



**Northeast Waste Management Officials'  
Association ([NEWMOA](#))**

**Municipal Solid Waste (MSW) Interstate Flow in 2010  
January 30, 2013**

Prepared by the [NEWMOA Solid Waste Metrics Workgroup](#)

State environmental agencies in the Northeast have a responsibility to monitor and manage municipal solid waste (MSW) disposal capacity. To fulfill this responsibility, they gather data from the MSW facilities that they regulate on their waste imports, and most collect data on waste shipped out-of-state. This information helps them assess disposal capacity and measure recycling and other waste diversion activities. Starting in 2000, NEWMOA's members began to share data and prepare reports to characterize the flow of MSW for disposal to validate their information and inform state MSW policy and program development. For the purposes of this analysis, MSW includes non-hazardous waste generated by residential and commercial sources and does not include construction and demolition debris or non-hazardous industrial by-products. This data presentation covers MSW that is disposed of in landfills or waste-to-energy facilities, and does not include MSW that is diverted from disposal for composting, reuse or recycling.

Most MSW collection and disposal facilities in the northeast are owned and/or operated by private haulers and waste management companies. However, a relatively small number are owned by municipal or county level government. When a disposal facility is publically-owned it can limit the geographic area from which it accepts MSW, and in certain situations can mandate that the MSW generated within the area it serves be managed at that facility (these restrictions are known as "flow control"). With the exception of MSW generated in flow control areas, MSW functions as a commodity with disposal markets that can vary year-to-year depending on tipping fees, transportation costs, and contract arrangements. State governments do not direct where disposal of MSW occurs.

The figures displayed below present available state and regional MSW disposal information for calendar year 2010 along with comparisons to [previous years](#). NEWMOA performed this analysis annually from 1999 to 2006. In 2006, NEWMOA decided to collect and analyze the data every other year. The figures below compare 2010 data with 1999 – 2006 and 2008 data.

Solid Waste Metrics Workgroup

State solid waste program directors appoint representatives to serve on NEWMOA's [Solid Waste Metrics Workgroup](#). The purpose of this Workgroup is to oversee NEWMOA's MSW data collection and analysis and the development of this presentation. By working together since 2000, the Workgroup members have improved the accuracy of their state data.

### Data Analysis Methodology

NEWMOA's Workgroup members start developing this presentation by sharing summaries of the MSW data they collect from facilities. The NEWMOA staff reviews the data and prepares draft figures using Microsoft Excel. The Workgroup reviews a draft of the data, figures, and text and provides comments and corrections. After the NEWMOA staff makes recommended corrections, a draft is shared with the NEWMOA Board of Directors and the Solid Waste Steering Committee for their review and approval prior to publishing online. To prepare this material, NEWMOA followed the data quality assurance procedures in its EPA-approved [Quality Management Plan](#).

### Data Caveats & Notes

This presentation focuses on the flow of MSW in the Northeast U.S., so waste imports from and exports to non-NEWMOA states and/or Canadian provinces are aggregated into the "non-NEWMOA" or "Other" category in the figures.

Workgroup members resolve discrepancies that arise once NEWMOA has compiled the MSW data. A typical discrepancy involves a situation where the waste data from transfer facilities in one state disagrees with the data from disposal facilities in another state. Unless otherwise noted below<sup>1</sup>, the figures are based on information from the disposal facilities, since the Workgroup considers their data to be more accurate. As a result, the figures might vary from information published by individual states for two primary reasons:

- If MSW is hauled directly from the pick-up route to an out-of-state disposal facility or transfer station, the MSW does not pass through a regulated facility in the state of origin (called the generating state) and, therefore, that state does not receive a report on it. (The exception to this is New Jersey, which collects data from haulers on where waste is transported.)
- If waste is transported to an out-of-state transfer station and then to a disposal facility in a third state (referred to as "pass through" in the footnote below); the disposal facility records the MSW as imported from the transfer station state rather than the generating state.

By examining the MSW data, the Workgroup adjusts for these situations, and the figures reflect these corrections.

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#### <sup>1</sup> Data Notes:

- a) 2010 disposal facility data was not used for MA imports from CT, NH imports from MA, and NH imports from VT – data provided by the export state was determined to be more reliable in these limited cases
- b) MA imports from RI were reduced to account for 38,759 tons pass-through (MA to RI back to MA)
- c) For exports to states and provinces outside the region: 2010 data reported by the exporting state was used for MSW disposal in Kentucky, Ohio and West Virginia because it was determined to be more reliable. Imports to PA from NJ and CT were reduced to account for pass-through from NY (657,111 and 20,356 tons, respectively) – and imports to PA from NY were increased by 677,467 tons.
- d) For New York only: for some or all years prior to 2006, there might be data quality issues for in-state disposal of in-state generated MSW that might overstate disposal.

## Observations

Since it began to publish these presentations in 2000, NEWMOA has found that all of the Northeast states export MSW to facilities in other NEWMOA states for disposal, and with the exception of Rhode Island and Vermont, disposal facilities in all of the NEWMOA states import MSW from other NEWMOA states. Other key observations about 2010 MSW flow in the Northeast include:

- Approximately 30.3 million tons of MSW was generated in the region and disposed of in 2010, a reduction of over 7.8 percent from 2008. The amount of MSW requiring disposal is affected by economic activity and trends and the availability of reuse, recycling, and composting markets and infrastructure:
  - Region-wide, 68 percent remained in the state of origin for disposal, ranging from a high of 95 percent for Maine to a low of 59 percent for New Jersey and New York;
  - Region-wide, 6 percent was exported from the state of origin to another state within the region for disposal, ranging from a high of 18 percent for New Hampshire and Rhode Island, and 17 percent for Vermont, to a low of 2 percent for New Jersey; and
  - Region-wide, 26 percent was exported to disposal facilities outside of the region, ranging from a high of 39 percent for New Jersey and 37 percent for New York to a low of zero for New Hampshire, Rhode Island, and Vermont.
- Region-wide, 0.72 tons per person of MSW was generated and disposed of in 2010; with the rate ranging from 0.57 tons per person for Maine and New Hampshire to 0.98 tons per person for Rhode Island.<sup>2</sup>
- Figure 4 shows a relatively steady state or general decline since 1999 in the amount of MSW generated and disposed of within the same state.
- Figure 5 shows the large year-to-year changes in waste shipment patterns that can occur. With the exception of Maine and Massachusetts, imports of MSW for disposal from other NEWMOA states declined between 2008 and 2010. Imports to facilities in Maine increased by approximately 40,000 tons (17 percent), and imports to facilities in Massachusetts increased approximately 225,000 tons (132 percent).
- Figure 6 also shows large year-to-year changes. In 2010, waste facilities in Massachusetts, Maine, New York and Vermont exported less MSW for disposal to facilities in other NEWMOA states than they did in 2008, while Connecticut, New Hampshire, New Jersey, and Rhode Island exported more MSW to the other NEWMOA States.
- Figure 7 shows a decline in the quantity of MSW exported for disposal from each of the Northeast states to states and provinces outside of the region since 2004, as well as an overall region-wide decline from a high of approximately 10.5 million tons in 2002 to approximately 7.7 million tons in 2010.

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<sup>2</sup> Per capita estimates were calculated using 2010 US Census population data.

