

# **2005 Municipal Solid Waste (MSW) Interstate Flow and Disposal in the Northeast States**

**September 18, 2007**

## **Disclaimer**

The tables and graphs contained in this report contain information based on data that was supplied by the NEWMOA member states. NEWMOA examines the data provided by states to identify and reconcile differences and, in consultation with the NEWMOA states determines the data to use in the graphs. NEWMOA also contacts the states that receive the majority of municipal solid waste (MSW) that leaves the NEWMOA region: Ohio, Pennsylvania, South Carolina and Virginia to obtain their data regarding imports to facilities in their states. Again, in consultation with the NEWMOA states NEWMOA determines the data to use regarding MSW sent to states outside the NEWMOA region. Generally, over time the quality of data obtained from the states has improved. There is more uncertainty associated with data from the earlier years included in this report; however, no data should be assumed to be 100 percent certain. The tables and graphs contained in this report were developed for use by the waste program directors in the NEWMOA states and the staff that participate in the project. Due to fiscal constraints, NEWMOA is unable to prepare and publish a full report suitable for public use.

## **About NEWMOA**

The Northeast Waste Management Officials' Association (NEWMOA) is a nonprofit, nonpartisan, interstate association. The membership is composed of state environmental agency directors of the hazardous waste, solid waste, waste site cleanup, pollution prevention and underground storage tank programs in Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. NEWMOA was established by the governors of the New England states as an official interstate regional organization, in accordance with Section 1005 of the Resource Conservation and Recovery Act (RCRA) in 1986 and is funded by state membership dues and contracts and EPA grants.

NEWMOA's mission is to develop and sustain an effective partnership of states to explore, develop, promote, and implement environmentally sound solutions for the reduction and management of materials and waste, and for the remediation of contaminated sites, in order to achieve a clean and healthy environment. The group fulfills this mission by providing a variety of support services that:

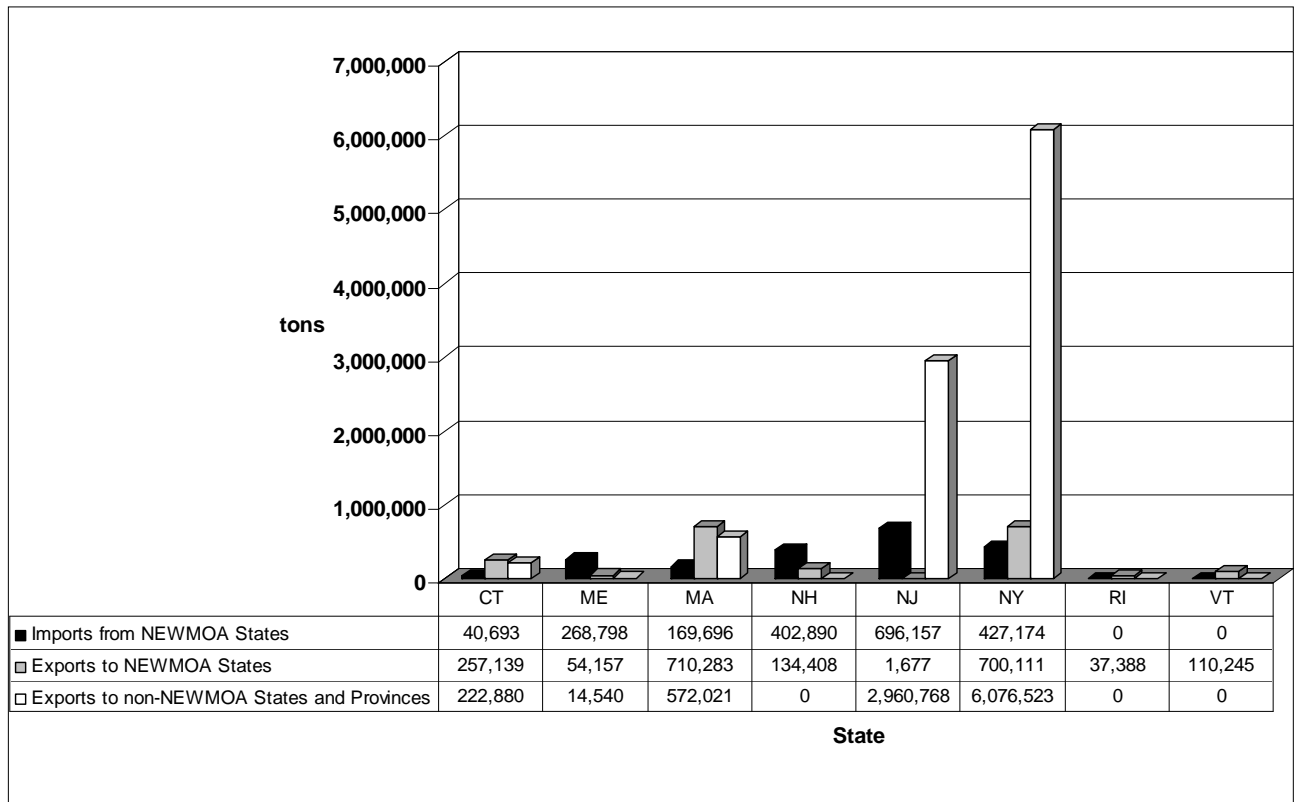
- facilitate communication and cooperation among member states and between the states and the US EPA
- support the efficient sharing of state and federal program resources to help avoid duplication of effort and to facilitate development of regional approaches to solving critical environmental problems in the region.

## **Acknowledgments**

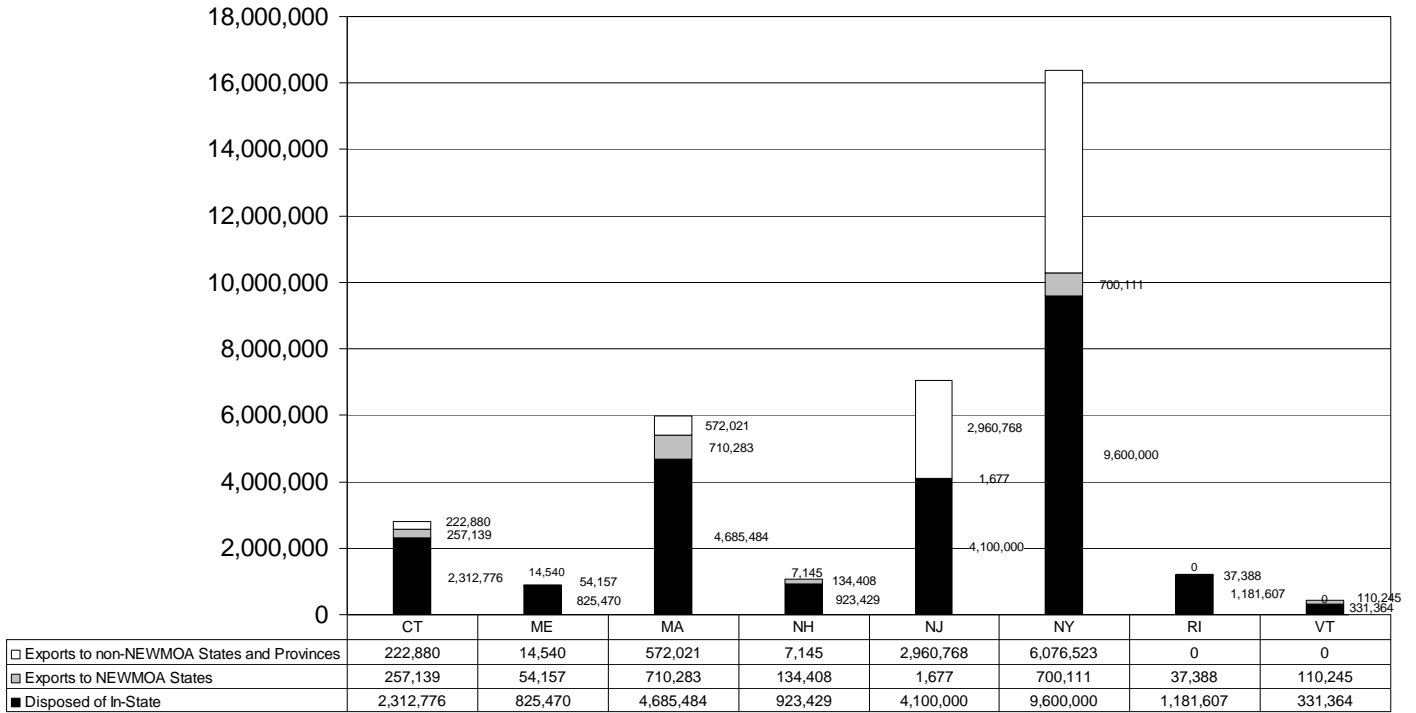
NEWMOA would like to thank the members of the Solid Waste Measurement Workgroup for their invaluable assistance with this project and report:

Judy Belaval, Connecticut Department of Environmental Protection  
Carole Cifrino, Maine Department of Environmental Protection  
Brian Holdridge, Massachusetts Department of Environmental Protection  
Donald Maurer, New Hampshire Department of Environmental Services  
Ray Worob, New Jersey Department of Environmental Protection  
Gerard Wagner, New York State Department of Environmental Conservation  
Robert Schmidt, Rhode Island Department of Environmental Management  
Julie Hackbarth, Vermont Department of Environmental Conservation

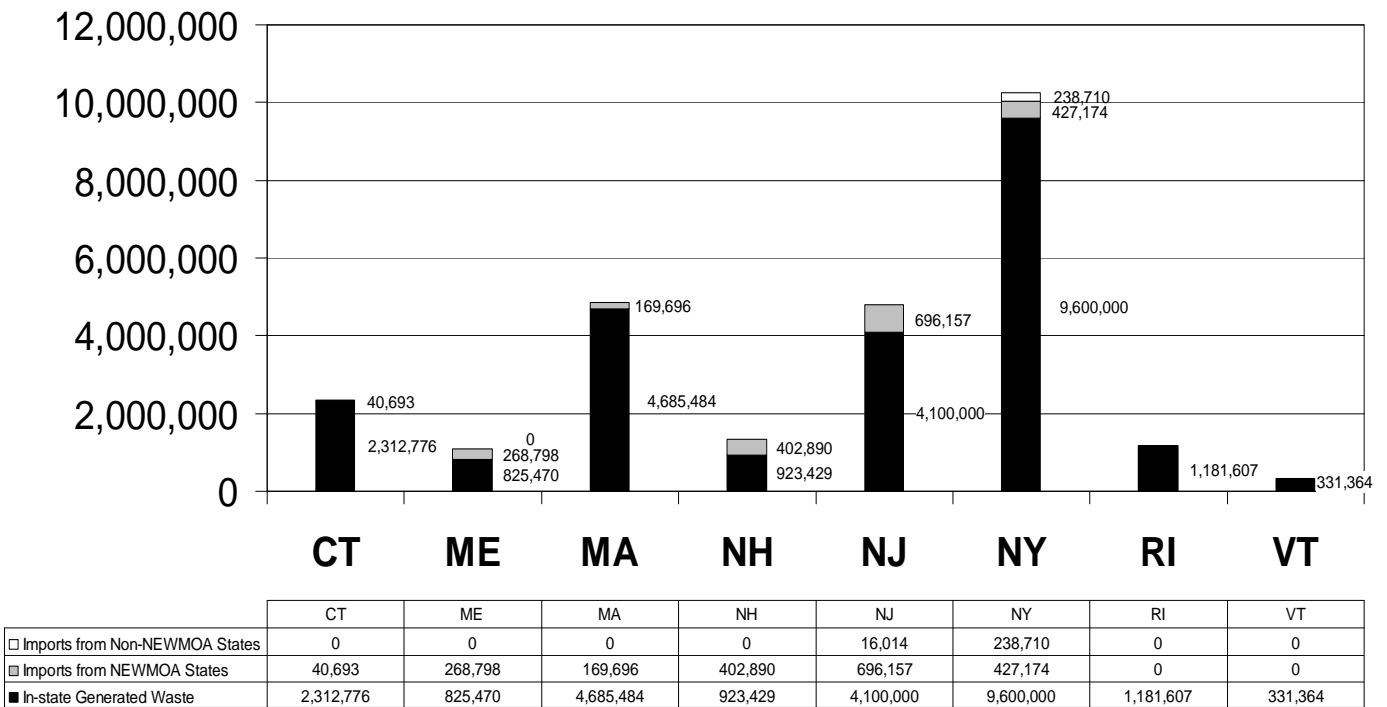
**Figure 1: 2005 MSW Imports and Exports (tons)**



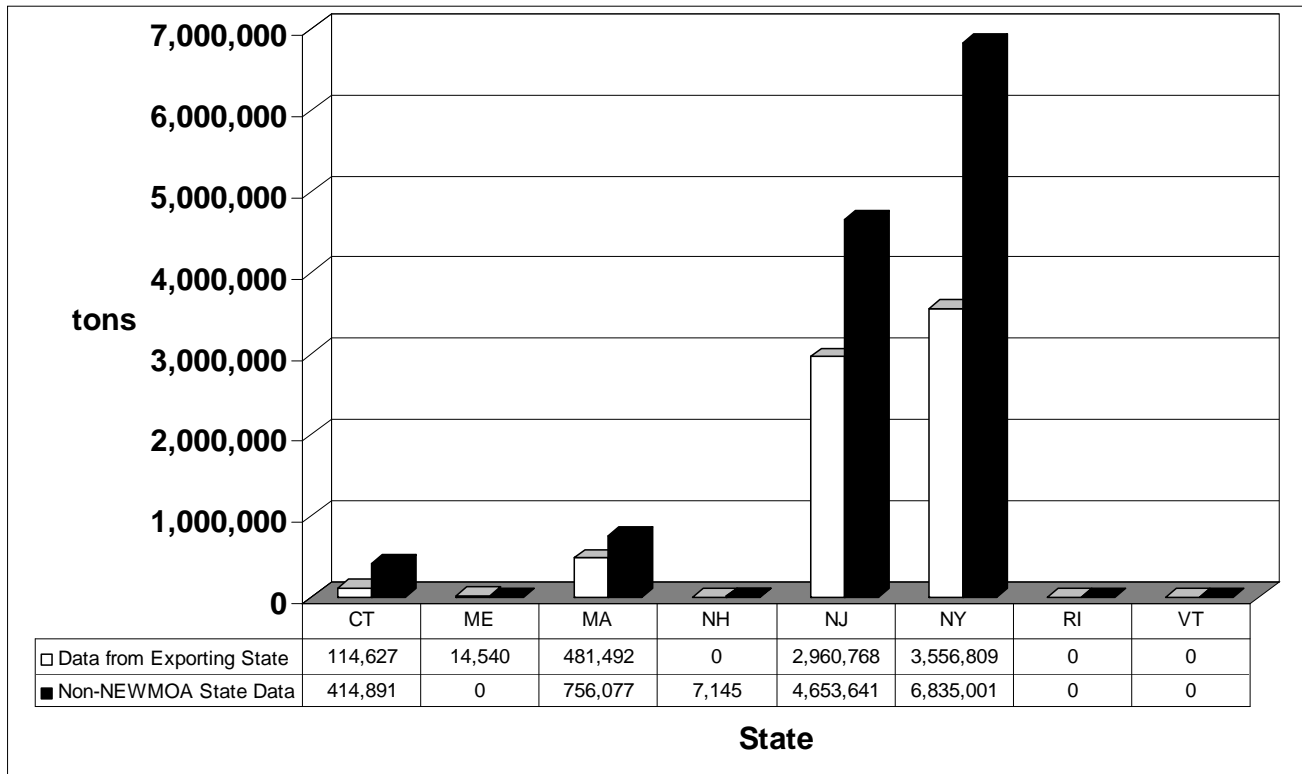
**Figure 2: MSW Generated by State and Disposed (2005, in tons)**



