

Pesticide Groundwater Quality Protection

2024 Annual Report

Prepared by the Arizona Department of Environmental Quality



Clean Air, Safe Water,
Healthy Land for Everyone

This report has been prepared by the Arizona Department of Environmental Quality (ADEQ) as mandated by Arizona Revised Statutes (A.R.S.) §49-303(C).

The Arizona Pesticide Groundwater Quality Protection Program is responsible for evaluating mobility and persistence data submitted in support of new pesticide product registration. After completing a substantive technical review of data, ADEQ determines if the products active ingredient poses a threat to groundwater quality.

A.R.S. § 49-303.C.1. Data gaps

There were no groundwater protection data gaps for any of the active ingredients associated with the agricultural-use pesticides registered in Arizona in 2023

A.R.S. § 49-303.C.2 and A.R.S. § 49-303.C.3 List of pesticides with active ingredients that have a potential to pollute groundwater

ADEQ reviews product chemistry and environmental fate submittal for pesticide active ingredients. The data are compared with Specific Numeric Values (SNVs) found in the Arizona Administrative Code (A.A.C.) R18-6-103.1. SNVs are based on the U.S. Environmental Protection Agency’s (EPA) criteria for identifying pesticide active ingredients that have the potential to leach to groundwater based on the factors of mobility and persistence in the subsurface environment.

Agricultural-use pesticide active ingredients that fail at least one SNV from both the mobility and persistence factors or based on environmental fate analysis are considered as having the potential to pollute groundwater. As an alternative to the SNVs, evaluation procedures have been adopted in A.A.C. R18-6-103.2 that allow for consideration of new scientific approaches in determining the pollution potential of agricultural-use pesticides. Active ingredients determined to have the potential to pollute groundwater are placed on the Groundwater Protection List (GWPL). See Appendix A for the 2023 GWPL.

A.R.S. § 49-303.C.4 Amount of pesticide applied and for what purpose

Application of a pesticide with an active ingredient, the location and amount, and the purpose is reported to the Arizona Department of Agriculture. This information is located in Appendix B and Appendix C.

Appendix A. 2022 Groundwater Protection List

The GWPL includes the brand name of the pesticide, the EPA Registration Number, Active Ingredient, and the Chemical Abstracts Service (CAS) Number.

Appendix A. 2023 Groundwater Protection List					
Brand Name	EPA1	EPA2	EPA3	Active Ingredient	CAS Number
ACTIGARD 50 WG PLANT ACTIVATOR	100	922	0	Acibenzolar-s-methyl	135158-54-2
AATREX 4L HERBICIDE	100	497	0	Atrazine	1912-24-9
AATREX NINE-O HERBICIDE	100	585	0	Atrazine	1912-24-9
AGRISOLUTIONS ATRAZINE 4L	1381	158	0	Atrazine	1912-24-9
ATRAZINE 4L HERBICIDE	100	497	72693	Atrazine	1912-24-9
ATRAZINE 4L HERBICIDE	66222	36	0	Atrazine	1912-24-9
ATRAZINE 4L HERBICIDE	34704	69	0	Atrazine	1912-24-9
DREXEL ATRAZINE 4L HERBICIDE	19713	11	0	Atrazine	1912-24-9
ABOUND FLOWABLE FUNGICIDE	100	1098	0	Azoxystrobin	131860-33-8
ABOUND FLOWABLE FUNGICIDE	10182	415	0	Azoxystrobin	131860-33-8
AFRAME	100	1098	0	Azoxystrobin	131860-33-8
QUADRIIS FLOWABLE FUNGICIDE	100	1098	0	Azoxystrobin	131860-33-8
GOWAN SEVIN BAIT AGRICULTURE POISON BAIT	10163	32	0	Carbaryl	63-25-2
SEVIN 5 BAIT	2935	366	0	Carbaryl	63-25-2
SEVIN XLR PLUS	61842	37	0	Carbaryl	63-25-2
AIM EC HERBICIDE (AZ-130003)	279	3241	0	Carfentrazone-ethyl	128639-02-1
DISPLAY COTTON HARVEST AID	279	9558	0	Carfentrazone-ethyl	128639-02-1
ACELEPRYN	100	1489	0	Chlorantraniliprole	500008-45-7
BESIEGE INSECTICIDE	100	1402	0	Chlorantraniliprole	500008-45-7
DUPONT CORAGEN INSECT CONTROL	352	729	0	Chlorantraniliprole	500008-45-7
VOLIAM FLEXI INSECTICIDE	100	1319	0	Chlorantraniliprole	500008-45-7
VOLIAM XPRESS INSECTICIDE	100	1320	0	Chlorantraniliprole	500008-45-7
STATUS HERBICIDE	7969	242	0	Dicamba, sodium salt	1982-69-0
FORUM FUNGICIDE	241	427	0	Dimethomorph	110488-70-5
ZAMPRO FUNGICIDE	7969	302	0	Dimethomorph	110488-70-5
SCORPION™ 35SL INSECTICIDE	10163	317	0	Dinotefuran	165252-70-0
VALENT VENOM INSECTICIDE	59639	135	0	Dinotefuran	165252-70-0
REDI-PIK 1.5EC COTTON DEFOLIANT	264	634	66222	Diuron	330-54-1
REDI-PIK1.5EC COTTON DEFOLIANT	66222	137	0	Diuron	330-54-1
PROCLAIM INSECTICIDE	100	904	0	Emamectin benzoate	137512-74-4
KATANA TURF HERBICIDE	71512	12	2217	Flazasulfuron	104040-78-0
BELEAF 50SG INSECTICIDE	71512	10	279	Fonicamid	158062-67-0
CARBINE 50 WG INSECTICIDE	71512	9	279	Fonicamid	158062-67-0
ISK BIOSCIENCE BELEAF 50SG INSECTICIDE	71512	10	0	Fonicamid	158062-67-0
LUNA SENSATION	264	1090	0	Fluopyram	658066-35-4
VELUM ONE	264	1078	0	Fluopyram	658066-35-4
EVITO 480 SC	66330	64	0	Fluoxastrobin	193740-76-0
EVITO 480 SC	70506	396	0	Fluoxastrobin	193740-76-0
LIBERTY 280 SL HERBICIDE	264	829	0	Glufosinate-ammonium	77182-82-2
LIBERTY 280 SL HERBICIDE	7969	448	0	Glufosinate-ammonium	77182-82-2
PROFINE 75 HERBICIDE	2749	528	0	Halosulfuron-methyl	100784-20-1
CLEARCAST HERBICIDE	241	437	0	Imazamox	114311-32-9
CLEARCAST HERBICIDE	241	437	67690	Imazamox	114311-32-9
RAPTOR HERBICIDE	241	379	0	Imazamox	114311-32-9

