Category 2: Well Inventory Database Monitoring Data

Table 1. WIDB sampling data from 2015-2025 on potential priority pesticides. Concentration statistics are on all reported detections. "Tribal" refers to individual tribes; "SWRCB-DWP" is the State Water Resources Control Board Drinking Water Program; "USGS" is the U.S. Geological Survey; "DPR" is the California Department of Pesticide Regulation.

Pesticide Name	Category	Number of Analyses	Number of Detections	Percent Positive Detections	Number of Unique Wells	Number of Unique Positive Wells	Minimum Concentration (ppb)	Average Concentration (ppb)	Maximum Concentration (ppb)	Sampling Agencies
Cyhalothrins	Pyrethroid	695	0	0	633	0	0	0	0	USGS
Dichlorvos/ Naled	OP	1,702/ 157	0	0	1,230/ 152	0	0	0	0	USGS, SWRCB-DWP
Fluopyram	PFAS	0	0	0	0	0	0	0	0	--
Malathion	OP	3,105	2	0.06	1,858	2	0.004	0.0075	0.011	DPR, USGS, SWRCB-DWP
Methyl Bromide	Fumigant	40,639	3	0.007	8,435	3	2.2	0.41	0.52	Tribal, USGS, SWRCB-DWP

Table 2. WIDB sampling data from 2015-2025 for organophosphates (OP). Concentration statistics are on all reported detections. "SWRCB-DWP" is the State Water Resources Control Board Drinking Water Program; "USGS" is the U.S. Geological Survey; "DPR" is the California Department of Pesticide Regulation.

Pesticide Name	Number of Analyses	Number of Detections	Percent Positive Detections	Number of Unique Wells	Number of Unique Positive Wells	Minimum Concentration (ppb)	Average Concentration (ppb)	Maximum Concentration (ppb)	Sampling Agencies
Acephate	382	0	0	370	0	0	0	0	USGS
Bensulide	1,604	4	0.2	745	4	0.006	0.009	0.012	DPR
Chlorpyrifos	2,224	1	0.04	1,521	1	0.001	0.001	0.001	DPR, USGS, SWRCB-DWP
Coumaphos	0	0	0	0	0	0	0	0	--
Diazinon	10,314	3	0.03	4,872	2	0.005	0.007	0.01	DPR, USGS, SWRCB-DWP
Dichlorvos/Naled	1,702/ 157	0	0	1,230/ 152	0	0	0	0	USGS, SWRCB-DWP

Pesticide Name	Number of Analyses	Number of Detections	Percent Positive Detections	Number of Unique Wells	Number of Unique Positive Wells	Minimum Concentration (ppb)	Average Concentration (ppb)	Maximum Concentration (ppb)	Sampling Agencies
Dimethoate	13,898	0	0	5,440	0	0	0	0	DPR, USGS, SWRCB-DWP
Ethoprop	2,550	1	0.04	1,700	1	0.013	0.013	0.013	DPR, USGS
Fosthiazate	0	0	0	0	0	0	0	0	--
Malathion	3,105	2	0.06	1,858	2	0.004	0.0075	0.011	DPR, USGS, SWRCB-DWP
Phorate	2,281	0	0	1,500	0	0	0	0	DPR, USGS, SWRCB-DWP
Phosmet	677	0	0	618	0	0	0	0	USGS
Tetrachlorvinphos	0	0	0	0	0	0	0	0	--
Tribufos	859	0	0	783	0	0	0	0	USGS

Figure 1. Distribution of unique wells, by type, sampled for cyhalothrins from 2015-2025. There were no positive wells for this timeframe.

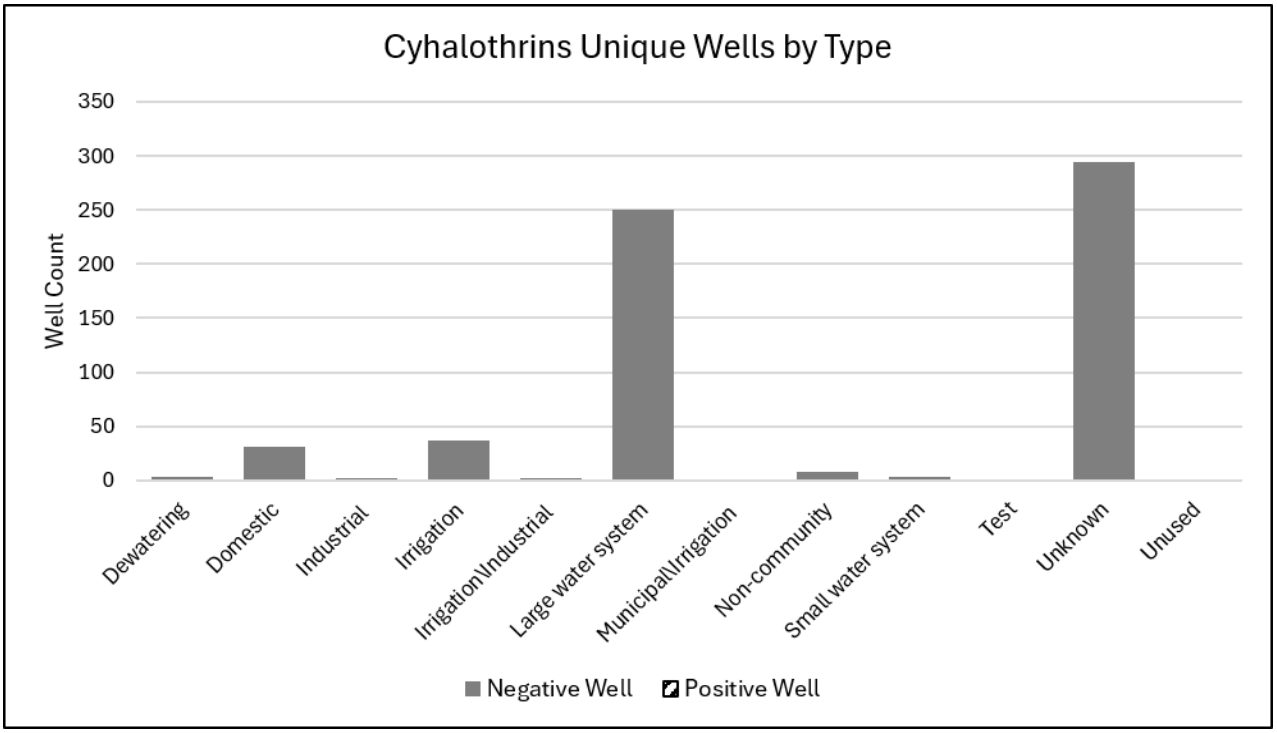


Figure 2. Distribution of unique wells, by type, sampled for dichlorvos from 2015-2025. There were no positive wells for this timeframe.