## **About NEWMOA**

The Northeast Waste Management Officials' Association ([NEWMOA](#)) is a non-profit, non-partisan interstate association whose membership is composed of the state environmental agency directors of the hazardous waste, solid waste, waste site cleanup, emergency response, pollution prevention, and underground storage tank programs in Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont.

NEWMOA's mission is to develop, lead, and sustain an effective partnership of states that helps achieve a clean, healthy, and sustainable environment by exploring, developing, promoting, and implementing environmentally sound solutions for:

- Reducing materials use and preventing pollution and waste;
- Properly reusing and recycling discarded materials that have value;
- Safely managing solid and hazardous wastes; and
- Remediating contaminated sites.

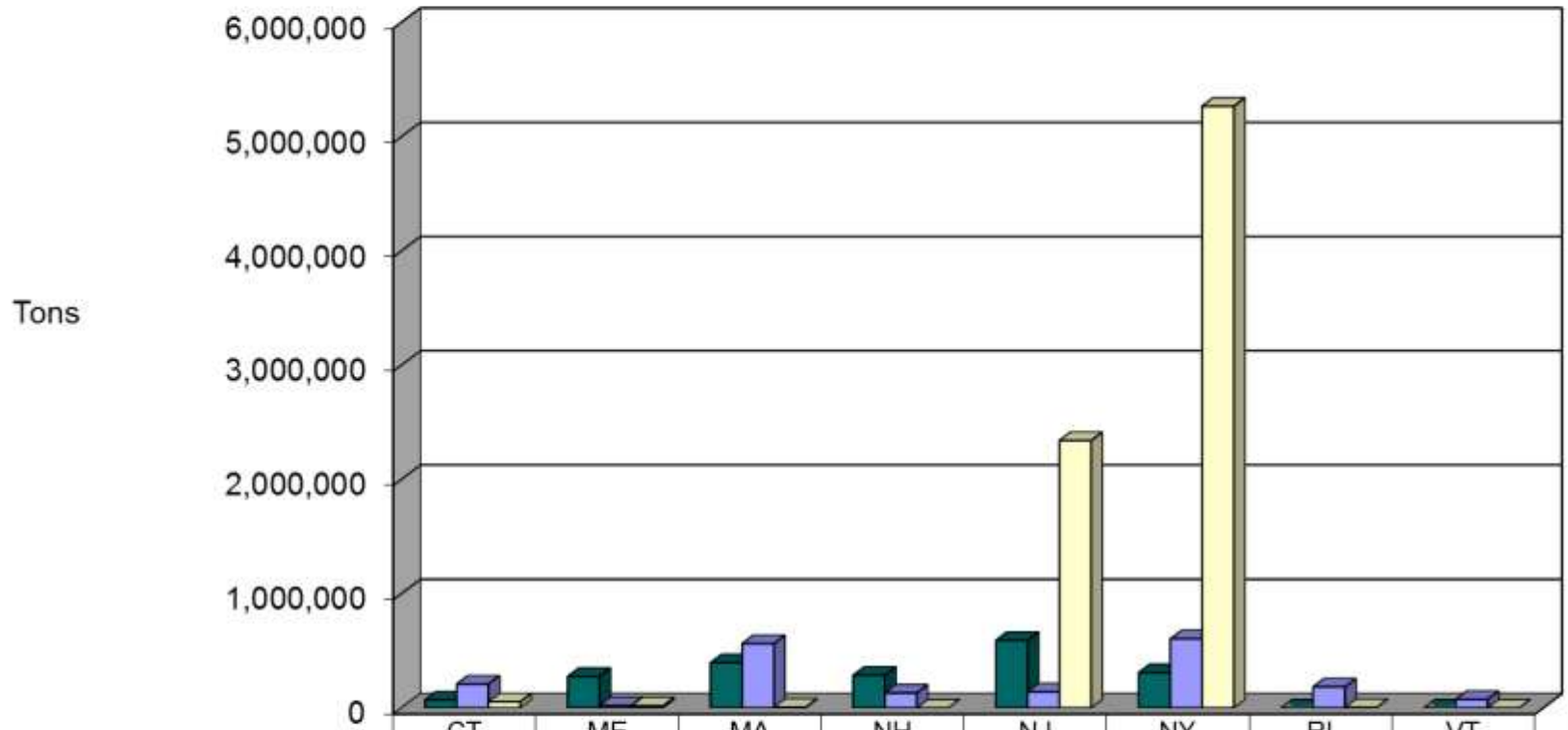
The group achieves its goals by:

- Managing and sharing information and data;
- Facilitating state and federal agency interaction;
- Providing training and assistance;
- Supporting regulatory development and program implementation; and
- Conducting research.

## **Disclaimer**

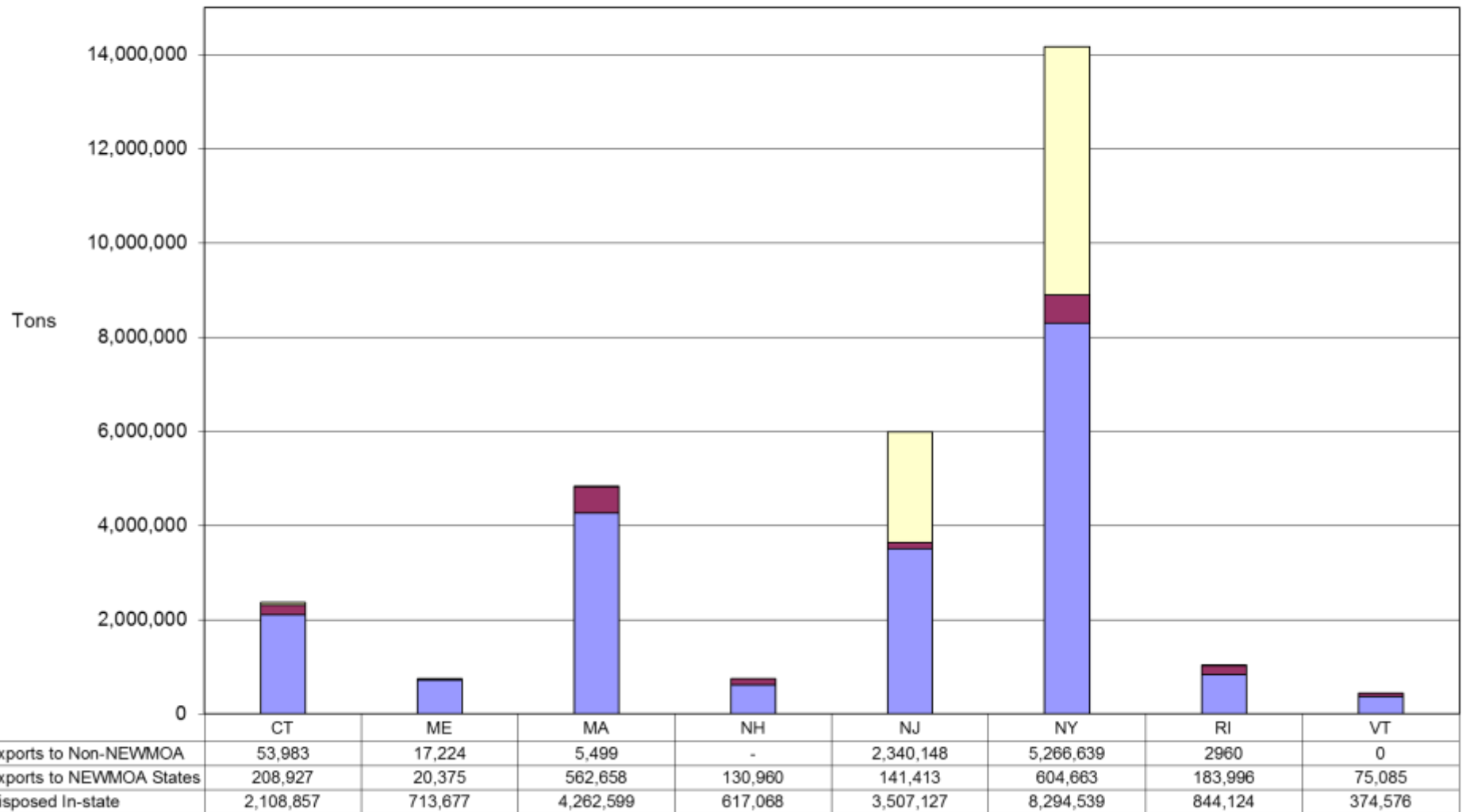
The views expressed in this Paper do not necessarily reflect those of each of the NEWMOA-member states or the U.S. Environmental Protection Agency (US EPA). Mention of any company, process, or product name should not be considered an endorsement by NEWMOA, NEWMOA-member states, or the U.S. EPA.

