



California Sportfishing Protection Alliance

"An Advocate for Fisheries, Habitat and Water Quality"

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5 September 2006

Mr. Robert Schneider, Chairman
Ms. Pamela Creedon, Executive Officer
Mr. Loren J. Harlow, Principal WRCE
Mr. Bert E. Van Voris, Supervising WRC Engineer
Mr. William Dale Harvey, Sr. WRC Engineer
Mr. Matt Scroggins, WRC Engineer
Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-6144

VIA: Electronic Submission
Hardcopy if Requested

RE: Waste Discharge Requirements (NPDES No. CA0085189) for City of Fresno and Copper River Ranch, LLC and Consolidated Land Company and Consolidated Industries, Inc., and Fresno Metropolitan Flood Control District, North Fresno Wastewater Reclamation Facility, Fresno County

Dear Messrs Schneider, Harlow, Van Voris, Harvey, Scroggins and Ms. Creedon;

The California Sportfishing Protection Alliance and Watershed Enforcers (hereinafter "CSPA") has reviewed the Central Valley Regional Water Quality Control Board's (hereinafter "Regional Board") tentative NPDES permit (hereinafter "Order" or "Permit") for City of Fresno and Copper River Ranch, LLC and Consolidated Land Company and Consolidated Industries, Inc., and Fresno Metropolitan Flood Control District, North Fresno Wastewater Reclamation Facility, Fresno County (hereinafter "Discharger") and submits the following comments.

CSPA is contesting this Permit and requests status as a designated party for this proceeding. CSPA is a conservation and research organization established in 1983 for the purpose of conserving, restoring, and enhancing the state's fishery resources and their aquatic ecosystems and associated riparian habitats. CSPA has actively promoted the protection of fisheries throughout California before state and federal agencies, the State Legislature and Congress and regularly participates in administrative and judicial proceedings on behalf of its members to protect, enhance, and restore declining populations of native California fish. CSPA members reside, boat, fish and recreate in and along waterways throughout the Central Valley.

1. The Tentative Permit Must be Recirculated for Public Comment

The removal of limitations for electrical conductivity, ammonia, nitrate and total nitrogen from the proposed Permit are major and significant changes. Consequently, the Permit must be recirculated for public review.

2. Lack of Data for Ammonia, Nitrate and Total Nitrogen Does Not Eliminate Reasonable Potential

Staff removed limitations for ammonia, nitrate and total nitrogen because of a lack of data for these constituents. The 23 August 2006 Response to Comments states, “[i]f it is determined, after sufficient data collection, that the discharge has a reasonable potential to cause or contribute to an excursion of applicable water quality objectives, the permit will be reopened and effluent limitations added for the appropriate constituent(s).”

Frankly, it is absurd to suggest that samples must be collected to determine if there is ammonia in domestic wastewater. Such a statement suggests a fundamental lack of understanding of the basic principles of wastewater engineering. Domestic wastewater contains ammonia at levels approximately 60 mg/L, depending upon the strength of the wastewater. This in itself presents a reasonable potential that ammonia can be present at concentrations toxic to aquatic life. The Permit does not state whether or not the plant will be operated in a nitrification/denitrification mode. If the plant is not designed to nitrify and denitrify, there is no question that reasonable potential exists. If it is designed to nitrify/denitrify, limitations will ensure that the plant is properly operated in a nitrification/denitrification mode. However, nitrification/denitrification is not a stable process. Even the best run wastewater treatment plants occasionally fall out of nitrification/denitrification mode. Therefore, because the process is unstable, ammonia can still pass through at toxic levels during periods of upset even if the wastewater treatment plant is designed to nitrify and denitrify. If the process fails (which is routine) nitrates can also pass through the system presenting a reasonable potential to exceed the Basin Plan MCL. The discharge of ammonia, nitrates and total nitrogen also presents a reasonable to cause exceedance of the Basin Plan for biostimulatory substances. Given the fact nitrification/denitrification is inherently an unstable process, the Regional Board should require continuous monitoring for ammonia to ensure that the plant is operated in a nitrification mode full-time.