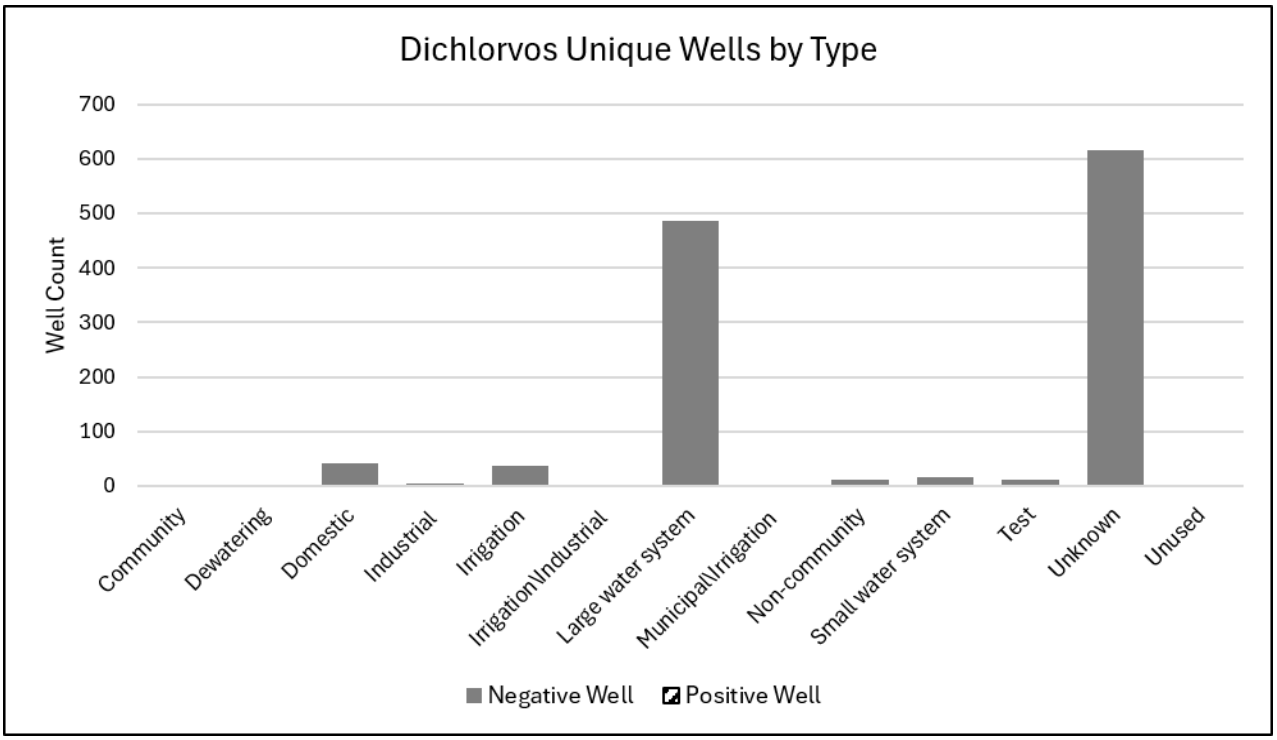


Figure 3. Distribution of unique wells, by type, sampled for naled from 2015-2025. There were no positive wells for this timeframe.

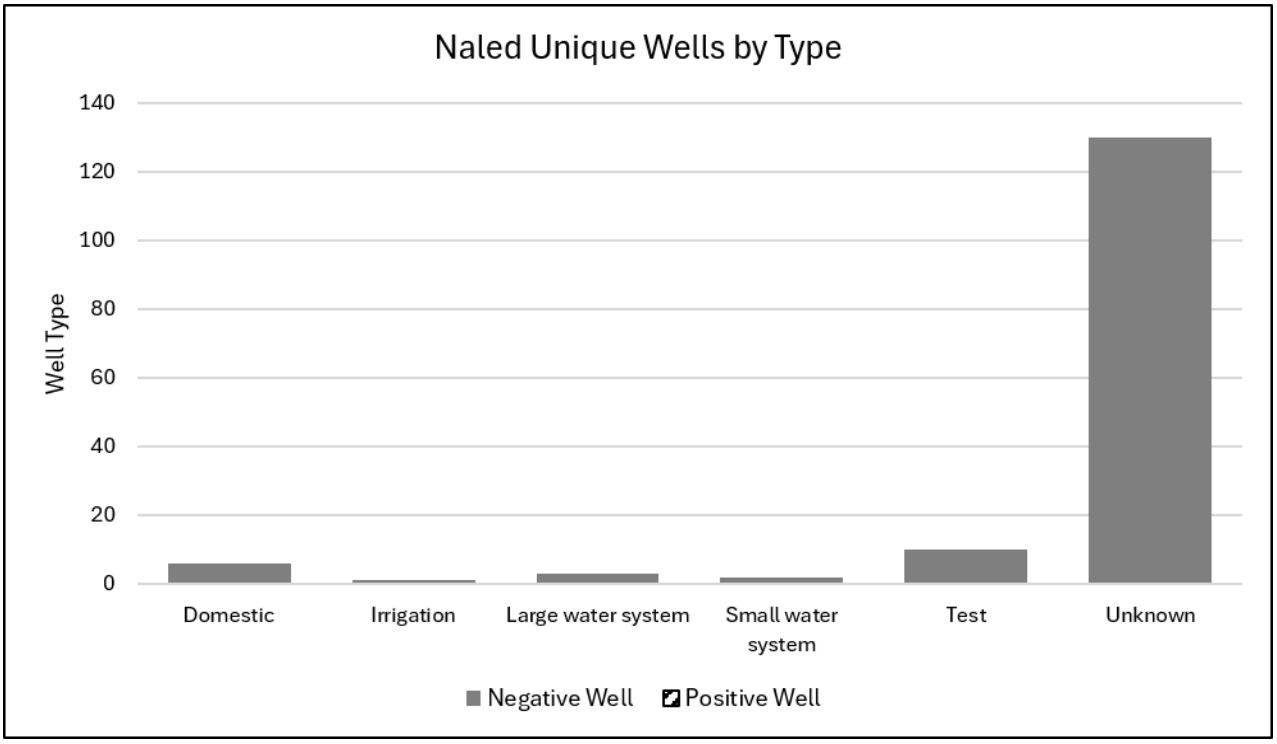


Figure 4. Distribution of unique wells, by type, sampled for malathion from 2015-2025. Numbers above columns are positive well totals for each well type.

