

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

CEASE AND DESIST  
ORDER NO. R5-2011-0097

REQUIRING THE CITY OF COLFAX  
WASTEWATER TREATMENT PLANT  
PLACER COUNTY

TO CEASE AND DESIST  
FROM DISCHARGING CONTRARY TO REQUIREMENTS

The California Regional Water Quality Control Board, Central Valley Region, ("Central Valley Water Board" or "Board") finds that:

1. On 25 October 2007 the Central Valley Water Board adopted Waste Discharge Requirements Order R5-2007-0130 (NPDES Permit No. CA0079529)(the "WDRs") and Cease and Desist Order (CDO) R5-2007-0131. These Orders prescribe waste discharge requirements and time schedules for the City of Colfax (hereafter "City" or "Discharger") at its Wastewater Treatment Plant (hereafter "Facility"). CDO R5-2007-0131 was rescinded and replaced by CDO R5-2010-0001 on 28 January 2010 (the "2010 CDO").
2. The City owns and operates the Facility and the wastewater collection system. The Facility provides sewerage service for the City of Colfax, serving a population of approximately 1,878<sup>1</sup>. Colfax is considered a small, disadvantaged community<sup>2</sup>.
3. The City has recently constructed a new wastewater treatment facility that treats effluent to Title 22 tertiary standards. The Facility has been in full operation since 1 January 2009. As permitted by the WDRs, the average dry weather flow limit is 0.275 million gallons per day ("mgd"). The Information Sheet of the WDRs states that the treatment plant's design flow capacity ("engineered wet weather design flow") is 0.5 mgd, which in effect, limits the discharge flow rate for the remainder of the year.
4. The wastewater treatment facility includes two treatment ponds, a treatment plant, and a 64 million gallon<sup>3</sup> storage reservoir (also known as "Pond 3"). The City collects all known sources of seepage and returns the water to the reservoir. The City intends to install a liner within the storage reservoir to prevent discharges to surface water and groundwater from the storage reservoir.

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<sup>1</sup> City of Colfax adopted budget for fiscal years 2010-2011 and 2011-2012, page 105

<sup>2</sup> Median household income of \$48,752 per year, as found in State Water Resources Control Board ("State Water Board") staff report for CWSRF Project C-06-7806-110.

<sup>3</sup> Capacity at two feet of freeboard, which is the limit in the WDRs

### **BASIS FOR THIS ORDER**

5. The 2010 CDO was issued to provide a timeline for the City to make improvements to: (a) its collection system to reduce inflow and infiltration, and (b) the wastewater storage reservoir to cease seepage discharges. The 2010 CDO also included an interim effluent limit for copper and a timeline for compliance with the final effluent limit. Recent events, described in the Findings below, demonstrate that the 2010 CDO must be updated.
6. The intent of this Order is to address all outstanding issues at the City of Colfax wastewater treatment plant. These include: (a) the need to continue rehabilitating the sewage collection system, (b) the need to provide temporary operational flexibility to allow the City to drain the storage reservoir so that it may be lined and therefore prevent wastewater seepage, and (c) the need to re-evaluate whether the storage reservoir has the capacity to hold all wastewater inflows, precipitation, and I/I generated during a 100-year annual precipitation event. This Order also allows the City to conduct a stress test, continues an updated interim effluent limit for copper, and contains an interim average dry weather flow limit and interim mass loading effluent limits.

### **INFILTRATION AND INFLOW**

7. The City's wastewater collection system consists of approximately 54,000 feet of sewer gravity main; 8,100 feet of sewer force main; 15,000 feet of private sewer lateral pipeline; 200 manholes; and four active pump stations<sup>4</sup>. Much of the original collection system is clay pipe and was built in the early 1900s. The sewage collection system experiences excessive rain-induced infiltration and inflow ("I/I"), causing high flows to the wastewater treatment facility during rain events. Excess flows are stored in the treatment ponds and the storage reservoir. When treatment capacity becomes available, water is pumped from the ponds into the wastewater treatment plant and blended with raw influent for treatment prior to discharge.
8. The City completed an initial I/I study in 2005, and updated the information in a 2009 study. As a result of the studies, the City developed lists of recommended I/I rehabilitation projects, and identified critical gravity sewer mains and manholes in need of repair.
9. The 2009 study found that a large quantity of the excessive I/I originates from private laterals and private sewer systems. As described in a 2009 lawsuit settlement<sup>5</sup>, the City agreed to develop, adopt, and implement an ordinance requiring that owners of

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<sup>4</sup> State Water Board Division of Financial Assistance, staff report for CWSRF Project C-06-7806-110

<sup>5</sup> ELF et al v. Colfax, Case 2:07-cv-02153-GEB-EFB. Filed 14 January 2009.

private businesses and residences inspect, and if necessary replace, their private laterals prior to sale or a major remodel. Ordinance No. 499, which contains these requirements, was subsequently adopted.

10. As required by the 2010 CDO, the City completed smoke testing and Closed Circuit Television (“CCTV”) inspections of the collection system, followed by an I/I reduction program and pump station upgrades. Funding was provided by the Clean Water State Revolving Fund (project C-06-5385-110) and the American Recovery and Reinvestment Act of 2009 (“ARRA”). Approximately 7,475 linear feet of collection system pipeline was repaired, 11 sewer manholes were rehabilitated, and the four active pump stations were upgraded<sup>6</sup>.
11. The City applied for \$6,638,000 in additional funding from the US EPA, USDA, and Clean Water State Revolving Fund to continue, in part, rehabilitation efforts on its sewer system. These funds were approved in mid-September 2011, and will be used to rehabilitate approximately 10,182 additional feet of collection system pipeline and 100 manholes. Additional CCTV work and smoke testing will be conducted prior to construction to verify I/I sources and to monitor flow.
12. The \$6,638,000 includes funds to finish upgrading the four pump stations. As part of the ARRA project, the stations were pre-equipped with SCADA systems. The next round of funding will allow the City to link the pump stations to a master control and acquisition computer via real-time communication.
13. The term “peaking factor” is an indicator of the severity of rainfall-dependent I/I which enters into a collection system, and is defined as the peak hourly flow during wet weather divided by the average dry weather flow. The US EPA recommends a peaking factor of 3 to 3.5, and considers a peaking factor of greater than 5 as typical of systems with higher than average inflow.<sup>7</sup>
14. In the spring of 2009, the City analyzed the rainfall-dependant I/I of three separate storm events, and reported peaking factors of 8.9, 7.8, and 4.6. In its annual I&I assessment report for 2011, the City reported a 2010 peaking factor, but used a different method of calculation than the US EPA method and different than that used in 2009. Therefore, the 2010 peaking factor is not comparable to the 2009 values. However, the City has shown an overall decrease in the inflow per inch of precipitation since it began its rehabilitation work.<sup>8</sup> It is expected that the City’s peaking factor will be reduced as it rehabilitates the sewer collection system, and this Order requires that the peaking factor be calculated yearly.