**Figure 1: 2010 MSW Imports & Exports for Disposal  
(Tons)**

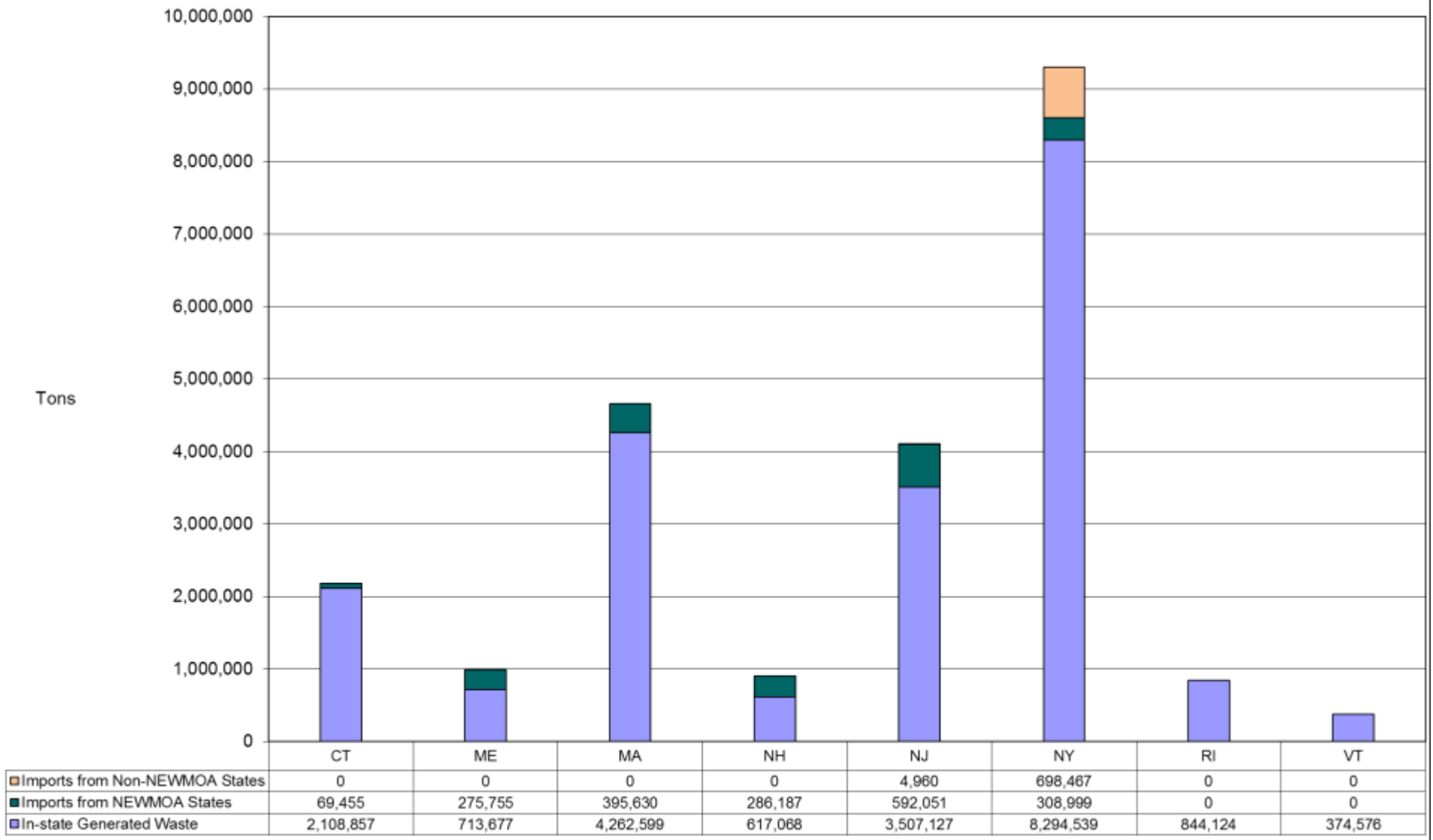


■ Imports from NEWMOA States	69,455	275,755	395,630	286,187	592,051	308,999	0	0
■ Exports to NEWMOA States	208,927	20,375	562,658	130,960	141,413	604,663	183,996	75,085
■ Exports to Non-NEWMOA States & Provinces	53,983	17,224	5,499	0	2,340,148	5,266,639	2,960	0