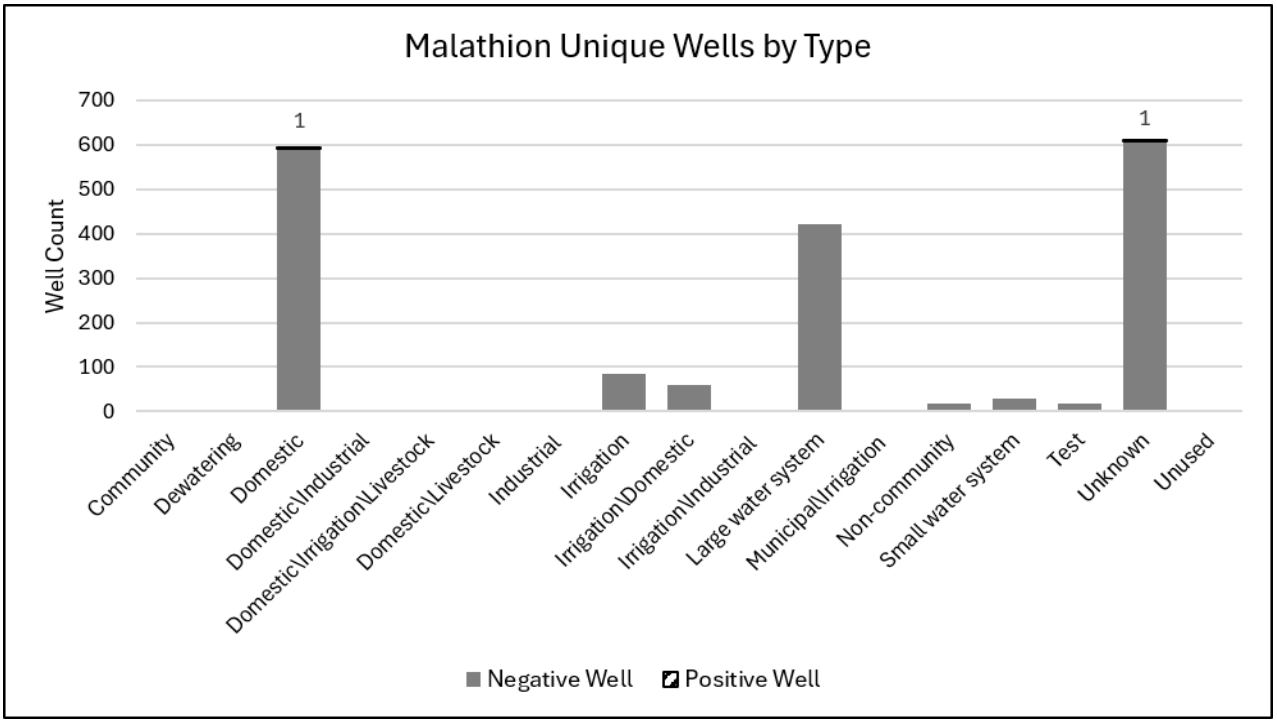


Figure 5. Distribution of unique wells, by type, sampled for methyl bromide from 2015-2025. Numbers above columns are positive well totals for each well type.

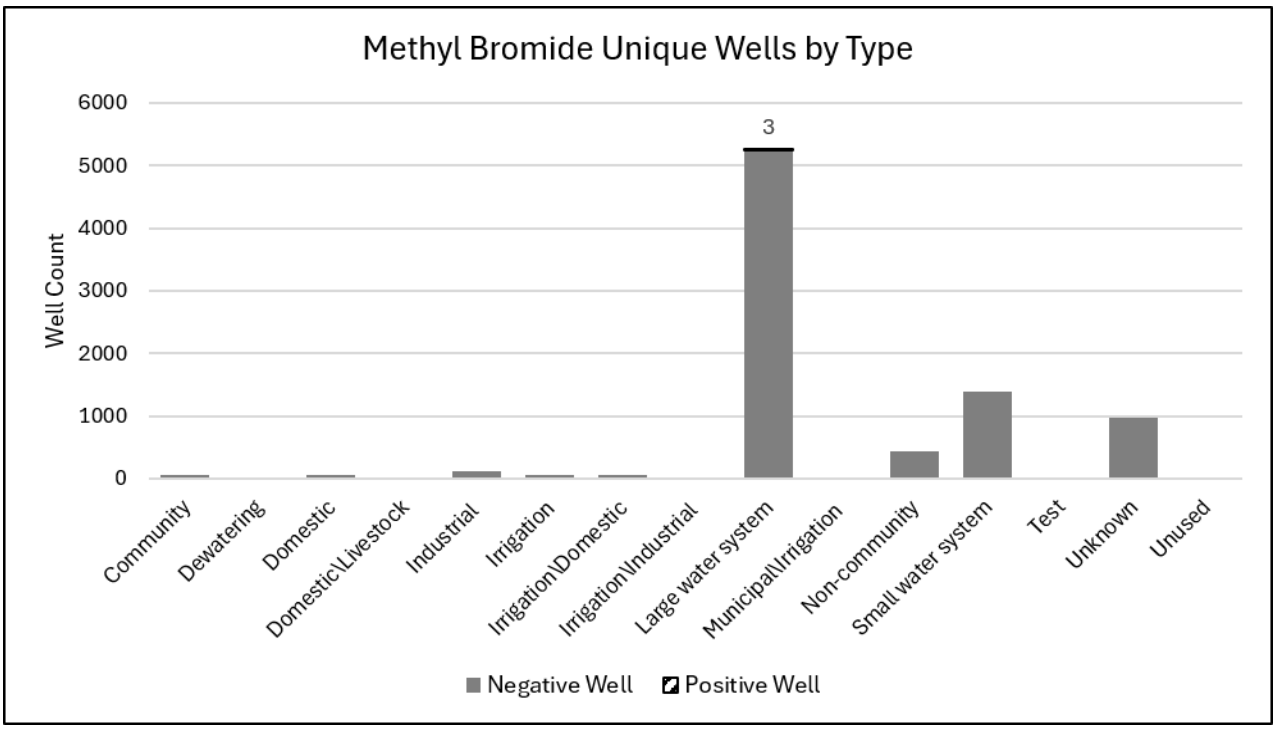


Figure 6. Distribution of unique wells, by type, sampled for acephate from 2015-2025. There were no positive wells for this timeframe.