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<sup>6</sup> State Water Board Division of Financial Assistance, staff report for CWSRF Project C-06-7806-110

<sup>7</sup> 1 July 2009 Technical memorandum, ECO:LOGIC Engineering

<sup>8</sup> 25 April 2011 Sewage Collection System Inflow & Infiltration Report, Ponticello Enterprises

15. The Code of Federal Regulations, Title 40, Part 35, Subsection 35.2005(b), provides the following definitions regarding inflow and infiltration:

(16) *Excessive infiltration/inflow*. The quantities of infiltration/inflow which can be economically eliminated from a sewer system as determined in a cost-effectiveness analysis that compares the costs for correcting the infiltration/inflow conditions to the total costs for transportation and treatment of the infiltration/inflow. (See §§35.2005(b) (28) and (29) and 35.2120.)

(28) *Nonexcessive infiltration*. The quantity of flow which is less than 120 gallons per capita per day (domestic base flow and infiltration) or the quantity of infiltration which cannot be economically and effectively eliminated from a sewer system as determined in a cost-effectiveness analysis. (See §§35.2005(b)(16) and 35.2120.)

(29) *Nonexcessive inflow*. The maximum total flow rate during storm events which does not result in chronic operational problems related to hydraulic overloading of the treatment works or which does not result in a total flow of more than 275 gallons per capita per day (domestic base flow plus infiltration plus inflow). Chronic operational problems may include surcharging, backups, bypasses, and overflows. (See §§35.2005(b)(16) and 35.2120.)

16. The City is expected to continue to rehabilitate its sewer collection system until its peaking factor is within the normal limits recommended by the US EPA, unless the City completes a cost analysis and shows that it is more economical to increase the size of the wastewater treatment facility to handle peak I/I flows than to continue rehabilitating the sewer collection system.
17. This Order requires the City to continue its efforts to reduce I/I within the collection system, to continue to implement the private lateral program (Ordinance No. 499), to submit annual progress reports, to evaluate the magnitude of I/I reduction at the completion of the work described in Finding 11, and then to determine whether additional I/I reductions are necessary.

### **STORAGE RESERVOIR SEEPAGE AND LINING PROJECT**

18. Discharge Prohibition III.A WDR Order R5-2007-0130 states: “*Discharge of wastewater at a location or in a manner different from that described in the Findings is prohibited.*”
19. When influent flows exceed the treatment plant’s capacity of 0.5 mgd, wastewater is diverted to the 64 million gallon storage reservoir (also known as Pond 3). Pond 3 was built in 1979, is unlined, and is constructed over bedrock in an area of several natural springs. Seepage occurs at the dam and is collected and returned to the storage reservoir. Seepage flow rates vary from approximately 0.1 to 0.2 mgd, depending on the volume of water stored in the reservoir. Seepage may also occur in other areas and may enter surface waters; however, no locations have been identified. The seepage discharge from Pond 3 directly to surface water without treatment is a violation of Prohibition III.A of the WDRs.

20. CDO R5-2007-0131 required the City to cease all wastewater seepage discharges from the storage reservoir by 1 October 2009. The Discharger submitted a work plan that proposed lining the storage reservoir. However, the Discharger was unable to dewater the reservoir, because it was needed to store wastewater during construction of the tertiary treatment plant and to store excessive I/I. In addition, the City experienced funding constraints. Consequently, the City did not comply with the 2007 CDO.
21. The 2010 CDO required the City to submit a new work plan and schedule to cease all seepage discharges to surface water, and allowed the City until 1 October 2012 to comply with the discharge prohibition. The City submitted a *Method of Compliance Work Plan*, and again proposed lining the storage pond. This Order extends the compliance date in the CDO by two months, to 30 November 2012, to take advantage of the entire construction season.
22. The 2010 CDO recognizes that the Central Valley Water Board may need to revise the compliance time schedule “*if weather conditions are not favorable for implementation of proposed compliance projects, or as other unknown factors become present (e.g., emergency use of the storage reservoir).*”
23. As discussed in the “Temporary Measures to Dewater the Storage Reservoir” section of this Order, the City submitted a revised water balance in October 2011 which shows that if the 2011-2012 rainfall exceeds 48 inches, then it is highly unlikely that the storage pond will be dewatered in time to complete the lining project during the 2012 construction season. Therefore, this Order allows the date for lining the pond to be extended to 30 November 2013 if more than 48 inches falls at gauge CFC during the 2011-2012 water year.
24. The 2011 funding commitment includes monies to line the storage reservoir. The City’s design consultant has recently completed the liner design<sup>9</sup> and anticipates going to bid by 1 December 2011. The proposed schedule shows that construction will be completed by 30 November 2012. However, construction is dependant upon (a) the amount of rainfall during the winter of 2011-12 and (b) dewatering the reservoir.
25. The 5 May 2011 design drawings for the pond lining project<sup>10</sup> state that “*residual solids remaining after pond dewatering operation may be spread on reservoir bottom for further drying and blending prior to liner installation.*” Given the shallow groundwater at the facility, it is not appropriate to allow the solids to remain in place as they may cause groundwater degradation. Therefore, this Order requires that the dried solids be removed and disposed of at an appropriately permitted facility.

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<sup>9</sup> State Water Board Division of Financial Assistance, staff report for CWSRF Project C-06-7806-110

<sup>10</sup> HDR Engineering, Inc. Design Drawings for City of Colfax WWTP Pond 3 Lining Project

**Spring 2011 Bypass**

26. On 16 March 2011, the City submitted a *Pond No. 3 Emergency Spill and Dewatering Plan* (“Dewatering Plan”). The City reported that the storage reservoir’s level was near capacity, even though the City had attempted to empty it prior to the rainy season. The City stated that approximately 1.9 mgd of wastewater was entering the treatment plant during storm events, but that the plant is only allowed to discharge 0.5 mgd. The remainder of the influent flow has been directed to the storage reservoir. The City was concerned that rainfall predicted in late March 2011 would cause an uncontrolled overflow from the storage reservoir, potentially causing property damage or creating a health and safety risk. The Dewatering Plan identified three alternatives for managing discharges from the storage reservoir to minimize impacts to the public and environment.
27. By letter dated 18 March 2011, Board staff acknowledged the potential concerns if an uncontrolled overflow were to occur. In the letter, Board staff stated that the City should take all steps possible to avoid a bypass, but that if one were necessary, then Dewatering Plan Alternatives 2 or 3 were preferable. Staff also indicated that a bypass may be subject to discretionary enforcement action, requested weekly status updates, and requested that a water balance be prepared.
28. Between 20 March and 8 April 2011, the City discharged approximately 25 million gallons of wastewater from the storage reservoir. The City proactively installed a temporary treatment plant and all bypassed water was disinfected by chlorination and then dechlorinated prior to discharge. In addition, the wastewater was filtered using pressure sand filters from 3 April 2011 through 8 April 2011.
29. The table below summarizes selected analytical results from samples taken from the treated bypass water prior to discharge to surface water. Although not required to, the City collected samples from the treated bypass water at the same time and frequency as it monitored the treated effluent.

