



2024 Atrazine Use (Legal and Illegal) Inspections Report

Wisconsin Department of Agriculture, Trade and Consumer Protection
Agricultural Resource Management Division
 Environmental Quality Unit
 Final (3-28-2025)

Introduction

The Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) Agrichemical Management (ACM) Bureau is responsible for assuring compliance with Wis. Admin. Code, ch. ATCP 30 - Pesticide Product Restrictions ([Wis. Admin. Code, ch. ATCP 30](#)). Within that chapter, Subchapter VIII deals specifically with the legal- and illegal-use of any herbicide that contain the active ingredient atrazine. This report documents 2024 DATCP ACM inspections associated with atrazine legal- and illegal-use relative to Wis. Admin. Code, chs. ATCP 30.31-30.37, and provides a summary of the inspection program findings and trends.

Wisconsin's general restrictions and requirements for atrazine use have not changed since 2010. It is illegal in Wisconsin to apply any pesticide containing the active ingredient atrazine within an atrazine Prohibition Area (PA). Outside of a PA, atrazine use is restricted, but not prohibited. Currently, there are no PAs under consideration for repeal (Wis. Admin. Code, ch. ATCP 30.375) or any active or under consideration research exemptions (Wis. Admin. Code, ch. ATCP 30.38).

Atrazine in drinking water remains a concern. The 2024 DATCP statewide survey report of agricultural chemicals in groundwater indicated atrazine, or one of its metabolites, was detected in 25.0% of private drinking water sample or estimated to exist in 19.9% of wells in Wisconsin¹. Regarding risk to human health, about 0.2% of the wells contained a total atrazine concentration exceeding the 3.0 micrograms per liter (µg/l or parts per billion [ppb]) Enforcement Standard (ES) listed within Wis. Admin. Code, ch. NR 140.

Atrazine Prohibition Area (Illegal-Use) Inspections

An atrazine PA restricts the ability to use a pesticide that contains the active ingredient atrazine within the designated boundaries. There are currently 101 atrazine PAs covering approximately 1.2 million acres within the state, of which about 247,000 acres are planted in corn (2022 data²). PAs are established once a groundwater sample collected from a residential/private drinking water well is found to contain greater than 3.0 ppb atrazine plus metabolites, and a subsequent investigation reveals that nearby agricultural practices (non-point source) contributed to the atrazine exceedance. This would not include atrazine contamination associated with a point source (spills or bulk release).

DATCP ACM Environmental Enforcement Specialists (EES) have performed annual atrazine illegal-use inspections since 2008. An inspection is performed on a field in agricultural production to verify compliance with Wis. Admin. Code, ch. ATCP 30.37, which states that “...no person may apply atrazine in a prohibition

¹ Wisconsin Department of Agriculture, Trade and Consumer Protection, March 2024. Wisconsin Groundwater Quality. ARM-PUB-465

² United States Department of Agriculture National Agriculture Statistics Service. CropScape - Cropland Data Layer, 2022 Data. nassgeodata.gmu.edu/CropScape

area identified under s. ATCP 30.37...". The goal for 2024 was to perform at least one atrazine illegal-use inspection for each EES territory with a PA (13 total; one EES territory does not contain any PAs). Inspections are performed during the atrazine application season, between April 1 and July 31, and on an existing field planted with corn.

PROGRAM APPROACH AND SELECTION CRITERIA

The first step is to select an agriculture field to inspect. Criteria used for field selection are listed below.

- The Environmental Quality (EQ) Unit Program Manager identifies a field(s) within the PA for the EES to inspect based on atrazine concentration trends at nearby residential/private drinking water wells that are not decreasing at an expected or acceptable rate based on a review of data associated with [DATCP's Exceedance Well Sampling Program](#).
- Referral by neighbors that suggests atrazine may have been used on an agricultural field within the PA.
- Review by EES personnel of herbicide sales records where users of atrazine are known to farm within PAs.
- ESS personnel select a field within the PA where corn is currently grown and has not been inspected prior.