Appendix A. 2023 Groundwater Protection List

Brand Name	EPA1	EPA2	EPA3	Active Ingredient	CAS Number
ADMIRE PRO SYSTEMIC PROTECTANT INSECTICIDE	264	827	0	Imidacloprid	138261-41-3
AGRI STAR MACJHO 4.0 FLOWABLE INSECTICIDE	42750	140	0	Imidacloprid	138261-41-3
ALIAS 4F FLOWABLE INSECTICIDE	66222	156	0	Imidacloprid	138261-41-3
MACHO 2.0 FL	42750	110	0	Imidacloprid	138261-41-3
MALLET 2F T & O INSECTICIDE	228	695	0	Imidacloprid	138261-41-3
MERIT 75 WSP INSECTICIDE	3125	439	0	Imidacloprid	138261-41-3
MERIT 75 WSP INSECTICIDE	432	1318	0	Imidacloprid	138261-41-3
NUPRID 4F MAX INSECTICIDE	228	528	0	Imidacloprid	138261-41-3
TRIPLE CROWN GOLF INSECTICIDE	279	3457	0	Imidacloprid	138261-41-3
WRANGLER INSECTICIDE	34704	931	0	Imidacloprid	138261-41-3
SPECTICLE FLO	101563	207	0	Indaziflam	950782-86-2
SPECTICLE FLO	432	1518	0	Indaziflam	950782-86-2
LOROX DF AGRICULTURAL HERBICIDE	61842	23	0	Linuron	330-55-2
LOROX® DF HERBICIDE	61842	23	0	Linuron	330-55-2
OSPREY HERBICIDE	264	802	0	Mesosulfuron-methyl	208465-21-8
DUPONT LANNATE LV INSECTICIDE	352	384	0	Methomyl	16752-77-5
DUPONT LANNATE SP INSECTICIDE	352	342	0	Methomyl	16752-77-5
LANNATE LV INSECTICIDE	352	384	0	Methomyl	16752-77-5
LANNATE LV INSECTICIDE	61842	55	0	Methomyl	16752-77-5
LANNATE SP	352	342	0	Methomyl	16752-77-5
LANNATE SP	62719	342	0	Methomyl	16752-77-5
NUDRIN LV INSECTICIDE	83100	27	83979	Methomyl	16752-77-5
NUDRIN SP INSECTICIDE	83100	28	83979	Methomyl	16752-77-5
ENGAME	68891	8	0	Methoxyfenozide	161050-58-4
ENGAME	62719	442	0	Methoxyfenozide	161050-58-4
INTREPID 2F	62719	442	0	Methoxyfenozide	161050-58-4
WITHSTAND	62719	442	0	Methoxyfenozide	161050-58-4
SENCOR 75% TURF HERBICIDE	101563	129	0	Metribuzin	21087-64-9
SENCOR 75% TURF HERBICIDE	432	1469	0	Metribuzin	21087-64-9
CAPAROL 4L HERBICIDE	100	620	0	Prometryn	7287-19-6
QUINCLORAC 75 DF	66222	160	0	Quinclorac	84087-01-4
TEBUSTAR 36L	42750	99	0	Tebuconazole	107534-96-3
ACTARA INSECTICIDE	100	938	0	Thiamethoxam	153719-23-4
CENTRIC 40WG INSECTICIDE	100	1147	0	Thiamethoxam	153719-23-4
ENDIGO ZC INSECTICIDE	100	1276	0	Thiamethoxam	153719-23-4
PALISADE EC	100	949	0	Trinexapac-ethyl	95266-40-3
PODIUM	100	937	0	Trinexapac-ethyl	95266-40-3
PRIMO MAXX	100	937	0	Trinexapac-ethyl	95266-40-3