	BOD <i>mg/L</i>	TSS <i>mg/L</i>	pH <i>Std. units</i>	NH3 <i>mg/L</i>	NO3 <i>mg/L</i>	Total Coliform <i>MPN/100mL</i>	Copper <i>µg/L</i>
Number of Samples	3	3	4	4	1	10	1
Concentration Range	2 - <3	<2 -13	8.7 – 9.6	0.097 – 0.13	0.82	<2 – 4	3.6
Average Concentration	1.6 <sup>1</sup>	5.4 <sup>1</sup>	9.3	0.11	0.82	<2	3.6

<sup>1</sup> non-detect concentrations counted as ½ of the detection limit for the average calculation.

30. Although the bypass water is not subject to the effluent limitations in the WDRs, it is appropriate to compare the constituent values to determine if there was a significant effect on water quality. The BOD, TSS, ammonia, nitrate, and total coliform concentrations were less than the effluent limitations contained in the WDRs. The pH concentration of all four samples was above the instantaneous maximum pH effluent limitation of 8.5 standard units; however, the receiving water pH met the permit limits. Although the copper sample exceeded the effluent limitation contained in the WDRs, it was below the 2010 CDO's maximum daily interim limit of 6.7 µg/L and therefore not considered a violation.
31. The wastewater released during the bypass event was also analyzed for settleable solids, total dissolved solids, dissolved oxygen, turbidity, total chlorine residual, total coliform, fecal coliform, Escherichia coli, aluminum, iron, manganese, mercury, chloride, and hardness. All concentrations for these constituents, with the exception of aluminum, were within their respective WDRs limitations. For aluminum, the flow weighted-average of the blended discharge of the tertiary-treated effluent and the partially treated bypass water is within the permit effluent limit. , and found that the blended discharge met all effluent limits in the permit. These effluent limits have been set to protect all beneficial uses of the receiving water, and therefore it can be presumed that the discharge did not cause the alleged foaming or odors. The aluminum concentration of the bypass water was above WDR effluent limitations; however, the flow weighted average concentration of the tertiary treatment plant effluent and bypass water (which is representative of the total effluent discharge to receiving waters) was below WDR limitations.
32. Board staff concludes that the City's temporary treatment system helped minimize any water quality impact during the bypass of water from the storage reservoir. With the exception of pH, the blended discharge complied with all permit effluent limits, which are set to protect all beneficial uses of the receiving water.

#### ***Water Balance and Compliance with Storage Capacity Requirement***

33. Section VI.C.4.b.v of the WDRs contains the following Treatment Ponds and Storage Reservoir Operating Requirement: "*Ponds and the storage reservoir shall have sufficient capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration during the winter season. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.*"
34. Section VI.C.4.b.iv contains the following Treatment Ponds and Storage Reservoir Operating Requirement: "*Freeboard shall never be less than two feet (measured vertically to the lowest point of overflow).*"

35. Because of the need to bypass water from the storage reservoir in early 2011, Board staff required that the City prepare a water balance to determine whether the facility had the capacity to comply with WDRs Provisions VI.C.4.b.iv and v. The City submitted a water balance on 31 May 2011, and after a meeting with Board staff, submitted a revised water balance on 1 July 2011.
36. While working on the water balance, the City found that the rainfall gauge used in previous years' water balances is inaccurate because it is shaded by trees. The more accurate rain gage (identified as CFC) is used in the most recent water balance, and shows that rainfall is higher than previously documented. Therefore, the City has less storage capacity than predicted by previous water balances.
37. The City completed several water balances. The first one was a "calibration model" and used the following inputs and assumptions:
  - Actual rainfall data collected from October 2010 through April 2011, and assumed rainfall for May 2011 through September 2011. Because the October through April rainfall showed that the water season to date was equivalent to a 2- to 5-year return period, rainfall for May through September was also based on a 2- to 5-year return period.
  - Actual discharge flow rates from Oct 2010 through April 2011, and assumed 0.465 mgd discharge for remainder of year. It is noted that this value is higher than the permitted flow<sup>11</sup>.
  - Actual storage in all three ponds at the beginning of the water year (30 September 2010) of 26.8 million gallons.
  - Current observed I/I flows of 1.05 million gallons per inch of rainfall.
  - Current observed domestic wastewater flow of 0.16 mgd,
  - Seepage into and out of the reservoir consistent with what was observed in 2010-2011, and dam seepage water returned to the reservoir.
  - A maximum freeboard of two feet, consistent with the WDRs.

The calibration water balance shows that the City did not have sufficient storage capacity to maintain compliance with WDRs Provision VI.C.4.b.iv and v during the 2010-2011 wet season. The 2010-2011 water year represents a 2-year and 5-year return period, and the WDRs require storage capacity for a 100-year annual

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<sup>11</sup> The WDRs contain a three-month dry weather flow limit of 0.275 mgd, and an engineered wet weather design flow of 0.5 mgd for the remainder of the year.

precipitation event. Even if the storage pond had been empty entering the winter (on 1 October 2010), there still would not have been enough storage capacity to meet the 100-year annual precipitation event requirement. Therefore, the City cannot comply with WDRs Provisions VI.C.4.b.iv and v.

38. The second water balance was a “predictive model” to determine the storage requirements necessary to comply with WDRs Provisions VI.C.4.b.iv and v for a 100-year annual precipitation event and two feet of freeboard. The following inputs and assumptions were used:

- Current observed I/I flows of 1.05 million gallons per inch of rainfall.
- An effluent discharge rate of 0.275 mgd from July through September, and a non-dry weather effluent discharge rate of 0.5 mgd for all other months of the year.
- Seepage into and out of the reservoir consistent with what was observed in 2010-2011, and dam seepage water returned to the reservoir.
- Seepage into the reservoir from the channel surrounding it consistent with what was observed in 2010-2011.
- Domestic wastewater influent of 0.275 mgd.
- The reservoir is empty at the beginning of the rainy season.

The water balance is conservative because (a) it is expected that I/I flows will decrease as more maintenance is completed on the sewer collection system, (b) the influent flow rate is almost double the current inflow, and (c) once the pond is lined, the City will no longer need to collect and return dam seepage water. The predictive model estimates that 135 million gallons of storage is needed in Pond 3 to maintain the required 2-feet of freeboard during a 100-year annual rainfall event. For comparison, Pond 3 currently holds 64 million gallons of wastewater at 2-feet of freeboard<sup>12</sup>.

39. Several adjustments were then made to the predictive water balance.

- First, the non-dry weather discharge flow rate was increased to 1 mgd. If all the other assumptions remain the same, then the current Pond 3 capacity would be sufficient to maintain the required 2-feet of freeboard.
- Second, it was assumed that no seepage enters the storage reservoir, dam seepage water does not need to be collected, and the discharge flow rate remains at the current permitted rate. All other factors remain the same. In this case, the

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<sup>12</sup> This value may increase or decrease somewhat once the pond is lined.

water balance estimates that the required capacity of the storage pond decreases from 135 million gallons to 102 million gallons (still significantly greater than the current capacity of 64 million gallons).

