

AQUATIC PESTICIDE USE IN NEW JERSEY – 2006

In 1983 the NJDEP Pesticide Control Program (PCP) implemented an Aquatic Pesticide Use Permit Program. The specific purpose of this program was to identify and control what pesticides are being applied to New Jersey's waterbodies. Recently, the PCP was able to gather data from Records of Actual Treatment (RATS) and compute the total amount of each aquatic pesticide used during the aquatic permit season, which runs from April to October. Furthermore, this total usage has also been broken down into Active Ingredient by County and by Watershed Management Area.

All aquatic applicators are responsible for submitting their RATS forms to the department by November 15 of each treatment year. These records are then entered into the PCP's database, and checked for any errors or misapplications. Once corrected, these data are analyzed and the pounds of active ingredient used determined for each treatment record. These data are then transposed to display the different permutations listed above.

Table 1 lists the chemicals and their amounts in pounds of active ingredient (A.I.) used during the 2006 Aquatic Pesticide Permit season. The most widely used trade names corresponding with these chemicals are also included.

Table 2 lists the chemicals and their A.I. amounts applied by county for the 2006 season.

Table 3 lists the chemicals and their A.I. amounts applied by Watershed Management Areas for the 2006 season. For more information on Watershed Management areas, please visit <http://www.nj.gov/dep/watershedmgt>, or contact the NJDEP Division of Watershed Management.

This information will help us address the impacts, if any, of specific aquatic pesticides to the environment in a particular area, as well as track the use of these pesticides. However, we must keep in mind that aquatic ecosystems are extremely dynamic and may change significantly from year to year and thus, may affect the trend of such pesticide usage over time. Another factor is the adoption of IPM (Integrated Pest Management). One of the goals of the Pesticide Control Program is pesticide use reduction, and IPM is a tool that can be used to achieve this. Over the past few years an increase in these activities has been seen throughout New Jersey, as many lake management associations have already incorporated some IPM techniques into their management programs.

The following data has been gathered and charted for there is a general interest in the trends of aquatic pesticide use for the control of aquatic weeds throughout the state of New Jersey. All information is based on permitted sites only.

Table 1. Compounds used during the 2006 Aquatic Pesticide Permit season and their amounts (pounds of active ingredient). Brand names listed comprise the most widely used products, and are not intended to be a comprehensive list.

Active Ingredient	Brand Name Products	Total
2, 4-D	AquaKleen, Navigate	619
Copper	Cutrine Plus, Cutrine Ultra, Captain	12,181
Copper Sulfate	Chem-One, Phelps-Dodge	83,686
Diquat	Reward	5,710
Endothall	Aquathol-K	1,771
Fluridone	Sonar AS, Avast AS	1,297
Glyphosate	Glypro, Rodeo	2,854
Imazapyr	Habitat	36
Triclopyr	Renovate3	162
Grand Total		108,316

Table 2. Pesticide amounts (in pounds of active ingredient) used during the 2006 Aquatic Pesticide Permit season by county. *Note: Some records were omitted from this analysis as they incorporated several counties in their treatment records. This omission represents only 0.7% of the overall data set.

County	2, 4-D	Copper	Copper Sulfate	Diquat	Endothall	Fluridone	Glyphosate	Imazapyr	Triclopyr	Pounds of A.I.	Percent of Total Use
Atlantic	248	30	80	94		8				460	0.4%
Bergen		143	18,417	150	167	14	206			19,098	17.8%
Burlington	99	793	600	441		71	199	0		2,205	2.0%
Camden		113	28	117		20	53	2		333	0.3%
Cape May		3		10		3	245			261	0.2%
Cumberland										0	0.0%
Essex		2,017	10,603	158		25	7			12,811	11.9%
Gloucester		92	167	509		33	50	4		854	0.8%
Hudson							272	14		286	0.3%
Hunterdon		50	160	50	1	17	0	1		280	0.3%
Mercer		483	305	37		0	22			848	0.8%
Middlesex		93	276	17		4	265			656	0.6%
Monmouth		794	6,146	146	114	14	32	2		7,248	6.7%
Morris		1,002	8,478	1,425	414	185	79	0		11,584	10.8%
Ocean		83	257	112	16	166	2	1		637	0.6%
Passaic		4,946	11,564	513	217	166	38			17,445	16.2%
Salem			2,475	20			350	9		2,854	2.7%
Somerset		277	444	68		17	1	0		807	0.8%
Sussex		991	23,423	1,647	842	553	250	2	162	27,869	25.9%
Union		66	54	35		1	11	1		166	0.2%
Warren	272	204	208	159		0	9	0		853	0.8%
Grand Total	619	12,181	83,686	5,710	1,771	1,297	2,091	36	162	107,553	

Table 3. Pesticide amounts (in pounds of active ingredient) used during the 2006 Aquatic Pesticide Permit season by Watershed Management Area (WMA). *Note: Some records were omitted from this analysis as they incorporated several WMA's in their treatment records. This omission represents only 0.7% of the overall data set.

WMA	2, 4-D	Copper	Copper Sulfate	Diquat	Endothall	Fluridone	Glyphosate	Imazapyr	Triclopyr	Pounds of A.I.	Percent of Total Use
1	272	347	6,992	1,523	792	118	261	2		10,308	9.6%
2		850	17,162	643	238	431	27		162	19,514	18.1%
3		311	13,201	518	393	170	53			14,645	13.6%
4		4,873	1,684	250	2	20	8			6,837	6.4%
5		197	17,035	40	4	2	478	14		17,769	16.5%
6		862	6,074	920	211	167	28	0		8,263	7.7%
7		2,092	10,590	167		38	32	1		12,920	12.0%
8		242	717	139	1	30	1	2		1,132	1.1%
9		131	68	26		3	243			471	0.4%
10		206	390	31		3	4	2		636	0.6%
11		327	19	14			21			381	0.4%
12		717	425	145	114	9	29			1,440	1.3%
13		79	5,978	106	16	171	10	1		6,360	5.9%
14		29	35	21			212			296	0.3%
15	248	27	80	94		8	37			494	0.5%
16		3		10		3	229			245	0.2%
17		41	2,642	470			359	9		3,521	3.3%
18	66	208	289	184		61	21	5		833	0.8%
19	33	553	283	383		61	39	1		1,353	1.3%
20		55	21	25		0				101	0.1%
Grand Total	619	12,150	83,686	5,708	1,771	1,294	2,091	36	162	107,518	