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# California Regional Water Quality Control Board Central Valley Region

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Edmund G. Brown Jr.  
Governor

27 June 2011

Mr. David Wadsworth, General Manager  
Maxwell Public Utilities District  
P.O. Box 294  
Maxwell, CA 95955

**CERTIFIED MAIL**  
**7010 1670 0002 0652 5808**

***NOTICE OF APPLICABILITY, WATER QUALITY ORDER NO. 2004-0012-DWQ  
GENERAL WASTE DISCHARGE REQUIREMENTS FOR THE DISCHARGE OF  
BIOSOLIDS TO LAND, MAXWELL BIOSOLIDS LAND APPLICATION PROJECT,  
COLUSA COUNTY, ORDER NO. 2004-0012-DWQ-0010***

Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff received a Notice of Intent (NOI) on 16 July 2009 from Maxwell Public Utilities District (hereafter referred to as Discharger) to apply for coverage under State Water Resources Control Board (State Water Board) Water Quality Order No. 2004 0012-DWQ, the *General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities* (General Order). The Discharger submitted new information to complete the NOI and Pre-Application Report on 29 April 2011, 19 May 2011, 21 and 22 June 2011. Based on the information in the NOI and subsequent documentation, Central Valley Water Board staff concurs that the project meets the required conditions for approval under the General Order. This letter serves as formal notice that the General Order is applicable to the site and discharge described below. This facility has been assigned a Central Valley Water Board order specific tracking number of No. 2004-0012-DWQ-0010.

A copy of the General Order is enclosed for the Discharger; otherwise it may also be viewed at the following web address:

[http://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/water\\_quality/2004/wqo/wqo\\_2004-0012.pdf](http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2004/wqo/wqo_2004-0012.pdf)

You are urged to familiarize yourself with the contents of the entire General Order. The discharge must be managed in accordance with the requirements contained in the General Order, the information submitted in the NOI and *Biosolids Management Plan*, and the requirements contained in this Notice of Applicability (NOA).

## **PROJECT DESCRIPTION**

Maxwell Public Utilities District (PUD) owns and operates a municipal wastewater treatment facility (WWTF) that serves approximately 1,056 residents. Maxwell PUD plans to upgrade the WWTF to improve treatment reliability and add effluent storage and a water recycling site.

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An average of three feet of sludge will be removed from the oxidation ponds prior to construction of the WWTF improvements and will be processed to create approximately 3,200 dry tons of Class B biosolids.

The biosolids will be applied to approximately 75 acres of agricultural land approximately one mile south of Maxwell in Colusa County, as shown on Attachment A, which is attached hereto and part of this NOA. The land is owned by Maxwell PUD.

The land application site is currently used for rice farming. It is relatively flat at an approximate elevation of 85 feet above mean sea level and surrounded by a perimeter berm that is used to flood the fields during the growing and rice straw decomposition seasons. When the drainage valves are open, surface water drainage is to agricultural drains that are tributary to Lurline Creek. Surface soils are typically clay and exhibit a cation exchange capacity approximately 16 meq/100 g, which indicates slight potential for degradation of soil and land productivity from biosolids application. The pH of a single shallow soil sample was 6.2, indicating moderate potential for crop damage and crop metals accumulation due to soluble metals in biosolids. The *Land Productivity Report* submitted with the Pre-Application Report states that the Discharger will apply lime to the site at approximately 3,000 pounds per acre to reduce the potential for adverse effects on crops and control metals mobility in the soil column. However, upon further investigation, the application of lime was found not necessary as stated in a letter dated 22 June 2011 from Winzler & Kelly on behalf of Maxwell PUD. Therefore, the addition of lime for this one-time application of biosolids is not required.

Following land application of biosolids at agronomic rates for nitrogen in the fall, the site will be planted to a crop such as alfalfa. Beginning in the late spring following land application, Maxwell PUD will begin using secondary disinfected effluent to irrigate the crop. That discharge, which will not add significant additional nitrogen, will be regulated under separate Waste Discharge Requirements (WDRs) Order No. R5-2009-0109.

Based on sludge analytical results included in the Notice of Intent, the *Land Productivity Report* states that the biosolids application will supply enough phosphorus to support an alfalfa crop for up to five years. Supplemental fertilizer application rates in subsequent years will be established so that no additional phosphorus will be applied until it is necessary.

Storm water will not be released from the site during the first rainy season after land application of biosolids. Irrigation tailwater will be collected in a tailwater pond in the northeast corner of the land application site and will be recycled through an effluent storage pond that is to be constructed as part of the WWTF improvements project. Storm water generated in subsequent years will be managed in accordance with the WDRs for the WWTF.

## **GROUNDWATER CONDITIONS**

Five groundwater monitoring wells were installed at the biosolids land application site in April 2008<sup>1</sup> to a total depth of 25 feet bgs with 10 feet of screen from 15 to 25 feet bgs. Following well development, the wells were sampled in April and December 2008. Static

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<sup>1</sup> This information was part of the Report of Waste Discharge that was submitted to apply for WDRs for the water recycling project.

groundwater levels prior to sampling were less than 10 feet below the ground surface on both occasions.