- Finally, the water balance was adjusted for a non-dry weather discharge flow rate of 0.75 mgd, and it was assumed that no seepage water enters the storage reservoir and that dam seepage water does not need to be collected. The other assumptions remained the same. In that case, the current Pond 3 capacity would be sufficient to maintain the required 2-feet of freeboard during a 100-year annual precipitation event.

40. This Order requires the City to come into compliance with Provisions IV.C.4.b.iv and v of the WDRs. The City's upgrades required by this Order may result in compliance or additional improvements may be needed such that the facility will meet the requirement to hold all wastewater, I/I, and precipitation generated during a 100-year annual storm event. Current upgrades or potential future improvements include reducing the volume of water entering the storage reservoir (e.g., reducing I/I, redirecting runoff from the hillside, lining the reservoir so that seepage flows no longer need to be collected), increasing the capacity of the storage reservoir, increasing the evaporation rate of the wastewater in the reservoir, demonstrating that a higher effluent discharge rate from the current wastewater treatment plant is acceptable, or increasing the treatment capacity of the wastewater treatment plant to allow a higher effluent discharge rate.

#### ***Temporary Measures to Dewater the Storage Reservoir and Stress Test***

41. At the end of April 2011, the storage reservoir contained approximately 49 million gallons of wastewater (i.e., it was 76% full). At the beginning of October 2011, the reservoir contained approximately 30 million gallons (45% full). Given a normal rainfall year, the volume of wastewater in the storage reservoir will increase through the winter. Therefore, additional steps must be taken to remove the water in the storage reservoir to allow the pond lining project to be completed in 2012.
42. The City submitted a June 2011 document titled *Wastewater Treatment Plant Feasibility Analysis for Alternative Measures to Dewater Pond 3 and Meet Freeboard Requirements* (the "Feasibility Analysis"). The City states that it is implementing a two-step approach to dewater the storage reservoir so that it can be lined. The first step is to reduce the amount of inflow into the pond. The City is working on this through its I/I rehabilitation efforts, by repairing private laterals, by re-lining the final effluent channel to prevent seepage, and by maintaining high-level functionality of the wastewater treatment plant to minimize the diversion of partially-treated wastewater to the storage reservoir.

43. The City has stated that the storage reservoir must be dewatered by the end of May 2012 in order to install the liner by end of October 2012, and that the amount of precipitation received during the winter of 2011-2012 will be a determining factor in whether the pond will be dewatered in time. The City's 13 October 2011 updated water balance, using current pond conditions, shows that the pond will be emptied by the end of May 2012 if (a) 48 inches or less of precipitation fall during the winter of 2011-2012, (b) the effluent flow rate is 0.5 mgd, and (c) dam seepage water does not need to be collected and returned to the pond.
44. The Feasibility Analysis summarizes seven alternatives to allow the reservoir to be dewatered by the end of May 2012. Board staff has reviewed the alternatives and identified four of them as being most protective of water quality. This Order requires the City to implement the following four alternatives:

Alternative 1 – Optimize performance of the wastewater treatment plant. The City has proposed to: (a) use Pond 1 for equalization of all influent flows, (b) modify the SCADA, influent, and effluent pumping systems to allow for operation above 0.5 mgd, (c) maintain consistent recycled activated sludge production; (d) improve sludge wasting operations, and (e) make sequencing basin modifications.

Alternative 2 – Conduct geotechnical investigations. The City will undertake geotechnical investigations to determine if: (a) the groundwater relief valves in Pond 2 are allowing excessive amounts of groundwater to enter the pond, (b) whether groundwater is flowing under the shot-crete lined channel into Pond 3, and (c) whether trenching would effectively prevent storm water seeping from the hillside from entering Pond 3. If the geotechnical investigations determine that additional physical improvements will result in less seepage water entering the ponds, then this Order requires that the City submit a work plan and undertake the work.

Alternative 3 – Increase effective evaporation rate. The City proposed to install and operate a sprinkler system or an industrial evaporator system over Pond 3 to increase the evaporation rate and reduce the volume of water in the storage reservoir. On 11 July 2011, Board staff approved this alternative, subject to certain conditions. This Order allows implementation with the same conditions.

Alternative 5 – Install a separate treatment system for dam seepage water. Seepage water from Pond 3 is currently collected and returned to the storage reservoir. The City originally proposed to use the (formerly retired) chlorine contact chamber and pressure sand filters to treat the dam seepage water prior to blending with the tertiary treatment plant effluent for discharge to surface water. In October 2011, the City modified its proposal and now plans to use UV disinfection instead of chlorine and sand filtration. Board staff is not opposed to either method of treatment as long as the blended effluent will meet WDR effluent limitations.

Because the storage reservoir must be dewatered so that it may be lined, this Order allows installation and use of a temporary treatment system for the dam seepage water. Wastewater seeping from the base of the pond will receive some treatment from the soil prior to treatment in the temporary system. This Order requires that the blended effluent (a combination of effluent from the temporary system and the tertiary treatment plant) must meet the effluent limits in WDRs R5-2007-0130. Water quality data obtained during the bypass event (Finding 29) and in October 2011 shows it is reasonable to expect that the blended effluent will comply with the effluent limits. This Order also sets a flow limit of 0.2 mgd for the volume of treated seepage water which may be blended with the tertiary effluent.

45. On 31 August 2011, the City submitted a *Capacity Assessment of Wastewater Treatment Processes*. This assessment was completed to determine whether it is appropriate to allow an increase in the engineered wet weather design flow from the existing wastewater treatment plant. A higher discharge rate will allow the storage reservoir to be dewatered sooner. The document evaluates each of the main treatment processes, and states that the most limiting process is the secondary clarifiers, with an estimated treatment capacity of 0.8 mgd.
46. As described in the City's 28 October 2011 *Full Scale Stress Test of Wastewater Treatment Processes* memorandum, the next step is to conduct a series of "stress tests" in which the facility is run at incrementally higher flows (i.e., 0.6 mgd, 0.7 mgd, 0.8 mgd). Each stress test would last for 2-3 sludge retention times, or approximately 40 days. During the stress tests, the City would collect additional water quality data to provide a profile of each treatment process and determine the maximum sustainable flow rate. The data obtained from the stress test is critical for determining the long-term solution to the current lack of storage capacity. The CDO allows the City to conduct the stress tests, and if the City can support a higher flow rate, allows the Executive Officer to authorize it after the City makes upgrades to its pumps. It is anticipated that this higher flow rate would also be reflected in the revised NPDES permit, which is scheduled for adoption in late 2012 or early 2013.