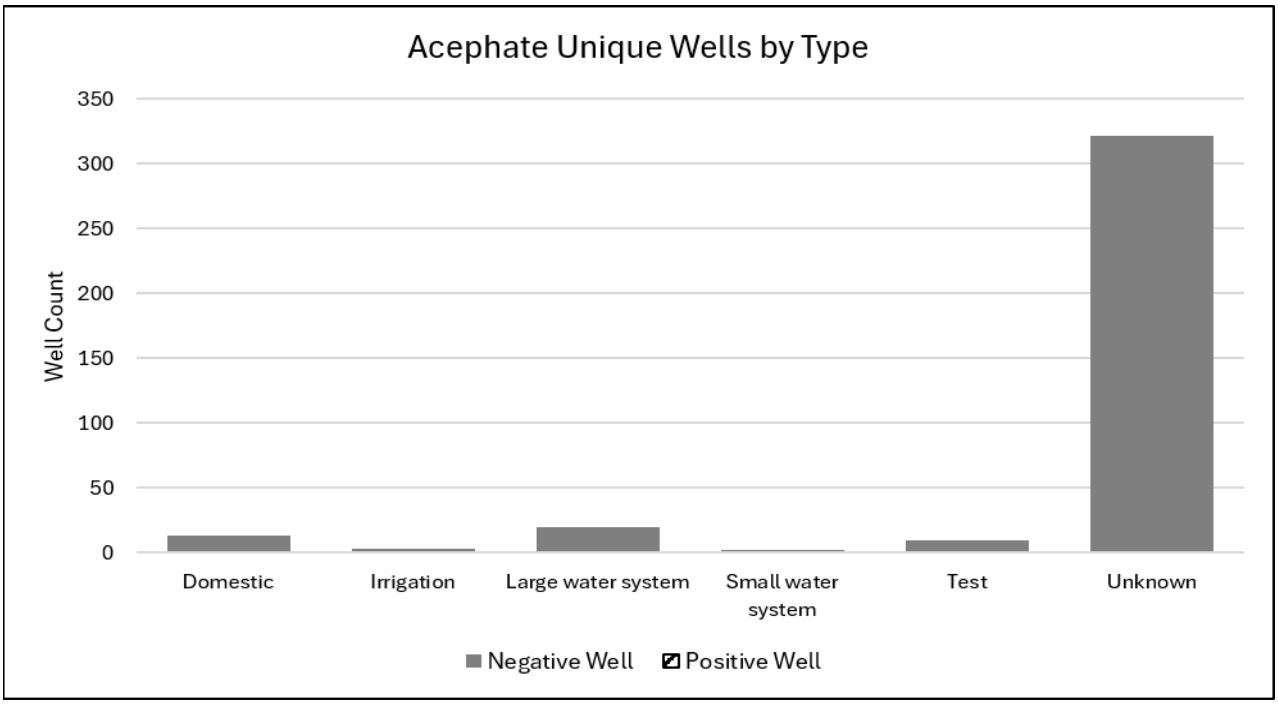


Figure 7. Distribution of unique wells, by type, sampled for bensulide from 2015-2025. Numbers above columns are positive well totals for each well type.

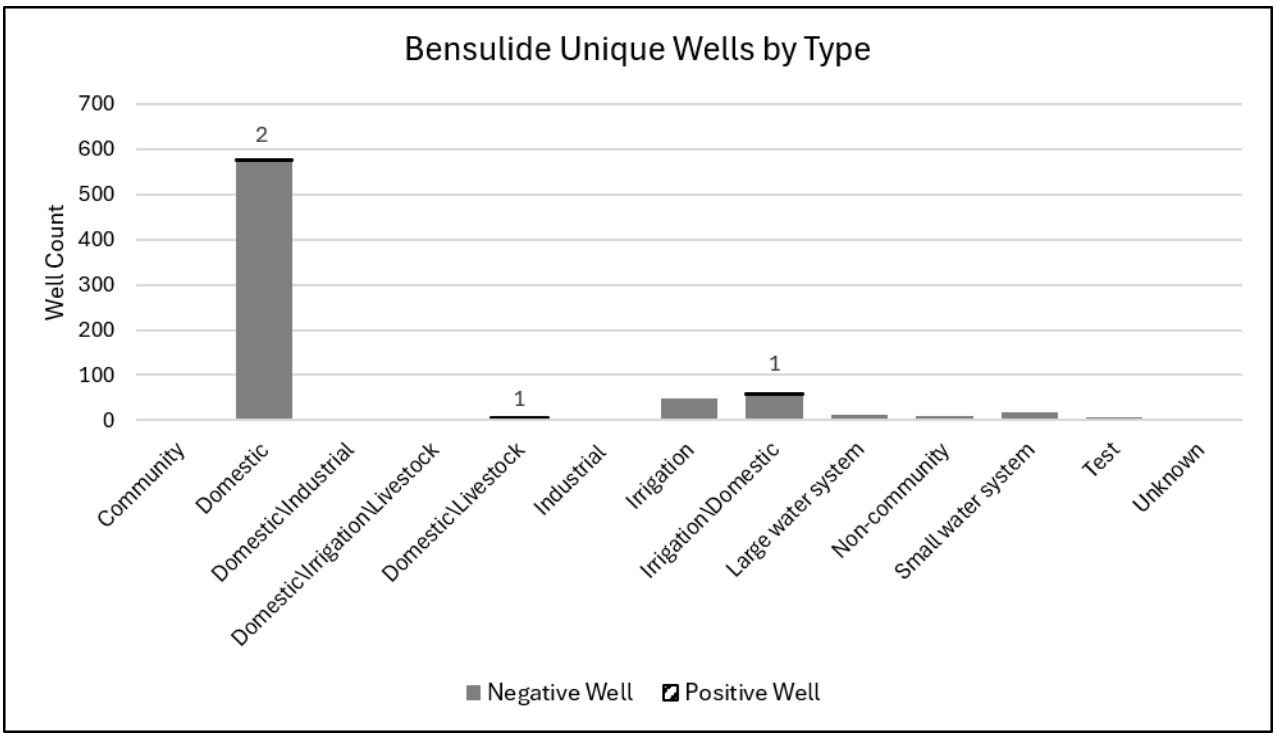


Figure 8. Distribution of unique wells, by type, sampled for chlorpyrifos from 2015-2025. Numbers above columns are positive well totals for each well type.