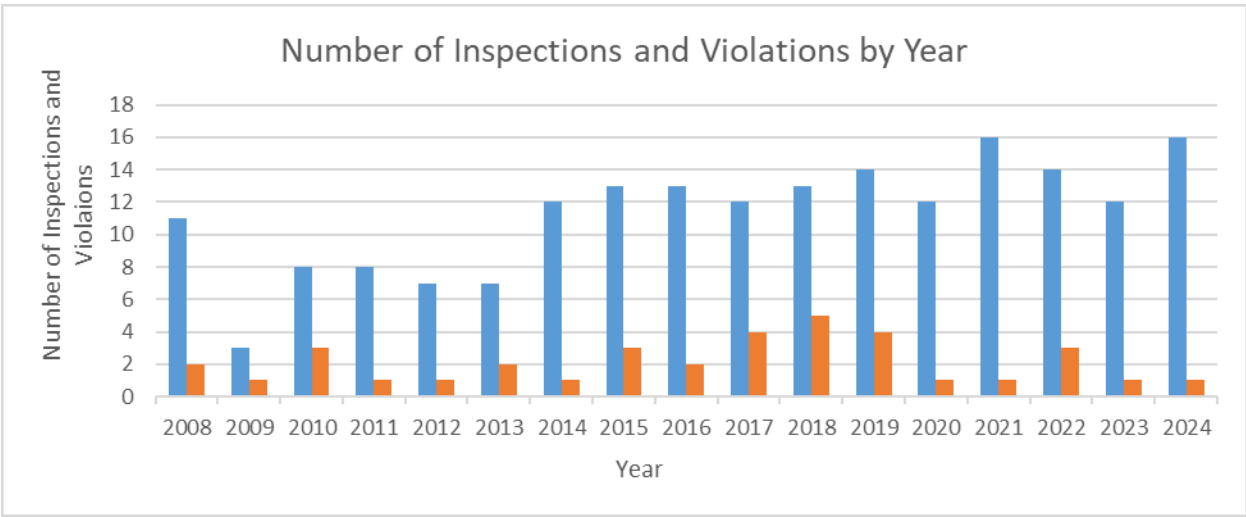
EES personnel meet with the agriculture field operator and/or owner and conducts a records check of the three prior growing seasons (i.e. years), gathers information on the crop(s) grown and the herbicides used on the selected field, and notes whether any herbicide product containing the active ingredient atrazine had been applied. The EES also collects three soil samples; two from the selected field to check for atrazine residue and one from a background location for comparison. These samples are analyzed at DATCP's Bureau of Laboratory Services (BLS) laboratory. The laboratory results are submitted to the Program Manager for evaluation. EES personnel then prepare a report using form ARM-ACM-453, rev 04/20, with appropriate supporting documentation. Reports are submitted to supervisors and the Program Manager for review, analysis, and memorialization.

ILLEGAL-USE INSPECTIONS AND VIOLATIONS

In 2024, 16 inspections were performed in atrazine PAs with one violation recorded involving applying an atrazine product to an agricultural field within a PA. This illegal application occurred within Sauk County, PA 93-57-02, by a commercial applicator. The applicator claimed they did not realize the field was within a PA. A civil forfeiture for a total of six violations was imposed.

Since 2008, 191 inspections were performed in atrazine PAs, yielding an overall violation rate of 18.8% (36 violations). Commercial applicators provided service for 84 (44%) of the fields inspected, yielding a violation rate of 26.2%. Self-applicators accounted for the remaining 107 (56%) inspected fields, yielding a violation rate of 13.1%, much less than the commercial applicator rate of violations. [Figure 1](#) depicts inspection and violations by year. A summary of atrazine illegal-use inspection results over the years is provided in [Appendix A](#).

Figure 1: Atrazine Illegal-Use Inspections and Violations



Notes: ■ Number of atrazine illegal-use inspections within stated year.
■ Number of violations associated with an atrazine illegal-use inspection within the stated year.

The atrazine illegal-use inspection program has encountered violations every year since inspections began in 2008. In 2024, the percentage of violations observed were similar to violation rates observed during the previous four years. It is important to note that EES personnel are searching for inspection locations with an increased chance that a violation may occur. This selection process introduces a bias regarding the selection of field(s) where an inspection will occur. A random approach in field selection versus the current field selection process would likely yield fewer violations.

ATRAZINE IN SOIL SAMPLES

Overall, atrazine concentrations in excess of laboratory detection limits have been identified in 14.7% (28 out of 191 locations) of soil samples collected from fields associated with atrazine illegal-use inspections. In 2024, the one location where a violation was identified (e.g. a location where atrazine was illegally applied to a field inside an atrazine PA), no atrazine was detected in excess of laboratory reporting limits (0.03 parts per million [ppm]) in any of the soil collected from that location. Over the course of the inspection program, atrazine was detected in soil samples collected from 10 of the 32 fields where atrazine was illegally applied to fields (self-reported by operator or applicator). Detected atrazine concentrations in these samples ranged from 0.0346 to 0.949 ppm.