**COMPLIANCE WITH FINAL COPPER EFFLUENT LIMITATION  
 AND AVERAGE DRY WEATHER FLOW LIMITATION**

47. WDR Order R5-2007-0130 includes the following final effluent limitations for copper. This limit became effective on 1 January 2009:

<i>Parameter</i>	<i>Units</i>	<i>Effluent Limitations</i>				
		<i>Average Monthly</i>	<i>Average Weekly</i>	<i>Maximum Daily</i>	<i>Instantaneous Minimum</i>	<i>Instantaneous Maximum</i>
<i>Copper, Total Recoverable</i>	<i>µg/L</i>	2.7	--	5.5	--	--

48. The Central Valley Water Board determined that the City cannot consistently comply with the copper effluent limitation and that it must implement additional actions to reach compliance. Therefore, the 2010 CDO provided a time schedule for completing the compliance actions, required the Discharger to implement a pollution prevention plan for copper, and contained an interim performance-based effluent limit for copper.
49. The performance-based interim effluent limitations for copper are statistically calculated using current treatment plant performance data. Sampling and laboratory variability is accounted for by establishing interim limits that are based on normally or log-normally distributed data, where 99.9% of the data points lie within 3.3 standard deviations of the mean.<sup>13</sup> The interim maximum daily effluent limitation in the 2010 CDO was calculated using 12 effluent samples collected between January 2009 and October 2009, and was based on a normal distribution. This Order refines the performance-based interim copper limitations based on an expanded dataset, using 37 effluent samples collected between January 2009 and June 2011 and a log-normal distribution. Because the WDR monitoring and reporting program only requires monthly effluent sampling for copper, the same limitation is used for the performance-based average monthly limitation and maximum daily interim.
50. As required by the 2010 CDO, the City is conducting a water effects ratio (WER) study to determine a site-specific water effect ratio to apply to the final effluent copper limitation in the WDRs. This may provide a higher final effluent copper limit with which the City can comply while still protecting water quality and the beneficial uses of the receiving water.
51. This Order continues the time schedule for the copper requirements contained in the 2010 CDO and includes an updated performance-based copper interim limitation.
52. The WDRs state that the average daily dry weather flow rate shall not exceed 0.275 mgd. The Compliance Determination section of the permit states that “*compliance...will be determined annually based on the average daily flow over three consecutive dry weather months (e.g., July, August, and September).*”
53. Section E of the Information Sheet of the WDRs states that “*...the design flow of the system is 0.5 mgd.*” This design flow effectively limits the effluent discharge rate during the non-dry weather months (October through June). However, as described elsewhere in this Order, the City is conducting a stress test to determine if the wastewater treatment plant can reliably treat wastewater at a higher flow rate. Based on the results, the Executive Officer may allow an increase in the non-dry weather flow rate.
54. The City has determined that it cannot dewater the storage reservoir if it complies with the average dry weather flow limit. This Order contains a temporary performance-

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<sup>13</sup> *Basic Statistical Methods for Engineers and Scientists, Kennedy and Neville, Harper and Row*

based average dry weather flow limit of 0.5 mgd, based on the treatment plant's design flow rate.

55. The WDRs contain flow-based mass limitations for BOD and TSS. The mass limits are based on a flow of 0.275 mgd. Because this Order allows a temporary average dry weather flow increase, it is appropriate to re-calculate the mass limitations for BOD and TSS based on a higher temporary flow.

### **MANDATORY MINIMUM PENALTIES**

56. CWC section 13385, subdivisions (h) and (i) require the Regional Water Board to impose mandatory minimum penalties ("MMPs") upon dischargers that violate certain effluent limitations. CWC section 13385(j) exempts certain violations from the MMPs. CWC section 13385(j)(3) exempts the discharge from MMPs "*where the waste discharge is in compliance with either a cease and desist order issued pursuant to Section 13301 or a time schedule order issued pursuant to Section 13300, if all the [specified] requirements are met.*"
57. Compliance with this Order exempts the Discharger from MMPs for violations of the copper final effluent limitations found in WDRs Order R5-2007-0130. The 2010 Cease and Desist Order provided protection from MMPs from 28 January 2010 through 31 December 2013. This Order continues that protection through the same date.
58. If the interim effluent copper limit in this Order is exceeded, then the City is subject to MMPs for that particular exceedance as it will no longer meet the exemption in CWC 13385(j)(3). It is the intent of the Board that a violation of the interim copper average monthly effluent limitation subjects the City to only one MMP for that monthly averaging period<sup>14</sup>. In addition, a violation of the interim maximum daily copper effluent limitation subjects the City to one MMP for the day the sample was collected.
59. This Order contains an interim temporary average dry weather flow limit in place of the average dry weather flow limit in the WDRs. The flow limit applies to the effluent discharge from the wastewater treatment plant<sup>15</sup>. Violation of the interim average dry weather flow limitation subjects the City to only one MMP per year.<sup>16</sup>
60. This Order defines the effluent monitoring point, EFF-OO1, as a point below the blended effluent but upstream of the discharge to the receiving water. The City may elect to collect internal effluent samples upstream of these two points to assess the

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<sup>14</sup> In accordance with Questions 39 and 40 of the 17 April 2001 State Water Board *SB 709 and SB 2165 Questions and Answers* document

<sup>15</sup> It does not apply to the blended flow of treated dam seepage and tertiary treatment plant effluent.

<sup>16</sup> Based on the Compliance Determination (VII.C.) section of the permit and in accordance with Questions 39 and 40 of the 17 April 2001 State Water Board *SB 709 and SB 2165 Questions and Answers* document

operational aspects of the two treatment facilities. However, MMPs only apply to the effluent monitoring result reported for EFF-001.

61. In accordance with CWC section 13385(j)(3), the total length of protection from MMPs for the constituents listed above is less than five years.
62. The 2010 CDO provided a time schedule for completing the actions necessary to ensure compliance with the final copper effluent limitation contained in the WDRs, and required the City to implement a pollution prevention plan for copper. The pollution prevention plan was submitted on 26 August 2010. This Order continues the time schedule from 2010 CDO, and requires the City to implement its copper pollution prevention plan. Since the time schedule for completion of actions necessary to bring the waste discharge into compliance exceeds one year, this Order includes interim effluent limitations, as well as interim requirements and dates for their achievement.
63. The Central Valley Water Board finds that the City can maintain compliance with the interim effluent limitations included in this Order. Interim effluent limitations are established when compliance with the final effluent limitations cannot be achieved by the existing Facility. Discharge of constituents in concentrations in excess of the final effluent limitations, but in compliance with the interim effluent limitations, can significantly degrade water quality and adversely affect the beneficial uses of the receiving stream on a long-term basis. The interim effluent limitations, however, establish an enforceable ceiling concentration until compliance with the final effluent limitation can be achieved.

### **REGULATORY BASIS**

64. The Discharger's acts and failure to act have caused or permitted waste to be discharged or deposited where it has discharged to waters of the state and has created, and continues to threaten to create, a condition of pollution or nuisance.
65. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins*, Fourth Edition, revised September 2009 (hereafter "Basin Plan"), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.
66. The designated beneficial uses of underlying groundwater, as stated in the Basin Plan, are domestic and municipal supply, agricultural supply, and industrial supply.
67. Treated effluent is discharged to an unnamed tributary of Smuthers Ravine, a water of the United States and a tributary to the North Fork of the American River. The existing and potential beneficial uses of the North Fork of the American River and its tributaries are municipal and domestic supply; agricultural supply; water contact recreation;

noncontact water recreation; cold freshwater habitat; warm freshwater habitat; spawning, reproduction and/or early development; and wildlife habitat.