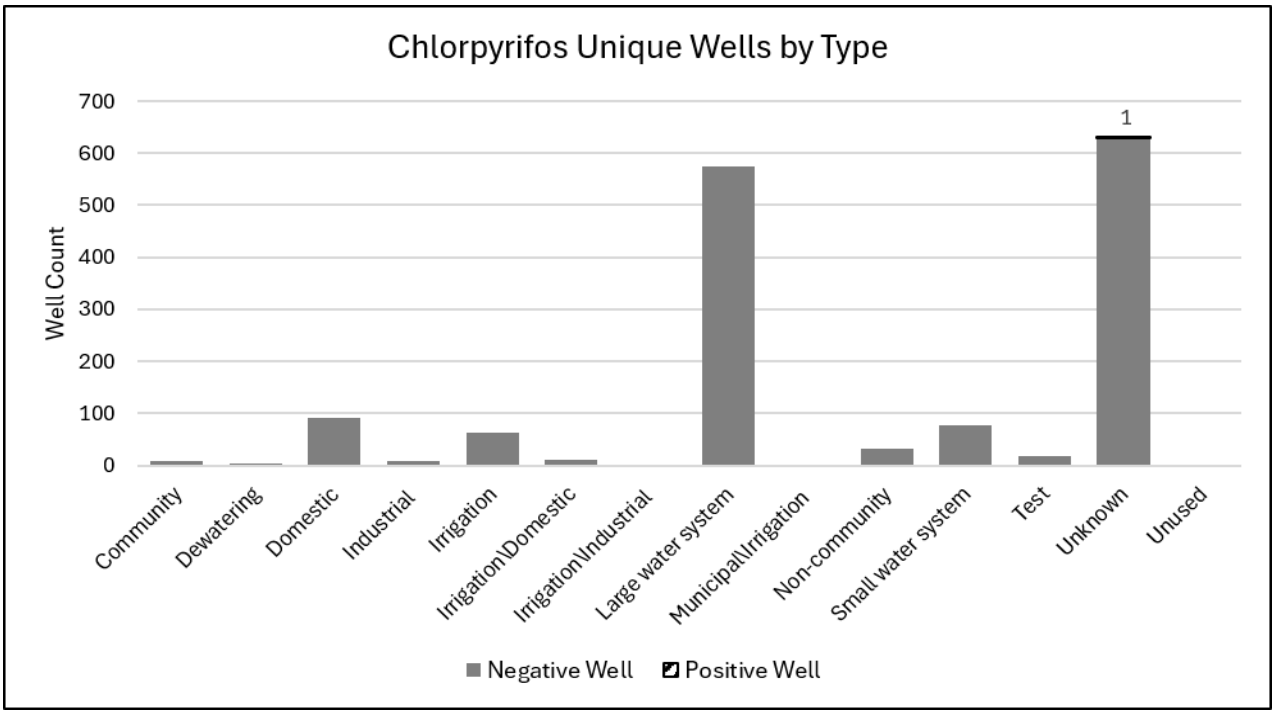


Figure 9. Distribution of unique wells, by type, sampled for diazinon from 2015-2025. Numbers above columns are positive well totals for each well type.

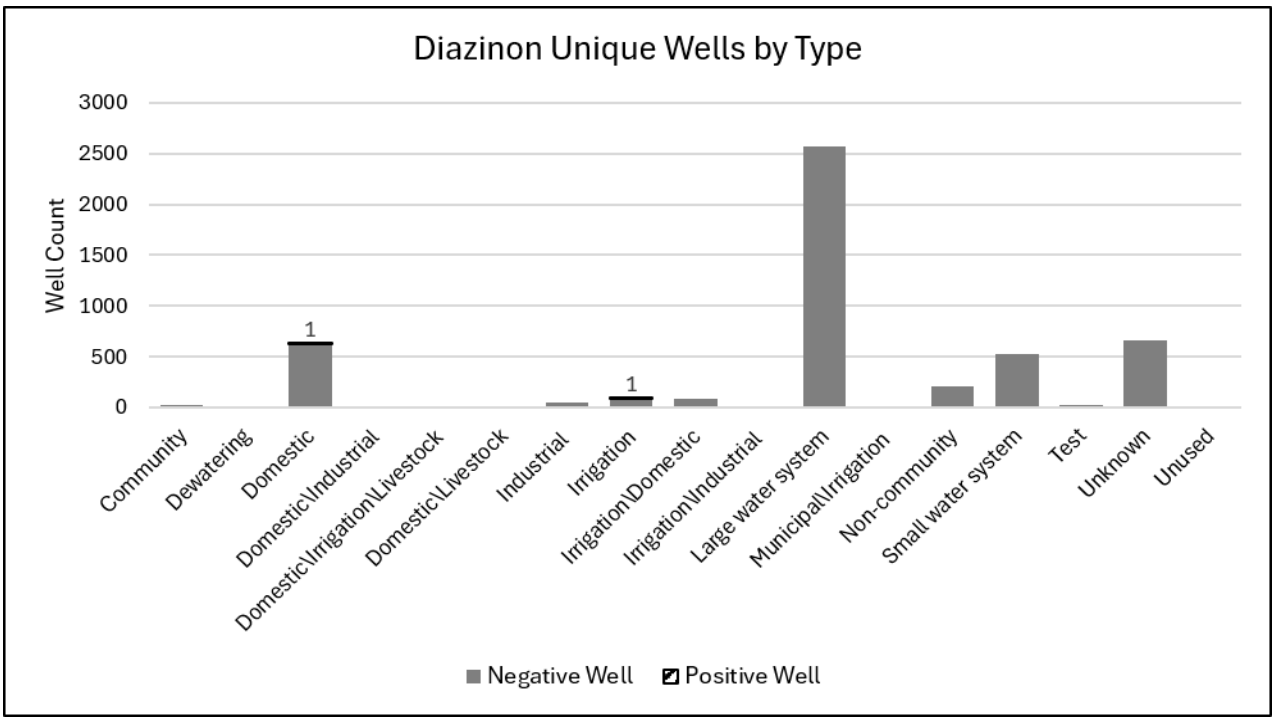


Figure 10. Distribution of unique wells, by type, sampled for dimethoate from 2015-2025. There were no positive wells for this timeframe.

