

**MAXWELL PUBLIC UTILITY DISTRICT      INCORPORATED FEBRUARY 23, 1934**

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August 17, 2009

Anne Olson, P.E.  
Water Resources Control Engineer  
California Regional Water Quality Control Board  
Central Valley Region  
11020 Sun Center Drive Suite 200  
Rancho Cordova, Ca. 95670-6114

**RE: TENTATIVE WASTE DISCHARGE REQUIREMENTS; MAXWELL PUBLIC UTILITY DISTRICT WASTEWATER TREATMENT FACILITY, COLUSA COUNTY**

Dear Ms. Olson:

Thank you for the opportunity to review the Maxwell Public Utility District (District) Tentative Waste Discharge Requirements. As you are aware, the District has been addressing several environmental permitting issues with the Army Corps of Engineers and the US Fish and Wildlife Service. The District is now at a point where it is believed the project will proceed as presented to you in the Report of Waste Discharge. Our comments on the Tentative Waste Discharge Requirements (WDRs) are presented below.

Our comments are organized into three categories: requested clarifications, minor project changes, minor permit changes requested, and major permit changes requested. For each comment the document, section letter, and number are given.

**CLARIFICATIONS**

WDR A.34 - The WDR states, “Flood depths at the wastewater treatment plant may be up to three feet during the 100-year flood event. Similarly, the water recycling site may experience water depths of up to two feet during the 100-year flood event.” Both sites lie within Flood Zone A, which is defined as an area inundated by 100 year flooding, for which no base flood elevations have been established. The District would like to know the data source that was used to determine the flood elevations included in the permit for future reference.

WDR A.57 – States the District has not incorporated any specific measures to reduce the potential for groundwater degradation for the effluent storage pond. The District has conducted an evaluation of soils at the reuse site and has identified a layer of low permeable soils that will be stockpiled and used to line the storage pond with the specific purpose of reducing potential impacts to groundwater.

WDR C.6 and C.14 - How are ‘authorized personnel’ and ‘appropriately trained personnel’ defined by the Regional Board in regards to the operation of recycled water system? The District proposes to lease the operation of the agricultural reuse site to a contract operator. Can the District designate the contract operator as the authorized personnel in regards to WDR C.6?

Also, the District needs the contract operator to be appropriately trained to operate the recycled water system (WDR C.14). What qualifies as appropriate training?

MRP p.4 - Groundwater monitoring refers to three existing monitoring wells. There are five wells at the WWTP site and five wells at the reuse site. Which wells does this section refer to?

WDR F.1.a - States limit for total coliform organisms is a maximum of 2.2 MPN/100 ml or natural background quality, whichever is greater. Existing data shows mean background concentrations of total coliform at the WWTP site range from 3 to 6 MPN/100 ml, and mean background concentrations at the reuse site based on all wells pre-project implementation ranges from less than 2 to 70 MPN/100 ml. How will the limits in Section F.1 of the WDR be applied to the District's groundwater monitoring? How will natural background quality be determined, given upgradient wells at the WWTP already show coliform concentrations greater than 2.2 MPN/100ml and background data at the reuse site also shows concentrations higher than 2.2 MPN/100ml in cross-gradient wells, but not in the upgradient well?

WDR Discharge Prohibitions A.4 p. 20 - This section prohibits bypass or overflow of partially treated or untreated waste. Will the District still be allowed to bypass individual treatment ponds for maintenance, while keeping remaining ponds in service?

#### **MINOR PROJECT CHANGES**

WDR A.15.d - The ability to vary the pond outlet depth was removed from the project to reduce costs. The new pond transfer structures do allow flexibility to vary the pond surface water elevation.

WDR Attachment C - A new figure is attached to this letter to replace Attachment C. The design was updated to completely avoid any trenching in the wetlands between aeration pond 1 and the old oxidation pond 1.

WDR A.19 - Request the maximum pond depth be changed to 14 feet. Updates to the water balance for the project have resulted in the need for a larger storage volume. The footprint is constrained due to soil types, thus the pond may need to be taller to accommodate the increased storage. The pond design still meets Division of Safety of Dams requirements and includes 2 feet freeboard.