Over the course of the inspection program, the top three compounds that have been detected in soil are metolachlor, acetochlor, and atrazine. Overall, 20 different compounds have been detected in soil samples collected during the inspection program at concentrations greater than laboratory reporting limits. (For the first time, tebupirimphos was detected at a concentration greater than laboratory reporting limits in a 2024 atrazine inspection soil sample collected from a field in Walworth County.) Table 1 identifies the compounds detected more than twice and their maximum detected concentration.

In 2024, concentrations of metolachlor (at seven different fields), acetochlor (at three different fields), pendimethalin (at one field), dimethenamid (at one field), and tebupirimphos (first time at one field) were detected in excess of laboratory reporting limits in soil samples. Dimethenamid was detected at a concentration of 1.27 ppm in a soil sample collected during an inspection completed in Portage County, PA 99-50-01. This is greater than the previous maximum concentration detected for dimethenamid (0.146 ppm).

Table 1: Soil Sample Results for the Atrazine Illegal-Use Inspection Program

Analyte	Number of Detections	Maximum Concentration (ppm)
metolachlor	116	1.46
acetochlor	55	3.33
atrazine	45	0.949
pendimethalin	13	2.96
simazine	11	0.587
boscalid	7	1.11
alachlor	5	0.695
dimethenamid	4	0.146
tefluthrin	2	0.622
chlordane	2	0.423
chlorothalonil	2	1.76
terbufos	2	3.58

Notes: ppm = parts per million

Over the course of the inspection program, atrazine was detected in soil samples collected from 14 fields where the operator or applicator either did not admit to using atrazine or had records indicating atrazine was not applied to the field. There were no detects of atrazine in excess of laboratory detection limits in any of the soil samples collected in 2024. For most of the 14 sites where atrazine was detected but with no reported activity, the detected atrazine concentrations are considered low (minimal risk to human health and the environment). Potential explanations for the detected atrazine detected in soil samples collected during these investigations are as follows:

- Carry-over from previous use within the field (prior to the three-year record review conducted during the inspection);
- Atmospheric deposition;
- Carry-over from equipment that was used at a field where atrazine was applied;
- Residue from atrazine applied at adjacent or nearby fields (that may be inside or outside the PA); or
- Illegal use on that field and not having proper paperwork, or the willingness, to admit to the violation.

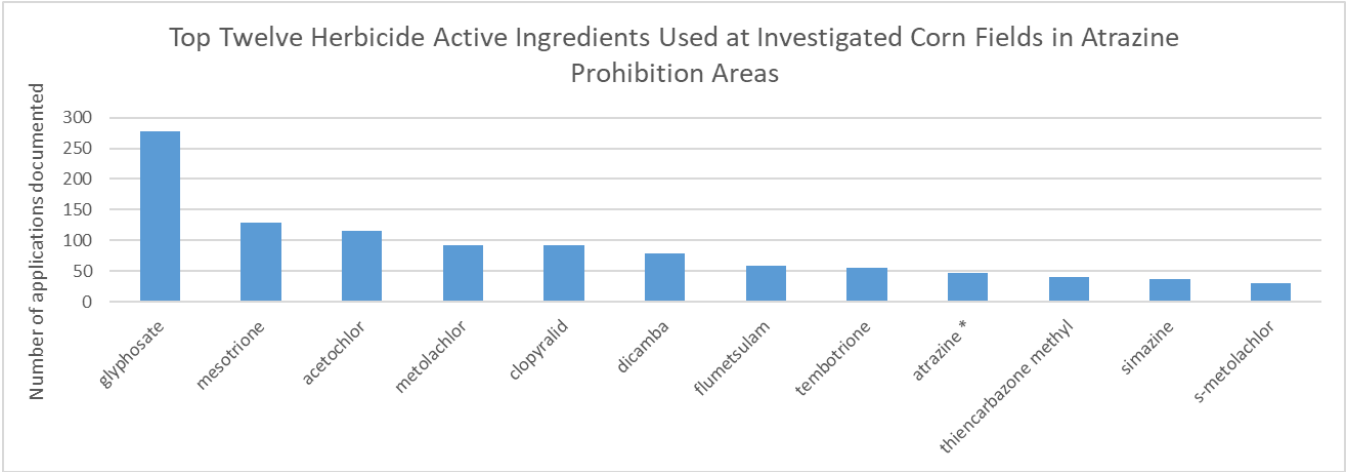
Currently, there is no reliable scientific understanding to explain the atrazine source or time of application in these type of scenarios. It is likely that these low concentrations will have no detrimental effect on local groundwater quality. However, if the detected atrazine concentrations are a result of illegal use (used prior to the three-year inspection window, falsified records, or lack of cooperation by violator), the protocol of following up with the field operator and/or applicator would be implemented. Current DATCP protocol is to perform follow-up inspections if atrazine concentrations in a soil sample exceeds a threshold of 0.25 ppm. The threshold for follow-up inspections had only occurred three times: in 2010 and 2022, associated with soil samples collected from two different Iowa County PA locations; and in 2023, associated with soil samples collected from a PA in Jackson County. Subsequent investigations were unable to identify the source of the atrazine for all three incidents.