Appendix B. Reported Use of Pesticides in Arizona by County – January 1, 2023 to December 31, 2023							
County	Type	Active ingredient	CAS	Brand name	Acres	Chem total	Unit
COCHISE	FUNGICIDE	Azoxystrobin	131860-33-8	ABOUND FLOWABLE FUNGICIDE	245.1	4	GAL
COCHISE	FUNGICIDE	Azoxystrobin	131860-33-8	ABOUND FLOWABLE FUNGICIDE	122.55	2	GAL
COCHISE	HERBICIDE	Carfentrazone-ethyl	128639-02-1	AIM EC HERBICIDE (AZ-130003)	1098	24.9	GAL
COCHISE	INSECTICIDE	Imidacloprid	138261-41-3	ALIAS 4F FLOWABLE INSECTICIDE	32	51.2	OZS
COCHISE	HERBICIDE	Atrazine	1912-24-9	ATRAZINE 4L HERBICIDE	27940.35	8862.3	GAL
COCHISE	HERBICIDE	Atrazine	1912-24-9	ATRAZINE 4L HERBICIDE	27940.35	8862.3	GAL
COCHISE	INSECTICIDE	Flonicamid	158062-67-0	CARBINE 50 WG INSECTICIDE	472	72.5	LBS
COCHISE	HERBICIDE	Atrazine	1912-24-9	DREXEL ATRAZINE 4L HERBICIDE	1385.46	398.2	GAL
COCHISE	INSECTICIDE	Methoxyfenozide	161050-58-4	INTREPID 2F	88	7.3	GAL
COCHISE	HERBICIDE	Imazamox	114311-32-9	RAPTOR HERBICIDE	12794	418.6	GAL
COCHISE	DEFOLIANT	Diuron	330-54-1	REDI-PIK1.5EC COTTON DEFOLIANT	612	57.5	GAL
COCHISE	DEFOLIANT	Diuron	330-54-1	REDI-PIK1.5EC COTTON DEFOLIANT	120	1596	OZS
COCHISE	HERBICIDE	Dicamba, sodium salt	1982-69-0	STATUS HERBICIDE	23220.96	6732.8	LBS
COCHISE	INSECTICIDE	Dinotefuran	165252-70-0	VALENT VENOM INSECTICIDE	64	8	LBS
GRAHAM	HERBICIDE	Carfentrazone-ethyl	128639-02-1	AIM EC HERBICIDE (AZ-130003)	1290	19.9	GAL
GRAHAM	HERBICIDE	Atrazine	1912-24-9	ATRAZINE 4L HERBICIDE	7240	3141.3	GAL
GRAHAM	HERBICIDE	Atrazine	1912-24-9	ATRAZINE 4L HERBICIDE	7240	3141.3	GAL
GRAHAM	HERBICIDE	Atrazine	1912-24-9	DREXEL ATRAZINE 4L HERBICIDE	1213	577.9	GAL
GRAHAM	HERBICIDE	Imazamox	114311-32-9	RAPTOR HERBICIDE	1950	63.4	GAL
GRAHAM	HERBICIDE	Dicamba, sodium salt	1982-69-0	STATUS HERBICIDE	4003	1254.4	LBS
LA PAZ	INSECTICIDE	Imidacloprid	138261-41-3	ALIAS 4F FLOWABLE INSECTICIDE	19	190	OZS
LA PAZ	INSECTICIDE	Flonicamid	158062-67-0	CARBINE 50 WG INSECTICIDE	226.6	39.7	LBS
LA PAZ	INSECTICIDE	Methoxyfenozide	161050-58-4	ENGAME	455.2	22	GAL
LA PAZ	INSECTICIDE	Methoxyfenozide	161050-58-4	INTREPID 2F	1343.19	91.7	GAL
LA PAZ	INSECTICIDE	Methoxyfenozide	161050-58-4	INTREPID 2F	1677.94	99.5	GAL
LA PAZ	INSECTICIDE	Methomyl	16752-77-5	LANNATE SP	171.7	171.7	LBS
LA PAZ	HERBICIDE	Imazamox	114311-32-9	RAPTOR HERBICIDE	1490.6	42.4	GAL

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County	Type	Active ingredient	CAS	Brand name	Acres	Chem total	Unit
LA PAZ	DEFOLIANT	Diuron	330-54-1	REDI-PIK1.5EC COTTON DEFOLIANT	746.25	9701.3	OZS
MARICOPA	HERBICIDE	Atrazine	1912-24-9	AATREX 4L HERBICIDE	465.3	134.1	GAL
MARICOPA	HERBICIDE	Atrazine	1912-24-9	AATREX NINE-O HERBICIDE	1391.58	2505	LBS
MARICOPA	FUNGICIDE	Azoxystrobin	131860-33-8	ABOUND FLOWABLE FUNGICIDE	100.95	9.4	GAL
MARICOPA	FUNGICIDE	Azoxystrobin	131860-33-8	ABOUND FLOWABLE FUNGICIDE	104.7	9.8	GAL
MARICOPA	INSECTICIDE	Chlorantraniliprole	500008-45-7	ACELEPRYN	7.52	0.4	GAL
MARICOPA	MILDEWSTAT	Acibenzolar-s-methyl	135158-54-2	ACTIGARD 50 WG PLANT ACTIVATOR	6589.56	412.8	LBS
MARICOPA	FUNGICIDE	Azoxystrobin	131860-33-8	AFRAME	4713.45	426.6	GAL
MARICOPA	HERBICIDE	Carfentrazone-ethyl	128639-02-1	AIM EC HERBICIDE (AZ-130003)	22	0.3	GAL
MARICOPA	INSECTICIDE	Imidacloprid	138261-41-3	ALIAS 4F FLOWABLE INSECTICIDE	552.36	5401.5	OZS
MARICOPA	HERBICIDE	Atrazine	1912-24-9	ATRAZINE 4L HERBICIDE	565	165	GAL
MARICOPA	HERBICIDE	Atrazine	1912-24-9	ATRAZINE 4L HERBICIDE	565	165	GAL
MARICOPA	INSECTICIDE	Flonicamid	158062-67-0	BELEAF 50SG INSECTICIDE	246.66	43.2	LBS
MARICOPA	INSECTICIDE	Chlorantraniliprole	500008-45-7	BESIEGE INSECTICIDE	977.8	60	GAL
MARICOPA	INSECTICIDE	Flonicamid	158062-67-0	CARBINE 50 WG INSECTICIDE	80	14	LBS
MARICOPA	INSECTICIDE	Methoxyfenozide	161050-58-4	ENGAME	458.78	28	GAL
MARICOPA	FUNGICIDE	Fluoxastrobin	193740-76-0	EVITO 480 SC	12	1	GAL
MARICOPA	INSECTICIDE	Methoxyfenozide	161050-58-4	INTREPID 2F	6221.85	384.6	GAL
MARICOPA	INSECTICIDE	Methoxyfenozide	161050-58-4	INTREPID 2F	5688.06	357.5	GAL
MARICOPA	INSECTICIDE	Methomyl	16752-77-5	LANNATE LV INSECTICIDE	448.06	165.2	GAL
MARICOPA	HERBICIDE	Glufosinate-ammonium	77182-82-2	LIBERTY 280 SL HERBICIDE	744	186	GAL
MARICOPA	HERBICIDE	Linuron	330-55-2	LOROX DF AGRICULTURAL HERBICIDE	15	45	LBS
MARICOPA	HERBICIDE	Linuron	330-55-2	LOROX® DF HERBICIDE	15	45	LBS
MARICOPA	INSECTICIDE	Imidacloprid	138261-41-3	MALLET 2F T & O INSECTICIDE	6	12	OZS
MARICOPA	HERBICIDE	Trinexapac-ethyl	95266-40-3	PALISADE EC	136	1920.1	OZS
MARICOPA	GROWTH REGULATOR	Trinexapac-ethyl	95266-40-3	PODIUM	1041.3675	13678.2	OZS