Further, the Discharger is using sequencing batch reactor design for the wastewater treatment plant. Ammonia is pH and temperature dependent. Review of the literature reveals that sequencing batch reactors do have the reasonable potential to exceed water quality standards for ammonia, nitrates and total nitrogen. While sequencing batch reactors can be operated in a nitrifying mode, it does not eliminate reasonable potential and limitations are crucial to ensure that the plant is operated in a nitrification/denitrification mode. *See* USEPA’s 1999 Fact Sheet on Sequential Batch Reactors.

Finally, since nitrification/denitrification is routinely employed in the Central Valley, nitrification/denitrification is BPTC and must be required in the Permit, in accordance with antidegradation policy and federal regulations.

3. Effluent Limitations

Federal regulations 40 CFR 122.44 requires that NPDES permits contain effluent limitations for any pollutant found to have the reasonable potential to exceed a water quality standard. The proposed permit fails to conduct a reasonable potential analysis for trihalomethanes. The Discharger will use chlorination in order to disinfect the wastewater prior to discharging it to the river or golf course. The formation of trihalomethanes as a by-product from disinfection, due to the reaction between chlorine and organic matter in the wastewater, is well documented in the literature. The Permit indicates that no further treatment will occur after chlorination that will reduce the concentration of trihalomethanes in the effluent. I am unaware of a single WWTP in the central valley that uses chlorination for disinfection, which does not have an effluent limitation for trihalomethanes. The Permit must include an effluent limitation for trihalomethanes. In addition, the Permit must contain effluent limitations for oil/grease and surfactants.

4. Effluent Limitations for the DE Basin

The revise Permit does not contain effluent limitations for the discharge. Staff comment letter indicates that treatment and waste retention do occur in the DE Basin. Staff's letter state in part, "...a man-made retention basin designed in part, to prevent pollutants from reaching the San Joaquin River." However, staff is wrong in the assumption that effluent is exempt from Federal regulations 40 CFR 122.44. When the WWTP's wastewater is commingled with the stormwater in the DE Basin the resulting effluent is considered to be wastewater (emphasis added) and not stormwater. Federal regulations 40 CFR 122.44 requires that NPDES permits contain effluent limitations for any pollutant found to have the reasonable potential to exceed a water quality standard. Effluent limitations for effluent discharges from the DE Basin must be included in the Permit.

5. Incomplete RWD

In accordance with CWC Section 13260, it is the responsibility of the Discharger to submit all the information necessary for the Permit. The Discharger failed to adequately characterize the groundwater quality for the golf course. The Discharger must install a network of groundwater well and characterize background water quality for the golf course and Basin DE. The Discharger must also characterize the quality of stormwater entering the Basin DE for priority pollutants.

6. Consistency with Antidegradation Policy.

The antidegradation analysis in the proposed Permit is not simply deficient, it is literally nonexistent. The brief discussion of antidegradation requirements, in the Findings and Fact Sheet, consist only of skeletal, unsupported, undocumented conclusory statements totally lacking in factual analysis. The failure to undertake a rigorous antidegradation analysis for a new "major" discharge of is appalling. Regional Board

staff are either unaware of state and federal policies regarding antidegradation analyses or they have been directed to ignore them.

Section 101(a) of the Clean Water Act, the basis for the antidegradation policy, states that the objective of the Act is to “restore and maintain the chemical, biological and physical integrity of the nation’s waters.” Section 303(d)(4) of the Act carries this further, referring explicitly to the need for states to satisfy the antidegradation regulations at 40 CFR § 131.12 before taking action to lower water quality. These regulations describe the federal antidegradation policy and dictate that states must adopt both a policy at least as stringent as the federal policy as well as implementing procedures. (40 CFR § 131.12(a).)

California’s antidegradation policy is composed of both the federal antidegradation policy and the State Board’s Resolution 68-16. (State Water Resources Control Board, Water Quality Order 86-17, p. 20 (1986) (“Order 86-17”); Memorandum from William Attwater, SWRCB to Regional Board Executive Officers, “federal Antidegradation Policy,” pp. 2, 18 (Oct. 7, 1987) (“State Antidegradation Guidance”).) As part of the state policy for water quality control, the antidegradation policy is binding on all of the Regional Boards. (Water Quality Order 86-17, pp. 17-18.) Implementation of the state’s antidegradation policy is guided by the State Antidegradation Guidance, SWRCB Administrative Procedures Update 90-004, 2 July 1990 (“APU 90-004”) and USEPA Region IX, “Guidance on Implementing the Antidegradation Provisions of 40 CFR 131.12” (3 June 1987) (“Region IX Guidance”), as well as Water Quality Order 86-17.