HERBICIDES USED IN PAS

As part of the atrazine illegal-use inspection in a PA, EES staff also collect crop and herbicide information for the current year and previous two years. A compilation of this information indicates that over 62 different active agrichemicals have been applied on the investigated corn fields within PAs inspected. By far, the most commonly used herbicide active ingredient is glyphosate. [Figure 2](#) depicts the 12 herbicides most frequently used on the cornfields inspected within PAs. Based on the biased approach for field selection and the

inspection information collected, atrazine is the ninth most common active ingredient used on fields within the PAs.

Figure 2: Herbicide Use Recorded During Atrazine Illegal-Use Inspection Program



Notes: **Illegal use of atrazine*
■ Number of times agrichemical was reportedly applied to inspected fields.

It should be noted that glyphosate has not been analyzed as part of the inspection program’s soil sampling. Based on chemical composition, it is unlikely that glyphosate will migrate from soil and affect groundwater quality.

Atrazine Legal-Use Inspections

An atrazine legal-use inspection is completed on a field with corn crops to verify compliance with Wis. Admin. Code, chs. ATPC 30.31 and ATPC 30.32. For 2024, DATCP did not perform any atrazine legal-use inspections. Instead, each EES conducted additional outreach and provided educational seminars/presentations regarding the need and benefits of an appropriate Irrigation Management Plan and atrazine label application set-back requirements. The intent was to provide focus to the atrazine application community regarding the regulations and then restart the inspections in 2025 to measure compliance to these focused elements. EES staff conducted numerous seminars and presentations with stakeholders, registrants, and the farming community through the year.

2025 Program Goals and Objectives

In 2025, the atrazine illegal-use inspection program will continue. 2025 program goals are listed below.

- At least one atrazine illegal-use inspection will be completed inside a PA for 13 of the 14 EES territories.
- Two additional atrazine illegal-use inspections will be completed inside PAs in Portage County (which was also completed in 2024) to further evaluate atrazine concentrations observed in local groundwater samples.
- At least one atrazine legal-use inspection will be completed for each EES territory.
- A 2025 Summary Report will be completed at the end of the inspection season.

The Program Manager has provided a number of recommended fields for atrazine illegal-use inspections for 2025 field selection. For 2025, a continual greater focus will be placed on fields within PAs where commercial applicators are used and where irrigation is used.