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County	Type	Active ingredient	CAS	Brand name	Acres	Chem total	Unit
MARICOPA	REGULATOR	Trinexapac-ethyl	95266-40-3	PRIMO MAXX	887.22	4739.1	OZS
MARICOPA	HERBICIDE	Halosulfuron-methyl	100784-20-1	PROFINE 75 HERBICIDE	50	5.6	LBS
MARICOPA	FUNGICIDE	Azoxystrobin	131860-33-8	QUADRIS FLOWABLE FUNGICIDE	46778.7	4376.4	GAL
MARICOPA	HERBICIDE	Imazamox	114311-32-9	RAPTOR HERBICIDE	2458	73.2	GAL
MARICOPA	DEFOLIANT	Diuron	330-54-1	REDI-PIK1.5EC COTTON DEFOLIANT	585	8014.5	OZS
MARICOPA	INSECTICIDE	Dinotefuran	165252-70-0	SCORPION™ 35SL INSECTICIDE	3939.04	318.4	GAL
MARICOPA	INSECTICIDE	Carbaryl	63-25-2	SEVIN 5 BAIT	5732.76	51106.2	LBS
MARICOPA	HERBICIDE	Indaziflam	950782-86-2	SPECTICLE FLO	140	840	OZS
MARICOPA	INSECTICIDE	Imidacloprid	138261-41-3	TRIPLE CROWN GOLF INSECTICIDE	36	8.4	GAL
MARICOPA	INSECTICIDE	Dinotefuran	165252-70-0	VALENT VENOM INSECTICIDE	33.98	12.3	LBS
MARICOPA	FUNGICIDE	Fluopyram	658066-35-4	VELUM ONE	1913.88	102.1	GAL
MARICOPA	INSECTICIDE	Methoxyfenozide	161050-58-4	WITHSTAND	170.89	10	GAL
MOHAVE	HERBICIDE	Flazasulfuron	104040-78-0	KATANA TURF HERBICIDE	1664	104	LBS
MOHAVE	FUNGICIDE	Azoxystrobin	131860-33-8	QUADRIS FLOWABLE FUNGICIDE	110.7	10.5	GAL
PIMA	INSECTICIDE	Chlorantraniliprole	500008-45-7	BESIEGE INSECTICIDE	4	0.3	GAL
PIMA	INSECTICIDE	Fonicamid	158062-67-0	CARBINE 50 WG INSECTICIDE	145	21	LBS
PIMA	HERBICIDE	Imazamox	114311-32-9	CLEARCAST HERBICIDE	3	1.6	GAL
PIMA	GROWTH REGULATOR	Trinexapac-ethyl	95266-40-3	PODIUM	304.5	2766.6	OZS
PIMA	FUNGICIDE	Azoxystrobin	131860-33-8	QUADRIS FLOWABLE FUNGICIDE	3603	228.3	GAL
PIMA	HERBICIDE	Imazamox	114311-32-9	RAPTOR HERBICIDE	152	5.2	GAL
PIMA	DEFOLIANT	Diuron	330-54-1	REDI-PIK1.5EC COTTON DEFOLIANT	1230.46	10985	OZS
PINAL	HERBICIDE	Atrazine	1912-24-9	AATREX 4L HERBICIDE	7408.35	2505	GAL
PINAL	MILDEWSTAT	Acibenzolar-s-methyl	135158-54-2	ACTIGARD 50 WG PLANT ACTIVATOR	1773	111	LBS
PINAL	FUNGICIDE	Azoxystrobin	131860-33-8	AFRAME	2859	258.3	GAL
PINAL	HERBICIDE	Atrazine	1912-24-9	AGRISOLUTION S ATRAZINE 4L	1832.4	458.4	GAL