The Regional Board must apply the antidegradation policy whenever it takes an action that will lower water quality. (State Antidegradation Guidance, pp. 3, 5, 18, and Region IX Guidance, p. 1.) Application of the policy does not depend on whether the action will actually impair beneficial uses. (State Antidegradation Guidance, p. 6. Actions that trigger use of the antidegradation policy include issuance, re-issuance, and modification of NPDES and Section 404 permits and waste discharge requirements, waiver of waste discharge requirements, issuance of variances, relocation of discharges, issuance of cleanup and abatement orders, increases in discharges due to industrial production and/or municipal growth and/or other sources, exceptions from otherwise applicable water quality objectives, etc. (State Antidegradation Guidance, pp. 7-10, Region IX Guidance, pp. 2-3.) Both the state and federal policies apply to point and nonpoint source pollution. (State Antidegradation Guidance p. 6, Region IX Guidance, p. 4.)

The federal antidegradation regulations delineate three tiers of protection for waterbodies. Tier 1, described in 40 CFR § 131.12(a)(1), is the floor for protection of all waters of the United States. (48 Fed. Reg. 51400, 51403 (8 Nov. 1983); Region IX Guidance, pp. 1-2; APU 90-004, pp. 11-12.) It states that “[e]xisting instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.” Uses are “existing” if they were actually attained in the water body on or after November 28, 1975, or if the water quality is suitable to allow the use to occur,

regardless of whether the use was actually designated. (40 CFR § 131.3(e).) Tier 1 protections apply even to those waters already impacted by pollution and identified as impaired. In other words, already impaired waters cannot be further impaired.

Tier 2 waters are provided additional protections against unnecessary degradation in places where the levels of water quality are better than necessary to support existing uses. Tier 2 protections strictly prohibit degradation unless the state finds that a degrading activity is: 1) necessary to accommodate important economic or social development in the area, 2) water quality is adequate to protect and maintain existing beneficial uses, and 3) the highest statutory and regulatory requirements and best management practices for pollution control are achieved. (40 CFR § 131.12(a)(2).) Cost savings to a discharger alone, absent a demonstration by the project proponent as to how these savings are “necessary to accommodate important economic or social development in the area,” are not adequate justification for allowing reductions in water quality. (Water Quality Order 86-17, p. 22; State Antidegradation Guidance, p. 13.) If the waterbody passes this test and the degradation is allowed, degradation must not impair existing uses of the waterbody. (48 Fed. Reg. at 51403). Virtually all waterbodies in California may be Tier 2 waters since the state, like most states, applies the antidegradation policy on a parameter-by-parameter basis, rather than on a waterbody basis. (APU 90-004, p. 4). Consequently, a request to discharge a particular chemical to a river, whose level of that chemical was better than the state standards, would trigger a Tier 2 antidegradation review even if the river was already impaired by other chemicals.

Tier 3 of the federal antidegradation policy states “[w]here high quality waters constitute an outstanding national resource, such as waters of national and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water shall be maintained and protected. (40 CFR § 131.12(a)(3).) These Outstanding National Resource Waters (ONRW) are designated either because of their high quality or because they are important for another reason. (48 Fed. Reg. At 51403; State Antidegradation Guidance, p. 15). No degradation of water quality is allowed in these waters other than short-term, temporary changes. (Id.) Accordingly, no new or increased discharges are allowed in either ONRW or tributaries to ONRW that would result in lower water quality in the ONRW. (EPA Handbook, p. 4-10; State Antidegradation Guidance, p. 15.) Existing antidegradation policy already dictates that if a waterbody “should be” an ONRW, or “if it can be argued that the waterbody in question deserves the same treatment {as a formally designated ONRW},” then it must be treated as such, regardless of formal designation. (State Antidegradation Guidance, pp. 15-16; APU 90-004, p. 4.) Thus the Regional Board is required in each antidegradation analysis to consider whether the waterbody at issue should be treated as an ONRW. It should be reiterated that waters cannot be excluded from consideration as an ONRW simply because they are already “impaired” by some constituents. By definition, waters may be “outstanding” not only because of pristine quality, but also because of recreational significance, ecological significance or other reasons. (40 CFR §131.12(a)(3).) Waters need not be “high quality” for every parameter to be an ONRW. (APU 90-004, p. 4) For example, Lake Tahoe is on the 303(d) list due to sediments/siltation and nutrients, and Mono Lake is listed for salinity/TDC/chlorides but both are listed as ONRW.