**Figure 3: Total Quantity of MSW Disposed of In-State (2005, in tons)**



**Figure 4: 2005 Exports to Non-NEWMOA States and Provinces**



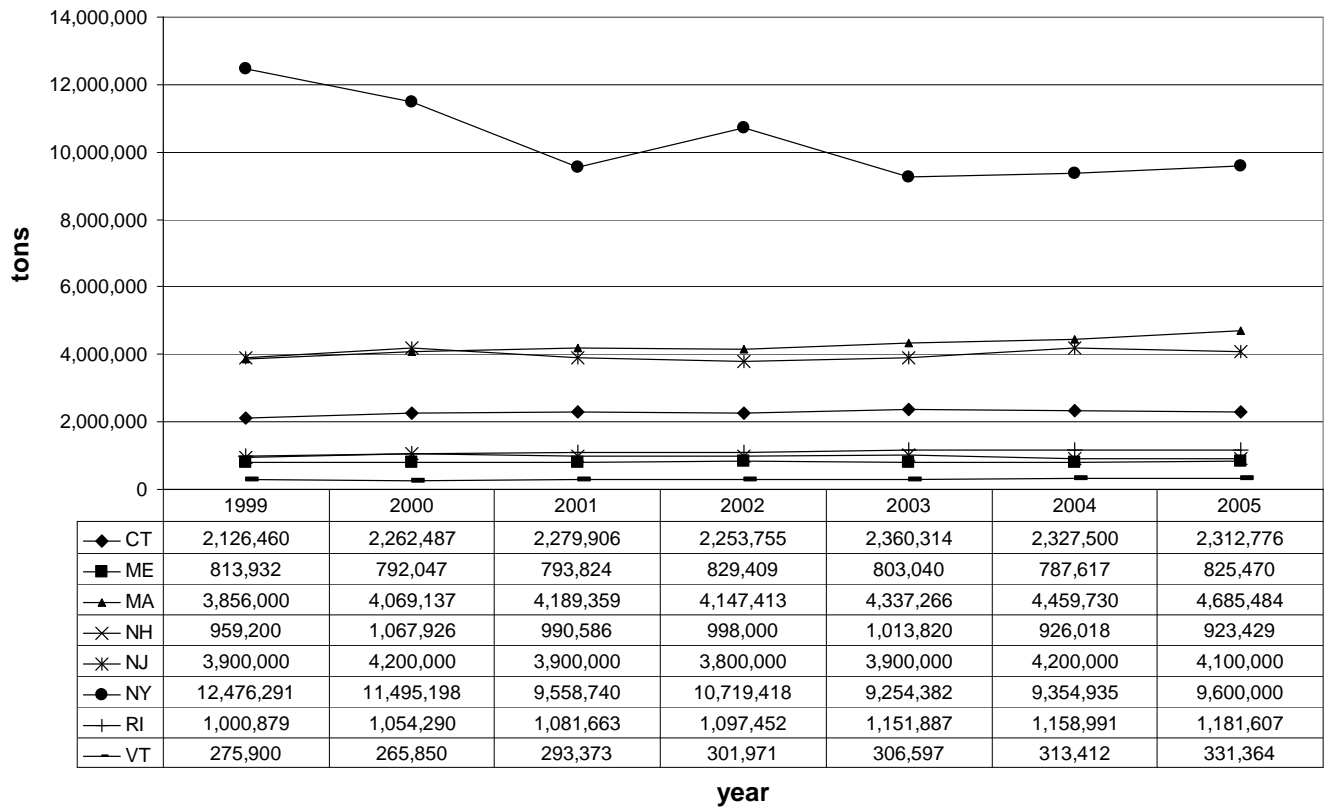
**Table 1: Exports to Non-NEWMOA States: NEWMOA vs. Non-NEWMOA State Data**

	Ohio		Pennsylvania		S. Carolina		Virginia	
	NEWMOA	OH	NEWMOA	PA	NEWMOA	SC	NEWMOA	VA
<b>CT</b>	44,098	235,948	70,529	178,782	0	0	0	161
<b>ME</b>	0	0	0	-		0		0
<b>MA</b>	85,092	302,077	4,045	5,437	479,496	448,541	1,996	22
<b>NH</b>	0	7,145	0	-	0	0	0	0
<b>NJ</b>	0	566,875	2,960,768	3,556,707	0	196,050	0	334,009
<b>NY</b>	513,546	1,045,469	1,972,812	3,985,778	116,559	0	1,460,640	1,803,754
<b>RI</b>	0	0	0	-	0	0	0	0
<b>VT</b>	0	0	0	-	0	0	0	0

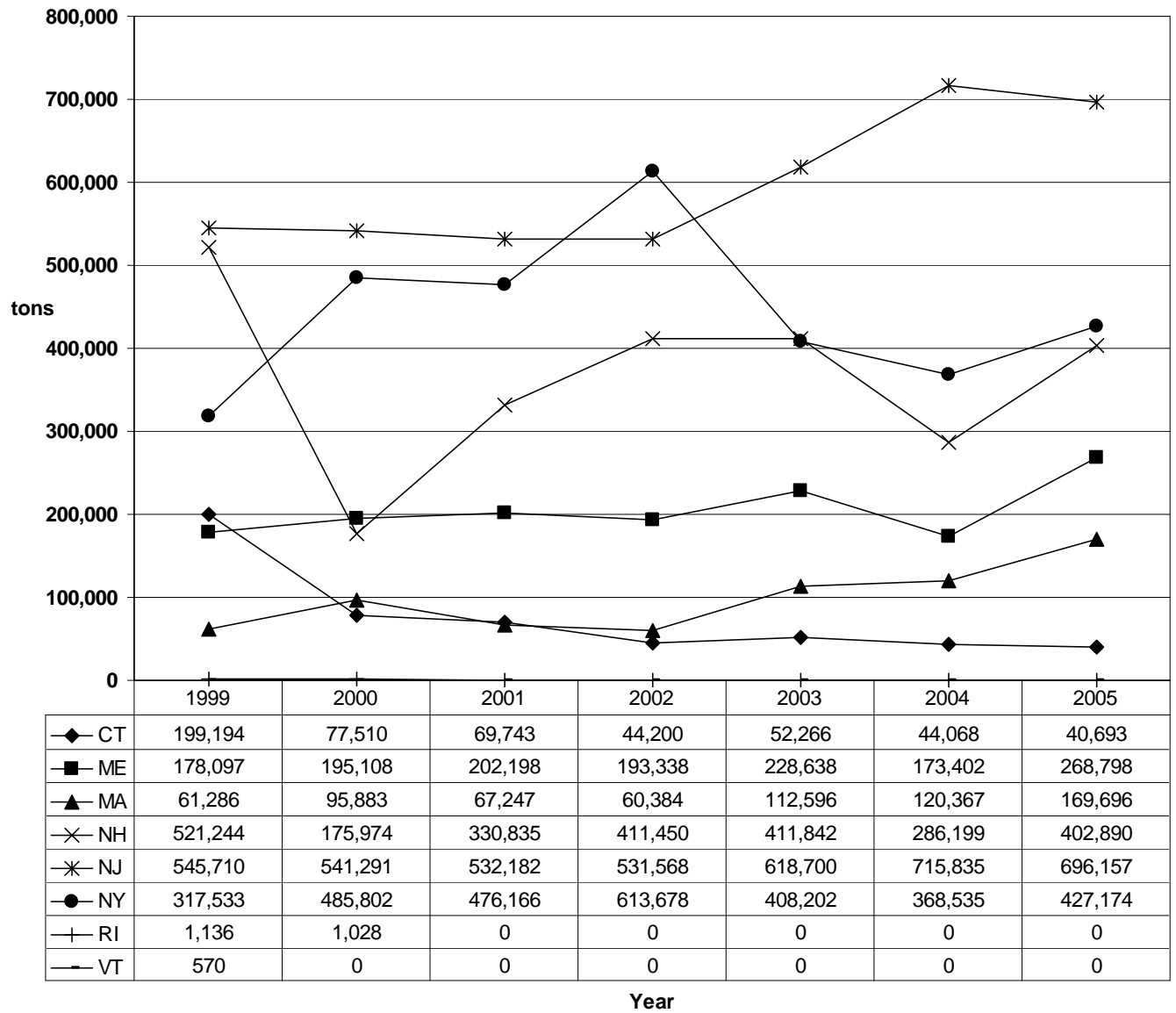
\*A portion of the amount New Jersey reports sending to Pennsylvania may be sent to other non-NEWMOA states instead of all to Pennsylvania.

895,964 tons of waste originated in New York and passed through New Jersey on its way to Pennsylvania for disposal. This amount was subtracted from the amounts Pennsylvania reports receiving from NJ and add to the amount PA reports receiving from NY.

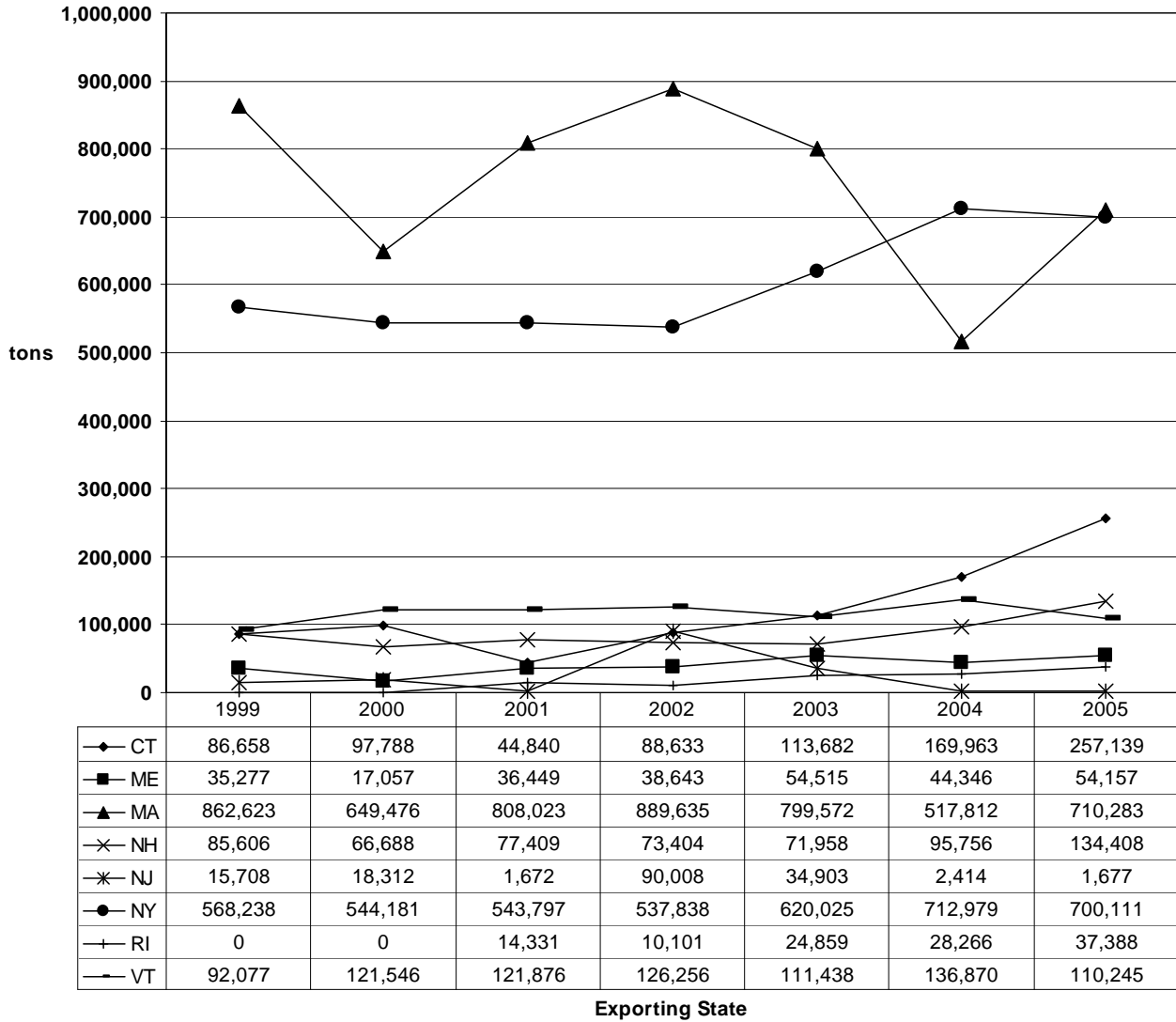
**Figure 5: In-State Disposal of MSW Generated In-State  
1999 through 2005**



**Figure 6: MSW Imports from NEWMOA States: 1999 through 2005 (tons)**

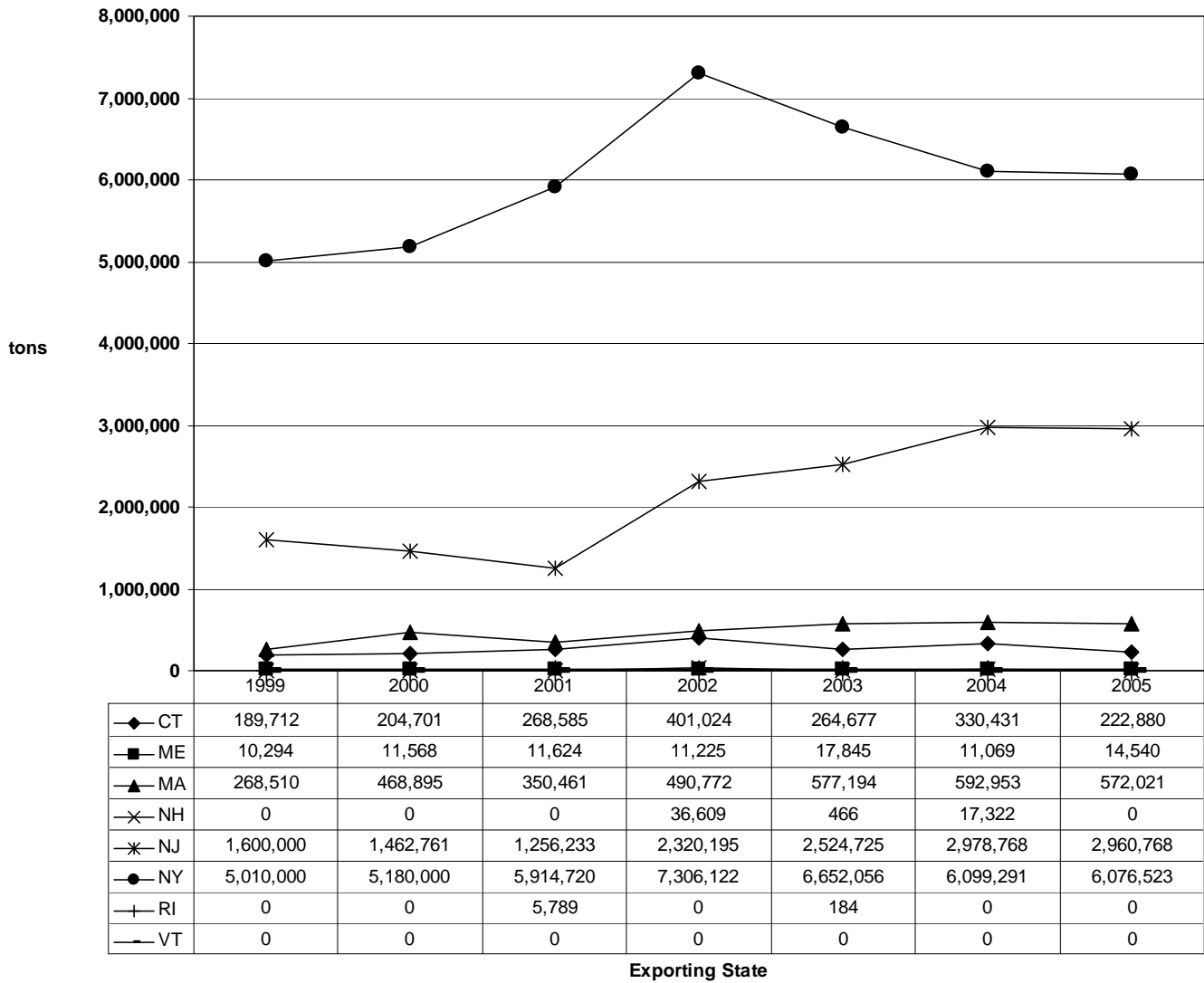


**Figure 7: MSW Exports to NEWMOA States: 1999 through 2005 (tons)**





**Figure 8: MSW Exports to Non-NEWMOA States and Provinces:  
1999 through 2005 (tons)**



**Table 2: Data Normalized for Population**

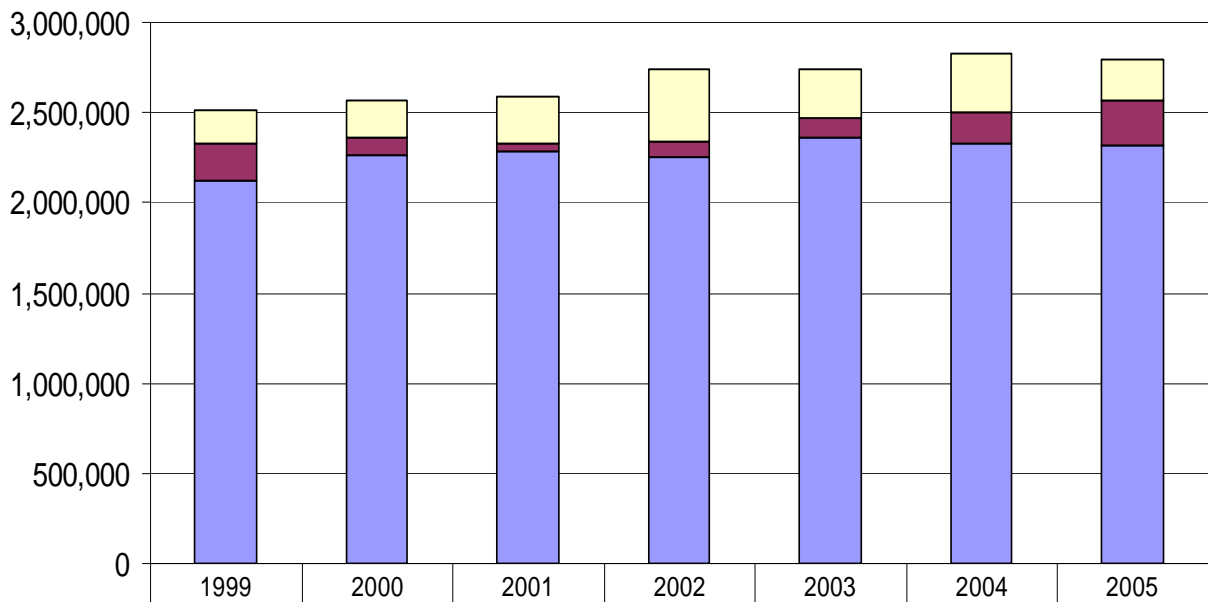
	<b>2004 Estimated Population</b>	<b>1999 Per Capita MSW Disposed (tons/year)</b>	<b>2000 Per Capita MSW Disposed (tons/year)</b>	<b>2001 Per Capita MSW Disposed (tons/year)</b>	<b>2002 Per Capita MSW Disposed (tons/year)</b>	<b>2003 Per Capita MSW Disposed (tons/year)</b>	<b>2004 Per Capita MSW Disposed (tons/year)</b>	<b>2005 Per Capita MSW Disposed (tons/year)</b>	<b>2005 Per Capita MSW Disposed of At Facilities in the State (tons/year)</b>
<b>State</b>	<b>(Source: U.S. Census Bureau)</b>								
<b>Connecticut</b>	3,500,701	0.73	0.75	0.76	0.79	0.79	0.81	0.80	0.67
<b>Maine</b>	1,318,220	0.69	0.64	0.65	0.69	0.67	0.64	0.68	0.83
<b>Massachusetts</b>	6,433,367	0.81	0.82	0.84	0.86	0.89	0.87	0.93	0.75
<b>New Hampshire</b>	1,306,819	0.87	0.92	0.85	0.87	0.84	0.80	0.81	1.01
<b>New Jersey</b>	8,703,150	0.66	0.68	0.61	0.72	0.75	0.83	0.81	0.55
<b>New York</b>	19,315,721	0.98	0.91	0.84	0.97	0.86	0.84	0.85	0.53
<b>Rhode Island</b>	1,073,579	1.01	1.01	1.04	1.04	1.09	1.10	1.14	1.10
<b>Vermont</b>	622,387	0.62	0.64	0.68	0.69	0.68	0.72	0.71	0.53

