyon which discharges into the North Fork of the American River. Smuthers Ravine is an ephemeral stream; Bunch Canyon and the North Fork American River are perennial streams. The distance between the discharge point and the North Fork of the American River is approximately 4.5 miles. For reference, the attached map showing the relationship between the North Fork of the American River and the WWTP discharge point. This map was presented by Board staff during the 30 May 2013 Board hearing presentation related to the adoption of the 2013 WDRs.

Comment 4: "There is nothing in the July 23 letter that justifies the recommendation to rescind. In fact, the contents of the letter document that it should be kept in place until it is replaced by a new order that sufficiently addresses the problems."

Response to Comment 4: Board staff disagrees with this comment. The Discharger has completed all items required by the CDO. Staff's 23 July 2014 letter cautions the Discharger that while improvements in I/I have been observed, a portion of this improvement may be related to the dry weather pattern experienced during the final year of the study. Staff also points out that the water balance predicts compliance with the 100-year storm season storage requirement when the newly-lined storage pond is empty going into the rainy season. Due to several diversions of effluent to the newly-lined storage pond earlier this summer (which is what the Discharger is required to do to avoid violating effluent limitations), Board staff is concerned that the pond may not be empty going into this rainy season. Therefore, staff have reminded the Discharger of the WDR requirement to make every effort to minimize carry-over in the pond going into the next rainy season. The Discharger made the appropriate decision not to violate effluent limitations and diverted effluent into the pond. Now that the plant is meeting effluent limitations, discharge to surface water has resumed and the water stored in the pond is being metered into the treatment plant for treatment prior to discharge. These actions have resulted in lowering water levels in the pond prior to the rainy season.

22 August 2014 Comments from Michael Garabedian representing Friends of the North Fork

Comment 5: "Paragraph 16 requires the City to continue I/I repair until the peaking factor is within normal limits recommended by USEPA unless the City does a cost analysis."

Response to Comment 5: Paragraph 16 is part of the Findings of the CDO which summarizes a portion of the CDO requirements dealing with I/I reduction. Item 7 in the Hereby Ordered portion of the CDO requires a cost analysis if the peaking factor remains above 5. The hourly peaking factor calculated for 2013 was 3.1, below the peaking factor of that was stated in the CDO to trigger the economic analysis. Staff's confidence in the value staying at 3.1 is low since this was observed during a dry year; however, plant inflows have been reduced significantly since I/I work was completed. The City acknowledges that the I/I reduction measured in 2013 is based on limited data due to dry conditions; however, when analyzing sewer plant influent flows

during the 2011/2012 wet season in comparison to the influent flows measured during the 2012/2013 wet season (two rainy seasons with very similar rainfall amounts), I/I flows were reduced by approximately 40%. Between 1 July 2011 and 30 June 2012, the area received 41.74 inches of precipitation and collected a total volume of 29.12 million gallons of I/I. During the 2012/2013 water year, when a portion of the I/I mitigation projects were completed, the area received 43.02 inches of precipitation but only collected 17.53 million gallons of I/I. Rainfall totals were very similar during these two years but I/I was reduced by approximately 40%. If I/I continues to impact plant performance or storage capacity in the future, the Regional Board can consider additional enforcement actions to address the issue. At this time, the requirement set in the CDO was met.

To further reduce I/I into the collection system, additional work is currently being conducted by the City as part of Administrative Civil Liability Orders (ACLOs) R5-2013-0582 and R5-2014-0531. These ACLOs include Supplemental Environmental Projects to provide City funding to property owners to replace or repair private laterals connected to the City's collection system. These projects accelerate repairs that would normally be the property owner's responsibility.

Water Board staff contacted the Region 9 USEPA I/I enforcement staff to discuss the appropriateness of the peaking factor of 5 used in the CDO. According to Eric Magnan at USEPA, he is unaware of an EPA document that gives specific peaking factor recommendations. The value of 5 was used as the criteria in the CDO based on language from a 2009 Inflow and Infiltration Study Technical Memorandum for the City of Colfax conducted by Eco:Logic. Although this reduction target was achieved in 2013, Board staff does not consider the peaking factor value of 5 to be a realistic threshold to determine whether future I/I mitigation work is needed.

