

GROUNDWATER QUALITY MANAGEMENT REPORT

2022

GROUND WATER QUALITY SAMPLING PROGRAM

All sub-districts of the District shall be monitored using the maximum contaminant levels (MCL) for nitrates set by the United States Environmental Protection Agency. A ground water analysis for nitrate-nitrogen content in registered active domestic, active irrigation, active industrial, and public water supply wells will be accomplished once within a five (5) year cycle, with the exception of those wells listed on DEQs Current Statewide Ground Water Monitoring Network which will be tested annually.

If a sample is found to contain one hundred percent (100%) of the Maximum Contaminant Level (ten (10) parts per million or ten (10) mg/l) of nitrate-nitrogen, a second sample will be sent to a reputable lab for verification and quantification prior to any quality phase area designation.

A minimum of ten (10) percent of all wells sampled annually will be sent to a reputable lab for analysis as a quality control measure.

If there is reason to believe that contaminants other than nitrate-nitrogen may be present, samples may be taken to test for those contaminants.

GROUND WATER QUALITY PHASE AREA CRITERIA

Phase 1 Area – areas that are not designated as either Phase 2 or Phase 3. 0 to 5.9 mg/L (milligrams per liter).

Phase 2 Area – areas where forty-five (45) percent or greater of the nitrate nitrogen samples have tested between 6 to 8.5 mg/L (milligrams per liter) for four (4) consecutive years beginning in 2008.

Phase 3 Area – areas where forty-five (45) percent or greater of the nitrate nitrogen samples have tested between 8.6 to 10 mg/L (milligrams per liter) for four (4) consecutive years beginning in 2008.

GROUND WATER QUALITY PHASE AREA CONTROLS FOR IRRIGATION WELLS

Currently all irrigation wells within District boundaries are in a Phase 1 Area.

Phase 1 Area - a water analysis for nitrogen content for irrigation wells, operators encouraged to attend classes for fertilizer and irrigation water management, to perform deep soil testing for residual nutrients, and to not apply nitrogen fertilizer on sandy, soils in the fall or winter;

Sub-District	Year	Well Type 10% of Irrig.	Sample Count Registered wells	Sample Count Non Registered	Average Nitrate 0-10 ppm	Sample Count Manganese 10%	Average Manganese 0-0.5 ppm .3 mg/L EPA
1	2022	Domestic Irrigation	2 1	9	11.52 w/ outliers .10 wo/ outliers 0.10	0	
2*	2022	Domestic Irrigation	53 8	51	1.025 1.46	20	.106
3	2022	Domestic Irrigation	2 1	2	1.325 2.3	0	
4	2022	domestic Irrigation	2 6	3	5.676 w/ outliers .610 wo/ outliers .58	2	.0515
5	2022	domestic Irrigation	1 17	0	28.8 1.47	0	

NR = Non-registered wells

* = Sub-district on the scheduled cycle

Summary of wells testing out of phase 1 limits (0-5.9 mg/L)

Well	Sub-District	Well Type	Nitrate Result	R/O	Well Age	Well Depth	Hx of high Nitrate
NR-9227	Sub-district 1	Domestic	11.2	No			first test
G-148408	Sub-district 1	Domestic	10.3	No	2007	44	yes
NR-6615	Sub-district 1	Domestic	33	3.9			yes
NR-6614	Sub-district 1	Domestic	33	1.4			yes
AshbyLeth	Sub-district 1	Domestic	12.67	No			first test
AshbyIngersoll	Sub-district 1	Domestic	14.7	No			first test
G-179308	Sub-district 4	Domestic	15.58	No	2016	130	first test
G-019634	Sub-district 5	Domestic	28.8		1958	306	first test