The "Per Capita MSW Disposed" data for each year 1999 - 2005 include MSW generated by the state and disposed, including exports (does not include imports)

The "Per Capita MSW Disposed of at Facilities in the State" data for 2005 includes MSW disposed of in-state, including imports (does not include exports)

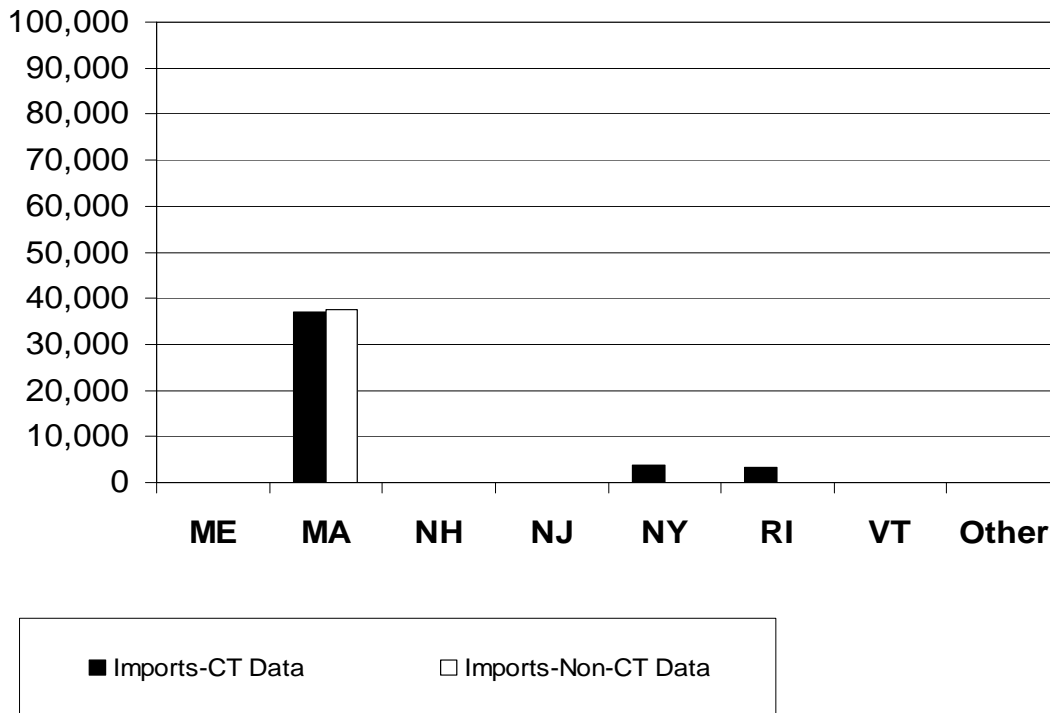
# Connecticut

**MSW Generated in Connecticut and Disposed**

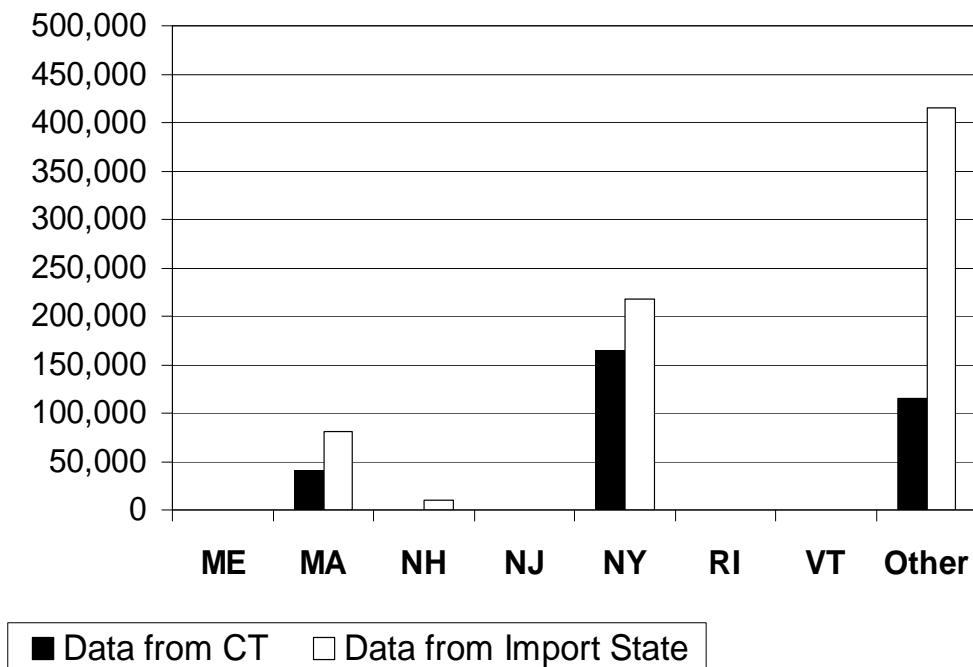


Exported to Non NEWMOA	189,712	204,701	268,585	401,024	264,677	330,431	222,880
Exported to NEWMOA	199,168	97,788	44,840	88,633	113,682	169,963	257,139
Disposed In State	2,126,460	2,262,487	2,279,906	2,253,756	2,360,314	2,327,500	2,312,776

### 2005 MSW Imports to Connecticut (tons)



### 2005 MSW Exports from Connecticut (tons)



**MSW Imports to Connecticut: 1999 through 2005  
(tons)**

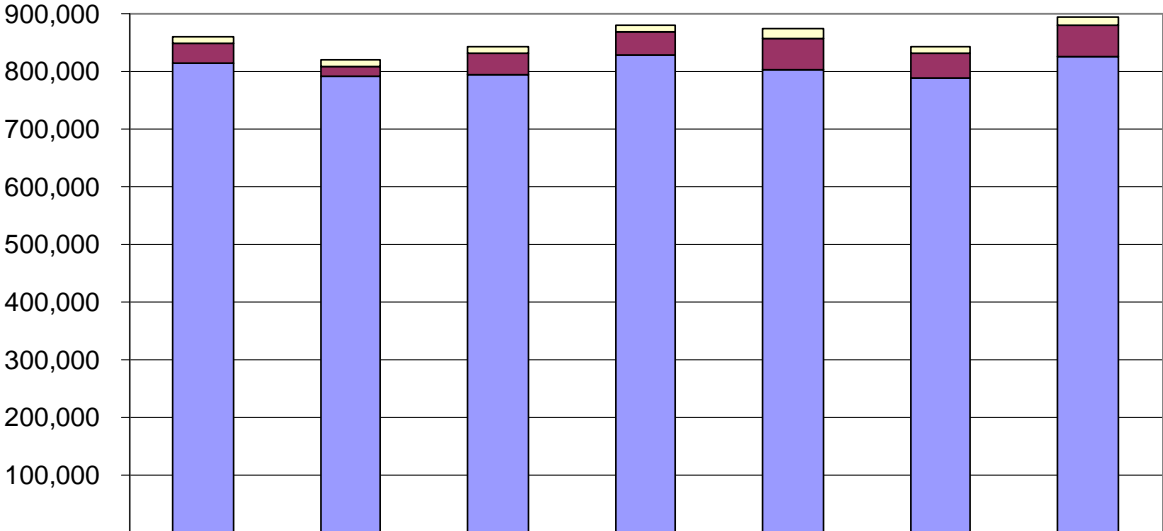


### MSW Exports from Connecticut: 1999 through 2005 (tons)



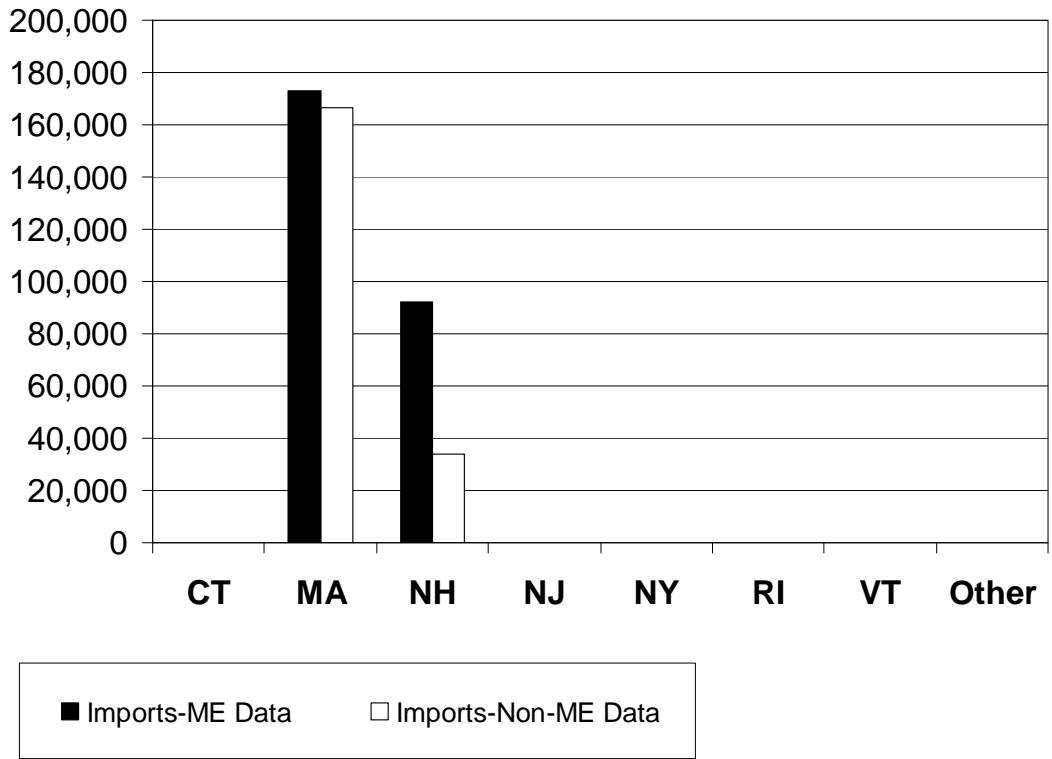
# Maine

**MSW Generated in Maine and Disposed**

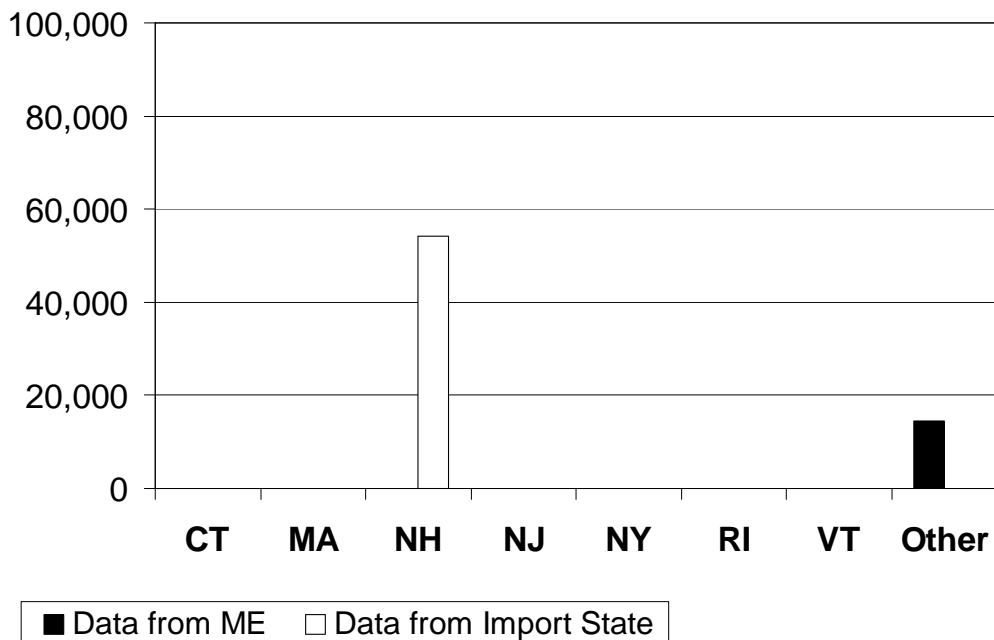


	1999	2000	2001	2002	2003	2004	2005
Exported to Non-NEWMOA	10,294	11,568	11,624	11,225	17,845	11,069	14,540
Exported to NEWMOA	35,277	17,057	36,449	38,643	54,515	44,346	54,157
Disposed In State	813,932	792,047	793,824	829,409	803,040	787,617	825,470