The State Board's APU 90-004 specifies guidance to the Regional Boards for implementing the state and federal antidegradation policies and guidance. The guidance establishes a two-tiered process for addressing these policies and sets forth two levels of analysis: a simple analysis and a complete analysis. A simple analysis may be employed where a Regional Board determines that: 1) a reduction in water quality will be spatially localized or limited with respect to the waterbody, e.g. confined to the mixing zone; 2) a reduction in water quality is temporally limited; 3) a proposed action will produce minor effects which will not result in a significant reduction of water quality; and 4) a proposed activity has been approved in a General Plan and has been adequately subjected to the environmental and economic analysis required in an EIR. A complete antidegradation analysis is required if discharges would result in: 1) a substantial increase in mass emissions of a constituent; or 2) significant mortality, growth impairment, or reproductive impairment of resident species. Regional Boards are advised to apply stricter scrutiny to non-threshold constituents, i.e., carcinogens and other constituents that are deemed to present a risk of source magnitude at all non-zero concentrations. If a Regional Board cannot find that the above determinations can be reached, a complete analysis is required.

Even a minimal antidegradation analysis would require an examination of: 1) existing applicable water quality standards; 2) ambient conditions in receiving waters compared to standards; 3) incremental changes in constituent loading, both concentration and mass; 4) treatability; 5) best practicable treatment and control (BPTC); 6) comparison of the proposed increased loadings relative to other sources; 7) an assessment of the significance of changes in ambient water quality and 8) whether the waterbody was a ONRW. A minimal antidegradation analysis must also analyze whether: 1) such degradation is consistent with the maximum benefit to the people of the state; 2) the activity is necessary to accommodate important economic or social development in the area; 3) the highest statutory and regulatory requirements and best management practices for pollution control are achieved; and 4) resulting water quality is adequate to protect and maintain existing beneficial uses. A BPTC technology analysis must be done on an individual constituent basis.

Any antidegradation analysis must comport with implementation requirements in State Board Water Quality Order 86-17, State Antidegradation Guidance, APU 90-004 and Region IX Guidance. The conclusory, unsupported, undocumented statements in the Permit are no substitute for a defensible antidegradation analysis.

The antidegradation review process is especially important in the context of waters protected by Tier 2. See EPA, Office of Water Quality Regulations and Standards, Water Quality Standards Handbook, 2nd ed. Chapter 4 (2nd ed. Aug. 1994). Whenever a person proposes an activity that may degrade a water protected by Tier 2, the antidegradation regulation requires a state to: (1) determine whether the degradation is "necessary to accommodate important economic or social development in the area in which the waters are located"; (2) consider less-degrading alternatives; (3) ensure that the best available pollution control measures are used to limit degradation; and (4) guarantee

that, if water quality is lowered, existing uses will be fully protected. 40 CFR § 131.12(a)(2); EPA, Office of Water Quality Regulations and Standards, Water Quality Standards Handbook, 2nd ed. 4-1, 4-7 (2nd ed. Aug. 1994). These activity-specific determinations necessarily require that each activity be considered individually.

