



Sampling Supply Wells and Subsurface (Tile) Drainage Systems

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In June 2015, the San Francisco Bay Regional Water Quality Control Board (Regional Board) renewed the Conditional Waiver of Waste Discharge Requirements for Dairy (Resolution No. R2-2015-0031). The Monitoring and Reporting Program of the renewed Conditional Waiver requires **groundwater sampling** to determine if current management is protective of groundwater quality. Results must be submitted to the Regional Board as part of the appropriate annual report, due November 30 of each year. Groundwater well sampling requirements are described beginning on page five of Attachment A to the Conditional Waiver.

Identification of wells

All existing supply wells (domestic and agricultural) located at the facility must be sampled four times, approximately six months apart: (1) Fall 2016, (2) Spring 2017, (3) Fall 2017, and (4) Spring 2018. Each well should have a unique identification (name/number/location) and conform to well identification on maps, which should be used consistently when samples are collected to make laboratory results easier to use. Results of groundwater samples collected for another purpose and consistently with the sampling protocols and within the time frame of the Conditional Waiver may be submitted rather than collecting additional samples.

Part I –Laboratory Selection and Identification of Sampling and Analytical Requirements

1. One sample from each well shall be tested for **nitrate and total coliform bacteria**.
2. Select a laboratory that is certified by the California Department of Public Health Services or approved by the Executive Officer.
3. Contact your analytical laboratory to obtain sample bottles, labels and appropriate instructions for sample collection, preservation, holding times, required record keeping, and chain of custody forms. Ask lab personnel to identify appropriate sample drop off times for the type of samples and analyses needed.

Part II - Sampling Preparation & Location Determination

1. Identify sampling locations and identification. Use the same name for the each well each time it is sampled.
2. Gather sampling equipment needed, e.g., disposable gloves, safety goggles (if handling sample bottles with preservatives), clean sample bottles (two per well), preservatives, ice and ice chest, labels for sample identification, chain of custody forms, notebook for record-keeping, etc.

For Domestic supply wells:

3. Collect water samples before the pressure tank if possible; otherwise collect samples from the tap nearest to the pressure tank. Purge the well for at least 10 minutes, or twice the volume of the pressure tank if the sample cannot be collected prior to the pressure tank.

For Irrigation supply wells:

3. Identify a sampling location as close to the wellhead as practical. Installation of a sampling valve may be useful for future collection.

4. Purge the well by running the pump for at least 30 minutes or until three well volumes have run prior to collecting the sample.

Part III – Sample Collection

1. Label sample bottles with well or tile drain identification, sampler's name, and the date and time of sampling.
2. Put on sampling gloves and safety goggles (if handling sample containers with preservatives).
3. Remove lid from sample bottle. Be sure to keep the lid clean.
4. Rinse the sampling bottle 3 times with the water you will be collecting **UNLESS YOUR BOTTLE HAS A PRESERVATIVE IN IT. DO NOT RINSE OUT PRESERVATIVE.**
5. Collect sample directly into the bottle, leaving the proper head-space (open space at the top) as required by the laboratory.
6. Preserve the sample as required by your laboratory. The laboratory may provide sample bottles that include preservative. Alternatively, the laboratory may require that samples be chilled immediately and transported to the laboratory within a few hours where laboratory personnel will preserve with acids.
7. Tightly cap the bottle.
8. Immediately put the bottle into an ice-cooled chest. **DO NOT FREEZE THE SAMPLES.**
9. Complete the chain of custody form.
10. Deliver sample(s) and chain of custody form(s) to laboratory before the required holding time has expired (typically 48 hours for nitrate).
11. Keep a copy of the chain of custody form and all records on sample collection & identification.

Recordkeeping requirement:

Well type and identification: _____
Well or subsurface (tile) drainage system location: _____
Date and time of sample collection: _____
Date sample submitted to laboratory: _____
Name of individual taking sample: _____
Well purge time: _____
Location of sample port or tile drainage discharge point: _____
Preservative method used (ice cooling or other): _____
Laboratory analyses requested: _____

Additional information

Contact your analytical laboratory for additional information on sample collection, handling, preservation, and delivery.

Information in this document was compiled by CDQAP to assist dairy producers in understanding and complying with the Conditional Waiver of Waste Discharge Requirements for Dairies (San Francisco Bay Regional Water Quality Control Board Resolution No. R2-2015-0031). Effort has been made to ensure accuracy, but these summaries are not official regulatory guidance and are not legal advice. Producers are advised that these summaries are not intended to be a substitute for producers reading the complete order and consulting their own legal counsel to ensure compliance with the waste discharge requirements. Should any information here conflict with the Conditional Waiver and/or official information provided by the Regional Board, Board-provided information takes precedence.