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County	Type	Active ingredient	CAS	Brand name	Acres	Chem total	Unit
PINAL	HERBICIDE	Carfentrazone-ethyl	128639-02-1	AIM EC HERBICIDE (AZ-130003)	4315.65	51.2	GAL
PINAL	HERBICIDE	Atrazine	1912-24-9	ATRAZINE 4L HERBICIDE	49	12.5	GAL
PINAL	HERBICIDE	Atrazine	1912-24-9	ATRAZINE 4L HERBICIDE	49	12.5	GAL
PINAL	INSECTICIDE	Chlorantraniliprole	500008-45-7	BESIEGE INSECTICIDE	80	7	GAL
PINAL	INSECTICIDE	Flonicamid	158062-67-0	CARBINE 50 WG INSECTICIDE	3528.65	1868.6	LBS
PINAL	INSECTICIDE	Thiamethoxam	153719-23-4	CENTRIC 40WG INSECTICIDE	56	140	OZS
PINAL	INSECTICIDE	Carfentrazone-ethyl	128639-02-1	DISPLAY COTTON HARVEST AID	1190.94	8.3	GAL
PINAL	HERBICIDE	Atrazine	1912-24-9	DREXEL ATRAZINE 4L HERBICIDE	551.93	127.5	GAL
PINAL	INSECTICIDE	Methoxyfenozide	161050-58-4	ENGAME	325	15.2	GAL
PINAL	INSECTICIDE	Methoxyfenozide	161050-58-4	INTREPID 2F	1317.24	88.2	GAL
PINAL	INSECTICIDE	Methoxyfenozide	161050-58-4	INTREPID 2F	1482.04	96.8	GAL
PINAL	HERBICIDE	Mesosulfuron-methyl	208465-21-8	OSPREY HERBICIDE	486.9	142.5	LBS
PINAL	HERBICIDE	Trinexapac-ethyl	95266-40-3	PALISADE EC	1938.62	26969.9	OZS
PINAL	INSECTICIDE	Emamectin benzoate	137512-74-4	PROCLAIM INSECTICIDE	95.8	24	LBS
PINAL	FUNGICIDE	Azoxystrobin	131860-33-8	QUADRIS FLOWABLE FUNGICIDE	9389.7	844.8	GAL
PINAL	HERBICIDE	Imazamox	114311-32-9	RAPTOR HERBICIDE	5468.96	228.6	GAL
PINAL	DEFOLIANT	Diuron	330-54-1	REDI-PIK 1.5EC COTTON DEFOLIANT	55	2.5	GAL
PINAL	DEFOLIANT	Diuron	330-54-1	REDI-PIK1.5EC COTTON DEFOLIANT	355.03	10854.7	GAL
PINAL	DEFOLIANT	Diuron	330-54-1	REDI-PIK1.5EC COTTON DEFOLIANT	6610.17	98942.4	OZS
PINAL	INSECTICIDE	Dinotefuran	165252-70-0	SCORPION™ 35SL INSECTICIDE	3574	293.8	GAL
PINAL	FUNGICIDE	Tebuconazole	107534-96-3	TEBUSTAR 36L	1037.5	7759.4	OZS
PINAL	FUNGICIDE	Fluopyram	658066-35-4	VELUM ONE	869	46.5	GAL
SANTA CRUZ	INSECTICIDE	Dinotefuran	165252-70-0	VALENT VENOM INSECTICIDE	40	7.5	LBS
YAVAPAI	INSECTICIDE	Thiamethoxam	153719-23-4	ACTARA INSECTICIDE	69.13	240	OZS
YAVAPAI	INSECTICIDE	Imidacloprid	138261-41-3	ALIAS 4F FLOWABLE INSECTICIDE	29.352	376.4	OZS

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County	Type	Active ingredient	CAS	Brand name	Acres	Chem total	Unit
YAVAPAI	FUNGICIDE	Dimethomorph	110488-70-5	FORUM FUNGICIDE	7.4	0.3	GAL
YAVAPAI	INSECTICIDE	Imidacloprid	138261-41-3	WRANGLER INSECTICIDE	24.142	386.5	OZS
YUMA	FUNGICIDE	Azoxystrobin	131860-33-8	ABOUND FLOWABLE FUNGICIDE	154.95	18.9	GAL
YUMA	FUNGICIDE	Azoxystrobin	131860-33-8	ABOUND FLOWABLE FUNGICIDE	341.55	41.4	GAL
YUMA	INSECTICIDE	Thiamethoxam	153719-23-4	ACTARA INSECTICIDE	385.3	104.7	LBS
YUMA	INSECTICIDE	Thiamethoxam	153719-23-4	ACTARA INSECTICIDE	3470.29	13885.1	OZS
YUMA	MILDEWSTAT	Acibenzolar-s-methyl	135158-54-2	ACTIGARD 50 WG PLANT ACTIVATOR	23719.29	1096.8	LBS
YUMA	INSECTICIDE	Imidacloprid	138261-41-3	ADMIRE PRO SYSTEMIC PROTECTANT INSECTICIDE	6981.884	559.4	GAL
YUMA	INSECTICIDE	Imidacloprid	138261-41-3	AGRI STAR MACJHO 4.0 FLOWABLE INSECTICIDE	773.9	9244.9	OZS
YUMA	HERBICIDE	Carfentrazone-ethyl	128639-02-1	AIM EC HERBICIDE (AZ-130003)	2627.59	81.2	GAL
YUMA	HERBICIDE	Carfentrazone-ethyl	128639-02-1	AIM EC HERBICIDE (AZ-130003)	7	210	XXX
YUMA	INSECTICIDE	Imidacloprid	138261-41-3	ALIAS 4F FLOWABLE INSECTICIDE	1484.2	56.2	GAL
YUMA	INSECTICIDE	Imidacloprid	138261-41-3	ALIAS 4F FLOWABLE INSECTICIDE	12255.8	143614.8	OZS
YUMA	INSECTICIDE	Fonicamid	158062-67-0	BELEAF 50SG INSECTICIDE	14105.02	2431.1	LBS
YUMA	INSECTICIDE	Chlorantraniliprole	500008-45-7	BESIEGE INSECTICIDE	11783.11	767.6	GAL
YUMA	HERBICIDE	Prometryn	7287-19-6	CAPAROL 4L HERBICIDE	4745.19	24055.5	GAL
YUMA	INSECTICIDE	Fonicamid	158062-67-0	CARBINE 50 WG INSECTICIDE	475.74	78.7	LBS
YUMA	INSECTICIDE	Carfentrazone-ethyl	128639-02-1	DISPLAY COTTON HARVEST AID	199.8	1.6	GAL
YUMA	INSECTICIDE	Chlorantraniliprole	500008-45-7	DUPONT CORAGEN INSECT CONTROL	66.1	2.7	GAL
YUMA	INSECTICIDE	Methomyl	16752-77-5	DUPONT LANNATE LV INSECTICIDE	1518.9	471.5	GAL
YUMA	INSECTICIDE	Methomyl	16752-77-5	DUPONT LANNATE LV INSECTICIDE	174.8	480	OZS

