

***Monitoring Guidelines for Large Capacity Water Wells Pursuant to General Plan Policy
WR-2d (formerly RC-3b)***

PURPOSE

The purpose of this policy is to provide groundwater monitoring guidelines for commercial and industrial projects requiring a Use Permit. The guidelines apply to Use Permits applied for after February 24, 2004.

GENERAL

A. All commercial and industrial projects which rely on water wells and require a Use Permit shall include a proposed groundwater use estimate prepared by a civil engineer or registered geologist as part of the project application. The following categories are to be applied to projects for purposes of determining water well monitoring requirements. Projects using less than 0.5 acre-foot/year are "Small Commercial and Industrial Projects." Projects using greater than 0.5 acre-foot/year, but less than 5 acre-foot/year, are "Large Commercial and Industrial Projects." Projects using greater than 5 acre-foot/year are "Very Large Commercial and Industrial Projects."

B. Requirements for Small Commercial and Industrial Projects.

If geologic reports prepared pursuant to section WR-2e (formerly RC-3h) of the General Plan or mitigations established through the CEQA process require ongoing well monitoring to reduce impacts to neighboring properties, then Small Commercial and Industrial Projects may be required to conduct groundwater monitoring. Otherwise they are exempt from groundwater monitoring requirements.

C. Requirements for Large Commercial and Industrial Projects.

1. Measuring Devices.

Each water well shall be equipped with a meter and a sounding tube or other water level sounding device and marked with a measuring reference point. Water meters shall be calibrated at least once every five years.

2. Recording and Reporting Requirements.

Static water level and the total quantity of water pumped shall be recorded quarterly. Static water level is the depth from ground level to the well water level when the pump is not operating. Static water level shall be measured by turning the pump off at the end of the working day and recording the water level at the beginning of the following day before turning the pump back on.

Groundwater monitoring reports shall be submitted annually to the Project Review Division at Permit and Resource Management Department (PRMD) by January 31 of

each year. The annual report shall show a cumulative hydrograph of static water levels and the total quarterly quantities of water pumped from all wells on the property.

3. Fire Protections.

Before measuring static water level, the following fire precautions shall be completed:

- a. Prior to turning off the pump, inspect all fire storage tanks on the site to insure that the required quantity of water is available.
- b. When the pump is turned off, an instruction sign shall be placed over the pump's on-off switch. The instruction sign shall be made of metal or plastic. The letters shall be at least two inches tall and written in contrasting colors. The words shall be visible from at least 25 feet away. The instruction sign shall inform readers how to turn the pump on in case of emergency.

4. Recorded Access Easement.

An access easement to allow County personnel to enter the property during normal business hours to read the water meter, measure the water level, and take other measurements as necessary to determine compliance with permit conditions shall be recorded in favor of the County.

5. Additional Monitoring Reports.

Any additional monitoring reports shall be submitted to PRMD as required by the Conditions of project Approval.

D. Requirements for Very Large Commercial and Industrial Projects.

1. Measuring Devices.

Each water well shall be equipped with a meter and a sounding tube or other water level sounding device and marked with a measuring reference point. Water meters shall be calibrated at least once every five years.

2. Monitoring Well.

A well shall be constructed and developed solely for the purpose of monitoring groundwater ("monitoring well"). A well permit must be obtained before construction of the monitoring well. The monitoring well shall be the same depth and contain the same screened interval as the primary water well. The monitoring well shall be located as far from other water wells, streams, waste water disposal fields and ponds as the parcel will allow, yet be located within the same geological formation(s) as the primary water well and accessible by street vehicle. The monitoring well location shall be approved by PRMD and shall be representative of the geologic and hydrologic conditions of the project well. The monitoring well shall be marked with a measuring reference point. The well's Global Positioning System (GPS) coordinates (in NAD83 California State Plane II or WGS 84lat./long.) shall be submitted to PRMD and shall be held in a non-

confidential status.

3. Recording and Reporting Requirements.
The monitoring water well level and the total quantity of water pumped shall be recorded monthly.

Groundwater monitoring reports shall be submitted annually to the Project Review Division at PRMD by January 31 of each year. The annual report shall show cumulative hydrograph of the monitoring well water levels and the total monthly quantities of water pumped from all of the wells on the property.

4. Recorded Access Easement.
An access easement to allow County personnel to enter the property during normal business hours to read the water meter(s), measure the water level, and take other measurements as specified in the Use Permit Conditions shall be recorded in favor of the County.
5. Additional Monitoring Reports.
Any additional monitoring reports must be submitted to PRMD as required by the Conditions of Approval.

AUTHORITY

Sonoma County General Plan, Water Resource Element Policy WR-2d (formerly RC-3b) and Policy WR-2e (formerly RC-3h).

PROCEDURE

A. Tasks necessary to implement this policy:

1. The application shall include an engineer's estimate of water use by the proposed project.
2. Conditions will be added to project approvals requiring groundwater monitoring, reporting, easements, and monitoring wells as specified. Additional conditions may be added to project approvals specifying the quantity of groundwater use approved.
3. Groundwater monitoring reports shall be submitted annually to the Project Review Division at PRMD between January 1 and January 31 of each year. Violations of project Approval Conditions shall be forwarded to Code Enforcement.
4. The Project Review Division shall conduct quality control site inspections to collect verifying water meter readings and, if applicable, monitoring well groundwater level measurements. The target goal is to collect verifying data on 5 percent of the subject sites per year.

B. Individual project approvals to be completed prior to project operation or final occupancy.

1. Requirements for all Large Commercial and Industrial Projects (using greater than 0.5 ac/ft/yr, and less than 5ac/ft/yr):
 - a. Proof of installation of a water meter and water level measuring port on the water well(s). The water meter shall provide water flow measurements in cumulative number of gallons and shall be installed in accordance with the manufacturer's specifications.
 - b. Conformed copy of the recorded easement to allow County personnel to read and record the water meter(s).
2. Requirements for all Very Large Commercial and Industrial Projects (using greater than 5 ac/ft/yr):
 - a. Proof of installation of a water meter and water level measuring port on the water well(s).
 - b. Conformed copy of the recorded easement to allow County personnel to read and record the water meter(s) and measure groundwater levels in the monitoring well.
 - c. Final approval of the well permit to install a monitoring well.

Approved by:

/s/ Pete Parkinson

Pete Parkinson, Director

Lead Author: Jon Tracy

05/18/04

06/05/13

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