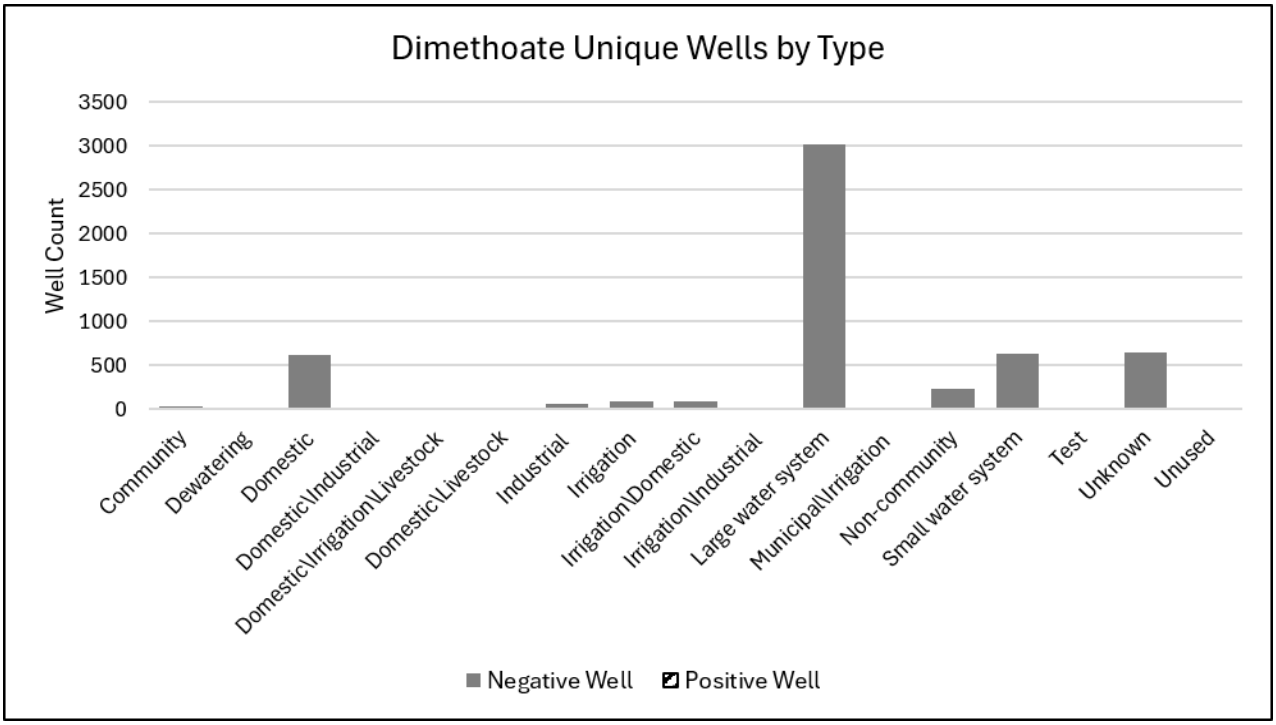


Figure 11. Distribution of unique wells, by type, sampled for ethoprop from 2015-2025. Numbers above columns are positive well totals for each well type.

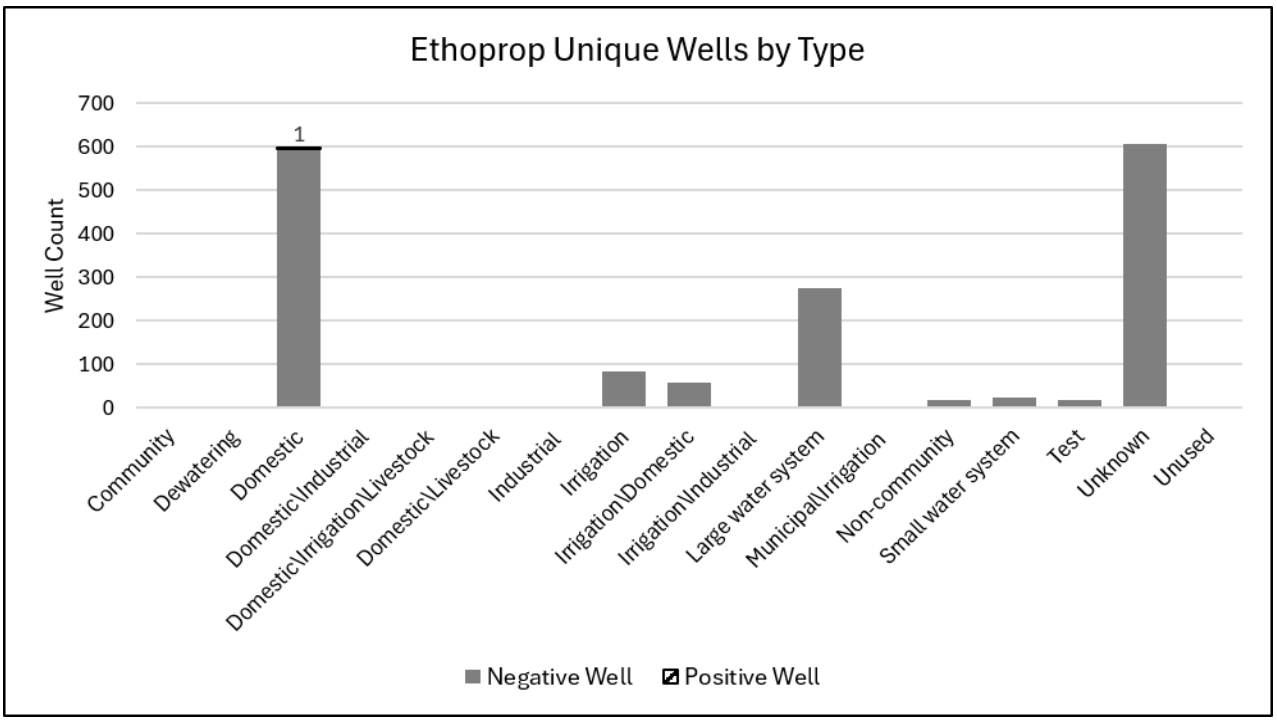


Figure 12. Distribution of unique wells, by type, sampled for phorate from 2015-2025. There were no positive wells for this timeframe.