## 2005 MSW Imports to Maine (tons)

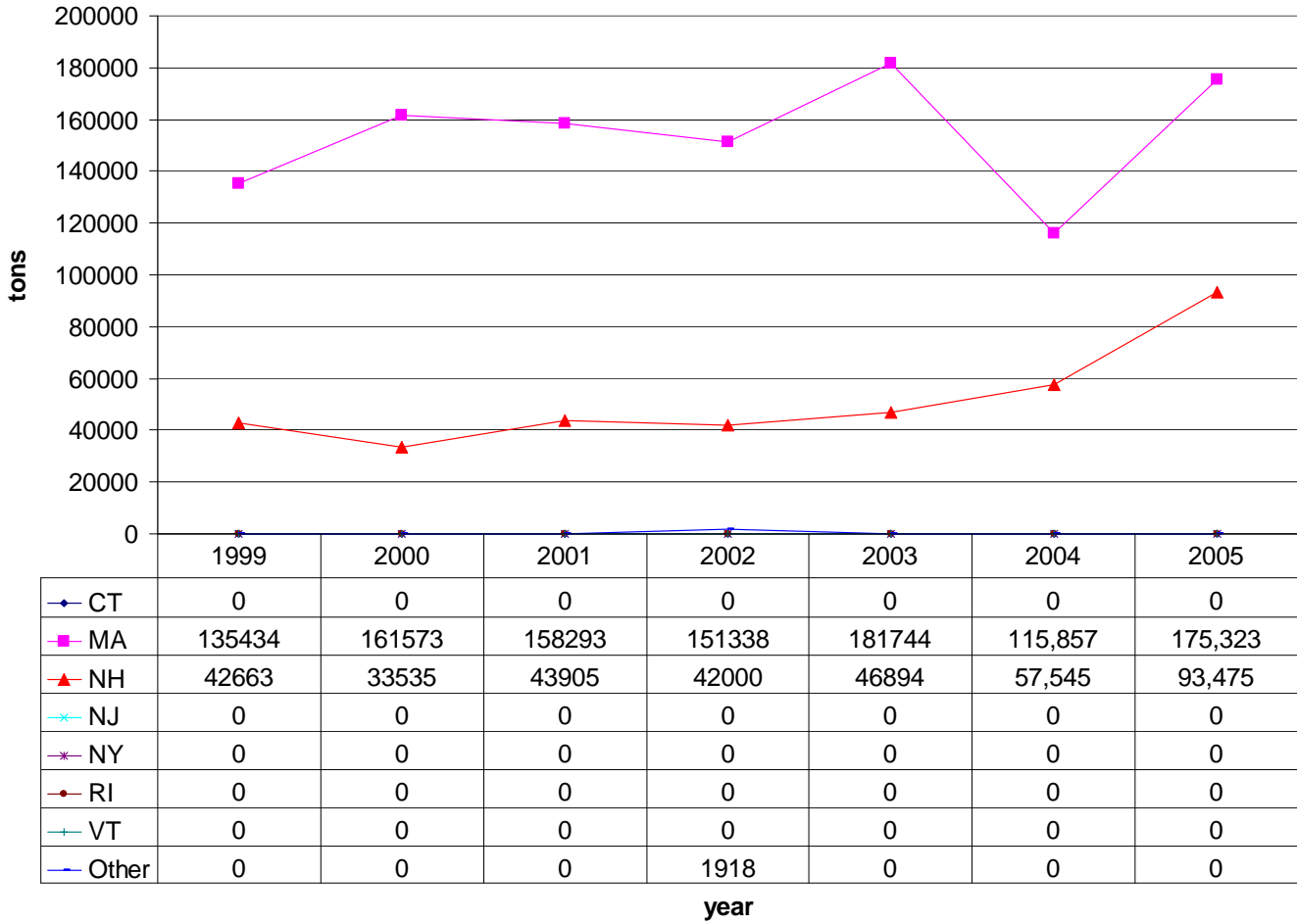


## 2005 MSW Exports from Maine (tons)

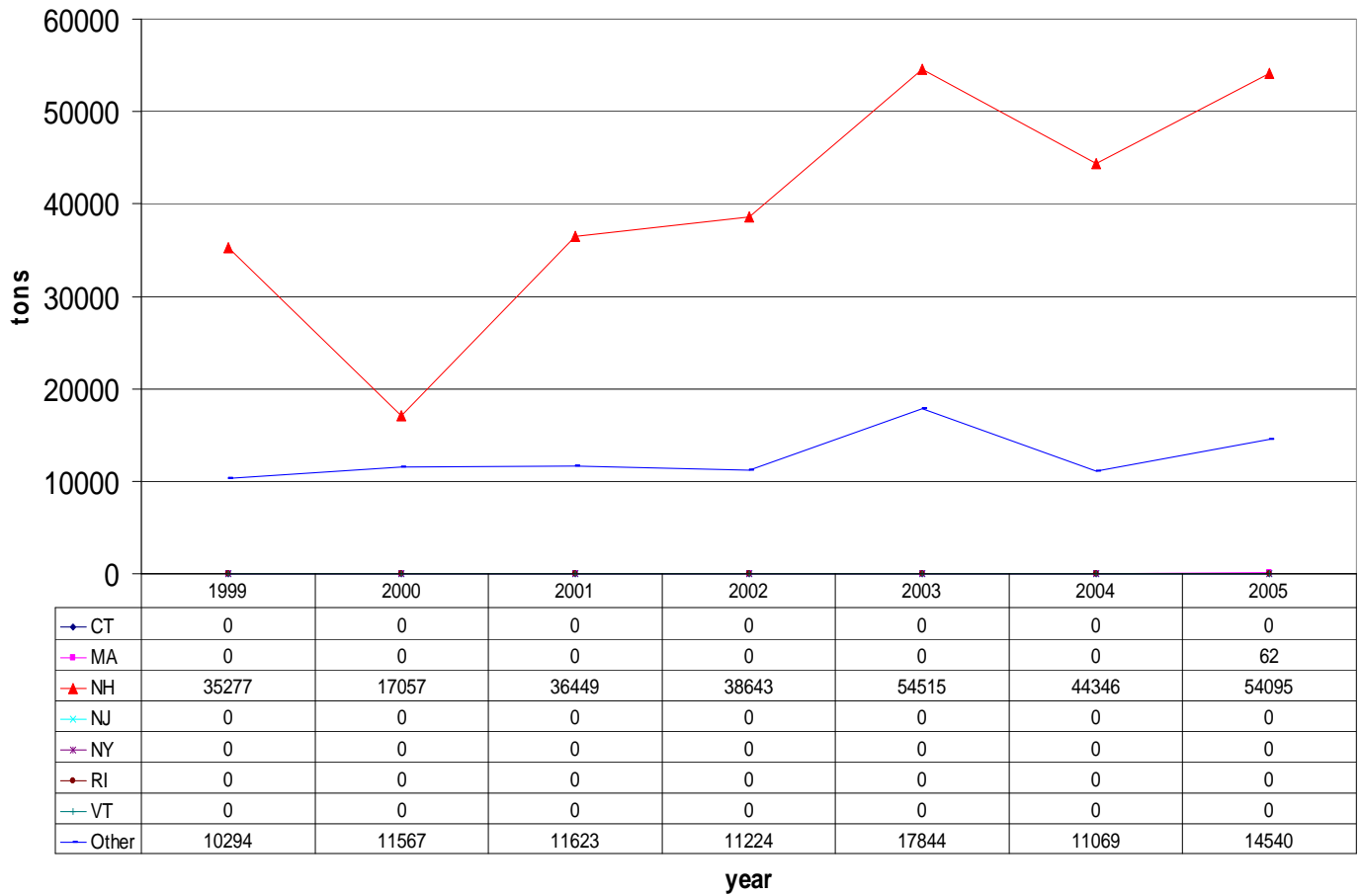




### MSW Imports to Maine: 1999 through 2005 (tons)

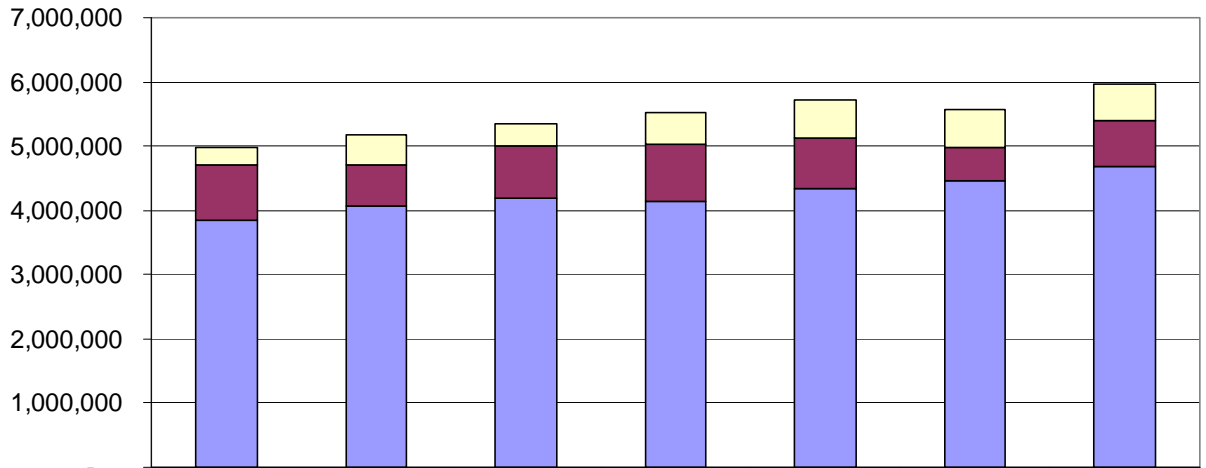


### MSW Exports from Maine: 1999 through 2005



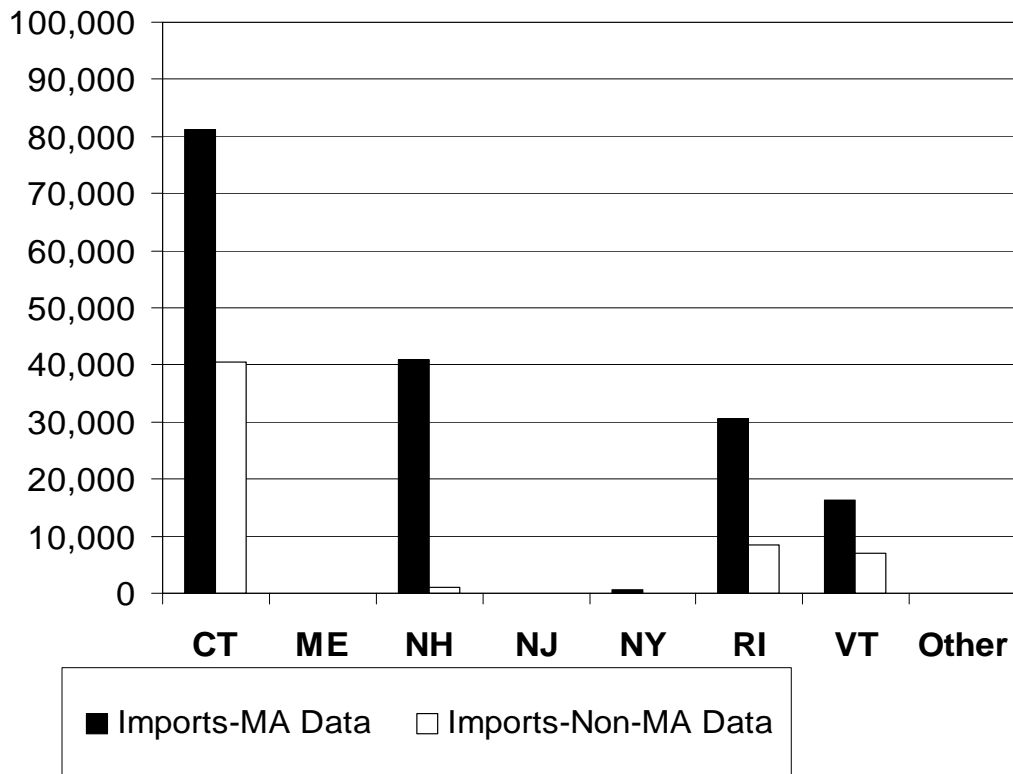
# Massachusetts

**MSW Generated in Massachusetts and Disposed**



	1999	2000	2001	2002	2003	2004	2005
Exported to Non-NEWMOA	268,510	468,895	350,461	490,772	577,194	592,953	572,021
Exported to NEWMOA	862,623	649,476	808,023	889,635	799,572	517,812	710,283
Disposed In State	3,856,000	4,069,137	4,189,359	4,147,413	4,337,266	4,459,730	4,685,484

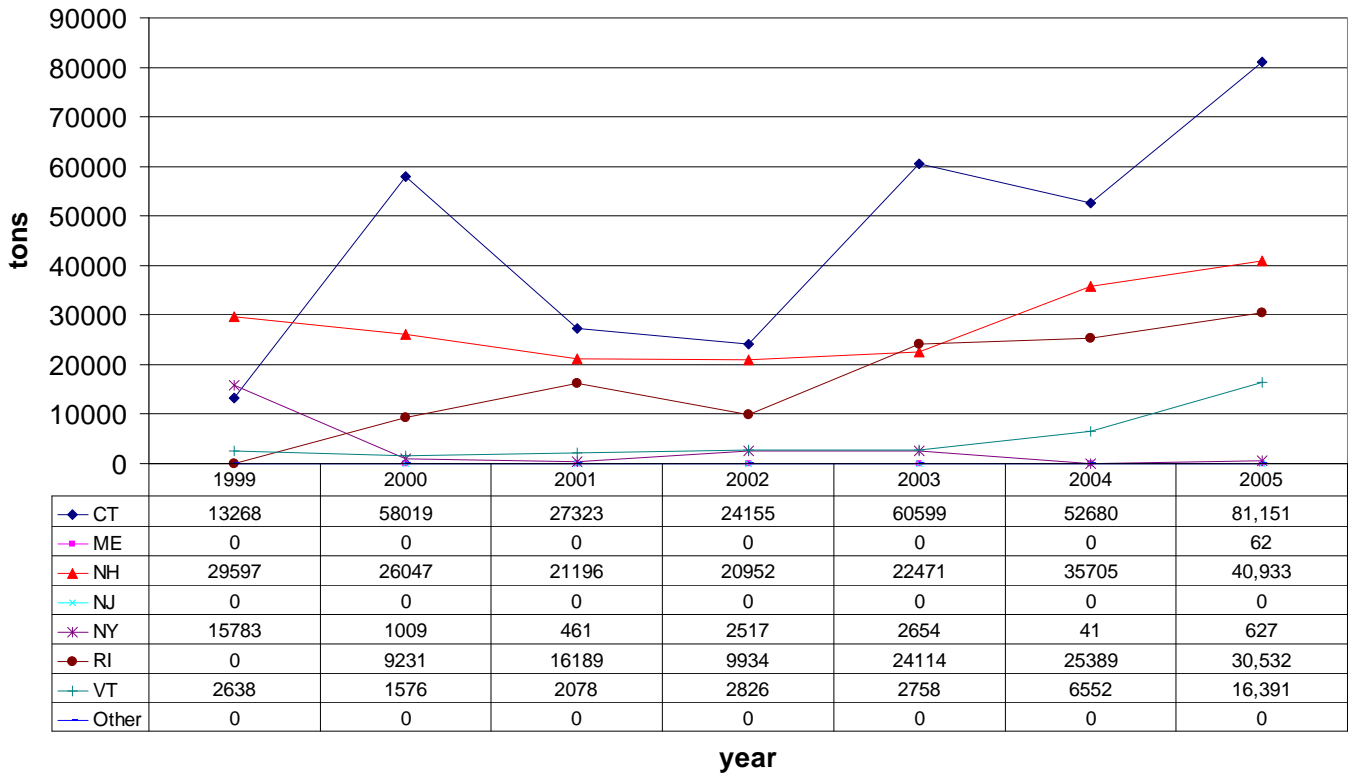
### 2005 MSW Imports to Massachusetts (tons)



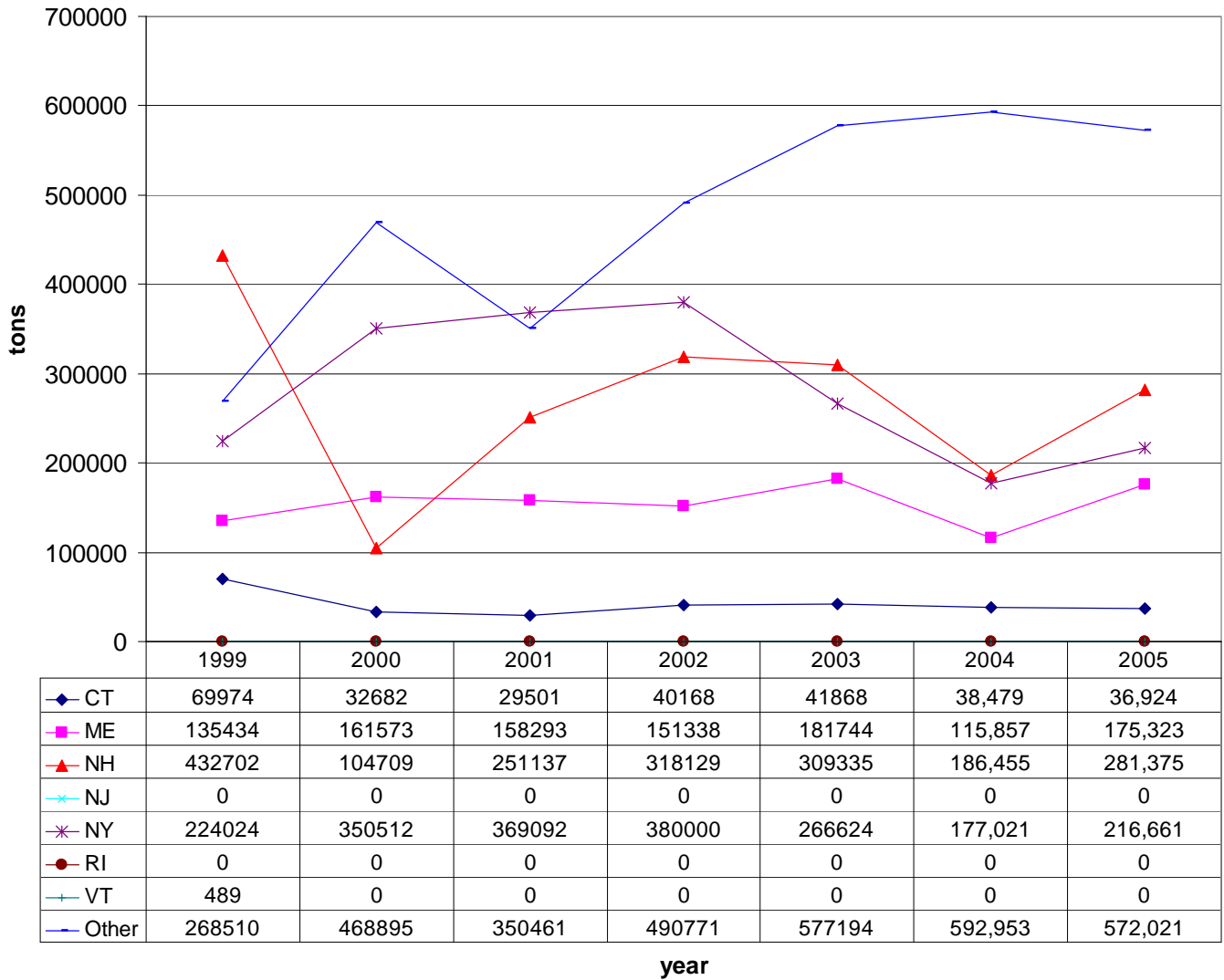
### 2005 MSW Exports from Massachusetts (tons)