68. Section 13301 of the California Water Code (CWC) states in part: *“When a regional board finds that a discharge of waste is taking place or threatening to take place in violation of requirements or discharge prohibitions prescribed by the regional board or the state board, the board may issue an order to cease and desist and direct that those persons not complying with the requirements or discharge prohibitions (a) comply forthwith, (b) comply in accordance with a time schedule set by the board, or (c) in the event of a threatened violation, take appropriate remedial or preventative action...”*
69. Section 13267 of the California Water Code states in part: *In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.*
70. The City of Colfax owns and operates the wastewater treatment plant and sewage collection system which is subject to this Order. The technical and monitoring reports required by this Order are necessary to determine compliance with the WDRs and with this Order.
71. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, *et seq.*; “CEQA”) for the following reasons, each of which is an independent basis for exemption.
  - This Order does not modify any compliance dates or other requirements of NPDES Order No. R5-2007-0130, which requires compliance with Discharge Prohibition III.A, compliance with Effluent Limitations IV.A.2.a for copper, and compliance with Effluent Limitations IV.A.2.j. for effluent discharge flow rate notwithstanding any cease and desist order. This Order serves to enforce Order No. R5-2007-0130. This Order is exempt from CEQA under Water Code Section 13389, since the adoption or modification of a NPDES permit for an existing source is exempt and this Order only serves to implement a NPDES permit. (*Pacific Water Conditioning Ass’n, Inc. v. City Council of City of Riverside* (1977) 73 Cal.App.3d 546, 555-556.)

- This Order does not have the potential to cause a significant impact on the environment (Title 14 CCR section 15061(b)(3)) and is not a “project” as defined by CEQA. This Order enforces preexisting requirements to improve the quality of ongoing discharges that constitute the CEQA “baseline”; and includes interim effluent limitations to ensure that discharge does not increase above the CEQA baseline. This Order imposes requirements that will maintain the CEQA baseline while the Discharger attains compliance with the existing requirements. Any measures to meet effluent limitations are the result of WDR Order No. R5-2007-0130 and not this Order. Since the compliance schedules are as short as possible and all actions to comply with the existing permit requirements are already required, this Order does not cause or allow any environmental impacts to occur; those impacts would occur regardless of this Order.

72. On 2 December 2011, in Rancho Cordova, California, after due notice to the Discharger and all other affected persons, the Central Valley Water Board conducted a public hearing at which evidence was received to consider this Cease and Desist Order under Water Code section 13301 to establish a time schedule to achieve compliance with waste discharge requirements.

#### **SUMMARY OF THE ACTIONS REQUIRED BY THIS ORDER**

73. As described above and summarized below, this Order requires the following:
- a. With regard to reducing I/I: the City shall continue rehabilitating its collection system, implement its private lateral program (Ordinance No. 499), submit annual progress reports, and evaluate the magnitude of I/I reduction by 1 May 2014. If the City’s I/I peak factor remains significantly greater than what US EPA considers acceptable, then the City shall (a) evaluate whether it is more cost effective to continue to rehabilitate the sewer collection system or to increase the storage and treatment capacity of the wastewater treatment facility, (b) describe which option the City will pursue, and (c) provide a proposed schedule for financing, design, and construction.
  - b. With regard to complying with Provisions C.4.b.iv and v. (ability to hold a 100 year annual rainfall event and maintain two feet of freeboard): the City shall complete the upgrades required by this Order, and then evaluate whether additional improvements are needed to reduce the volume of wastewater to be stored and/or increase the treatment or disposal capacity.
  - c. With regard to dewatering the storage reservoir: the City shall implement Alternatives 1,2,3, and 5 as described in its June 2011 *Wastewater Treatment Plant Feasibility Analysis for Alternative Measures to Dewater Pond 3 and Meet Freeboard Requirements* with the additional requirements listed in this Order.

- d. With regard to lining the storage reservoir: the City shall dewater the reservoir by 31 May 2012 and complete the lining project by 30 November 2012. However, if more than 48 inches of rain falls at gauge CFC during the 2011-2012 water year, then each of the above dates is automatically extended by one year. The Order requires that all solids in the bottom of the storage reservoir be removed and properly disposed of.
- e. With regard to the final copper effluent limitation: This Order includes an interim performance-based limitation which is in effect until 31 December 2013. The City shall implement its copper pollution prevention plan and fully comply with the final effluent limitation found in the WDRs beginning 1 January 2014.
- f. With regard to the average dry weather flow limitation: This Order includes an interim average dry weather flow limitation of 0.5 mgd, which is the current design flow. This Order also allows a stress test to be conducted as described in the City's 28 October 2011 document. Depending on the results, this Order allows the engineered wet weather design flow to be increased to no more than 0.8 mgd if certain improvements are made to the pumping systems. This Order also contains interim mass loading effluent limits based on the interim average dry weather flow limitation.

**IT IS HEREBY ORDERED THAT** Cease and Desist Order No. R5-2010-0001 is rescinded except for enforcement purposes, and, pursuant to CWC Sections 13301 and 13267, the City of Colfax, its agents, successors, and assigns shall, in accordance with the following tasks and time schedule, implement the following actions to ensure compliance with WDRs Order R5-2007-0130, or subsequent Order.

Any person signing a document submitted under this Order shall make the following certification:

*"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my knowledge and on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."*

**Note: the following due dates are summarized  
in Hereby Ordered Item 32 (page 25)**

#### Quarterly Progress Reports

The City shall submit progress reports on a quarterly basis, describing the steps taken to date to comply with this Order. As detailed below, certain quarterly reports shall contain additional

information. Quarterly Progress Reports are due by **30 April** (first quarter), **30 July** (second quarter), **30 September** (third quarter), and **30 January** (fourth quarter) of each year until this Order is rescinded. The first quarterly progress report is due by 30 January 2012.

#### Infiltration and Inflow Reduction

1. The City shall continue to implement Ordinance No. 499 (private lateral program) and shall continue to rehabilitate its sewer collection system. The City shall complete the I/I project funded by the State Water Board under CWSRF Project No. C-06-7806-110 by **31 December 2013**.
2. The **Fourth Quarter 2011 Progress Report** shall include documentation showing that the City has advertised for bids to install a SCADA system to connect the four pump stations to the master computer at the wastewater treatment plant.
3. The **First Quarter 2012 Progress Report** and the **First Quarter 2013 Progress Report** shall include a *Collection System I/I Reduction Report* describing (a) the collection system repairs completed during the previous year, (b) the private lateral repairs completed during the previous year, (c) any CCTV, flow, or smoke testing completed during the previous year or proposed for the current year, and (d) work proposed for the current year. The report shall also quantify the impacts of the collection system improvements on the volume of inflows entering the wastewater treatment facility by reporting (a) annual inflow, annual precipitation, and annual inflow per annual precipitation<sup>17</sup>, and (b) peaking factors since 2005, using the US EPA methodology described in Finding 13. If the City is unable to measure the peak hourly wet weather flow, then it shall propose an alternative method to determine a peaking factor. The Report shall address the two different gauges used to obtain rainfall data and how that impacts the I/I calculations.
4. The **Second Quarter 2012 Progress Report** shall document that the City has advertised for bids to complete the Collection System I/I Mitigation work funded by the State Water Board, and as described in Finding 11.
5. The **Third Quarter 2012 Progress Report** shall document that the City has either begun construction or awarded a Notice to Proceed for the Collection System I/I Mitigation work funded by the State Water Board.
6. The **Fourth Quarter 2012 Progress Report** shall document that the pump station SCADA project has been completed.
7. The **First Quarter 2014 Progress Report** shall include a *Final Collection System I/I Reduction Report*. In addition to including the information found in Item No. 3, above, the report shall describe all work completed with funding supplied by the State Water