For example, the APU 90-004 states:

“Factors that should be considered when determining whether the discharge is necessary to accommodate social or economic development and is consistent with maximum public benefit include: a) past, present, and probably beneficial uses of the water, b) economic and social costs, tangible and intangible, of the proposed discharge compared to benefits. The economic impacts to be considered are those incurred in order to maintain existing water quality. The financial impact analysis should focus on the ability of the facility to pay for the necessary treatment. The ability to pay depends on the facility’s source of funds. In addition to demonstrating a financial impact on the publicly – or privately – owned facility, the analysis must show a significant adverse impact on the community. The long-term and short-term socioeconomic impacts of maintaining existing water quality must be considered. Examples of social and economic parameters that could be affected are employment, housing, community services, income, tax revenues and land value. To accurately assess the impact of the proposed project, the projected baseline socioeconomic profile of the affected community without the project should be compared to the projected profile with the project...EPA’s Water Quality Standards Handbook (Chapter 5) provides additional guidance in assessing financial and socioeconomic impacts”

There is nothing resembling an economic or socioeconomic analysis in the Permit. There are viable alternatives that have never been analyzed. The Discharger could continue with complete land disposal and install micro-filtration treatment equipment. The evaluation contains no comparative costs. As a rule-of-thumb, USEPA recommends that the cost of compliance should not be considered excessive until it consumes more than 2% of disposable household income in the region. This threshold is meant to suggest more of a floor than a ceiling when evaluating economic impact. In the Water Quality Standards Handbook, USEPA interprets the phrase “necessary to accommodate important economic or social development” with the phrase “substantial and widespread economic and social impact.”

The antidegradation analysis must discuss the relative economic burden as an aggregate impact across the entire region using macroeconomics. Considering the intrinsic value of the surface water to the entire state and the potential effects upon those who rely and use surface waters, it must also evaluate the economic and social impacts to water supply, recreation, fisheries, etc. from the Discharger’s degradation of water

quality. It is unfortunate that the agency charged with implementing the Clean Water Act has apparently decided it is more important to protect the polluter than the environment.

There is nothing in the Permit resembling an alternatives analysis evaluating less damaging and degrading alternatives. Unfortunately, the Permit fails to evaluate and discuss why there is no alternative other than discharging to surface waters. A proper alternatives analysis would cost out various alternatives and compare each of the alternatives' impacts on beneficial uses.

There is nothing in the Permit resembling an analysis that ensures that existing beneficial uses are protected. Nor does the Permit analyze the incremental and cumulative impact of increased loading of non-impairing pollutants on beneficial uses. In fact, there is almost no information or discussion on the composition and health of the identified beneficial uses. Any reasonably adequate antidegradation analysis must discuss the affected beneficial uses (i.e., numbers and health of the aquatic ecosystem; extent, composition and viability of agricultural production; people depending upon these waters for water supply; extent of recreational activity; etc.) and the probable effect the discharge will have on these uses.

The State Board has clearly articulated its position on increased mass loading of pollutants. In Order WQ 90-05, the Board directed the San Francisco Regional Board on the appropriate method for establishing mass-based limits that comply with state and federal antidegradation policies. That 1990 order stated "[I]n order to comply with the federal antidegradation policy, the mass loading limits should also be revised, based on mean loading, concurrently with the adoption of revised effluent limits. The [mass] limits should be calculated by multiplying the [previous year's] annual mean effluent concentration by the [four previous year's] annual average flow. (Order WQ 90-05, p. 78). USEPA points out, in its 12 November 1999 objection letter to the San Francisco Regional Board concerning Tosco's Avon refinery, that '[a]ny increase in loading of a pollutant to a water body that is impaired because of that pollutant would presumably degrade water quality in violation of the applicable antidegradation policy.'

The Permit states, "While the discharge is expected to degrade existing high quality groundwater with total dissolved solids, it will not likely cause an exceedance of water quality objectives or unreasonably affect the beneficial uses of underlying groundwater. Beneficial recycling of wastewater conserves freshwater resources and is encouraged by the California Water Code, Basin Plans, and State Water Board Resolution No. 77-1. Specifically, the California Legislature declares that the people of the state have primary interest in the development of recycled water facilities and that utilization of recycled water for various purposes, including recreational purposes, will contribute to the peace, health, safety, and welfare of the people of the state. The Tulare Lake Basin Plan recognizes that some degradation by salts within the basin is unavoidable. Salinity impacts to underlying groundwater will be minimized by the following project factors:

- High quality surface water will be the primary source of potable water.

- High quality surface water will recharge groundwater and mix with the discharge.”