### MSW Imports to Massachusetts: 1999 through 2005 (tons)

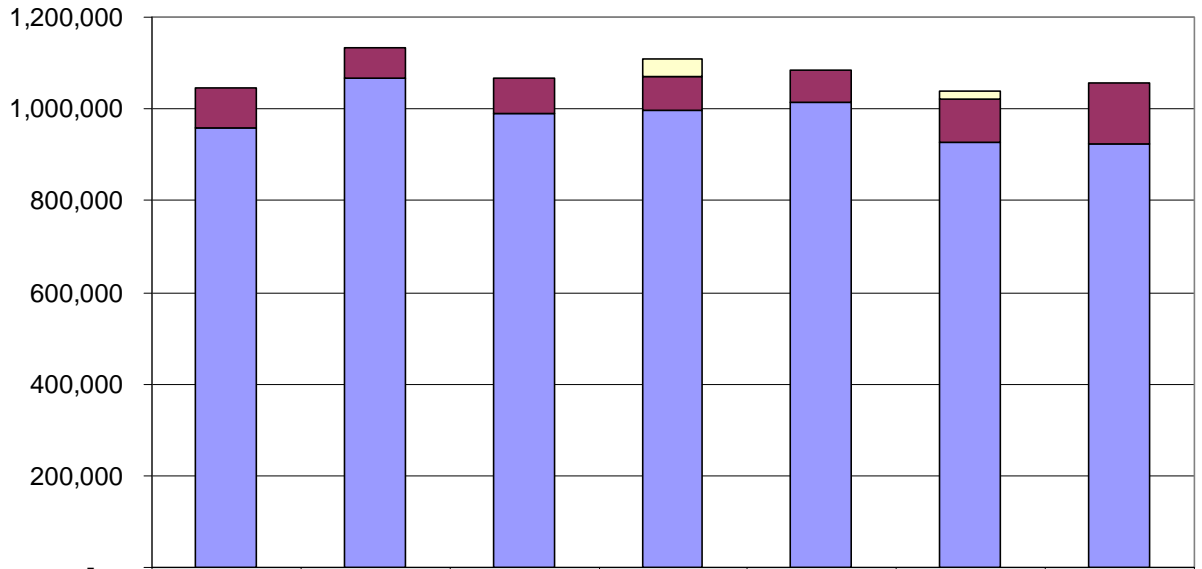


**MSW Exports from Massachusetts: 1999 through 2005  
(tons)**



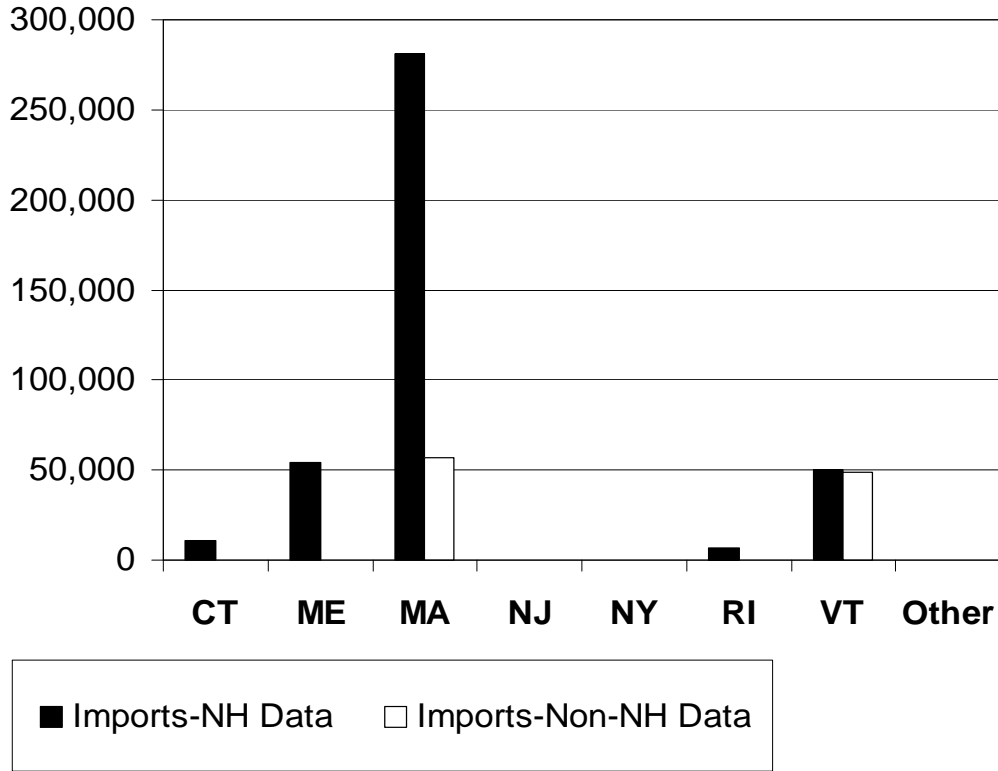
# New Hampshire

**MSW Generated in New Hampshire and Disposed**

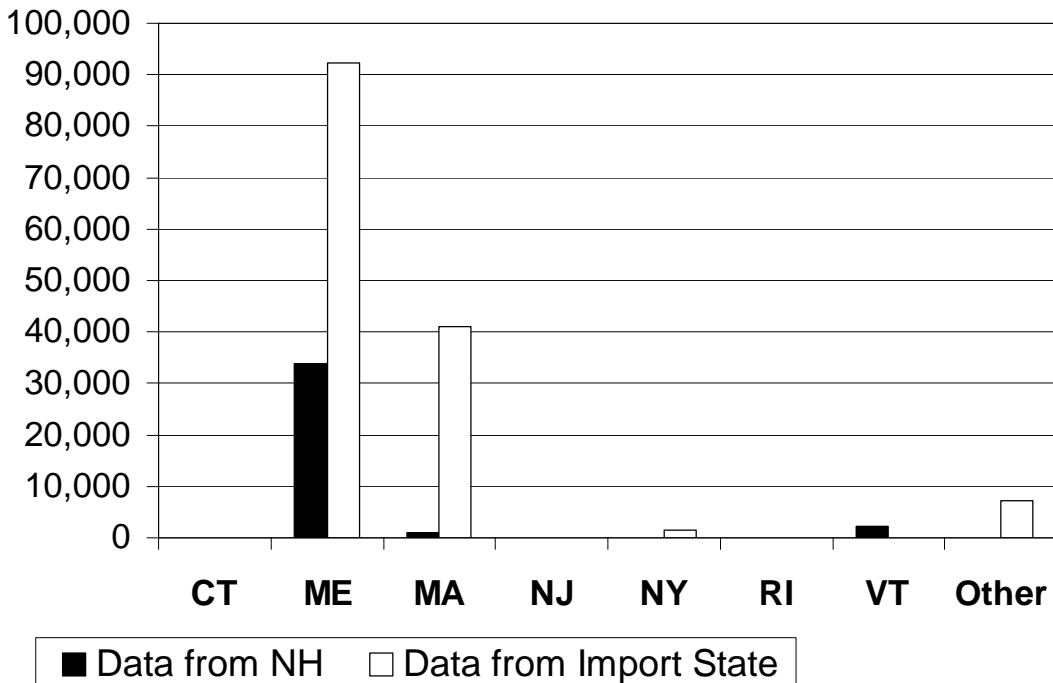


	1999	2000	2001	2002	2003	2004	2005
Exported to Non-NEWMOA	0	0	0	36,609	466	17,322	0
Exported to NEWMOA	85,606	66,688	77,409	73,404	71,958	95,756	134,408
Disposed In State	959,200	1,067,926	990,586	998,000	1,013,820	926,018	923,429