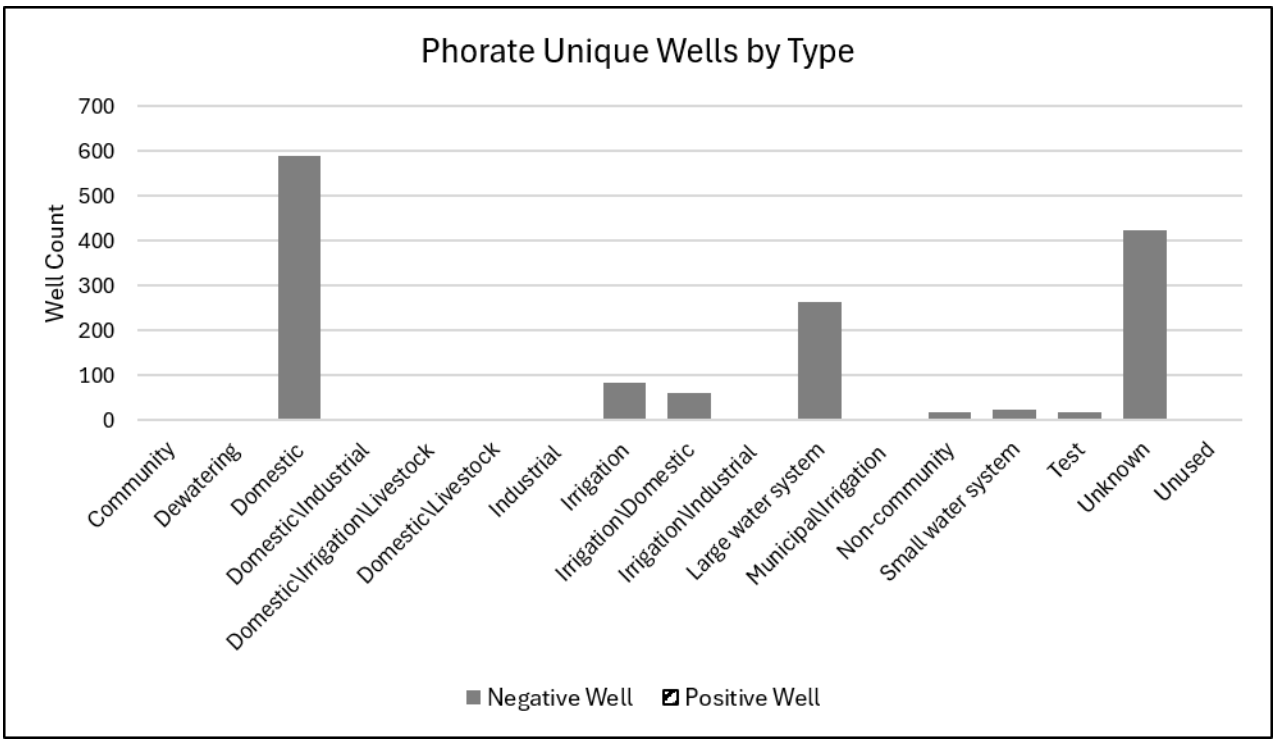


Figure 13. Distribution of unique wells, by type, sampled for phosmet from 2015-2025. There were no positive wells for this timeframe.