The use of high quality water for dilution contradicts the purpose of recycling. Even with dilution, the discharge will to degrade water quality. Therefore, the Permit must comply with Resolution 68-16.

State Water Board Resolution No. 68-16 requires the Regional Water Board in regulating the discharge of waste to maintain high quality waters of the State (i.e., background water quality) until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the Regional Water Board’s policies (e.g., quality that exceeds water quality objectives). Some degradation of groundwater beneath the land application is consistent with Resolution No. 68-16 provided that:

- a. The degradation is confined within a specified boundary;
- b. The Discharger minimizes the degradation by fully implementing, regularly maintaining, and optimally operating Best Practicable Treatment and Control (BPTC) measures;
- c. The degradation is limited to waste constituents typically encountered in municipal wastewater as specified in the Groundwater Limitations of this Order; and
- d. The degradation does not result in water quality less than that prescribed in the Basin Plan.

The Permit is inconsistent with Resolution 68-16 and in fact it violates every condition.

The Permit fails to limit the extent of the degradation to a specified boundary in the Permit. Recently adopted Regional Board Orders limit the extent of degradation to within the boundary of the monitoring well network. The Permit indicates that a groundwater monitoring well network has not been installed and the background quality for the shallow groundwater has not been determined for either the golf course or Basin DE. It is not known if the shallow groundwater underlying the golf course and Basin DE is not already polluted and therefore no additional loading may be authorized. California Water Code Section 13050(1)(1) define pollution as “*an alteration of the quality of the waters of the state by waste to a degree which unreasonably affects either of the following: (A) The waters for beneficial uses. (B) Facilities which serve these beneficial uses.*”

The golf course started operation in 1994. After a decade of using fertilizers and pesticides it may reasonably be expected that the underlying groundwater is degraded. (Bill if we have any information regarding the lakes put it here.) The Permit does not require the Discharger to install any groundwater wells near the golf course lakes and irrigated turf and therefore does not limit the extent of the degradation around the golf course. The Permit does not analyze the effects that agricultural pumping may have on the extent of the degradation such as expanding the area of plume.

The Discharger has not performed a water balance to show what application rates are actually required not to degrade groundwater. In fact, the Permit is inconsistent with other Regional Board Orders, which require “Application rates for recycled water shall not exceed agronomic rates considering the crop, soil, climate, and irrigation management system in accordance with the water balance submitted with the RWD.” Instead the Permit allows the entire WWTP discharge to be applied to the golf course without considering the actual capacity of the land application area, which exacerbates the zone of degradation.

Because the DE Basin is unlined and used for recharge, nitrogen and other waste associated with the WWTP discharge will migrate and degrade the underlying groundwater. The Discharger is not using high quality water to mix in the DE Basin; rather the Discharger is using stormwater, which is likely not to meet water quality standards. Again the Permit is inconsistent with other Regional Board Orders that require “No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations.”

The Permit indicates that the discharge will degrade water quality for TDS. In order to comply with Resolution 68-16, the Discharger must demonstrate that the WWTP meets BPTC for TDS. The Discharger has failed to implement BPTC in that the Discharger has not selected treatment systems that qualify as BPTC. For example, UV systems are widely used by the industry and to comply with Regional Board Order for the disinfection of wastewater. The Permit indicates that the Discharger will use chlorination to disinfect the wastewater. Chlorination increases that amount of chlorides in the wastewater. In comparison, UV systems reduce the concentration of chlorides in the effluent and therefore also reduce the concentration of TDS. Additional chemicals are also required in order to de-chlorinate the effluent (discharged to the DE Basin) which is not used with UV. Chlorination of wastewater is known to create trihalomethane. The UV system would also reduce the concentration of trihalomethane in the effluent compared to chlorination. Given the site specific factors including recharge, groundwater quality and surface water quality, chlorination does not qualify as BPTC.

The Permit requires only a grab sample to be used to monitor the effluent for chlorine residual. In comparison, it is common practice within the industry and Regional Board Orders to have continuous monitoring for chlorine residual for over a decade. In the event of a chlorine excursion detected by the continuous monitoring equipment, the flow can be easily diverted back to the effluent storage pond. Continuous monitoring equipment for chlorine, as well as other sample parameters like turbidity, pH and EC, is BPTC. Continuous monitoring is the “best control” in that it allows the Discharger to minimize the frequency and duration of effluent violations that degrade water quality. The Discharger’s contention that intermittent flows don’t allow the use of continuous monitoring is incorrect. The Discharger may employ a number of piping, pump and sump modifications may be made to the facility in order to accommodate the chlorine and other monitoring equipment.