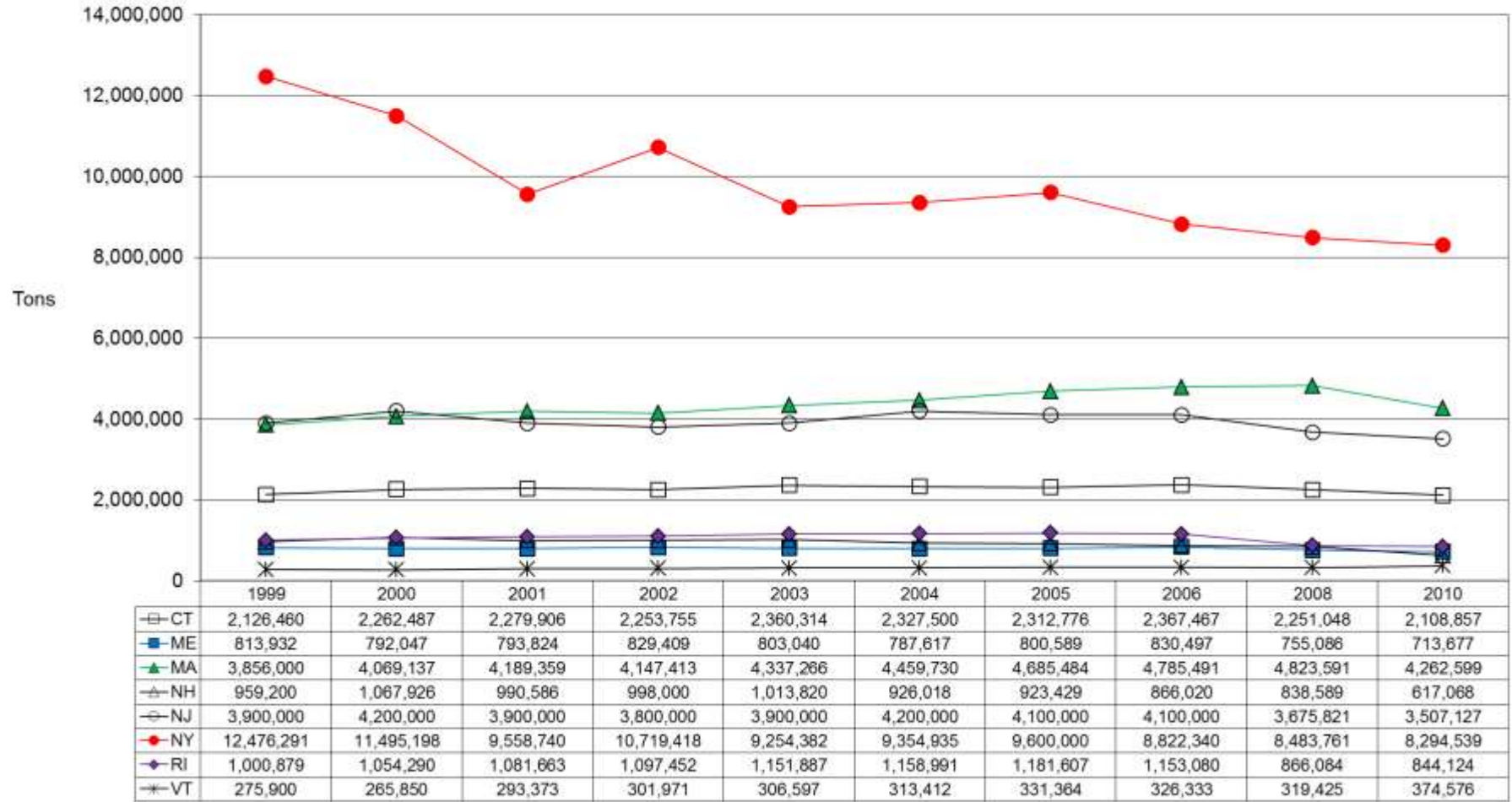
**Figure 2: 2010 MSW Generated by State & Disposed (Tons)**



