

## Appendix 3D

Annual Groundwater Quality Regulatory Limit Exceedances  
from 2017 to 2023

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Groundwater quality is assessed using water quality data available for public water supply wells through the SWRCB's Division of Drinking Water (DDW). The Central Coast Regional Water Quality Control Board's (CCRWQCB) Irrigated Lands Regulatory Program (ILRP) dataset is used to evaluate water quality in on-farm domestic and irrigation wells. Each well type has its own set of constituents of concern (COCs) that are outlined in GSP Amendment 1. The State's Title 22 Maximum Contaminant Levels (MCLs) and Secondary Maximum Contaminant Levels (SMCLs) are used to assess water quality in public water system supply wells and on-farm domestic wells. For irrigation supply wells, water quality is compared to the COC levels that may lead to reduced crop production specified in the CCRWQCB's 2019 Basin Plan.

Table 1 lists the COCs for each well type and summarizes the number of wells that exceed the regulatory standard for any given COC from the GSP baseline year in 2017 through the most recent year of data in 2023. The exceedance values for each year are based on the last sample collected for each RMS well. Table 1 does not include all Title 22 constituents for drinking water wells, and not all listed COCs were sampled during the 7-year period. For a given year, if a COC had no exceedance or was not sampled, the recorded value in the table is zero. The ILRP on-farm domestic wells exhibited the most variability in exceedances between 2017 and 2023, which is likely due to the recently available ILRP data from CCRWQCB. Table 1 includes the updated 2017 baseline values that incorporate wells from the supplemental ILRP dataset provided by the CCRWQCB.

In the 2017 to 2019 period, notable increases and fluctuations in the exceedances of the regulatory standards for the ILRP on-farm domestic wells occurred in 2017. In 2017, nitrate and specific conductance had 15 and 12 additional detections than in 2018, respectively, and was the only year with exceedances for chloride.

In the 2019 to 2023 evaluation period, notable increases in the regulatory exceedances are summarized by well type and corresponding years below:

#### **DDW**

- Specific Conductance: 2020 to 2021
- Total Dissolved Solids: 2021 to 2022

#### **ILRP On-Farm Domestic Wells**

- Nitrate + Nitrite (sum as nitrogen): Increases from 9 exceedances in 2019 to 35 in 2022 after a lapse in sampling in 2020 and 2021
- Specific Conductance: Increase from zero exceedances in 2021 to 39 and 41 in 2022 and 2023, respectively

Table 1. Annual Number of Wells Exceeding Regulatory Standard (2017-2023)

Constituent of Concern	Regulatory Exceedance Standard	Standard Units	2017	2018	2019	2020	2021	2022	2023
<b>DDW Wells</b>									
1,2,3-Trichloropropane	0.005	UG/L	0	2	2	2	2	2	2
Aluminum	1000 (MCL) 200 (SMCL)	UG/L	0	0	0	0	0	0	0
Arsenic	10	UG/L	2	1	1	1	1	2	1
Chloride	500	MG/L	1	1	0	1	1	2	1
Chromium	50	UG/L	0	0	0	0	0	0	0
Chromium, Hexavalent (Cr6)	10	UG/L	0	0	0	0	0	0	0
Di(2-ethylhexyl) phthalate	4	UG/L	0	0	0	0	0	0	0
Foaming Agents (MBAS)	0	MG/L	0	0	0	1	0	0	0
Gross Alpha radioactivity	15	pCi/L	3	3	1	3	1	2	1
Iron	300	UG/L	4	3	4	1	3	3	1
Manganese	50	UG/L	2	3	3	1	3	2	1
Methyl-tert-butyl ether (MTBE)	13 (MCL) 5 (SMCL)	UG/L	0	0	0	0	1	0	1
Nitrate (as nitrogen)	10	MG/L	7	7	8	10	10	10	9
Selenium	20	UG/L	0	0	0	0	0	0	0
Specific Conductance	1600	UMHOS/CM	2	3	1	1	4	3	1
Sulfate	500	UG/L	0	0	0	0	0	0	0
Total Dissolved Solids	1000	MG/L	2	1	2	2	2	4	2
<b>ILRP On-Farm Domestic Wells</b>									
Chloride	500	MG/L	9	0	0	0	0	0	0
Iron	300	UG/L	9	3	1	0	0	0	0
Manganese	50	UG/L	2	1	0	0	0	0	0
Nitrite	1	MG/L	0	0	0	0	0	0	0
Nitrate (as nitrogen)	10	MG/L	23	8	6	1	0	2	0
Nitrate + Nitrite (sum as nitrogen)	10	MG/L	11	2	9	0	0	35	35
Specific Conductance	1600	UMHOS/CM	19	7	3	1	0	39	41
Sulfate	500	MG/L	0	0	1	0	0	0	0
Total Dissolved Solids	1000	MG/L	11	8	5	1	0	0	1
<b>ILRP Irrigation Wells</b>									
Chloride	350	MG/L	22	6	3	0	0	0	0
Iron	5000	UG/L	2	0	0	0	0	0	0
Manganese	200	UG/L	2	0	1	0	1	0	0

Table 2 summarizes the data by the number of sampled wells and the percentage of exceedances for a given COC and year. Percentages of exceedances represent the number of wells with exceedances (Table 1) divided by the total number of wells that were sampled for that COC and year. The COCs that were not sampled for are indicated by a ‘ - - ’ in both the ‘Sampled Wells’ and ‘%’ columns, whereas a percentage value of zero indicates that no exceedances were recorded in any of the sampled wells for that COC and year.

Hexavalent chromium (Cr6) was not sampled for any of the 7 years. The COCs that were sampled in only 1 of the 7 years include di(2-ethylhexyl) phthalate, foaming agents (MBAS), and nitrite. The COCs sampled in only 2 out of the 7 years include Methyl-tert-butyl ether (MTBE) and Manganese. The ILRP on-farm domestic wells exhibited the most variability in exceedances over the 7 years, while the DDW wells showed more stable trends, with slight increases in exceedances occurring during the 2019 to 2023 evaluation period.

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Constituent of Concern	2017		2018		2019		2020		2021		2022		2023	
	Sampled Wells	%	Sampled Wells	%	Sampled Wells	%	Sampled Wells	%	Sampled Wells	%	Sampled Wells	%	Sampled Wells	%
Nitrate (as nitrogen)	63	37%	31	26%	21	29%	6	17%	3	0%	6	33%	--	--
Nitrate + Nitrite (sum as nitrogen)	43	26%	10	20%	27	33%	--	--	--	--	88	40%	79	44%
Specific Conductance	84	23%	24	29%	7	43%	3	33%	2	0%	112	35%	111	37%
Sulfate	58	0%	30	0%	10	10%	3	0%	2	0%	--	--	--	--
Total Dissolved Solids	28	39%	29	28%	9	56%	3	33%	2	0%	--	--	4	25%
<b>ILRP Irrigation Wells</b>														
Chloride	271	8%	77	8%	62	5%	8	0%	12	0%	5	0%	--	--
Iron	49	4%	14	0%	7	0%	3	0%	3	0%	--	--	--	--
Manganese	37	5%	10	0%	4	25%	3	0%	2	50%	--	--	--	--