Appendix B. Reported Use of Pesticides in Arizona by County – January 1, 2023 to December 31, 2023							
County	Type	Active ingredient	CAS	Brand name	Acres	Chem total	Unit
YUMA	INSECTICIDE	Methomyl	16752-77-5	DUPONT LANNATE SP INSECTICIDE	10479.5	8083.1	LBS
YUMA	INSECTICIDE	Methomyl	16752-77-5	DUPONT LANNATE SP INSECTICIDE	111.84	185.9	OZS
YUMA	INSECTICIDE	Thiamethoxam	153719-23-4	ENDIGO ZC INSECTICIDE	752.89	26.3	GAL
YUMA	INSECTICIDE	Thiamethoxam	153719-23-4	ENDIGO ZC INSECTICIDE	256.5	1150	OZS
YUMA	FUNGICIDE	Dimethomorph	110488-70-5	FORUM FUNGICIDE	11646.42	604.1	GAL
YUMA	INSECTICIDE	Carbaryl	63-25-2	GOWAN SEVIN BAIT AGRICULTURE POISON BAIT	9.2	9.2	LBS
YUMA	INSECTICIDE	Methoxyfenozide	161050-58-4	INTREPID 2F	2204.94	157.7	GAL
YUMA	INSECTICIDE	Methoxyfenozide	161050-58-4	INTREPID 2F	1936.19	137.5	GAL
YUMA	INSECTICIDE	Flonicamid	158062-67-0	ISK BIOSCIENCE BELEAF 50SG INSECTICIDE	195.46	33.2	LBS
YUMA	INSECTICIDE	Methomyl	16752-77-5	LANNATE SP	6935.15	5194.2	LBS
YUMA	INSECTICIDE	Methomyl	16752-77-5	LANNATE SP	69.22	405.8	OZS
YUMA	HERBICIDE	Linuron	330-55-2	LOROX DF AGRICULTURAL HERBICIDE	322.76	485.6	LBS
YUMA	HERBICIDE	Linuron	330-55-2	LOROX® DF HERBICIDE	513.3	876	LBS
YUMA	FUNGICIDE	Fluopyram	658066-35-4	LUNA SENSATION	846.1	39.8	GAL
YUMA	INSECTICIDE	Imidacloprid	138261-41-3	MACHO 2.0 FL	356.34	1047.8	OZS
YUMA	INSECTICIDE	Imidacloprid	138261-41-3	MERIT 75 WSP INSECTICIDE	12	102.4	OZS
YUMA	INSECTICIDE	Imidacloprid	138261-41-3	MERIT 75 WSP INSECTICIDE	9	76.8	OZS
YUMA	INSECTICIDE	Methomyl	16752-77-5	NUDRIN LV INSECTICIDE	169.7	43.9	GAL
YUMA	INSECTICIDE	Methomyl	16752-77-5	NUDRIN SP INSECTICIDE	113.9	67	LBS
YUMA	INSECTICIDE	Imidacloprid	138261-41-3	NUPRID 4F MAX INSECTICIDE	9.8	98	OZS
YUMA	HERBICIDE	Trinexapac-ethyl	95266-40-3	PALISADE EC	4	0.4	GAL
YUMA	HERBICIDE	Trinexapac-ethyl	95266-40-3	PALISADE EC	3832.99	48117.5	OZS
YUMA	INSECTICIDE	Emamectin benzoate	137512-74-4	PROCLAIM INSECTICIDE	15609.16	4176.4	LBS
YUMA	FUNGICIDE	Azoxystrobin	131860-33-8	QUADRIS FLOWABLE FUNGICIDE	3147.81	351.6	GAL
YUMA	HERBICIDE	Quinclorac	84087-01-4	QUINCLORAC 75 DF	171.3	171.3	LBS
YUMA	HERBICIDE	Imazamox	114311-32-9	RAPTOR HERBICIDE	6137.86	271.6	GAL

Appendix B. Reported Use of Pesticides in Arizona by County – January 1, 2023 to December 31, 2023

County	Type	Active ingredient	CAS	Brand name	Acres	Chem total	Unit
YUMA	DEFOLIANT	Diuron	330-54-1	REDI-PIK1.5EC COTTON DEFOLIANT	5511.37	45498.8	OZS
YUMA	INSECTICIDE	Dinotefuran	165252-70-0	SCORPION™ 35SL INSECTICIDE	69.62	3.2	GAL
YUMA	HERBICIDE	Metribuzin	21087-64-9	SENCOR 75% TURF HERBICIDE	1	0.3	LBS
YUMA	INSECTICIDE	Carbaryl	63-25-2	SEVIN XLR PLUS	80.38	36.8	GAL
YUMA	INSECTICIDE	Dinotefuran	165252-70-0	VALENT VENOM INSECTICIDE	580.36	195.1	LBS
YUMA	INSECTICIDE	Chlorantraniliprole	500008-45-7	VOLIAM FLEXI INSECTICIDE	20.2	8.9	LBS
YUMA	INSECTICIDE	Chlorantraniliprole	500008-45-7	VOLIAM XPRESS INSECTICIDE	26.71	1.6	GAL
YUMA	FUNGICIDE	Dimethomorph	110488-70-5	ZAMPRO FUNGICIDE	15997.4	1783.4	GAL

Appendix C. Total Reported Use of Pesticides in Arizona January 1, 2023 to December 31, 2023