### 2005 MSW Imports to New Hampshire (tons)

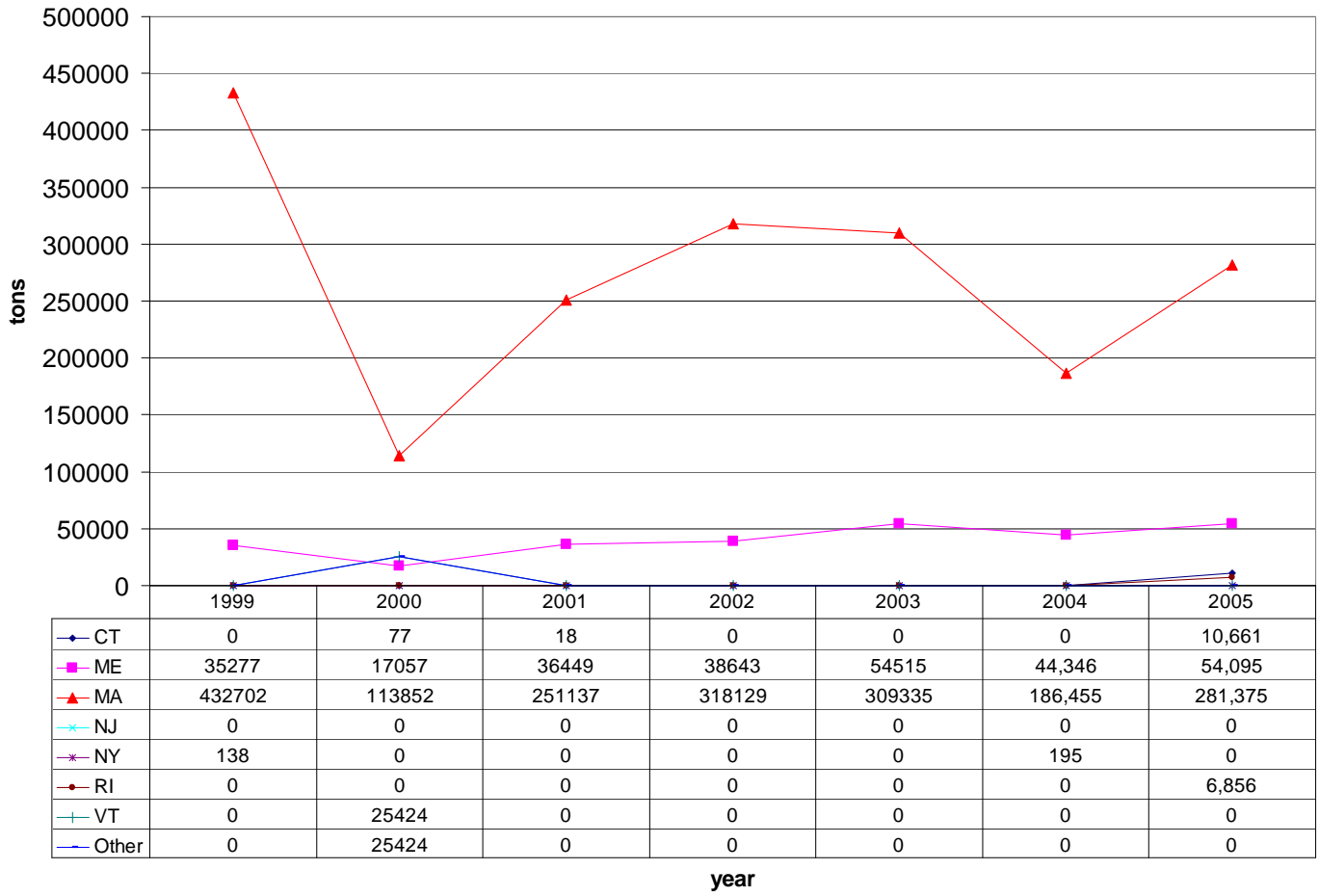


### 2005 MSW Exports from New Hampshire (tons)

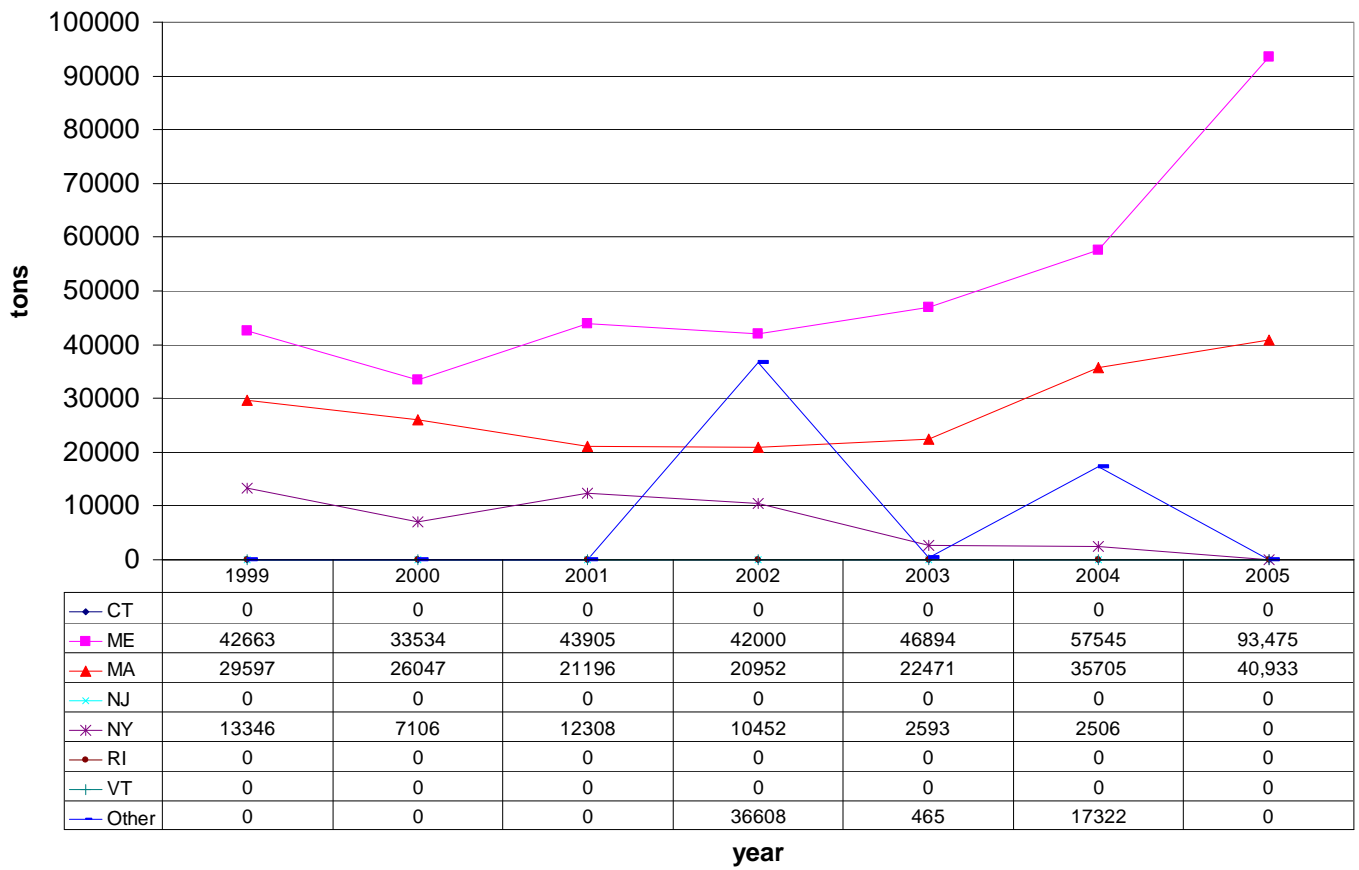




**MSW Imports to New Hampshire: 1999 through 2005  
(tons)**

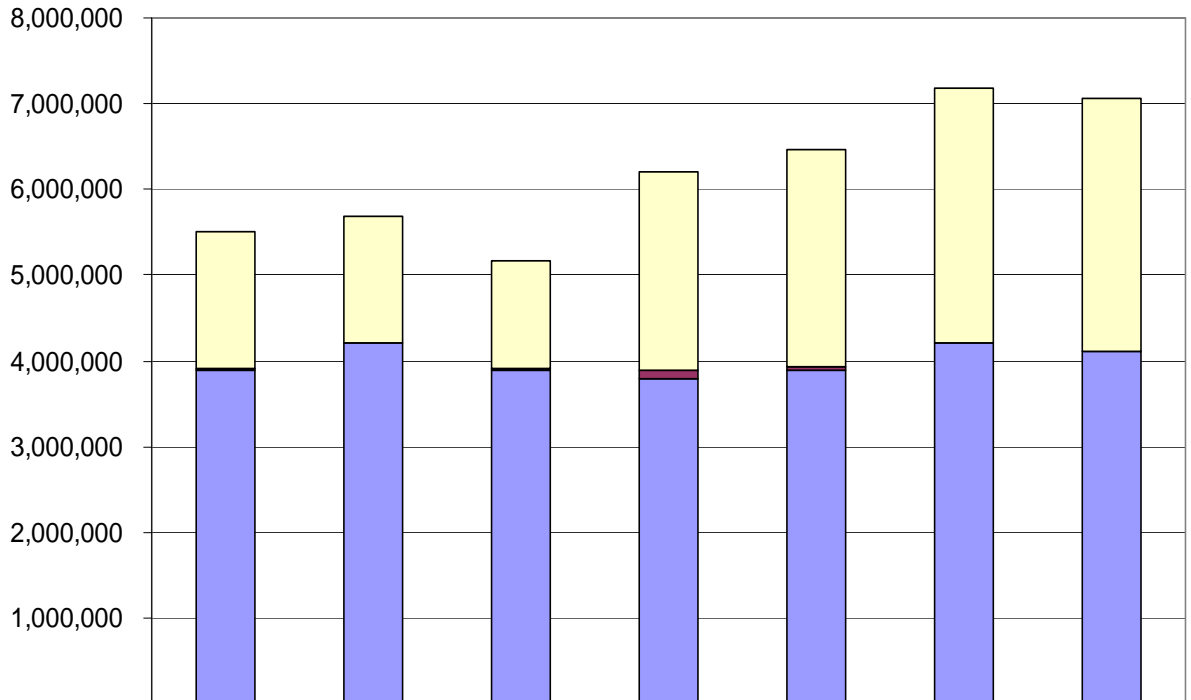


### MSW Exports from New Hampshire: 1999 through 2005



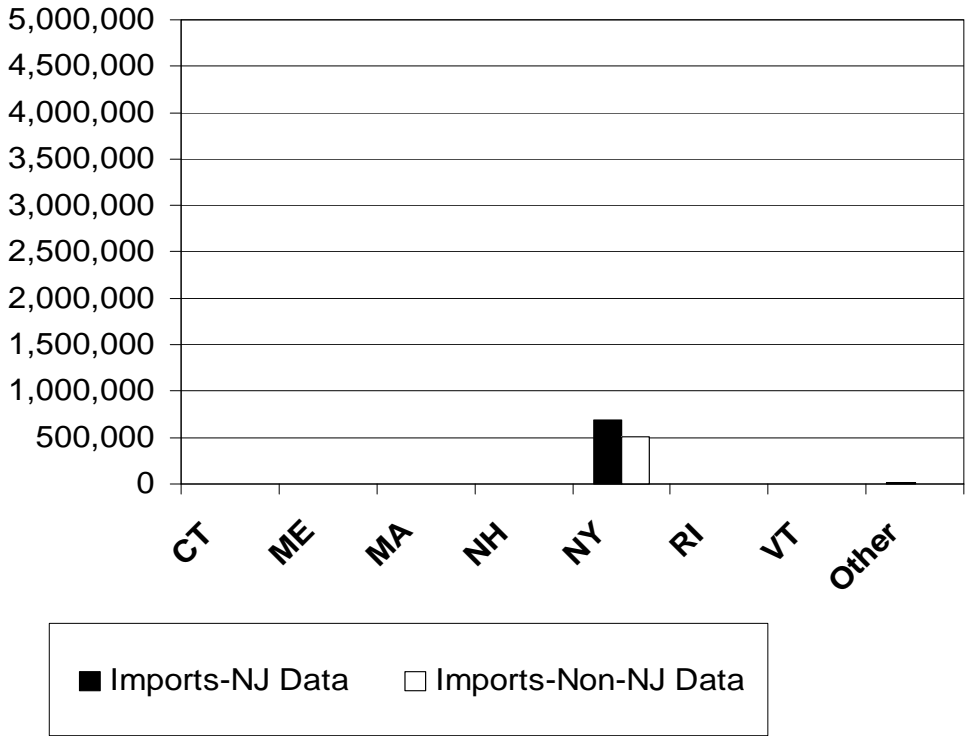
# New Jersey

**MSW Generated in New Jersey and Disposed**

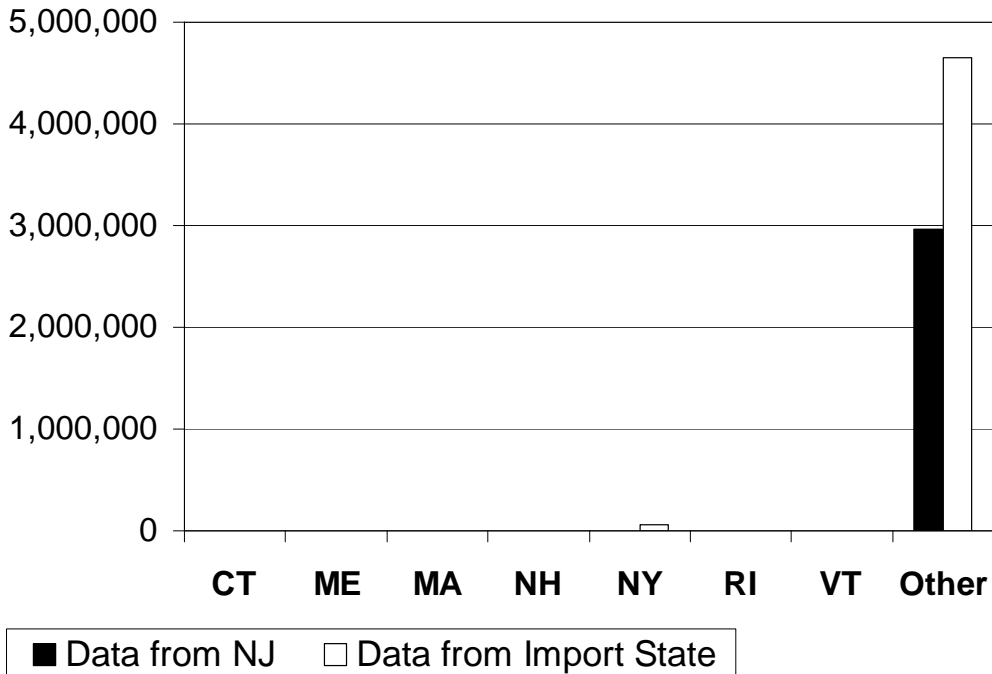


	1999	2000	2001	2002	2003	2004	2005
Exported to Non NEWMOA	1,600,000	1,462,761	1,256,233	2,320,195	2,524,725	2,978,768	2,960,768
Exported to NEWMOA	15,708	18,266	1,672	90,000	34,903	2,414	1,677
Disposed In State	3,900,000	4,200,000	3,900,000	3,800,000	3,900,000	4,200,000	4,100,000

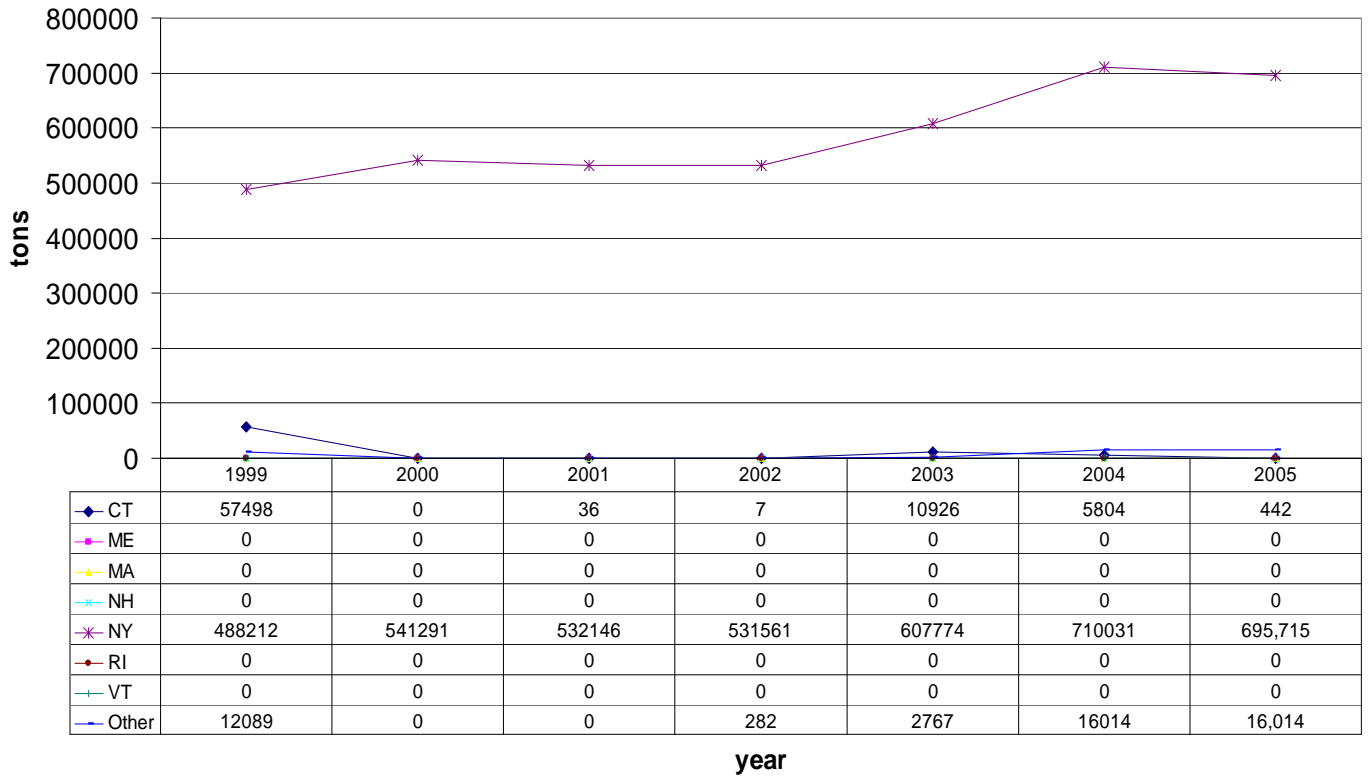
### 2004 MSW Imports to New Jersey (tons)



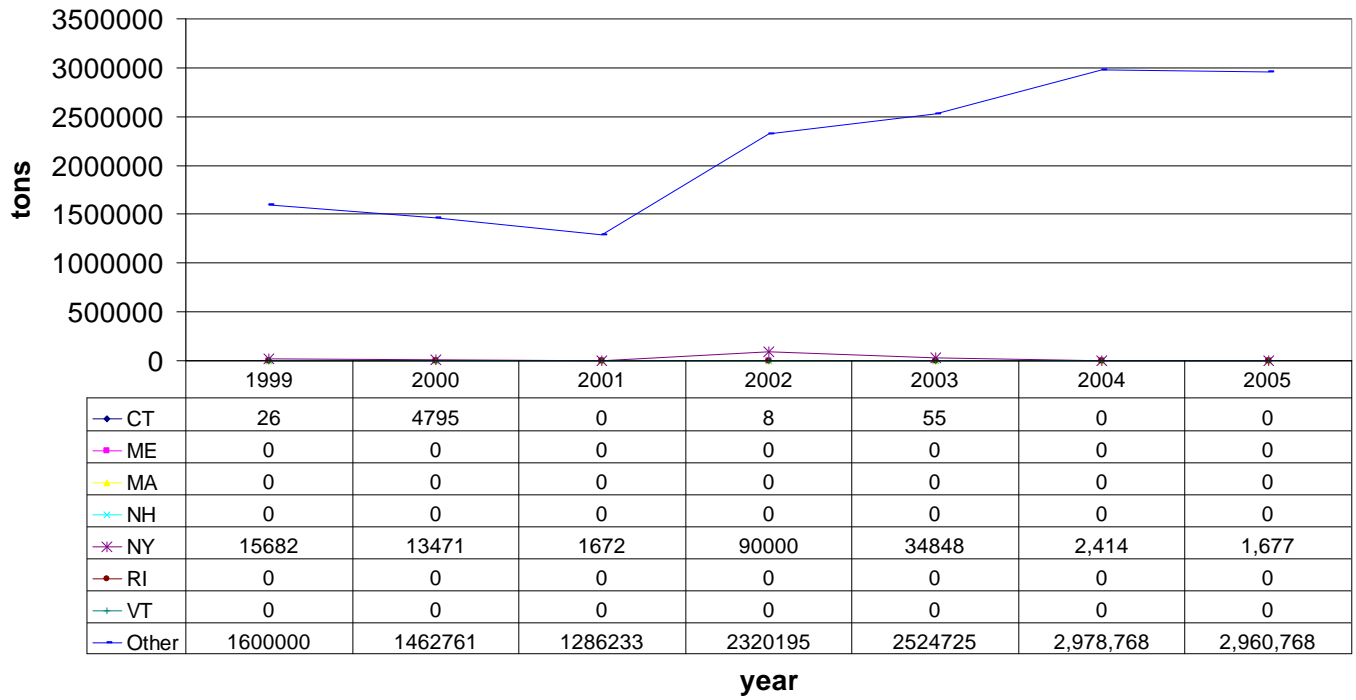
### 2004 MSW Exports from New Jersey (tons)



### MSW Imports to New Jersey: 1999 through 2005 (tons)

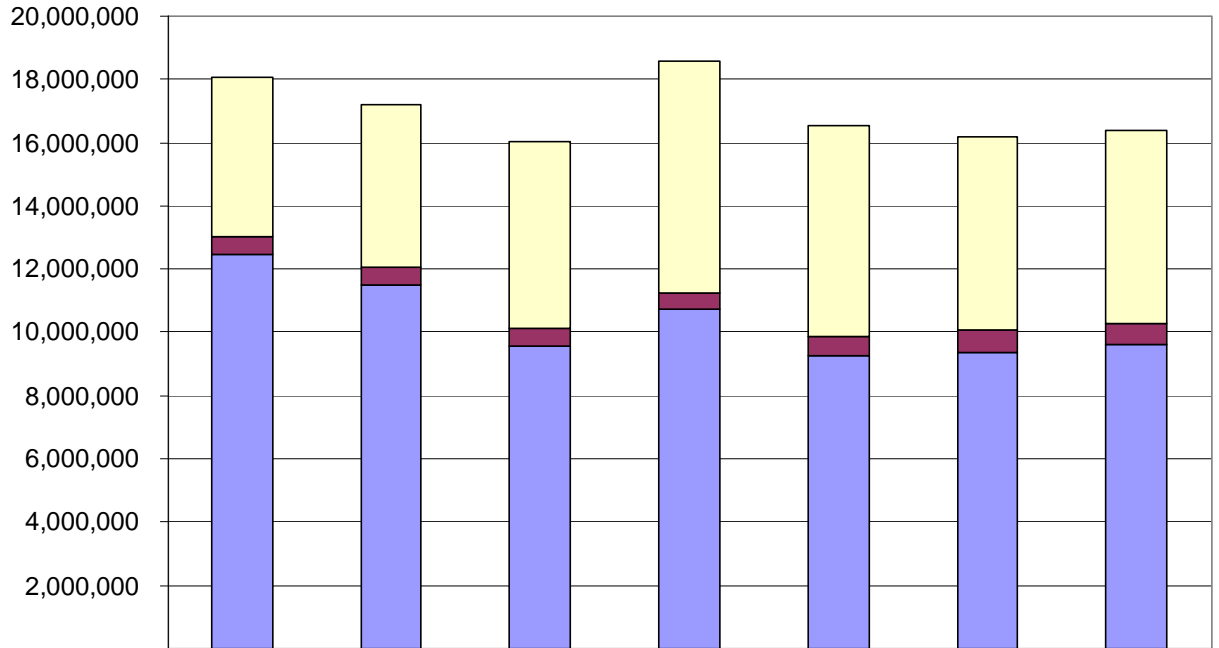


**MSW Exports from New Jersey: 1999 through 2005  
(tons)**



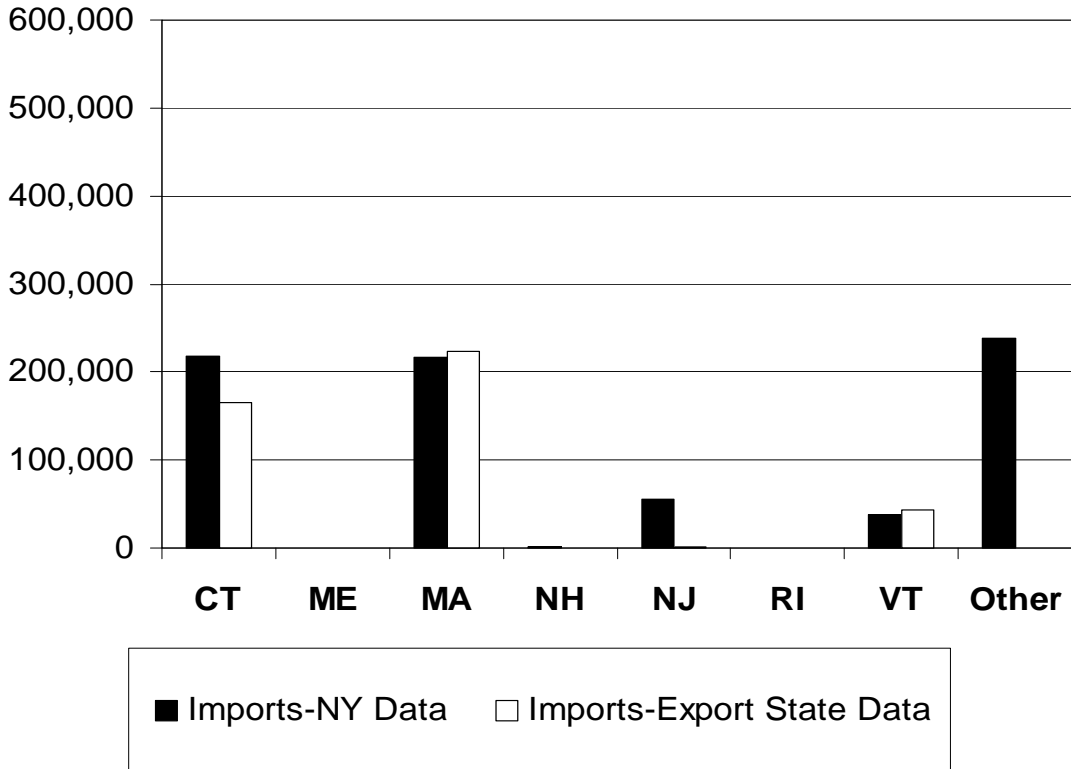
# New York

**MSW Generated in New York and Disposed**

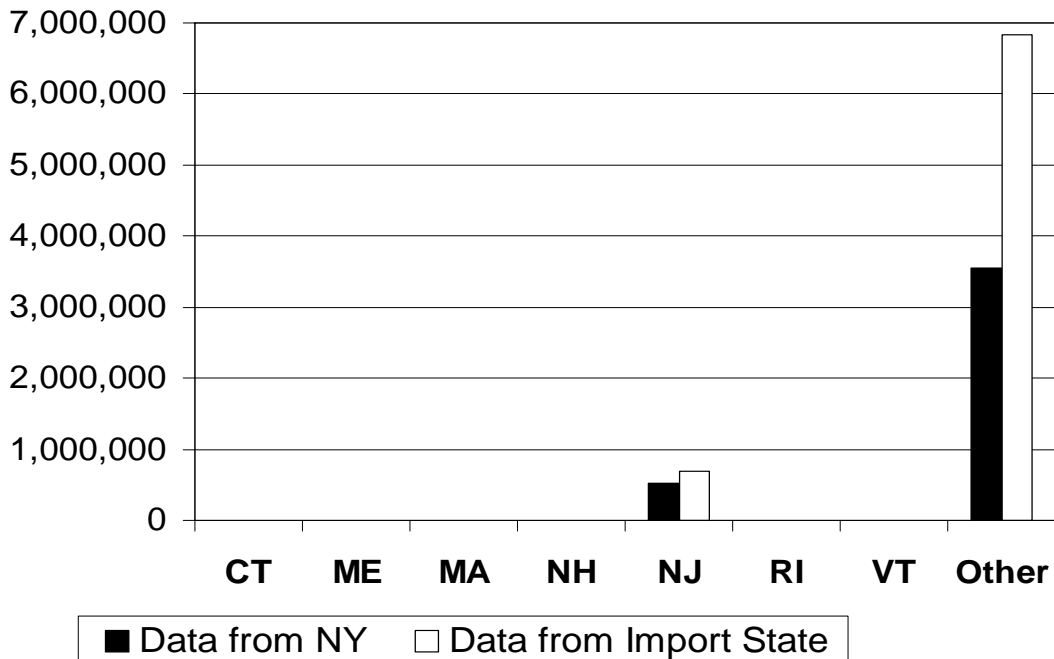


	1999	2000	2001	2002	2003	2004	2005
Exported to Non NEWMOA	5,010,000	5,180,000	5,914,719	7,306,122	6,652,056	6,099,291	6,076,523
Exported to NEWMOA	568,238	544,181	543,797	537,838	620,025	712,979	700,111
Disposed In State	12,476,291	11,495,198	9,558,740	10,719,419	9,254,382	9,354,935	9,600,000