**Figure 3: 2010 Total Quantity of MSW Disposed of In-State  
(Tons)**

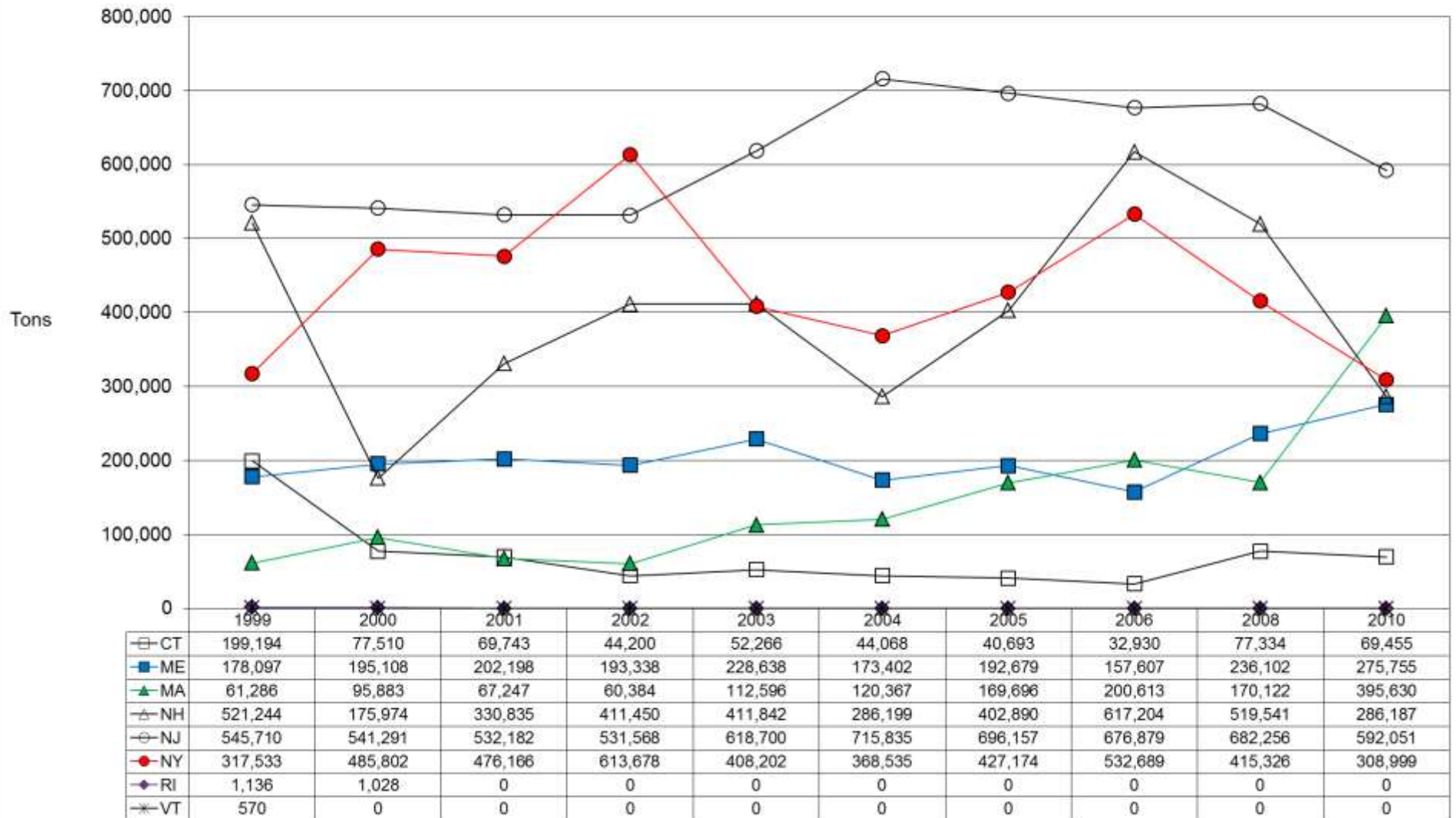


**Figure 4: In-State Disposal of MSW Generated In-State: 1999 through 2010 (Tons)**

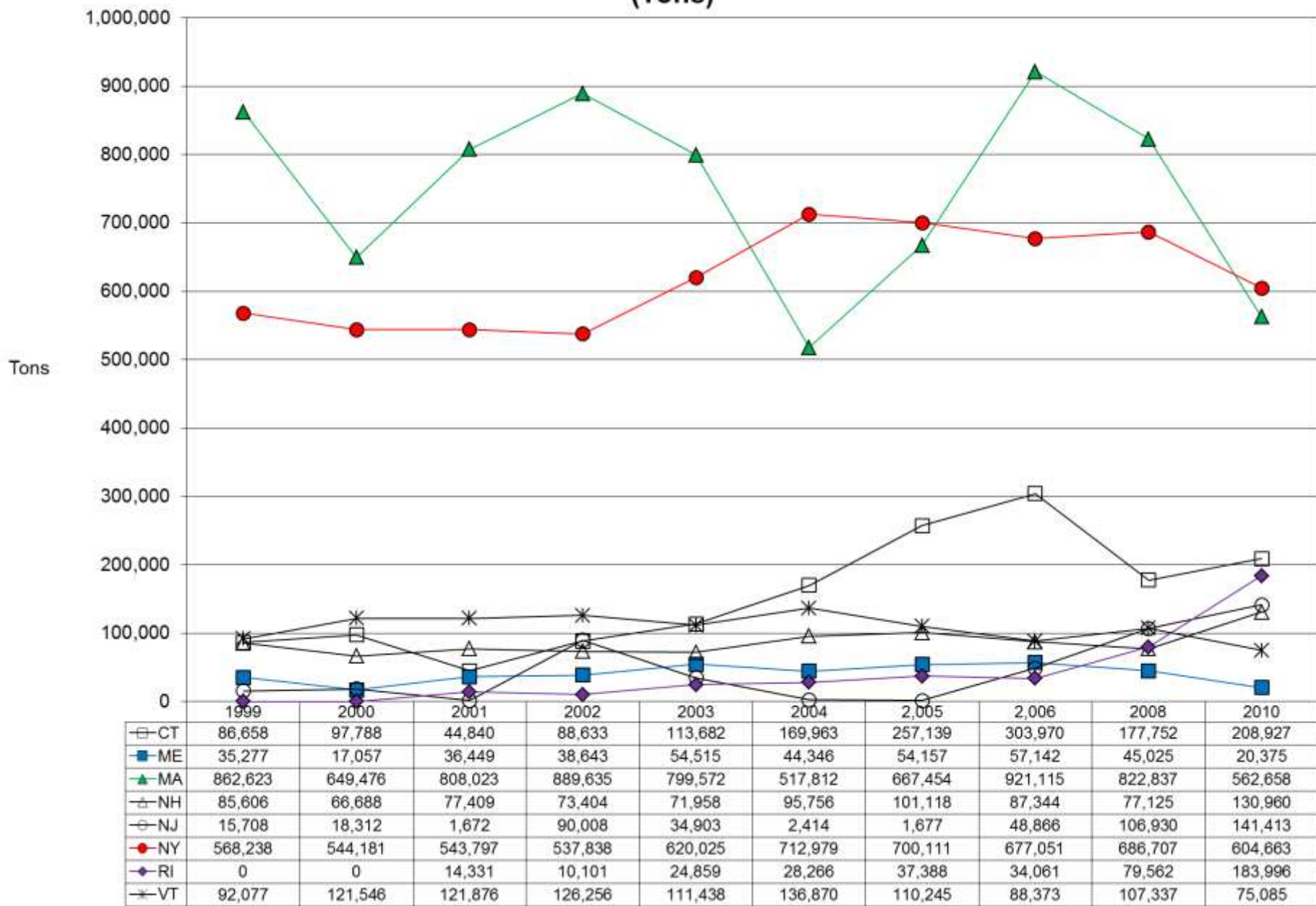




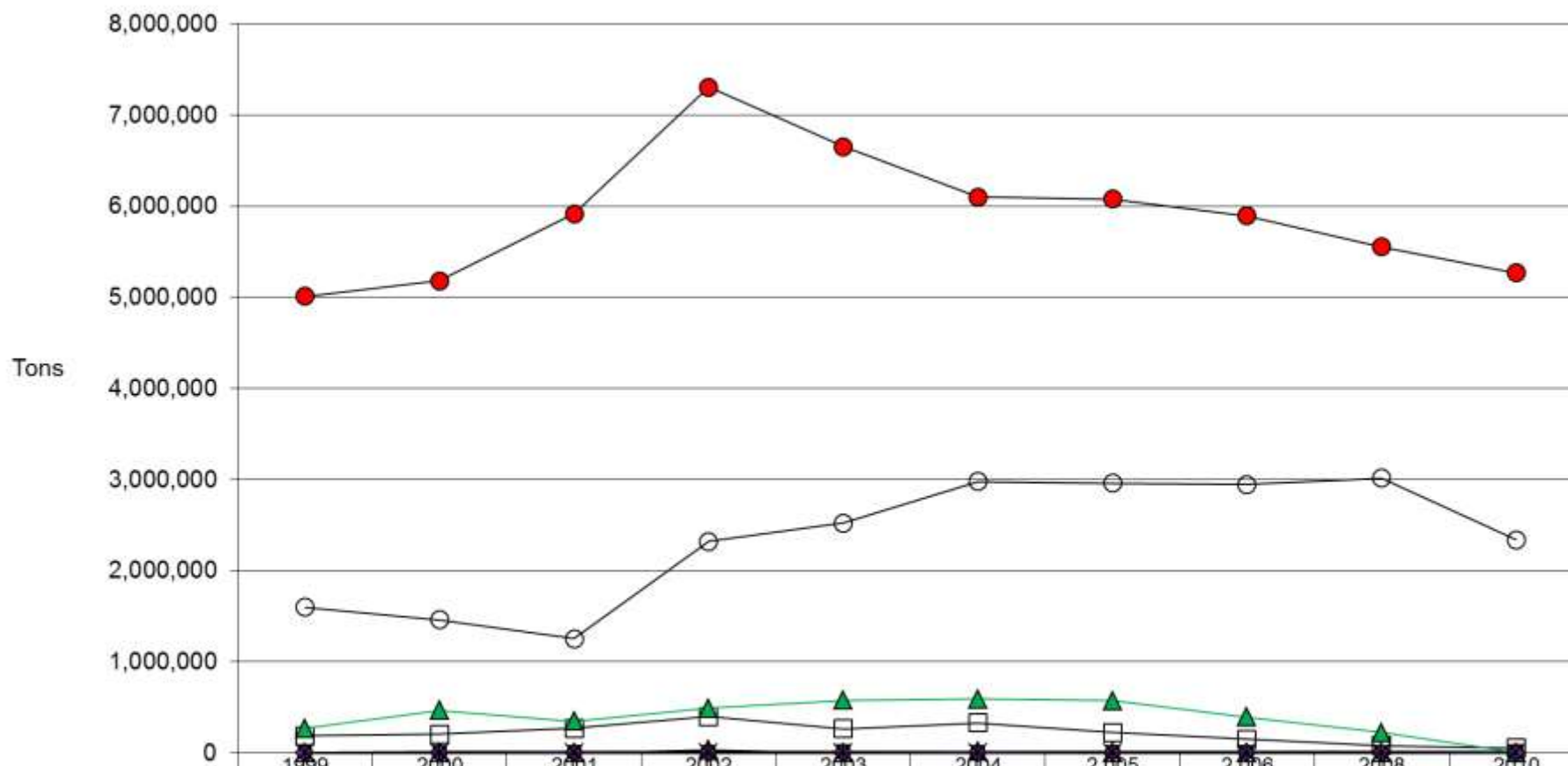
**Figure 5: MSW Imports from NEWMOA States: 1999 through 2010  
(Tons)**