Active Ingredient	CAS	Brand Name	Type	Acres	Chem Total	Unit
Acibenzolar-s-methyl	135158-54-2	ACTIGARD 50 WG PLANT ACTIVATOR	MILDEWSTAT	32081.85	1620.6	LBS
Atrazine	1912-24-9	AATREX 4L HERBICIDE	HERBICIDE	7873.65	2639.1	GAL
Atrazine	1912-24-9	AATREX NINE-O HERBICIDE	HERBICIDE	1391.58	2505	LBS
Atrazine	1912-24-9	AGRISOLUTIONS ATRAZINE 4L	HERBICIDE	1832.4	458.4	GAL
Atrazine	1912-24-9	ATRAZINE 4L HERBICIDE	HERBICIDE	35794.35	12181.1	GAL
Atrazine	1912-24-9	ATRAZINE 4L HERBICIDE	HERBICIDE	35794.35	12181.1	GAL
Atrazine	1912-24-9	DREXEL ATRAZINE 4L HERBICIDE	HERBICIDE	3150.39	1103.6	GAL
Azoxystrobin	131860-33-8	ABOUND FLOWABLE FUNGICIDE	FUNGICIDE	501	32.3	GAL
Azoxystrobin	131860-33-8	ABOUND FLOWABLE FUNGICIDE	FUNGICIDE	568.8	53.2	GAL
Azoxystrobin	131860-33-8	AFRAME	FUNGICIDE	7572.45	684.9	GAL
Azoxystrobin	131860-33-8	QUADRIS FLOWABLE FUNGICIDE	FUNGICIDE	63029.91	5811.6	GAL
Carbaryl	63-25-2	GOWAN SEVIN BAIT AGRICULTURE POISON BAIT	INSECTICIDE	9.2	9.2	LBS
Carbaryl	63-25-2	SEVIN 5 BAIT	INSECTICIDE	5732.76	51106.2	LBS
Carbaryl	63-25-2	SEVIN XLR PLUS	INSECTICIDE	80.38	36.8	GAL
Carfentrazone-ethyl	128639-02-1	AIM EC HERBICIDE (AZ-130003)	HERBICIDE	9353.24	177.5	GAL
Carfentrazone-ethyl	128639-02-1	AIM EC HERBICIDE (AZ-130003)	HERBICIDE	7	210	XXX
Carfentrazone-ethyl	128639-02-1	DISPLAY COTTON HARVEST AID	INSECTICIDE	1390.74	9.9	GAL
Chlorantraniliprole	500008-45-7	ACELEPRYN	INSECTICIDE	7.52	0.4	GAL
Chlorantraniliprole	500008-45-7	BESIEGE INSECTICIDE	INSECTICIDE	12844.91	834.9	GAL
Chlorantraniliprole	500008-45-7	DUPONT CORAGEN INSECT CONTROL	INSECTICIDE	66.1	2.7	GAL
Chlorantraniliprole	500008-45-7	VOLIAM FLEXI INSECTICIDE	INSECTICIDE	20.2	8.9	LBS
Chlorantraniliprole	500008-45-7	VOLIAM XPRESS INSECTICIDE	INSECTICIDE	26.71	1.6	GAL
Dicamba, sodium salt	1982-69-0	STATUS HERBICIDE	HERBICIDE	27223.96	7987.2	LBS
Dimethomorph	110488-70-5	FORUM FUNGICIDE	FUNGICIDE	11653.82	604.4	GAL
Dimethomorph	110488-70-5	ZAMPRO FUNGICIDE	FUNGICIDE	15997.4	1783.4	GAL
Dinotefuran	165252-70-0	SCORPION™ 35SL INSECTICIDE	INSECTICIDE	7582.66	615.4	GAL
Dinotefuran	165252-70-0	VALENT VENOM INSECTICIDE	INSECTICIDE	718.34	222.9	LBS
Diuron	330-54-1	REDI-PIK 1.5EC COTTON DEFOLIANT	DEFOLIANT	55	2.5	GAL
Diuron	330-54-1	REDI-PIK1.5EC COTTON DEFOLIANT	DEFOLIANT	967.03	10912.2	GAL
Diuron	330-54-1	REDI-PIK1.5EC COTTON DEFOLIANT	DEFOLIANT	14803.25	174738	OZS

Appendix C. Total Reported Use of Pesticides in Arizona January 1, 2023 to December 31, 2023