Based on regional groundwater maps prepared by the Department of Water Resources for spring and summer 2006, the groundwater flow direction in the Maxwell area tends to be eastward year round. However, flow directions in the shallow groundwater may be different and/or more variable due to agricultural pumping, irrigation, and drainage practices in the area. Based on the assumed groundwater flow direction and two groundwater monitoring events conducted in April and December 2008, groundwater quality beneath the land application site may be highly variable, both spatially and temporally. In general, the limited data indicate that shallow groundwater is hard, alkaline, and moderately saline.

Based on the soil types, depth to groundwater, and existing groundwater quality, the proposed one-time application of biosolids at agronomic rates for nutrients is not expected to significantly affect groundwater quality. Groundwater monitoring of the land application site is required under the WDRs that will regulate the ongoing discharge of recycled effluent at the site.

### **MONITORING AND REPORTING**

The Discharger shall comply with Monitoring and Reporting Program (MRP) No. R5-2011-0810, which is attached hereto and part of this NOA. This site-specific MRP replaces the requirements of the MRP contained in the General Order. Electronic files of the monitoring report forms attached to the MRP are available upon request. The MRP is effective immediately and requires submittal of annual monitoring reports until Central Valley Water Board staff formally terminates your coverage under the General Order. Per Provision D.1.b(1) of the General Order, such approval cannot be granted until 38 months have passed since the last application of biosolids. Please reference your unique Order No. 2004-0012-DWQ-0010 and MRP No. R5-2011-0801 when submitting your monitoring reports.

### **GENERAL INFORMATION AND REQUIREMENTS**

Provision D.1.a of the General Order requires that after the NOA is issued, no discharge shall occur until 15 days after submission of the Pre-Application Report. This NOA is for a one-time land application of biosolids from a single generator and the Discharger has submitted a Pre-Application Report with the Notice of Intent. Therefore, no subsequent Pre-Application Reports are required.

The project is expected to be complete by 15 October 2011. If the Discharger is unable to land apply all biosolids and biosolids storage is needed, the Discharger shall submit a *Biosolids Storage Plan* pursuant to Biosolids Storage and Transportation Specifications No. C.8. of the General Order to the Central Valley Water Board by **15 September 2011**.

The Discharger is required to implement the plans included in the Notice of Intent and Pre-Application Report. The Discharger shall review these documents carefully with land application and crop management personnel and ensure that that the recommendations contained therein are followed. If, based on conditions encountered, it is appropriate to

revise one or more of these documents, any revisions shall be submitted to the Central Valley Water Board.

The Discharger may only apply biosolids in the designated land application area shown on Attachment A. Discharge of material other than that described in the Notice of Intent is prohibited.

At least **15 days** before the first planned biosolids application, the Discharger shall submit proof of full compliance with Provision D.5 of the General Orders, including notification of the appropriate regional office(s) and neighboring adjacent property owners. Proof of compliance shall be submitted to the Central Valley Water Quality Control Board.

In the event of a spill during biosolids transport or discovery of hazardous or other unauthorized material, the Colusa County Department of Environmental Health and the Central Valley Water Board shall be notified immediately.

Title 40, Part 503 of the Code of Federal Regulations requires that certain information about the biosolids and the discharge be submitted to the regional office of the United States Environmental Protection Agency. These requirements are separate from those set forth in Monitoring and Reporting Program No. R5-2011-0810, and Maxwell PUD is solely responsible for compliance with the federal regulations.

This letter serves as formal notice that Water Quality Order No. 2004-0012-DWQ is applicable as described above. If the discharge violates the terms or conditions of the General Order, the Central Valley Water Board may take enforcement action, including assessment of administrative civil liability.

Prior to implementing any discharge changes, a new NOI must be submitted to apply for continued coverage under the General Order or a Report of Waste Discharge must be submitted to apply for individual Waste Discharge Requirements.

The required annual fee specified in the annual billing received from the State Water Board shall be paid until this NOA is officially terminated. Within **60 days** after the discharge ceases, the Discharger must notify this office in writing using the Notice of Termination form that accompanies General Order No. 2004-0012-DWQ.

All monitoring reports, submittals, violation notifications and questions regarding compliance with the General Order shall be directed to Guy Childs at (916) 464-4648 or [gchilds@waterboards.ca.gov](mailto:gchilds@waterboards.ca.gov). If you have any questions regarding the General Order or this

Notice of Applicability, please contact Mr. Childs. Questions regarding application for a revised NOA or individual WDRs may be directed to Lani Andam, at (916) 464-4723 or [landam@waterboards.ca.gov](mailto:landam@waterboards.ca.gov).

Original signed by Frederick Moss

Pamela C. Creedon  
Executive Officer

Attachments: A – Location and Site Map  
Monitoring and Reporting Program No. R5-2011-0810

Enclosure: State Water Board Water Quality Order No. 2004-0012-DWQ

cc w/att only: Mr. David Carter, Winzler & Kelly, Eureka  
Mr. Jacob Collins, Synagro West, LLC., Suisun City  
Mr. Gordon Innes, State Water Board, Division of Water Quality, Sacramento  
Colusa County Department of Environmental Health, Colusa