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<sup>17</sup> Continue adding data to Table 1 of the 1 May 2011 *Sewage Collection System Inflow and Infiltration Report*

Board under CWSRF Project No. C-06-7806-110. If the City's I/I peak factor remains greater than 5, then the report shall (a) include an evaluation of whether it is more cost effective to continue to rehabilitate the sewer collection system or to increase the storage and treatment capacity of the wastewater treatment facility, (b) describe which option the City will pursue, and (c) provide a proposed schedule for financing, design, and construction. The Report shall address the two different gauges used to obtain rainfall data and how that impacts the I/I calculations.

Dewatering the Storage Reservoir (Pond 3)

8. The City shall implement Alternatives 1, 2, 3, and 5 as described in its June 2011 *Wastewater Treatment Plant Feasibility Analysis for Alternative Measures to Dewater Pond 3 and Meet Freeboard Requirements* with the conditions outlined below.
9. The **Fourth Quarter 2011 Progress Report** shall include a *Geotechnical Investigation Work Plan* to implement the three investigations described in Option 2 of the *Feasibility Analysis*.
10. The **Fourth Quarter 2011 Progress Report** shall document that the City has implemented Option 3 (enhanced evaporation), with the conditions below.
  - During enhanced evaporation activities, all water spray that does not evaporate must return to Pond 3 and no overspray may occur beyond the pond boundaries.
  - The City shall maintain records of the following when operating the evaporation system: time and duration of operation, wind conditions and directions, presence or absence of odors, and area affected by the ejected water, and whether any overspray occurs. This information shall be submitted with the monthly monitoring reports required by WDRs Order R5-2007-0130.
  - Enhanced evaporation shall take place whenever weather conditions are such that it will result in evaporation rates at greater than ambient conditions.
  - Enhanced evaporation shall cease once Pond 3 is dewatered unless (a) the Executive Officer allows its use for additional study or emergency dewatering to prevent a spill, or (b) the Board allows its use through a revised NPDES permit.
11. The **Fourth Quarter 2011 Progress Report** shall document that the City has implemented Option 5, the installation of a temporary treatment system at the base of the dam on Pond 3. The system shall include any treatment equipment necessary to meet the conditions listed below, including a flow meter. The City shall begin discharge as soon as possible after adoption of this Order, but no later than **30 December 2011**. Discharge shall cease when the pond liner has been constructed (either 30 November 2012 or 30 November 2013). Treated dam seepage water may be discharged under

the following conditions:

- Treated dam seepage water shall be mixed with tertiary effluent from the wastewater treatment plant prior to discharge to surface water.
  - The blended discharge shall meet all effluent limits found in WDRs Order R5-2007-0130 at effluent monitoring point, EFF-001, which this Order defines as a point below the blended effluent but upstream of the discharge to the receiving water.
  - The City shall monitor EFF-001 as required by Table E-3 of the MRP. Instead of collecting one sample at EFF-001, the City may elect to collect two internal effluent samples upstream of the blended discharge to assess the operational aspects of the two treatment facilities. In that case, and if appropriate for the type of analysis, the City may report a flow-weighted result for EFF-001. The data reported shall include the analytical result and flow for the dam seepage, the analytical result and flow for the WWTP effluent, and the calculated result for EFF-001.
  - A maximum daily flow of 0.2 mgd of treated dam seepage may be mixed with tertiary effluent. Daily flow monitoring results shall be submitted with the monthly monitoring reports required by WDRs Order R5-2007-0130.
12. The **Second Quarter 2012 Progress Report** shall document that the City has constructed and/or implemented the non-flow related wastewater treatment facility improvements described in Option 1 of the *Feasibility Analysis* (i.e., optimize the performance of the wastewater treatment plant by using Pond 1 for equalization of all influent flows; maintaining consistent recycled activated sludge production; improving sludge wasting operations; and making sequencing basin modifications).
13. The **Second Quarter 2012 Progress Report** shall include a *Geotechnical Investigation Report of Results* describing the results of the geotechnical investigation. If physical or operational improvements will result in less surface water or seepage water entering any of the ponds, then the *Report* shall also include a work plan and proposed time line for undertaking the work.

#### Lining the Storage Reservoir

14. The **Fourth Quarter 2011 Progress Report** shall include documentation showing that the City has advertised for bids to construct the liner for the storage reservoir.
15. The **First Quarter 2012 Progress Report** shall include an estimation of the number of inches of rainfall that will be measured at station CFC during water year 2011-2012. The City shall use actual data for the months of October 2011 through March 2012. Because the water year does not end until September, the City shall estimate the

rainfall that may occur between April and September 2012.

16. The **First Quarter 2012 Progress Report** shall include a *Pond 3 Solids Removal Sampling Plan* describing (a) how the wastewater-derived solids remaining in Pond 3 after dewatering will be removed and properly disposed of prior to lining the pond, and (b) a confirmation sampling plan to show that all the solids were removed.
17. If the 2011-2012 water year is estimated to be less than or equal to 48 inches as measured at Station CFC, then:
  - a. The **Second Quarter 2012 Progress Report** shall include documentation showing that the storage reservoir has been dewatered and the lining project is underway.
  - b. The pond lining project shall be completed by **30 November 2012** and the City shall be in full compliance with Discharge Prohibition III.A of the WDRs at that time.
  - c. The **Fourth Quarter 2012 Progress Report** shall include (a) a report describing and documenting the pond lining project, and (b) a *Pond 3 Solids Removal Report of Results* documenting that all solids from within the pond have been collected and disposed of at an appropriately permitted facility and containing the analytical results of confirmation sampling.
18. If the 2011-2012 water year is estimated to be greater than 48 inches as measured at Station CFC, then each of the dates in Item 17, above, subject to the approval of the Executive Officer, are extended by one year.
19. Upon documentation by the City that the Pond 3 lining project is completed, and with written approval by the Executive Officer, the City is no longer required to collect or treat any Pond 3 seepage water.

#### Storage Capacity

20. The **First Quarter 2014 Progress Report** shall include a *Storage Capacity Evaluation Report*. This report should reference and refer to the *Final Collection System I/I Reduction Report*, and shall contain an evaluation of whether or not the improvements completed under this Order have resulted in the City coming into compliance with Sections VI.C.4.B.iv and v of the WDRs. The report shall include a current condition (calibrated) water balance. The water balance shall follow the same format as the 1 August 2011 water balance and incorporate the revised pond geometry, revised inflows, and revised outflows resulting from the pond liner installation.