### 2005 MSW Imports to New York (tons)

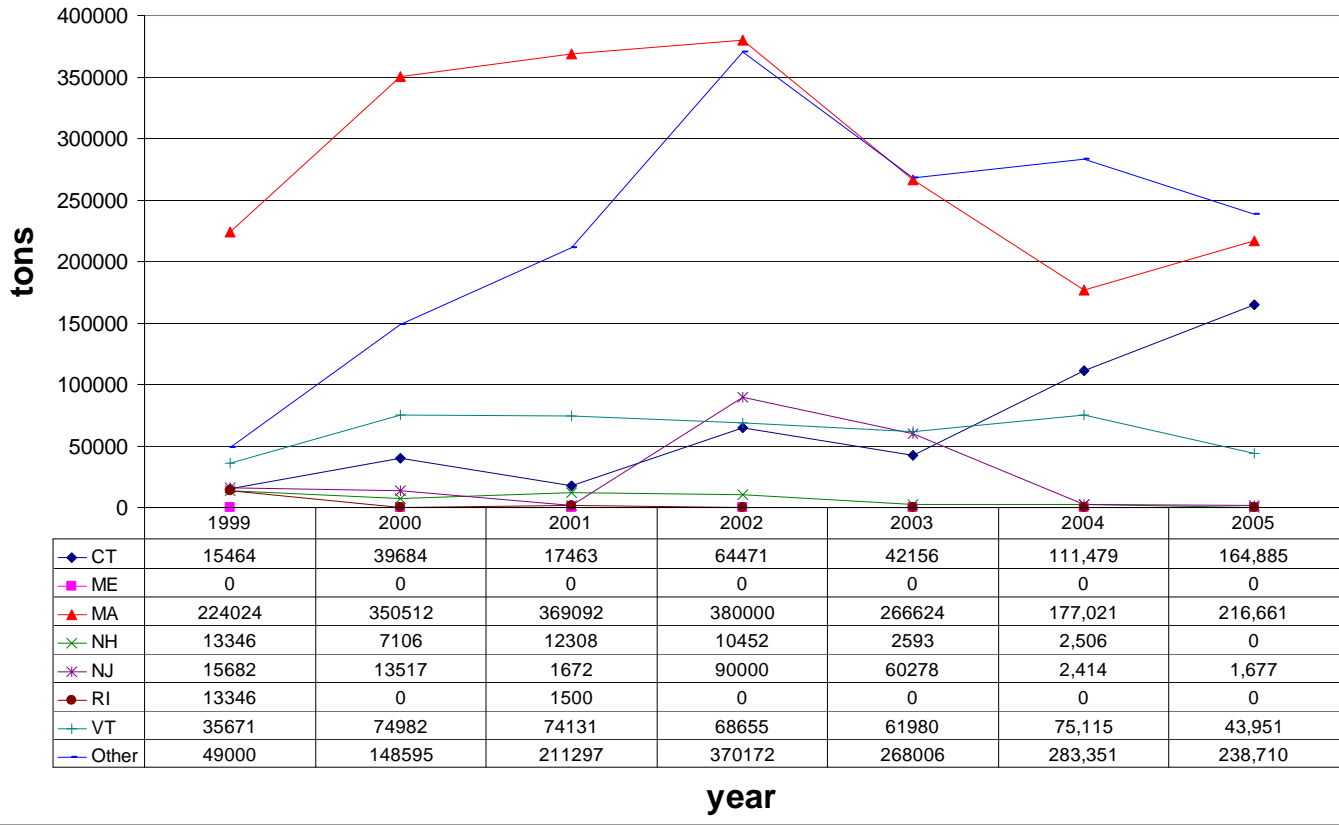


### 2005 MSW Exports from New York (tons)

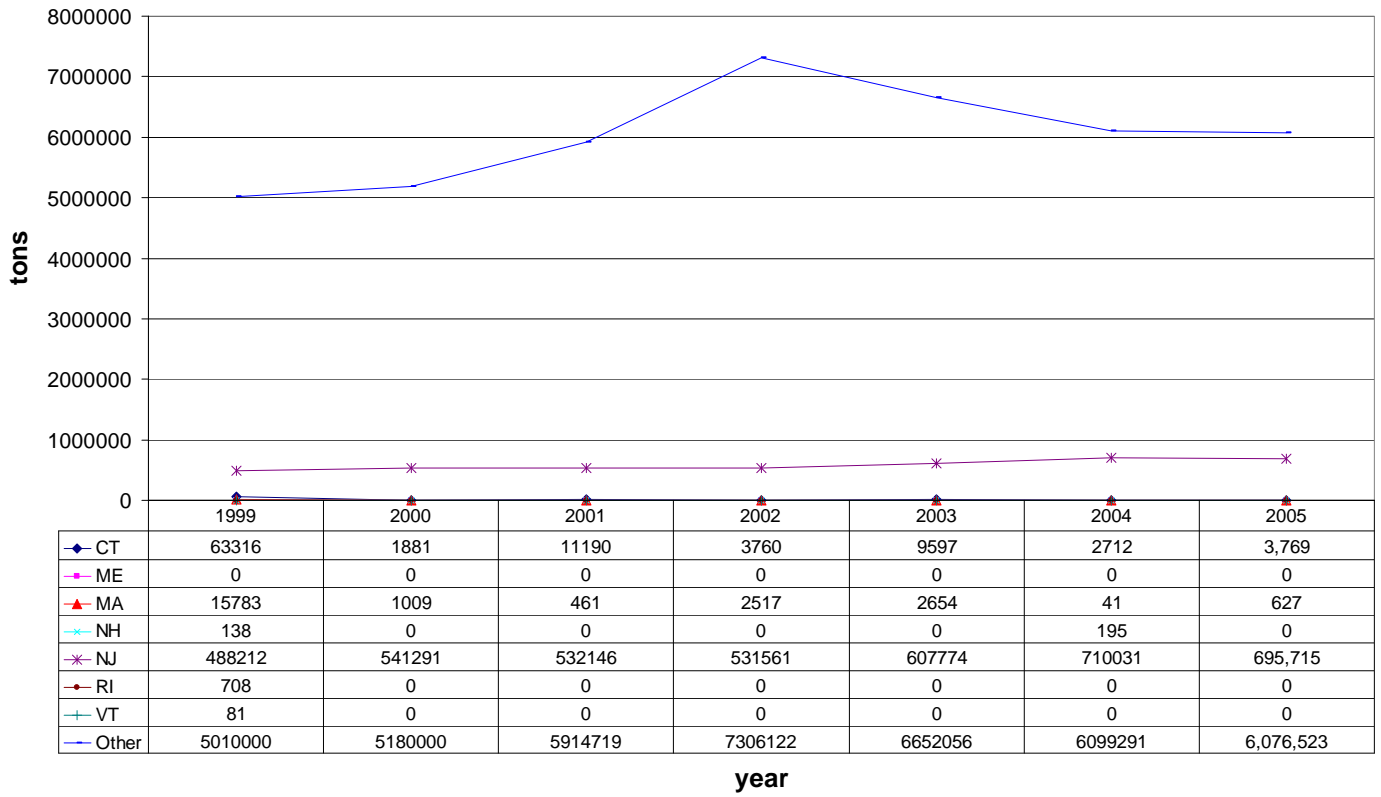




### MSW Imports to New York: 1999 through 2005 (tons)

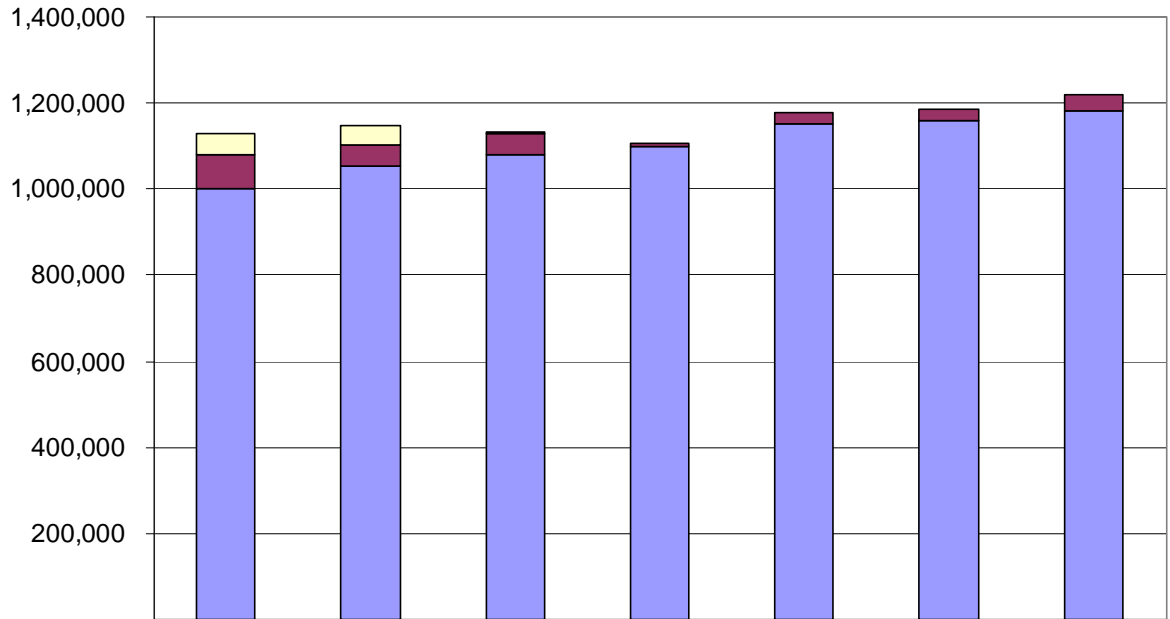


**MSW Exports from New York: 1999 through 2005  
(tons)**



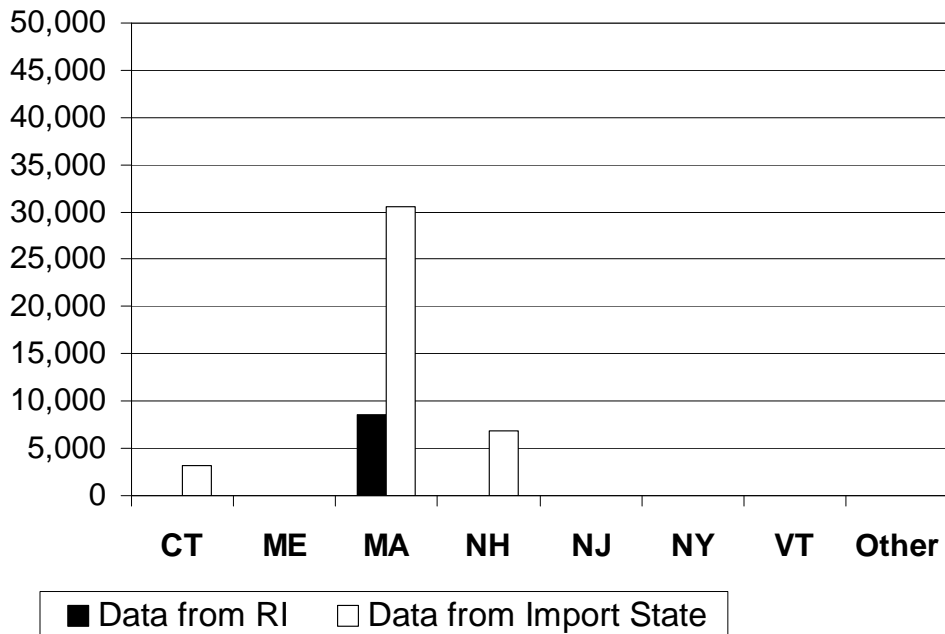
# Rhode Island

**MSW Generated in Rhode Island and Disposed**

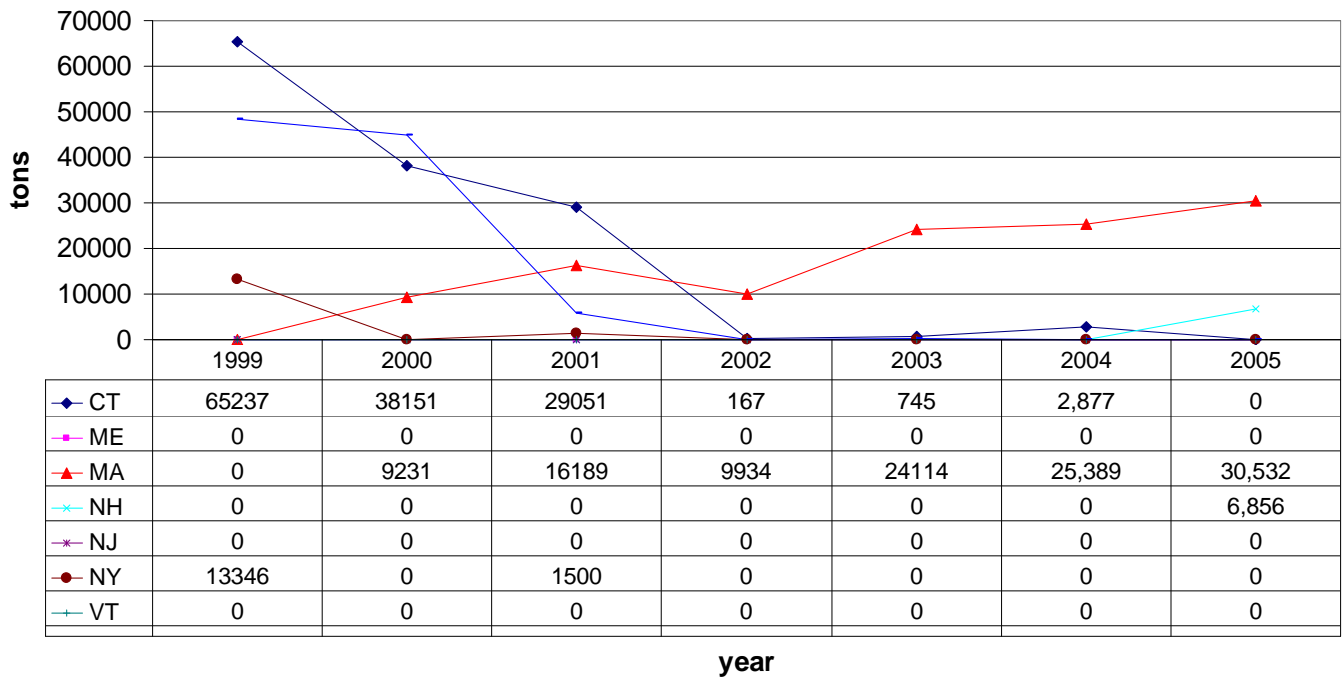


	1999	2000	2001	2002	2003	2004	2005
Exported to Non NEWMOA	48,339	44,939	5,789	0	184	0	0
Exported to NEWMOA	78,583	47,383	46,741	10,101	24,859	28,266	37,388
Disposed In State	1,000,879	1,054,290	1,081,663	1,097,452	1,151,887	1,158,991	1,181,607