Comment 6: "The City has done no cost analysis."

Response to Comment 6: See response to comment 5 above.

Comment 7: "The City wants to continue its lateral improvement program which it states it has more applications that it has been able to fill."

Response to Comment 7: The City is currently implementing its private lateral improvement program as required by ACLOs R5-2013-0582 and R5-2014-0531.

Comment 8: "Paragraph 17 requires the City to determine if additional I/I reductions are necessary after a number of steps have been taken. It has made no such determination."

Response to Comment 8: In its *April 2014 Final Sewage Collection System Inflow and Infiltration Report*, the City determined that no additional I/I work is required based on the I/I flows observed during the 2012/2013 rainy season, the peaking factor observed in 2013, and results from the water balance.

Comment 9: "The City has 54,000 lateral feet of gravity and force sewer lines, not including laterals, and has repaired about 18,000 feet, which is about 33% of the system. It is common knowledge that when I/I is repaired in one area, more I/I will occur in the remaining leaking

areas. The recent I/I wet year reductions are a roughly similar percentage, so to maintain and increase I/I, continued repair of the system is necessary."

Response to Comment 9: The City conducted a city-wide CCTV inspection of the collection system in 2008 and 2010. Information from these inspections was used to determine which areas of the collection system needed to be repaired or replaced. In addition, 28 flow monitors were installed throughout the collection system to provide confirmation of areas that required repair or replacement. Smoke testing was also conducted to identify additional sources of I/I. Utilizing these methods, 10,500 feet of sewer lines were identified as needing attention and were repaired or replaced since December 2011(18,000 feet when including work conducted in 2010 and 2011 prior to adoption of the CDO). In addition, 30 manholes, 180 lateral/main connections, and 146 laterals from the main to the property boundary were replaced. Deficiencies identified during the CCTV inspection have been addressed. These efforts have reduced I/I measured during the 2012/2013 rainy season by roughly 40% in comparison to the 2011/2012 rainy season, which both experienced similar amounts of rainfall.

Comment 10: "The Storage Capacity Evaluation Report and Water Balance are similarly compromised by operational and methodological failures. The Regional Board has assumed that POTW shutdowns for repairs and maintenance are about two days a month. In the first six months of 2014, interference, upset and other problems caused the plant to fail half of the time. For an incredible 90 days January through June of this year, there was no discharge from the POTW. Instead, plant effluent was diverted to Pond 3 which is a 75-foot high sewage dam. Shut down internal diversions, not including for maintenance short repair times, were 1/17-1/18, 1/2-1/11, 2/11-2/19, 2/3-2/7, 2/27-4/23, and 6/17-6/30. In a wet year the POTW and its pond could not meet operating requirements."

Response to Comment 10: The assumption that the plant does not discharge for two days per month is used in the current water balance prepared by the Discharger. This assumption is identical to the assumption used in the water balance conducted in 2011 to provide an apples-to-apples comparison of the two water balances. When the WWTP is operating under normal conditions, this assumption is reasonable. Water Board staff did point out that this assumption does not match actual operations this year due to numerous effluent diversions. According to the Discharger, implementation of the industrial pre-treatment permit should drastically reduce the number and duration of diversions. If future diversions continue to reduce available storage capacity to the point where the plant is not in compliance with WDR storage requirements, Board staff will request the water balance be updated and if non-compliance is predicted, will require the Discharger to address the capacity issue. If the City does not comply with its WDRs and discharges waste from the storage pond, then it would be subject to additional enforcement actions, which can include an ACL.

Comment 11: "The humor-laden aspect of this POTW is that much of the time it literally does not discharge into receiving waters. Smuthers Ravine above the discharge point is usually dry. It has also been regularly dry at the monitoring point below the POTW discharge point. In other words, the POTW effluent is its own receiving waters. Smuthers Ravine enters Bunch Creek which flows year-round, and Bunch Creek enters the North Fork American River that also flows year-round. Regional Board executive staff cannot stomach the idea of monitoring in the creek and river above and below these confluences. It might help to understand that the Colfax POTW was designed and built as a treated sewage land application operation on a ridge above the

North Fork. The scheme quickly failed and treatment operations have been added on to it with uneven results."