APPENDIX A

TABLE OF ATRAZINE ILLEGAL-USE INSPECTIONS

Year	Inspections			Violations			Atrazine Detects in Soil	Year Notes
	Total	Private App	Commercial App	Total	Private App	Commercial App		
2008	11	11	0	2	2	0	1	Atrazine detect in soil at farm in PA 93-65-02; Walworth County. Letter of concern submitted. Other violation was improper records
2009	3	3	0	1	1	0	1	Atrazine illegally used by unlicensed applicator in PA 96-33-01, Lafayette County, and soil detects. Letter warning issued.
2010	8	6	2	3	2	1	2	Atrazine illegally used in PA 00-56-01 in St. Croix County (private applicator). No paperwork. No soil detects. Letter warning issued. Non-violation with soil detect associated with equipment carry-over. Second was record-keeping issue. Atrazine illegally used in PA93-65-01 in Walworth County (commercial applicator, Conserv FS-Zenda). No soil detects.
2011	8	6	2	1	1	0	1	Atrazine illegally used in PA 93-22-01 in Grant County (private applicator). Soil detects. Letter warning issued.
2012	7	0	7	1	0	1	1	Atrazine illegally used in PA 98-37-01 in Marathon County (commercial applicator, Central Wisconsin Cooperative). Soil detects. Letter warning issued.
2013	7	5	2	2	1	1	1	Atrazine illegally used in PA 93-48-01 in Pierce County (private applicator). Letter warning issued. Atrazine illegally used in PA 93-09-02 in Chippewa County (commercial applicator, Asgrow Services). No soil detects. Atrazine detect in soil collected within PA 93-57-04, which was not further investigated. Note; this does not include the seven United Coop locations where they self-identified in violation for atrazine application.
2014	12	5	7	1	0	1	2	Atrazine illegally used in PA 94-56-02 in St. Croix (commercial applicator, Countryside Cooperative). Soil detects. Atrazine detect in soil collected within PA 93-54-05, which was not further investigated.
2015	13	6	7	3	0	3	4	Atrazine illegally used in PA 93-09-01 in Chippewa County (commercial applicator, River Country Coop). Soil detects. Verbal warning issued. A second, atrazine illegally used in PA 93-09-01 in Chippewa County (commercial applicator, River Country Coop). Soil detects. Verbal warning issued. Atrazine illegally used in PA 93-09-02 in Chippewa County (commercial applicator, River Country Cooperative). No soil detects. Verbal warning issued. Atrazine detect in soil collected within PA 95-25-01, which was not further investigated. Atrazine detect in soil collected within PA 93-65-02, which was not further investigated.
2016	13	8	5	2	1	1	1	Atrazine detect in soil collected within PA 98-63-01, which was not further investigated. First and second violations were associated with improper records. Verbal guidance provided in both instances.
2017	12	3	9	4	0	4	3	Atrazine illegally used in PA 93-25-01 in Iowa County (commercial applicator, Premier Cooperative). Soil detects. Written warning issued. Atrazine illegally used in PA 93-45-02 in Outagamie County (commercial applicator, Greenville Coop [which was taken over by United Cooperative in 2017]). No soil detects. Written warning issued and case developed. Atrazine illegally used in PA 02-29-01 in Juneau County (commercial applicator, Allied Cooperative). Soil detects. Written warning issued. Atrazine detect in soil collected within PA 94-56-02, which was not further investigated. Atrazine illegally used in PA 93-62-01 in Trempealeau County (commercial applicator, Countryside Cooperative). No soil detects. Written warning issued.
2018	13	5	8	5	2	3	2	Atrazine illegally used in PA 97-50-01 in Portage County (commercial applicator, Provision Partners Coop). No soil detects. Atrazine illegally used in PA 93-09-02 in Chippewa County (self applicator). Soil detects. Written warning issued. Atrazine illegally used in PA 94-56-02 in St. Croix County (commercial applicator, Federated Coop Inc.). No soil detects. Written warning issued. Atrazine illegally used in PA 11-11-01 in Columbia County (self applicator). No soil detects. Written warning issued. Atrazine illegally used in PA 98-63-01 in Vernon County (commercial applicator, Ag Consulting and Products). Soil detects. Written warning issued.
2019	14	4	10	4	1	3	2	Atrazine illegally used in PA 94-42-01 in Monroe County (commercial applicator, Allied Cooperative). One soil sample had atrazine detect (0.0366 ppm). Financial penalty imposed for two instances. Atrazine illegally used in PA 96-54-01 in Rock County (commercial applicator, Landmark Services Coop.). No soil detects. Financial penalty imposed for one instance. Atrazine illegally used in PA 98-37-01 in Marathon County (commercial applicator, Provision Partners). No soil detects. Financial penalty imposed for three instances. Atrazine illegally used in PA 93-09-02 in Chippewa County (self applicator). No soil detects. Financial penalty imposed for one instance.
2020	12	9	3	1	0	1	1	Atrazine illegally used in PA 93-09-02 in Chippewa County (commercial applicator, River Country Coop). No soil detects. Financial penalty imposed for one instance. Atrazine detect in soil sample collected from PA 97-50-03, which was not further investigated.
2021	16	8	8	1	0	1	2	Atrazine illegally used in PA 97-27-01 in Jackson County (commercial applicator, Melrose Farm Supply). No soil samples were chemically analyzed. Official warning imposed for one instance. Atrazine detect in soil samples collected from PAs 93-56-01 and 93-09-02, which were not further investigated.
2022	14	8	6	3	2	1	2	Atrazine illegally applied in one location, PA 93-54-02 in Rock County (self applied, Mueller Farms), and applied and mixed at two other locations; PA 94-70-01 in Waushara County (self applied, Bacon Farms) and PA 99-14-02 in Dodge County (commercial applicator, Country Visions Cooperative). No atrazine soil detects at these three locations. Financial penalty imposed on all three. Atrazine detect in soil samples collected from PAs 94-27-03 (Jackson County) and 93-25-01 (Iowa County). Further investigation on Iowa County site because of excessive atrazine concentrations. Official warning imposed for each.
2023	12	9	3	1	1	0	2	Atrazine illegally mixed and loaded, PA 99-14-02 in Dodge County (self operator). Written warning issued. Atrazine detects in soil samples collected from PAs 93-25-01 (Iowa County) and 97-27-01 (Jackson County). Further investigation on Jackson County site because of excessive atrazine concentration.
2024	16	11	5	1	0	1	0	Atrazine illegally applied in one location, PA 93-57-02 in Sauk County (commercial services). Financial penalty imposed for six violations on this one infraction.
	191	107	84	36	14	22	28	
		56.0%	44.0%	18.8%	13.1%	26.2%	14.7%	