If the water balance shows that the City is not yet in compliance, then at a minimum,

the report shall evaluate: reducing the flows into the storage reservoir (e.g., reducing I/I, redirecting runoff from the hillside, reducing seepage into the pond), increasing the capacity of the storage reservoir, increasing the evaporation rate of the wastewater in the reservoir, or demonstrating that a higher effluent discharge rate from the current wastewater treatment plant is acceptable, or increasing the treatment capacity of the wastewater treatment plant to allow a higher effluent discharge rate. The report shall include a predictive water balance, and propose additional improvements and a timeline for compliance with Sections VI.C.4.B.iv and v of the WDRs.

#### Copper Effluent Limit

21. The City shall comply with the time schedule first adopted in CDO R5-2010-0001 to ensure compliance with Effluent Limitation IV.A.2.a for copper in WDR Order No R5-2007-0130.
22. The **Fourth Quarter 2011 and Fourth Quarter 2012 Progress Reports** shall detail the steps that have been implemented towards achieving compliance with copper effluent limitation, including studies, construction progress, evaluation of measures implemented, and recommendations for additional measures as necessary to achieve full compliance by the final date.
23. The City shall submit a Water Effects Ratio (WER) for copper by **31 March 2012**. The WER shall follow the guidance found in the US EPA document *Streamlined Water-Effect Ratio Procedure for Discharges of Copper* (EPA-822-R-01-005, March 2001).
24. The City shall fully comply with Effluent Limitation IV.A.2.a for copper by 1 January 2014. The **Fourth Quarter 2013 Progress Report** shall document that full compliance has been reached.
25. The following interim effluent limitations for copper shall be effective immediately, and shall remain in effect through 31 December 2013, or when the Discharger is able to come into compliance with the final effluent limitations, whichever is sooner.

Constituent	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitation
Copper	13.3 ug/L	13.3 ug/L

#### Flow Limits and Mass Loading Limits

26. Beginning with the installation of the temporary treatment system at the base of Pond 3, and continuing until the liner has been installed in the pond, the following interim flow limit is in effect:

Discharge Location	Daily Maximum Limit
Treated seepage from the base of Pond 3	0.2 mgd

27. Upon adoption of this Order, and continuing until the liner has been installed in Pond 3, the following interim average daily dry weather flow limit is in effect. Compliance shall be determined as described in the WDRs (Section VII.C).

Discharge Location	Average Daily Dry Weather Flow Limitation
Treated effluent from the permanent wastewater treatment plant	0.5 mgd

28. The mass emission limitations for BOD and TSS contained in WDRs Order R5-2007-0130 shall be immediately replaced with limitations based on the maximum daily effluent flow limit from the entire facility, which is determined as the flow of treated seepage water (0.2 mgd) plus the flow of treated effluent (between 0.5 and 0.8 mgd). The mass emission limitation is calculated as: (effluent limitation in Table 2 of the WDRs) x (maximum flow rate) x 8.34. These updated mass emission limitations shall be calculated by Water Board staff, and will change (a) if the Executive Officer approves a flow increase, and (b) when the treated seepage from Pond 3 is no longer discharged, and (c) when the interim average daily dry weather flow limitation is no longer in effect.

Stress Tests

29. During the winter of 2011-2012, the City shall implement the stress tests as described in Finding 46 and the City's 28 October 2011 memorandum. All effluent discharged to surface water during the stress test shall comply with the effluent limits found in WDR Order R5-2007-0130.
30. The **First Quarter 2012 Progress Report** shall contain the results of the wastewater treatment plant stress test, and if appropriate, shall contain notification that the City intends to increase the engineered wet weather design flow to a volume justified by the stress test and which will comply with the WDR Effluent Limitations. If such notification is made, then the Progress Report shall also show that the SCADA system, influent pumps, and effluent pumps have been modified to allow for continuous operation above 0.5 mgd.
31. If supported by the stress test results, then the Executive Officer may agree to an increase in the engineered wet weather design flow up to 0.65 mgd. If supported by the stress test results, and if the City demonstrates that it has installed a third influent

pump, then the Executive Officer may agree to an increase in the engineered wet weather design flow up to 0.8 mgd. The City shall not discharge at the increased design flow until receiving authorization from the Executive Officer.

Summary of Required Reports

32. The following table summarizes the due dates, in chronological order, for all reports required by this Order.

<b>Due Date</b>	<b>Description</b>
30 January 2012	<i>Fourth Quarter 2011 Progress Report</i> , including: - bids for SCADA system, - bids to line Pond 3 - implementation of Option 3 - implementation of Option 5 - progress toward compliance with copper effluent limit - Geotechnical Investigation Work Plan
31 March 2012	Copper Water Effects Ratio
30 April 2012	<i>First Quarter 2012 Progress Report</i> , including: - documentation of all flow monitoring and CCTV inspections - estimation of rainfall for water year 2011-2012 - results of wastewater treatment plant stress test - 2011-2012 Collection System I/I Reduction Report - Pond 3 Solids Removal Sampling Plan
30 July 2012	Second Quarter 2012 Progress Report, including: - documentation of bids for collection system I/I work - documentation that storage reservoir is dewatered - documentation that lining project underway - documentation that non-flow Option 1 improvements in place - Geotechnical Investigation Report of Results
30 September 2012	Third Quarter 2012 Progress Report - Notice to Proceed for collection system I/I work
30 January 2013	Fourth Quarter 2012 Progress Report, including: - documentation that SCADA work completed - documentation that pond lining has been completed - Pond 3 Solids Removal Report of Results - progress toward compliance with copper effluent limit
30 April 2013	First Quarter 2013 Progress Report - 2012-2013 Collection System I/I Reduction Report
30 July 2013	Second Quarter 2013 Progress Report
30 September 2013	Third Quarter 2013 Progress Report
30 January 2014	Fourth Quarter 2013 Progress Report, including: - documentation of full compliance with copper effluent limit

30 April 2014	First Quarter 2014 Progress Report, including - Final Collection System I/I Reduction Report - Storage Capacity Evaluation Report
Quarterly	Continuing Progress Reports until Order is rescinded

In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain work plans for, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall contain the professional's signature and/or stamp of the seal.

The Assistant Executive Officer may extend the deadlines contained in this Order if the Discharger demonstrates that circumstances beyond the Discharger's control have created delays, provided that the Discharger continues to undertake all appropriate measures to meet the deadlines. The Discharger shall make any deadline extension request in writing at least 30 days prior to the deadline. The Discharger must obtain written approval from the Assistant Executive Officer for any departure from the time schedule shown above. Failure to obtain written approval for any departures may result in enforcement action.

If, in the opinion of the Assistant Executive Officer, the Discharger fails to comply with the provisions of this Order, the Assistant Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions.

Failure to comply with this Order or with the WDRs may result in the assessment of Administrative Civil Liability of up to \$10,000 per violation, per day, depending on the violation, pursuant to the California Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date that this Order becomes final, except that if the thirtieth day following the date that this Order becomes final falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

[http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality)

or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 2 December 2011.

*Original Signed By*

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PAMELA C. CREEDON, Executive Officer

8 December 2011

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DATE

MAF/VV/WSW: 14-Dec-11