**Figure 6: MSW Exports to NEWMOA States: 1999 through 2010  
(Tons)**

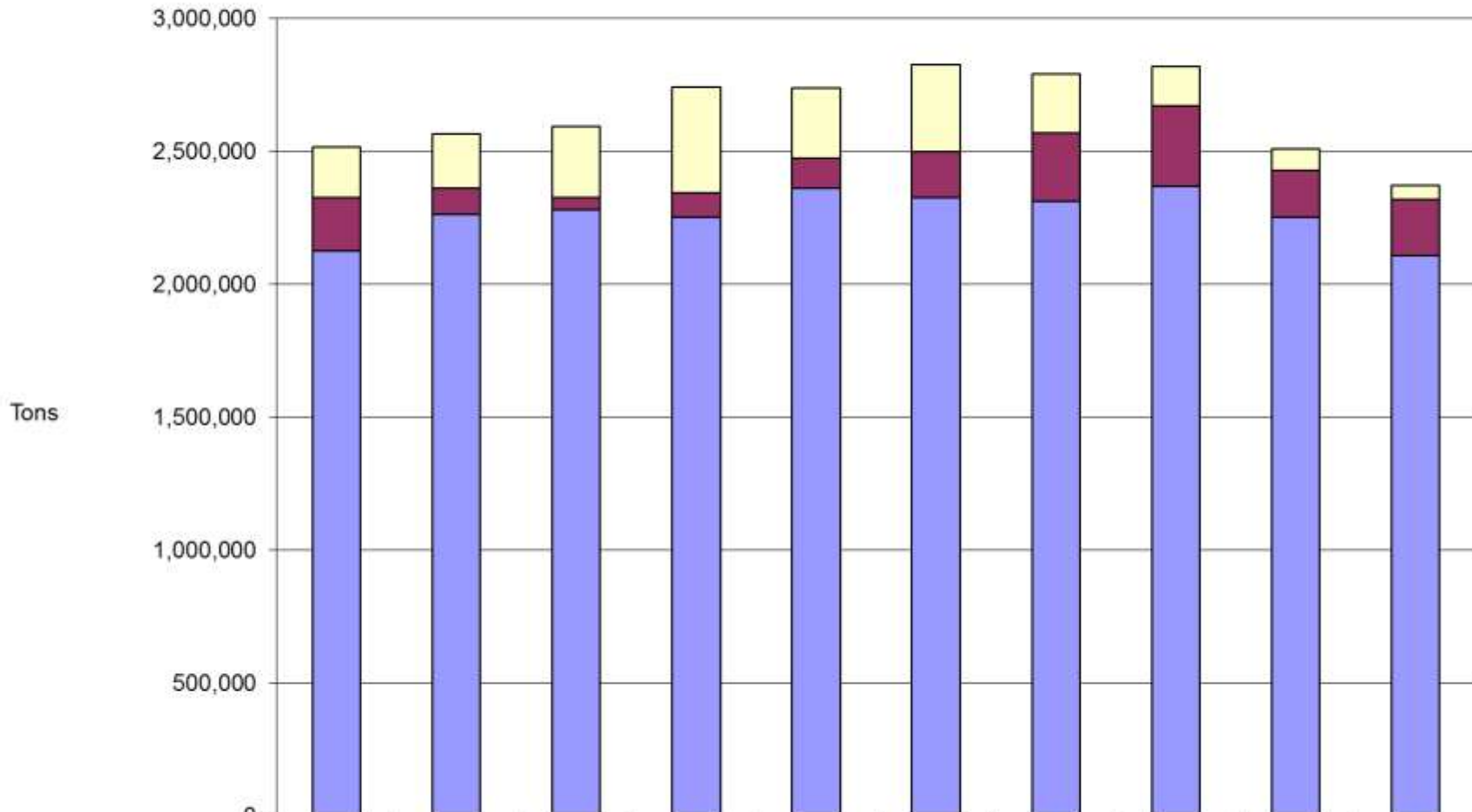


**Figure 7: MSW Exports to Non-NEWMOA States & Provinces  
1999 through 2010  
(Tons)**



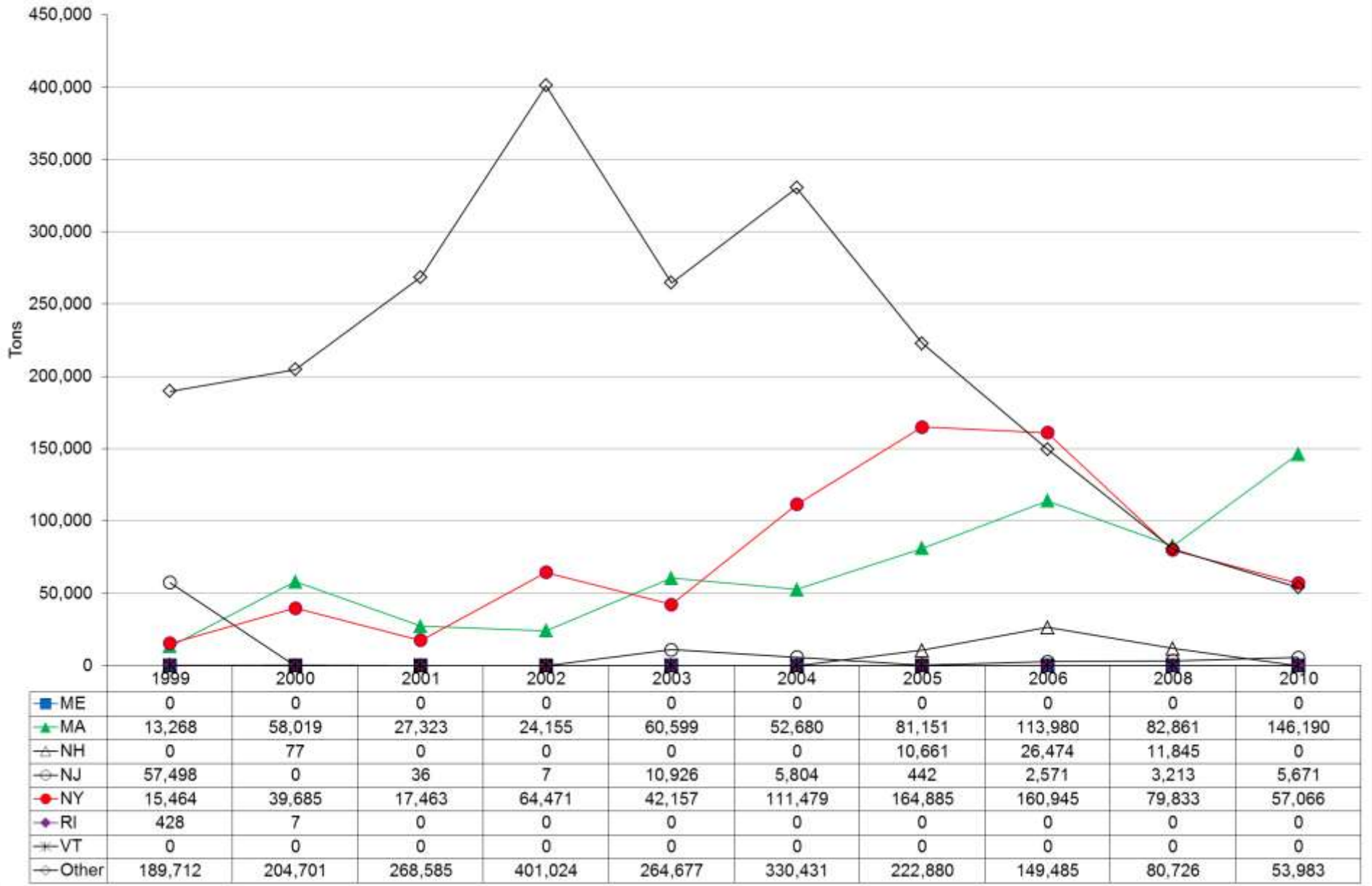
	1999	2000	2001	2002	2003	2004	2005	2006	2008	2010
□ CT	189,712	204,701	268,585	401,024	264,677	330,431	222,880	149,485	80,726	53,983
■ ME	10,294	11,568	11,624	11,225	17,845	11,069	14,540	13,958	13,054	17,224
▲ MA	268,510	468,895	350,461	490,772	577,194	592,953	572,021	394,798	225,496	5,499
△ NH	0	0	0	36,609	466	17,322	0	0	0	0
○ NJ	1,600,000	1,462,761	1,256,233	2,320,195	2,524,725	2,978,768	2,960,768	2,947,913	3,017,298	2,340,148
● NY	5,010,000	5,180,000	5,914,720	7,306,122	6,652,056	6,099,291	6,076,523	5,893,420	5,552,650	5,266,639
◆ RI	0	0	5,789	0	184	2,960	0	0	1,489	2,960
* VT	0	0	0	0	0	0	0	0	0	0