Response to Comment 11: This comment has no bearing on whether the CDO should be rescinded. However, staff will provide a response. Water Board staff recognizes that the previous land discharge plant had shortcomings. The Regional Board required the City to upgrade its treatment plant and a new tertiary treatment plant was built and came online in January 2009. The current treatment plant is designed to only discharge to surface water. In the event of an upset or known condition when effluent limitations or UV operational requirements are not being met (turbidity into the UV system above 2 NTU for example) the plant diverts discharge to its storage pond. This is done to maintain compliance with permit conditions and effluent limitations. The plant is situated at the headwaters of the watershed of an unnamed tributary to Smuthers Ravine. The creek in this area was historically ephemeral and was dry much of the year. When the plant is not discharging, the creek does go dry at the downstream monitoring location, as would be expected in an effluent dominated ephemeral stream. Monitoring the North Fork of the American River upstream and downstream of the confluence with Bunch Creek, approximately 4.5 miles from the plant with several other surface water inputs instead of the direct receiving waters in the unnamed tributary of Smuthers Ravine, would not provide useful information to determine whether the Discharge may be causing exceedances of water quality objectives. The monitoring locations reflected in the permit are the most conservative locations because the Discharger must meet all applicable water quality objectives without dilution credits in the unnamed tributary to Smuthers Ravine.

Also, the Water Board's Surface Water Ambient Monitoring Program (SWAMP) monitors the North Fork American River both upstream and downstream of the confluence with Bunch Creek as part of the safe-to-swim program. The upstream location is at Yankee Jim's Road approximately ½ mile upstream of the confluence of Bunch Creek and the North Fork American River. The downstream location is at Ponderosa Way approximately four miles downstream of the confluence. These locations are regularly monitored for pH, temperature, turbidity, dissolved oxygen, specific conductivity, total coliform, and E. Coli. Monitoring data from these locations do not indicate any negative impacts from the WWTP discharge.

Comment 12: "The recent shut downs have largely been attributed to an alcoholic fruit drink distillery referred to by the City as Crispin Cider Company. A recent USEPA-funded Colfax pretreatment inspection only reviewed the distillery, which is the only industry in Colfax regulated by the City's industrial sewer program. The report inexplicably fails to investigate whether a Clean Water Act industrial Pretreatment program is needed in Colfax."

Response to Comment 12: See the response to Comment 2, above.

Comment 13: "Colfax has had regular problems meeting aluminum limitations."

Response to Comment 13: Colfax exceeded the aluminum effluent limitations nine times since the new plant was brought online in January 2009. Eight of the exceedances occurred in January, February, and April 2013 and were caused by operator error. In an attempt to lower turbidity and improve filtration efficiency, the operator began adding a coagulant (polyaluminum chloride) prior to filtration. This addition did improve coagulation and filtration but resulted in elevated aluminum effluent concentrations. As a result of these violations, the Discharger no

longer uses polyaluminum chloride to enhance filtration. The source of the aluminum and cause of the effluent violations was the plant itself and not an unidentified industrial user. ACLO R5-2013-0582 addresses these violations and $24,000 of penalties was assessed in response to these aluminum effluent violations.

The ninth exceedance occurred in August 2012. Polyaluminum chloride addition is suspected to have caused this exceedance as well, but this has not been verified. This violation was addressed by ACLO R5-2013-0500 and a $3,000 penalty was assessed for this violation.

Comment 14: "The Regional Board and City methods of calculating the copper Water Effects Ratio (WER) are impermissible."

Response to Comment 14: The City of Colfax conducted a WER study in compliance with the Streamlined WER Procedure for Discharges of Copper (EPA 822-R-01-005). The copper WER study was reviewed and results were incorporated into the 2013 revision of the WDRs. Board staff is unsure what the commenter determined is impermissible about the methods used.

Comment 15: "A court decision this week requires amending Board Permits with an established weekly aluminum limitation."

Response to Comment 15: Compliance and enforcement staff are tasked with regulating the permit as adopted. If a new legal decision requires the WDRs to be re-opened and a weekly aluminum limitation to be added, this will be done. It is noted that this comment has no bearing on whether or not the CDO should be rescinded.

Comment 16: "The same decision will require the Board to change to the legal California Toxics Rule calculation."

Response to Comment 16: See response to comment 15.