In order to reduce TDS loadings to the WWTP, the Discharger can also install well head treatment for the municipal water system or seek an alternate water supply with lower TDS concentrations. Since other treatment technology may still be employed to reduce TDS, the Discharger has not demonstrated that the WWTP has implement BPTC.

The Discharger has not even performed a Pollution Prevention Study. Pollution Prevention Study is a critical element need to evaluate if BPTC. Since this WWTP is a new source, the permit writer must require the Discharger to complete a Pollution Prevention Study as part of the RWD.

The Permit fails to limit waste constituents typically encountered in municipal wastewater in the Permit’s Groundwater Limitations. Wastewater contains bacteria and pathogens. The Permit’s groundwater limitations do not prohibit the introduction of bacteria in groundwater. State Water Board Order No. WQO-2003-0014 upheld the Regional Water Board’s interpretation of the Basin Plan with respect to implementation of the Bacteria objective, stating: *“The Basin Plan contains a water quality objective for bacteria that applies to groundwater that states: ‘In groundwaters used for domestic or municipal supply (MUN) the most probable number of coliform organisms over any seven-day period shall be less than 2.2/100 mL.’ Since the groundwater is designated for municipal or domestic supply, a groundwater limitation for coliform of less than 2.2MPN/100 mL is appropriate.”* The Permit must specify a groundwater limitation for total coliform organisms.

In addition to bacteria, the Permit does not contain adequate groundwater limitations, expressed either in concentration or mass loading, for other municipal wastes such as nitrogen compounds, sodium, chlorides, boron and trihalomethanes. The Permit must include groundwater limitations as follows:

1. Release of waste constituents from any wastewater treatment or storage system component associated with the treatment, storage and reuse including Basin DE, golf course shall not cause groundwater under and beyond that system component, as determined by an approved groundwater well monitoring network, to:
 - a. Contain any of the following constituents in concentrations greater than those listed below or greater than ambient background groundwater quality, whichever is greater:

Constituent	Units	Limitation
Arsenic	ug/L	0.004
Boron	mg/L	0.7
Cadmium	ug/L	0.07
Chloride	mg/L	106
Chromium	ug/L	50
Copper	ug/L	170
Iron	ug/L	300

Constituent	Units	Limitation
Lead	ug/L	2
Manganese	ug/L	0.5
Mercury	ug/L	1.2
Nickel	ug/L	12
Silver	ug/L	85
Sodium	mg/L	69
Zinc	mg/L	2
Total Dissolved Solids	mg/L	450
Total Nitrogen	mg/L	10
Nitrite (as N)	mg/L	1
Nitrate (as N)	mg/L	10
Ammonia (as NH ₄)	mg/L	1.5
Total trihalomethanes	ug/L	80
Bromoform	ug/L	4
Bromodichloromethane	ug/L	0.27
Chloroform	ug/L	1.1
Dibromochloromethane	ug/L	0.37
Total Coliform Organisms	MPN/100 mL	<2.2
Total Dissolved Solids ¹	mg/L	450

¹ A cumulative impact limit that accounts for several dissolved constituents in addition to those listed here separately [e.g., alkalinity (carbonate and bicarbonate), calcium, hardness, phosphate, and potassium].

- b. Exhibit a pH of less than 6.5 or greater than 8.4 pH units.
- c. Impart taste, odor, toxicity, or color that creates nuisance or impairs any beneficial use.

As discussed above, the Permit is inconsistent with Regional Board Orders and allows degradation in groundwater quality more than that prescribed in the Basin Plan.

7. Protection for Polluters

Special Provision No.7 states in part that, “Notwithstanding the identification as Discharger in Finding II.B Fresno Metropolitan Flood Control District shall only be subject to the following components of this Order.

- a. Discharge Prohibitions III.A. and IIIC.
- b. Receiving Water Limitations V.A.
- c. Provisions VI.A., VI5.c. and VIC.8...”