**Figure 8: MSW Generated in Connecticut & Disposed of: 1999 through 2010  
(Tons)**

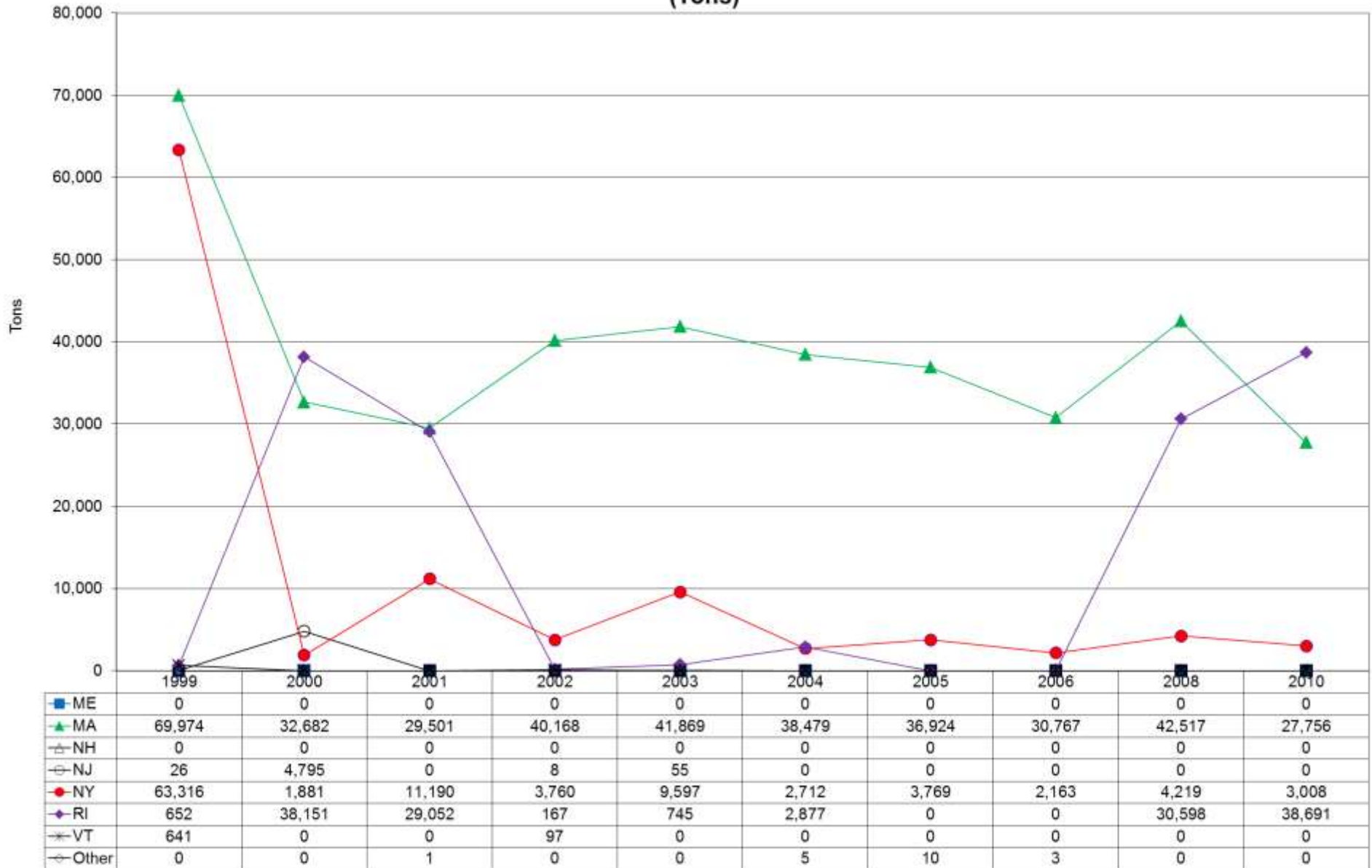


	1999	2000	2001	2002	2003	2004	2005	2006	2008	2010
Exported to Non-NEWMOA	189,712	204,701	268,585	401,024	264,677	330,431	222,880	149,485	80,726	53,983
Exported to NEWMOA	199,168	97,788	44,840	88,633	113,682	169,963	257,139	303,970	177,752	208,927
Disposed In State	2,126,460	2,262,487	2,279,906	2,253,756	2,360,314	2,327,500	2,312,776	2,367,467	2,251,048	2,108,857