## 2005 MSW Exports from Rhode Island (tons)

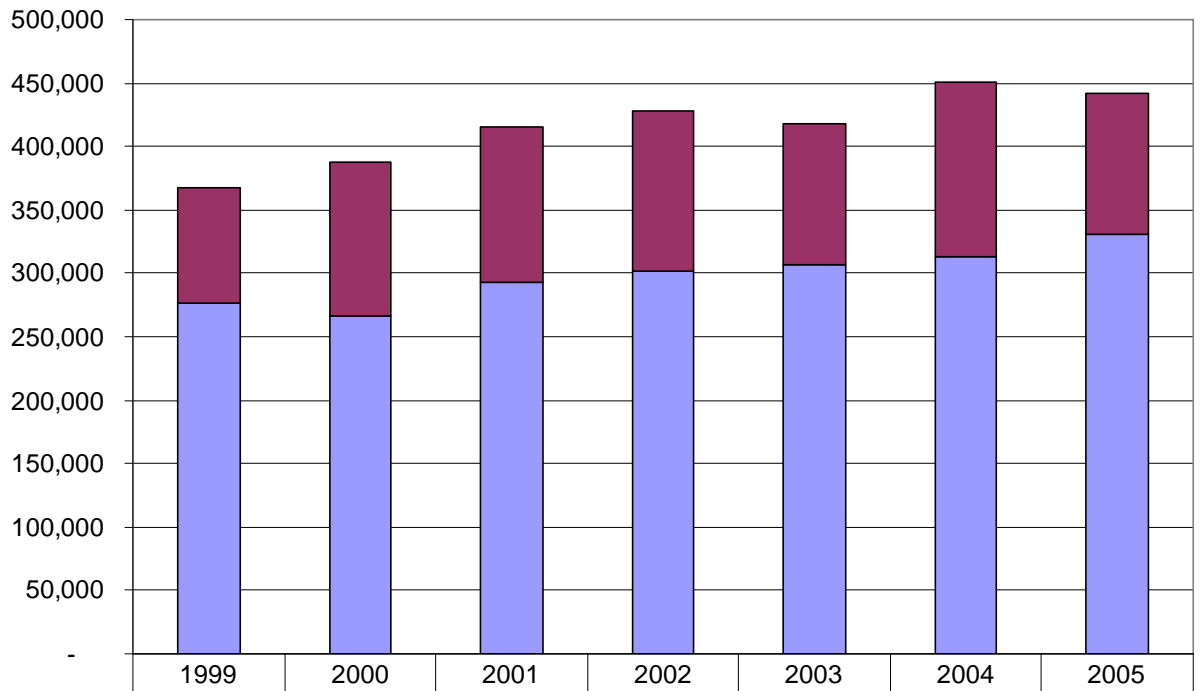


### MSW Exports from Rhode Island: 1999 through 2005 (tons)



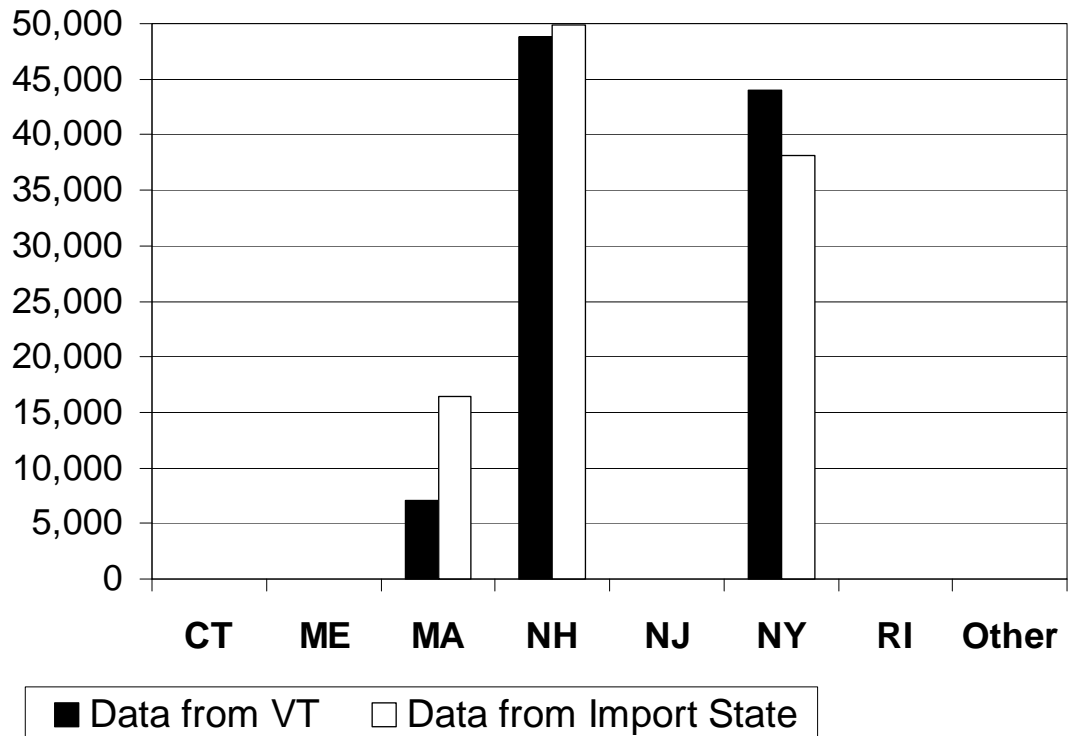
# Vermont

**MSW Generated in Vermont and Disposed**

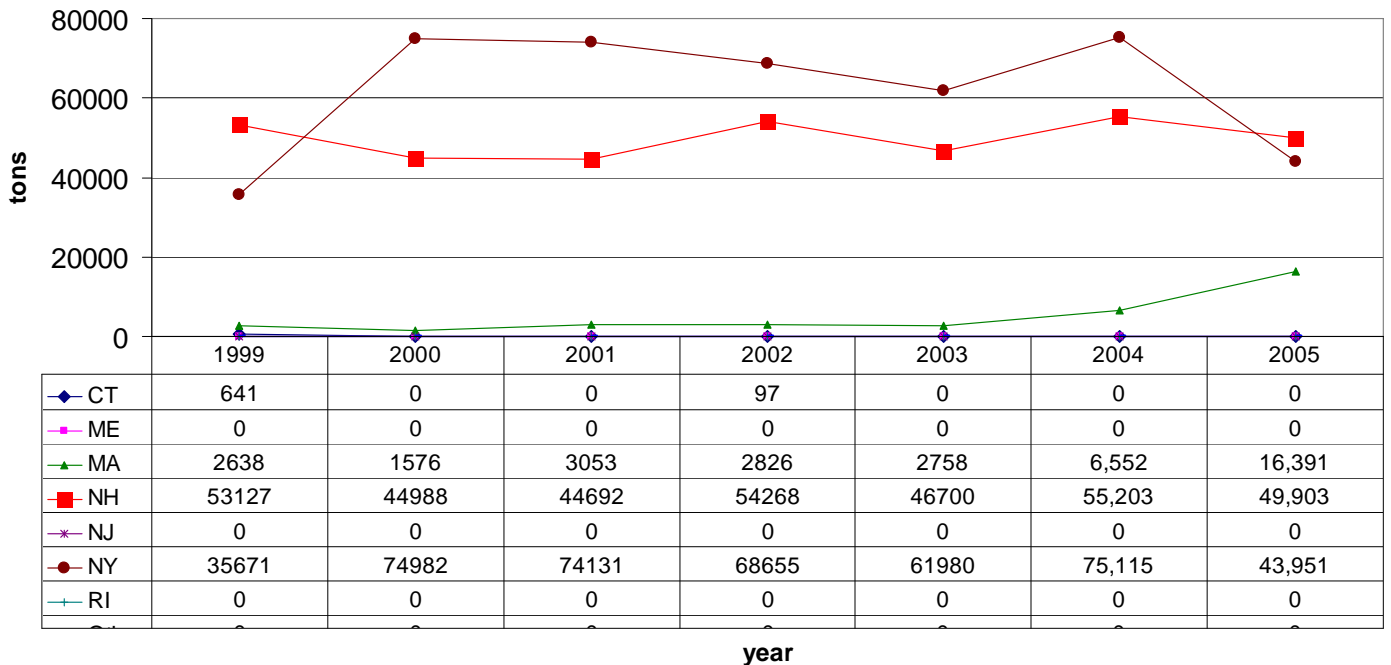


	1999	2000	2001	2002	2003	2004	2005
Exports to Non NEWMOA	0	0	0	0	0	0	0
Exports to NEWMOA	92,077	121,546	121,876	126,256	111,438	136,870	110,245
Disposed In State	275,900	265,850	293,373	301,971	306,597	313,412	331,364

## 2005 MSW Exports from Vermont (tons)



**MSW Exports from Vermont: 1999 through 2005  
(tons)**



Municipal Solid Waste

2005 Data

(na = not applicable)

(other can also mean unknown)

1. MSW Imported by Landfills (tons)

Data for this table provided by importing state

Exporting State	Importing State								
	CT	ME	MA	NH	NJ	NY	RI	VT	Export Total
CT	na	0	77,922	10,661	442	218,013	0	0	307,038
ME	0	na	62	54,095	0	0	0	0	54,157
MA	119	3,085	na	281,375	0	216,661	0	0	501,240
NH	0	1,836	26,859	na	0	1,476	0	0	30,171
NJ	0	0	0	0	na	56,136	0	0	56,136
NY	0	0	0	0	10,969	na	0	0	10,969
RI	0	0	19,351	6,856	0	0	na	0	26,207
VT	0	0	13,687	25,120	0	38,087	0	na	76,894
other	0	0		0	19,215	238,710	0	0	257,925
Import Total	119	4,921	137,881	378,107	30,626	769,083	0	0	

2. MSW Imported by Incinerators (tons)

Data for this table provided by importing state

Exporting State	Importing State								
	CT	ME	MA	NH	NJ	NY	RI	VT	Export Total
CT	na	0	3,229	0	0	0	0	0	3,229
ME	0	na	0	0	0	0	0	0	-
MA	36,805	170,053	na	0	0	0	0	0	206,858
NH	0	90,340	14,074	na	0	0	0	0	104,414
NJ	0	0	0	0	na	0	0	0	-
NY	3,769	0	627	0	684,746	na	0	0	689,142
RI	3,218	0	11,181	0	0	0	na	0	14,399
VT	0	0	2,704	24,783	0	0	0	na	27,487
other	10	0	0	0	13,807	0	0	0	
Import Total	43,802	260,393	31,815	24,783	698,553	0	0	0	

3. MSW Imported by Transfer Stations (tons)

Data for this table provided by importing state

Exporting State	Importing State								
	CT	ME	MA	NH	NJ	NY	RI	VT	Export Total
CT	na	0	0	0	0	29,003	0	0	29,003
ME	0	na	0	0	0	0	0	0	0
MA	0	0	na	0	0	0	0	0	0
NH	0	0	185	na	0	0	0	0	185
NJ	0	0	0	0	na	46,961	0	0	46,961
NY	0	0	69,083	0	895,964	na	0	0	965,047
RI	0	0	318	0	0	0	na	0	318
VT	0	0	0	0	0	0	0	na	0
other	0	0	0	0	0	7	0	0	
Import Total	0	0	69,586	0	895,964	75,971	0	0	

4. MSW Exported by Solid Waste Facilities (tons)

Data for this table provided by exporting state

Exporting State	Importing State									
	CT	ME	MA	NH	NJ	NY	RI	VT	Other	Export Total
CT	na	0	40,480	0	0	164,885	0	0	114,627	319,992
ME	0	na	0	0	0	0	0	0	14,540	14,540
MA	37,505	166,557	na	56,996	0	223,936	5,924	0	481,492	972,410
NH	0	33,870	967	na	0	0	0	2,338	0	37,175
NJ			0		na	1,677			2,960,768	2,962,445
NY	0	0	0	147	513,546	na	0	0	3,556,809	4,070,502
RI	0	0	8,528	0	0	0	na	0	0	8,528
VT	0	0	7,106	48,809	0	43,951	0	na	0	99,866
Import Total	37,505	200,427	57,081	105,952	513,546	434,449	5,924	2,338	7,128,236	



## Connecticut

### Imports

Source	CT	Import State	Difference	USED
ME	0	0	0	0
MA	36,924	37,505	-581	36,924
NH	0	0	0	0
NJ	0	0	0	0
NY	3,769	0	3,769	3,769
RI	3,218	0	3,218	0
VT	0	0	0	0
Other	10			10
Total	43,921	37,505		40,703

### Exports

Source	CT	Import State	Difference	USED
ME	0	0	0	0
MA	40,480	81,151	-40,671	81,151
NH	0	10,661	-10,661	10,661
NJ	0	442	-442	442
NY	164,885	218,013	-53,128	164,885
RI	0	0	0	0
VT	0	0	0	0
Other	114,627	414,891	-300,264	222,880
Total	319,992	725,158		480,019

## Massachusetts

### Imports

Source	MA	Import State	Difference	USED
CT	81,151	40,480	40,671	81,151
ME	62	0	62	62
NH	40,933	967	39,966	40,933
NJ	0	0	0	0
NY	627	0	627	627
RI	30,532	8,528	22,004	30,532
VT	16,391	7,106	9,285	16,391
Other	0	0	0	0
Total	169,696	57,081		169,696

## Maine

### Imports

Source	ME	Import State	Difference	USED
CT	0	0	0	0
MA	175,323	166,557	8,766	175,323
NH	93,475	33,870	59,605	93,475
NJ	0	0	0	0
NY	0	0	0	0
RI	0	0	0	0
VT	0	0	0	0
Other	0	0		0
Total	268,798	200,427		268,798

### Exports

Source	ME	Import State	Difference	USED
CT	0	0	0	0
MA	0	62	-62	62
NH	0	54,095	-54,095	54,095
NJ	0	0	0	0
NY	0	0	0	0
RI	0	0	0	0
VT	0	0	0	0
Other	14,540	0	14,540	14,540
Total	14,540	54,157		68,697

## New Hampshire

### Imports

Source	NH	Import State	Difference	USED
CT	10,661	0	10,661	10,661
ME	54,095	0	54,095	54,095
MA	281,375	56,996	224,379	281,375
NJ	0	0	0	0
NY	0	147	-147	0
RI	6,856	0	6,856	6,856
VT	49,903	48,809	1,094	49,903
Other	0	0	0	0
Total	402,890	105,952		

**Massachusetts**

**Exports**

Source	MA	Import State	Difference	USED
CT	37,505	36,924	581	36,924
ME	166,557	175,323	-8,766	175,323
NH	56,996	281,375	-224,379	281,375
NJ	0	0	0	0
NY	223,936	216,661	7,275	216,661
RI	5,924	0	5,924	0
VT	0	0	0	0
Other	481,492	756,077	-274,585	572,021
Total	972,410	1,466,360	-491,765	

**New Hampshire**

**Exports**

Source	NH	Import State	Difference	USED
CT	0	0	0	0
ME	33,870	93,475	-59,605	93,475
MA	967	40,933	-39,966	40,933
NJ	0	0	0	0
NY	0	1,476	-1,476	0
RI	0	0	0	0
VT	2,338	0	2,338	0
Other	0	7,145	-7,145	0
Total	37,175	143,029	-105,854	

**New Jersey**

**Imports**

Source	NJ	Import State	Difference	USED
CT	442	0	442	442
ME	0	0	0	0
MA	0	0	0	0
NH	0	0	0	0
NY	695,715	513,546	182,169	695,715
RI	0	0	0	0
VT	0	0	0	0
Other	16,014		16014	16,014
Total	712171			

**New York**

**Imports**

Source	NY	Import State	Difference	USED
CT	218,013	164,885	53,128	164,885
ME	0	0	0	0
MA	216,661	223,936	-7,275	216,661
NH	1,476	0	1,476	0
NJ	56,136	1,677	54,459	1,677
RI	0	0	0	0
VT	38,087	43,951	-5,864	43,951
Other	238,710		238,710	238,710
Total	769,083	434,449		665,884

**Exports**

Source	NJ	Import State	Difference	USED
CT	0	0	0	0
ME	0	0	0	0
MA	0	0	0	0
NH	0	0	0	0
NY	1,677	56,136	-54,459	1,677
RI	0	0	0	0
VT	0	0	0	0
Other	2,960,768	4,653,641	-1,692,873	2,960,768
Total	2,962,445	4,709,777	-1,747,332	

**Exports**

Source	NY	Import State	Difference	USED
CT	0	3,769	-3,769	3,769
ME	0	0	0	0
MA	0	627	-627	627
NH	147	0	147	0
NJ	513,546	695,715	-182,169	695,715
RI	0	0	0	0
VT	0	0	0	0
Other	3,556,809	6,835,001	-3,278,192	6,076,523
Total	4,070,502	7,535,112	-3,464,610	

the import state total subtracts 895,964 tons of pass NY through waste (that goes to PA)

the NY total # adds their pass through waste from CT and NJ

**Rhode Island****Imports**

Source	RI	Import State	Difference	USED
CT	0	0	0	0
ME	0	0	0	0
MA	0	5,924	-5,924	0
NH	0	0	0	0
NJ	0	0	0	0
NY	0	0	0	0
VT	0	0	0	0
Other	0		0	0
Total	0	5,924		

**Exports**

Source	RI	Import State	Difference	USED
CT	0	3,218	-3,218	0
ME	0	0	0	0
MA	8,528	30,532	-22,004	30,532
NH	0	6,856	-6,856	6,856
NJ	0	0	0	0
NY	0	0	0	0
VT	0	0	0	0
Other	0	0	0	0
Total	8,528	40,606	-32,078	

**Vermont****Imports**

Source	VT	Import State	Difference	USED
CT	0	0	0	0
ME	0	0	0	0
MA	0	0	0	0
NH	0	2,338	-2,338	0
NJ	0	0	0	0
NY	0	0	0	0
RI	0	0	0	0
Other	0		0	0
Total	0	2,338		

**Exports**

Source	VT	Import State	Difference	USED
CT	0	0	0	0
ME	0	0	0	0
MA	7,106	16,391	-9,285	16,391
NH	48,809	49,903	-1,094	49,903
NJ	0	0	0	0
NY	43,951	38,087	5,864	43,951
RI	0	0	0	0
Other	0	0	0	0
Total	99,866	104,381	-4,515	