#### **MINOR PERMIT CHANGES REQUESTED**

WDR C.3 - The District has proposed flood irrigation of the reuse site. Flood irrigation has the major benefit of reducing aerosol drift which can be a major concern with recycled water irrigation. The District requests the minimum irrigation setbacks be reduced as flood irrigation poses less threat to public health than spray irrigation. The District requests that the setback definition for 'Edge of recycled water recycling areas to manmade or natural surface water drainage course or spring,' be separated into natural and man made. The Glen Colusa Irrigation canal traverses through the middle of the reuse property, and maintains a positive flow pressure away from the canal. The District requests a 10 foot setback in this area. The District also requests a reduced setback from Finks Road, which is a low use gravel county road, primarily used for agriculture purposes. A 10 foot setback is also requested for Finks Road, especially in consideration of the proposed irrigation method.

WDR A.54.a - Electrical conductivity (EC) is a constituent of concern that has the potential to degrade groundwater and the potential to cause violation of water quality objectives for salinity. The permit limit for EC seems to be set based on the historical maximum annual average EC value for each of the last 5 years, which is stated as annual average limitation of 1,900 umhos/cm in section D.1 of the WDRs. The Maximum Annual Average EC over the last five years was 1942 umhos/cm in 2005. The District requests the effluent limit be increased to an annual average limitation of 1,950 umhos/cm. This is still consistent with providing an effluent limit that does not allow the effluent salinity to increase. The permit is also protective of long-term groundwater quality by requiring the District to conduct Salinity Evaluation and Minimization Plan (WDR G.g) and Background Groundwater Quality Study Report (WDR G.h)

### **MAJOR PERMIT CHANGES REQUESTED**

MRP p. 8 (B. Quarterly Monitoring Reports) - This section of the permit requires the District to submit quarterly monitoring reports to the Regional Water Board prepared under the direct supervision of a registered Professional Engineer or Geologist and signed by the registered professional. Contracting for professional services is very expensive for small communities like Maxwell. The District would like to work with the Regional Board on an alternate reporting timeline, whereby the Regional Board can be assured that data is being collected appropriately by a ELAP certified laboratory while allowing reports to be submitted on an annual basis, which would still provide all required reporting information. This proposed alternate reporting timeline would reduce annual operating costs to the District, while still providing the Regional Board with requested information.

WDR p. 15 (54c) - This section of the permit discusses potential groundwater impacts due to coliform organisms in the effluent. According to the Department of Public Health's comments on our Title 22 Engineering Report, disinfection is not expressly required under Title 22 for this project. Our original intent was to still continue chlorination of our effluent. However, there are two reasons causing us to reconsider whether or not chlorination and de-chlorination are actually beneficial.

1. Chlorination has no effect on coliform impacts to groundwater at the treatment plant and the treated effluent in the storage pond will gradually be re-contaminated with coliform from wildlife using the pond. Thus we are questioning the effectiveness of chlorination in mitigating potential coliform impacts to groundwater from our project.
2. Chlorinating with sodium hypochlorite and de-chlorinating with sodium bisulfate increases the salinity of our effluent. Thus, we are concerned that chlorination and de-chlorination of our treated effluent may actually increase salinity impacts to groundwater.

Since the existing chlorination and de-chlorination equipment is old and was to be replaced as part of our project, and since this equipment is easily added at any time after operation commences, we request that you consider postponing the requirements for chlorination and/or de-chlorination until definitive results of the statistical groundwater impacts analysis are known.

### **SUMMARY**

This memo presented the Maxwell Public Utility District's comments on the Tentative Waste Discharge Requirements for the proposed new WWTP. We appreciate the Regional Board work on the WDRs and thank you in advance for your consideration of our comments and look

forward to discussing the remaining outstanding issues. If you have questions, please feel free to contact the District's Engineers on this project, either Rebecca Crow or David Carter with Winzler & Kelly at (707) 443-8326 .

Thank you,

A handwritten signature in black ink, appearing to read "David Wadsworth". The signature is fluid and cursive, with a large initial "D" and a long, sweeping tail.

David Wadsworth  
Operations Supervisor Maxwell Public Utility District

CC: Rebecca Crow, P.E. Winzler & Kelly  
David Carter, P.E. Winzler & Kelly