This “special provision” is simply an illicit haven designed to protect polluters and must be deleted from the Permit.

Fresno Metropolitan Flood Control District is not held liable for any effluent and groundwater limitation violations. Fresno Metropolitan Flood Control District has allowed the mixing of wastewater with stormwater in the DE Basin and is fully culpable for any violations of the Order. The resulting discharge after mixing with stormwater in the DE Basin is wastewater. We are perplexed by misguided assumptions to the contrary. The annual municipal stormwater monitoring reports submitted to the Regional Board clearly show that urban stormwater is not pollutant free water. In fact, urban stormwater is among the highest ranking sources of surface water degradation in the state. The synergistic effect that combining multiple waste constituents has on wastewater toxicity is well documented in the literature. Urban stormwater contains waste that when combined with wastewater may contribute to toxicity in the receiving waters. The Basin Plan contains a water quality standard for toxicity. Federal regulations 40 CFR 122.44 requires that NPDES permits contain effluent limitations for any pollutant found to have the reasonable potential to exceed a water quality standard. Effluent limitations do apply to the DE Basin and the Fresno Metropolitan Flood Control District is responsible for the discharge. Furthermore, the Permit recognizes that waste will be retained in the DE Basin and that recharge of groundwater will occur. The DE Basin is unlined in order to allow groundwater recharge and wastes will inevitably migrate to the underlying groundwater. Therefore, groundwater limitations apply to the DE Basin too. Fresno Metropolitan Flood Control District is the owner and operator of the DE Basin and as such is fully responsible for any groundwater degradation that occurs from the basin.

8. Title 22 Requirements

The proposed Permit requires compliance with Title 22 and indicates that the Discharger has completed a Title 22 engineer report for recycled water application to the golf course. However, Title 22 requirements also apply to groundwater recharge which is being performed in the DE Basin. The Discharger failed to complete a Title 22 report for recharge activities and the Permit lacks comments from DHS regarding recharge. In addition, the Permit fails to specify any requirements for the groundwater recharge or comments from DHS. In accordance to the MOU between DHS and the Regional Board, DHS comments regarding the Title 22 report must be incorporated into the Permit. In order to comply with Title 22, the Discharger must complete a Title 22 engineer report for groundwater recharge activities and correct any deficiencies cited in the report.

9. Revised Receiving Water Monitoring

The revised Permit eliminated the downstream monitoring location. The revised is inconsistent Basin Plan with Regional Board Orders that require downstream receiving water monitoring in order to assess compliance with receiving water limitations. At least three receiving monitoring stations are required to properly monitor the river conditions. First an upstream location is necessary to determine background conditions. The second location is at the point of discharge from the DE Basin into the San Joaquin River (within

50 feet) and is necessary to assess compliance with the receiving water limitations. Finally, a third point further downstream approximately 500 feet from the outfall is required to assess the extent on any noncompliance and more longer term effects such dissolved oxygen sags. The Permit must require the Discharger to monitor compliance with Receiving Water Limits at three locations.

10. Continuous Chlorine monitoring for the effluent

The Permit requires only a single grab sample be collected for chlorine discharges to the river. Chlorine is highly toxic to aquatic life. It is common practice for WWTP to have continuous monitoring for chlorine residual and intermittent discharges have been easily accommodated by piping modification, sumps and pumps. During the wet season, recycled water discharges for irrigation will cease and discharge to the DE Basin will be routine. In the event of a chlorine excursion detected by the continuous monitoring equipment, the flow can be easily diverted back to the effluent storage pond. Continuous monitoring equipment for chlorine, as well as other sample parameters like turbidity, pH and EC, is BPTC in that it allows the Discharger the ability to minimize effluent violations that degrade water quality and optimize the performance of the WWTP. If the facility will be left unmanned for any period of time, then other Regional Board Orders have mandated continuous monitoring. Without continuous monitoring equipment the Discharger cannot comply with the Federal and state Antidegradation Policy.

Thank you for considering these comments. If you have questions or require clarification, please don't hesitate to contact us.

Sincerely,



Bill Jennings, Executive Director
California Sportfishing Protection Alliance