Active Ingredient	CAS	Brand Name	Type	Acres	Chem Total	Unit
Emamectin benzoate	137512-74-4	PROCLAIM INSECTICIDE	INSECTICIDE	15704.96	4200.4	LBS
Flazasulfuron	104040-78-0	KATANA TURF HERBICIDE	HERBICIDE	1664	104	LBS
Flonicamid	158062-67-0	BELEAF 50SG INSECTICIDE	INSECTICIDE	14351.68	2474.3	LBS
Flonicamid	158062-67-0	CARBINE 50 WG INSECTICIDE	INSECTICIDE	4927.99	2094.5	LBS
Flonicamid	158062-67-0	ISK BIOSCIENCE BELEAF 50SG INSECTICIDE	INSECTICIDE	195.46	33.2	LBS
Fluopyram	658066-35-4	LUNA SENSATION	FUNGICIDE	846.1	39.8	GAL
Fluopyram	658066-35-4	VELUM ONE	FUNGICIDE	2782.88	148.6	GAL
Fluoxastrobin	193740-76-0	EVITO 480 SC	FUNGICIDE	12	1	GAL
Glufosinate-ammonium	77182-82-2	LIBERTY 280 SL HERBICIDE	HERBICIDE	744	186	GAL
Halosulfuron-methyl	100784-20-1	PROFINE 75 HERBICIDE	HERBICIDE	50	5.6	LBS
Imazamox	114311-32-9	CLEARCAST HERBICIDE	HERBICIDE	3	1.6	GAL
Imazamox	114311-32-9	RAPTOR HERBICIDE	HERBICIDE	30451.42	1103	GAL
Imidacloprid	138261-41-3	ADMIRE PRO SYSTEMIC PROTECTANT INSECTICIDE	INSECTICIDE	6981.884	559.4	GAL
Imidacloprid	138261-41-3	AGRI STAR MACJHO 4.0 FLOWABLE INSECTICIDE	INSECTICIDE	773.9	9244.9	OZS
Imidacloprid	138261-41-3	ALIAS 4F FLOWABLE INSECTICIDE	INSECTICIDE	1484.2	56.2	GAL
Imidacloprid	138261-41-3	ALIAS 4F FLOWABLE INSECTICIDE	INSECTICIDE	12888.512	149633.9	OZS
Imidacloprid	138261-41-3	MACHO 2.0 FL	INSECTICIDE	356.34	1047.8	OZS
Imidacloprid	138261-41-3	MALLET 2F T & O INSECTICIDE	INSECTICIDE	6	12	OZS
Imidacloprid	138261-41-3	MERIT 75 WSP INSECTICIDE	INSECTICIDE	12	102.4	OZS
Imidacloprid	138261-41-3	MERIT 75 WSP INSECTICIDE	INSECTICIDE	9	76.8	OZS
Imidacloprid	138261-41-3	NUPRID 4F MAX INSECTICIDE	INSECTICIDE	9.8	98	OZS
Imidacloprid	138261-41-3	TRIPLE CROWN GOLF INSECTICIDE	INSECTICIDE	36	8.4	GAL
Imidacloprid	138261-41-3	WRANGLER INSECTICIDE	INSECTICIDE	24.142	386.5	OZS
Indaziflam	950782-86-2	SPECTICLE FLO	HERBICIDE	140	840	OZS
Linuron	330-55-2	LOROX DF AGRICULTURAL HERBICIDE	HERBICIDE	337.76	530.6	LBS
Linuron	330-55-2	LOROX® DF HERBICIDE	HERBICIDE	528.3	921	LBS
Mesosulfuron-methyl	208465-21-8	OSPREY HERBICIDE	HERBICIDE	486.9	142.5	LBS

Appendix C. Total Reported Use of Pesticides in Arizona January 1, 2023 to December 31, 2023

Active Ingredient	CAS	Brand Name	Type	Acres	Chem Total	Unit
Methomyl	16752-77-5	DUPONT LANNATE LV INSECTICIDE	INSECTICIDE	1518.9	471.5	GAL
Methomyl	16752-77-5	DUPONT LANNATE LV INSECTICIDE	INSECTICIDE	174.8	480	OZS
Methomyl	16752-77-5	DUPONT LANNATE SP INSECTICIDE	INSECTICIDE	10479.5	8083.1	LBS
Methomyl	16752-77-5	DUPONT LANNATE SP INSECTICIDE	INSECTICIDE	111.84	185.9	OZS
Methomyl	16752-77-5	LANNATE LV INSECTICIDE	INSECTICIDE	448.06	165.2	GAL
Methomyl	16752-77-5	LANNATE SP	INSECTICIDE	7106.85	5365.9	LBS
Methomyl	16752-77-5	LANNATE SP	INSECTICIDE	69.22	405.8	OZS
Methomyl	16752-77-5	NUDRIN LV INSECTICIDE	INSECTICIDE	169.7	43.9	GAL
Methomyl	16752-77-5	NUDRIN SP INSECTICIDE	INSECTICIDE	113.9	67	LBS
Methoxyfenozide	161050-58-4	ENGAME	INSECTICIDE	1238.98	65.2	GAL
Methoxyfenozide	161050-58-4	INTREPID 2F	INSECTICIDE	11175.22	729.5	GAL
Methoxyfenozide	161050-58-4	INTREPID 2F	INSECTICIDE	10784.23	691.3	GAL
Methoxyfenozide	161050-58-4	WITHSTAND	INSECTICIDE	170.89	10	GAL
Metribuzin	21087-64-9	SENCOR 75% TURF HERBICIDE	HERBICIDE	1	0.3	LBS
Prometryn	7287-19-6	CAPAROL 4L HERBICIDE	HERBICIDE	4745.19	24055.5	GAL
Quinclorac	84087-01-4	QUINCLORAC 75 DF	HERBICIDE	171.3	171.3	LBS
Tebuconazole	107534-96-3	TEBUSTAR 36L	FUNGICIDE	1037.5	7759.4	OZS
Thiamethoxam	153719-23-4	ACTARA INSECTICIDE	INSECTICIDE	385.3	104.7	LBS
Thiamethoxam	153719-23-4	ACTARA INSECTICIDE	INSECTICIDE	3539.42	14125.1	OZS
Thiamethoxam	153719-23-4	CENTRIC 40WG INSECTICIDE	INSECTICIDE	56	140	OZS
Thiamethoxam	153719-23-4	ENDIGO ZC INSECTICIDE	INSECTICIDE	752.89	26.3	GAL
Thiamethoxam	153719-23-4	ENDIGO ZC INSECTICIDE	INSECTICIDE	256.5	1150	OZS
Trinexapac-ethyl	95266-40-3	PALISADE EC	HERBICIDE	4	0.4	GAL
Trinexapac-ethyl	95266-40-3	PALISADE EC	HERBICIDE	5907.61	77007.5	OZS
Trinexapac-ethyl	95266-40-3	PODIUM	GROWTH REGULATOR	1345.8675	16444.8	OZS
Trinexapac-ethyl	95266-40-3	PRIMO MAXX	REGULATOR	887.22	4739.1	OZS



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