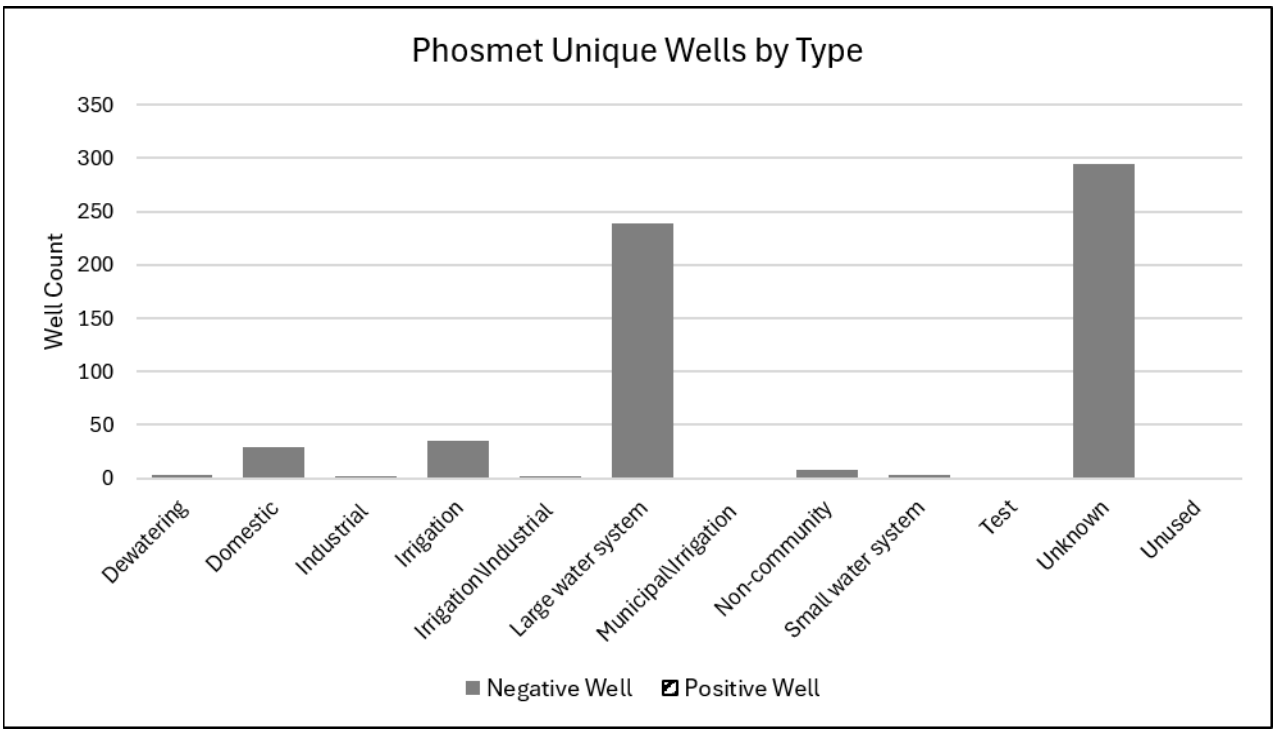
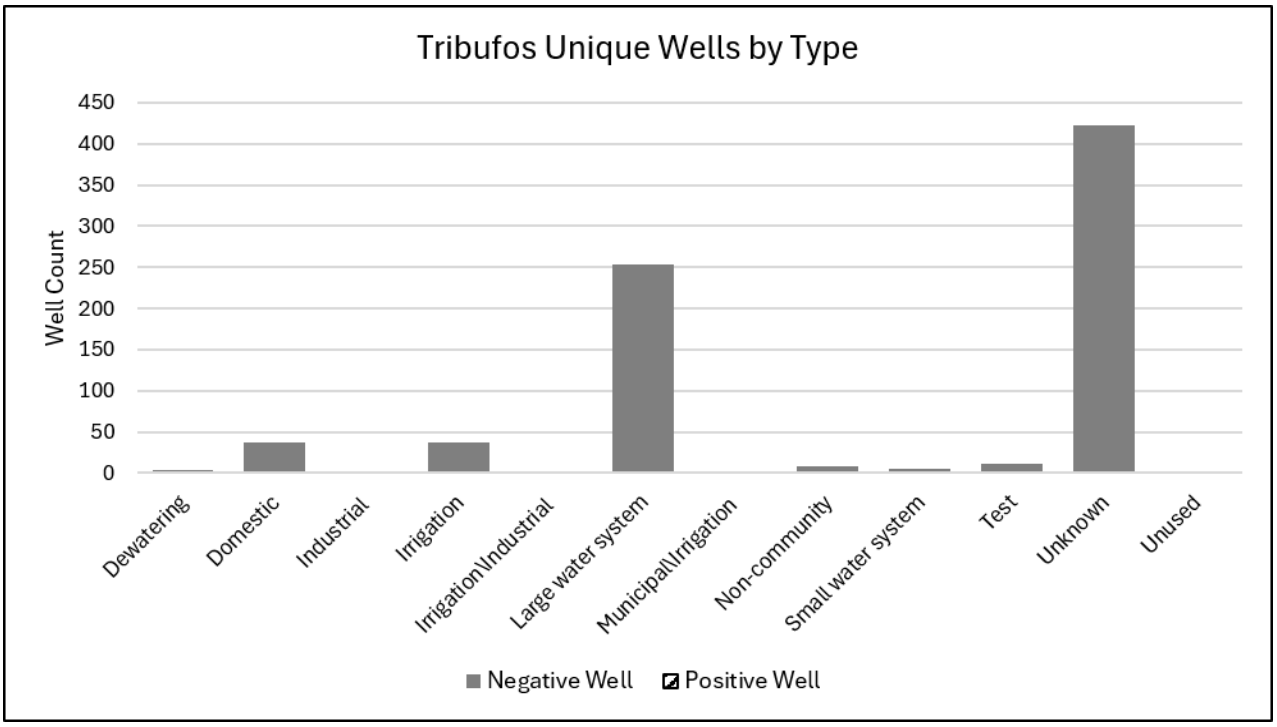


Figure 14. Distribution of unique wells, by type, sampled for tribufos from 2015-2025. There were no positive wells for this timeframe.



Well Inventory Database (WIDB) Background

In the early 1980s, DPR established the WIDB under the authority granted in FAC section 13152(c) and began collecting groundwater sampling data from public agencies. The database currently contains more than 3.4 million records, including monitoring data from over 37,000 public and private wells sampled for more than 520 different pesticides and degradates. Over 7,000 of the wells in the database have reported detections of at least one pesticide or degradate. Although approximately 45 agencies submitted data for inclusion in the database in the past, most data now added comes from DPR, State Water Resource Control Board's Drinking Water Program (SWRCB-DWP), and National Water Quality Monitoring Council's Water Quality Portal (primarily USGS).

The WIDB includes the following information:

- Well location by county
- Well type (domestic, agricultural, industrial, large water system)
- Well sampling agency and study number(s)
- Sample date, analysis date, analyzing laboratory
- Chemical analyzed, concentration detected, method detection limit or reporting limit
- Unusual or important notes about the detection or the analytical method
- Legal agricultural use determination/point or nonpoint source determination
- Year the analysis/detection was added to the database

The dataset available on DPR's website does not include the exact well location for any wells sampled by DPR; instead, the latitude and longitude data provided for DPR-sampled wells are the centroid of their respective public lands survey system section. Data acquired from other agencies through California SDWIS and WQP contain publicly available latitude and longitude and are included in this dataset. Additionally, all wells/samples, regardless of sampling agency, are identified by county, the county-meridian-township-range and section (COMTRS), and the unique well key assigned to all wells in the WIDB.

The WIDB is available for download at: https://calpip.cdpr.ca.gov/wellInventoryDatabase.cfm

Well Type Definitions

Well type is categorized by use. Some categories overlap due to different naming conventions among reporting agencies. The definitions are as follows:

Community: Like a small water system, this category is used for residential connections in a self-contained geographic area. Examples include trailer parks, apartment complexes, and smaller community water systems.

Dewatering: These wells pump water to dewater a construction or mining site or to lower the water table for agricultural purposes. A dewatering well differs from a drainage well that is used to drain surface water to underground.

Domestic: These are single wells associated with a private residence.

Industrial: If a product is manufactured, assembled, remodeled, or otherwise fabricated at the well site, the well is considered industrial.

Irrigation: These wells are for agricultural irrigation purposes.

Large water system: These wells serve more than 200 residential service connections.

Livestock: These wells are used to supply cattle, horses, pigs, or poultry operations.

Municipal: Wells owned by a city, town, or water district.

Non-community: Not for residential purposes. Examples include schools, hospitals, restaurants, filling stations, parks, and campgrounds.

Small water system: These wells serve less than 200 residential service connections. There is overlap between this well type and "Community" wells.

Test: This is similar to the "Unused" category.

Unknown: Well type was not captured during data collection.

Unused: Water is not being removed from the site for one of the purposes described below. A test hole, oil or gas well, recharge, drainage, observation, or waste-disposal well will be assigned to this category.