APPENDIX B

TABLE OF ATRAZINE LEGAL-USE INSPECTIONS

Year	Inspections			Violations			Inspection Notes	Irrigation	Soil Moisture Method	In Compliance	Irrigation Notes
	Total	Self/Private App	Commercial App	Total	Private App	Commercial App					
2011	1	1	0	1	1	0	Applied rate of 1 lb/acre in a coarse soil texture field in Jackson County. Letter warning issued.	0			
2014	2	0	2	1	0	1	no written irrigation plan for field in Chippewa County	1	none	0	Did not have a written Irrigation Management Plan.
2015	8	2	6	2	1	1	two violations due to improper record paperwork (Waukhara [Heartland Farms] and Marathon [Amish] Counties). Verbal warning issued.	2	soil probes (commercial)	0	Did not inspect written plan, suspect one does not exist
2016	12	7	5	4	3	1	four violations due to improper record paperwork (Dodge, Eau Claire, Waukhara [Insight FS] and Juneau Counties). Verbal warning for three and also written warning for lack of Irrigation Management Plan in Juneau County.	1	none	0	Written warning issued due to lack of Irrigation Management Plan
2017	16	10	6	4	3	1	three violations due to improper paperwork (Lincoln, Winnebago and Walworth Counties). Verbal warnings issued. Applied rate of 0.8 lb/acre in a coarse soil texture field in Columbia County. Verbal warning issued.	5	one hand textured (commercial in Chippewa County) and one soil probes	5	two of the five could use improvements
2018	13	7	6	5	3	2	three violations due to improper paperwork (St. Croix, Columbia and Juneau Counties). Verbal and written warnings issued. Both commercial violations were over application, 1.0 lb/acre (Rusk County Farm Supply) and 0.78 lb/acre (Allied Cooperative) in a coarse soil texture field in Rusk and Adams Counties, respectively. Written warnings issued.	1		1	
2019	14	6	8	1	1	0	the one violation is due to improper paperwork (Iowa County). Verbal warning issued.	0			
2020	15	6	8	0	0	0	No violations. However, a 2018 field with fine soils received a 1.5 lbs/acre. But no information on 2017 application.	1	probes in field and hand checked	1	
2021	17	10	7	4	3	1	All four violations were associated with improper documentation.	1		0	Did not have a written Irrigation Management Plan. Operator assessed the need through tracking precipitation, consulting the forecast, and periodically visually inspecting soil moisture and crop conditions.
2022	12	9	3	3	3	0	All three violations were associated with improper documentation.	0		0	
2023	16	8	8	7	6	1	Six of the violations were associated with improper documentation. The seventh violation was associated with an atrazine-applied site that was irrigated, but did not have an Irrigation Management Plan.	1		0	Did not have a written Irrigation Management Plan.
2024	0	0	0	0	0	0	No inspections conducted in 2024.	0		0	
	126	66	59	32	24	8		13		7	
		52.4%	46.8%	25.4%	40.7%	13.6%		10.3%		53.8%	