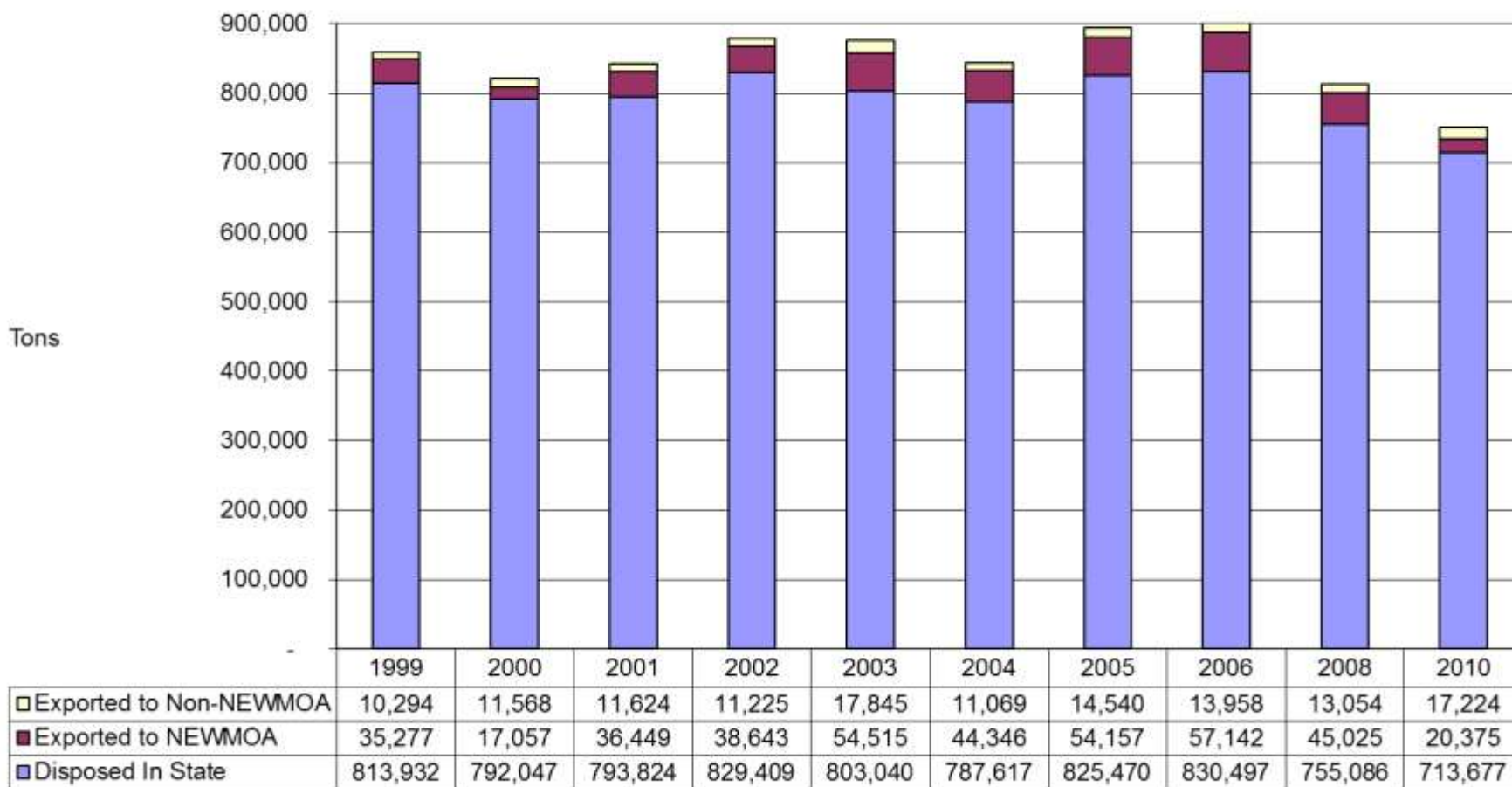
**Figure 9: MSW Exports from Connecticut: 1999 through 2010  
(Tons)**



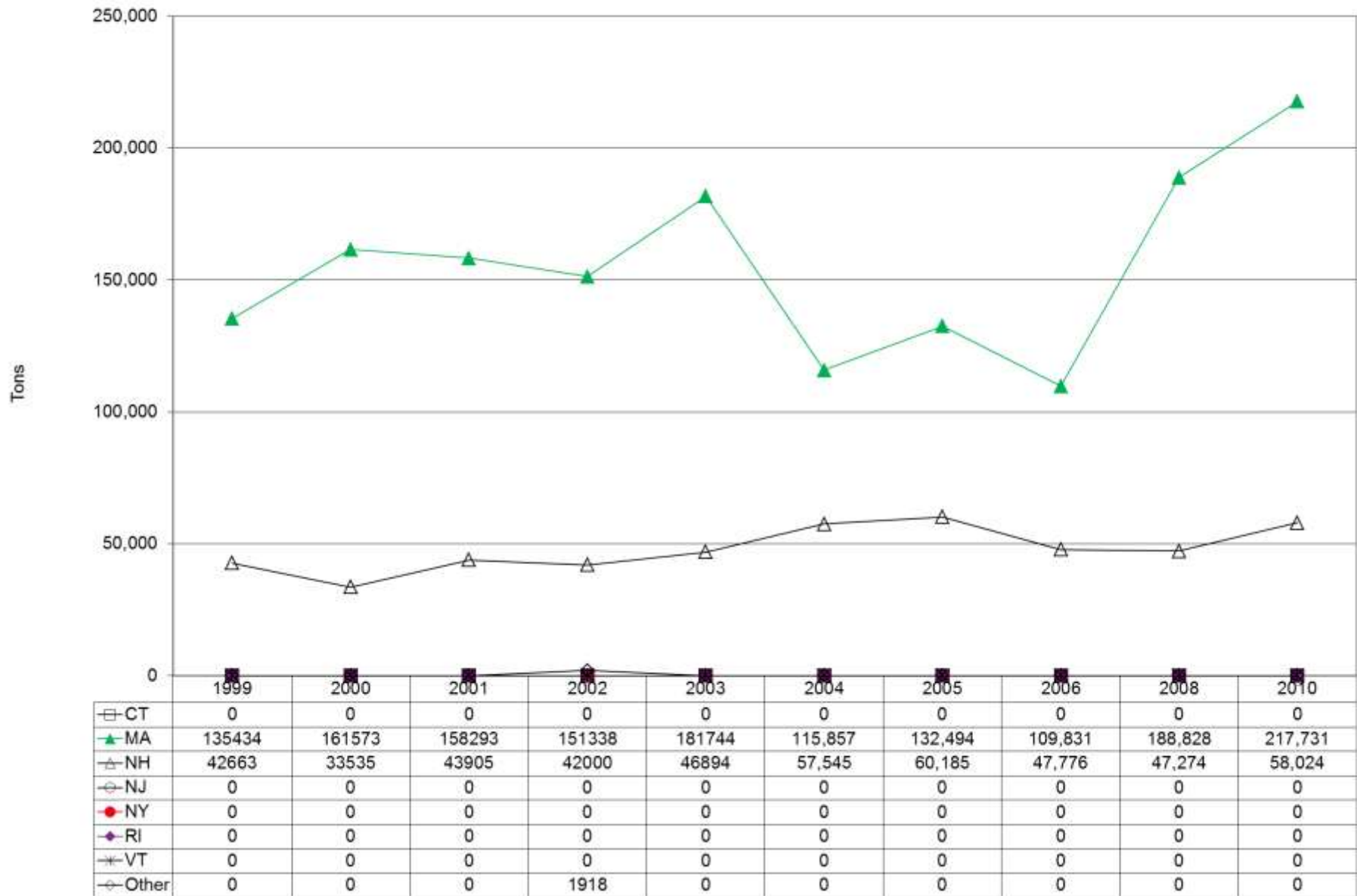
**Figure 10: MSW Imports to Connecticut: 1999 through 2010  
(Tons)**



**Figure 11: MSW Generated in Maine & Disposed of: 1999 through 2010  
(Tons)**

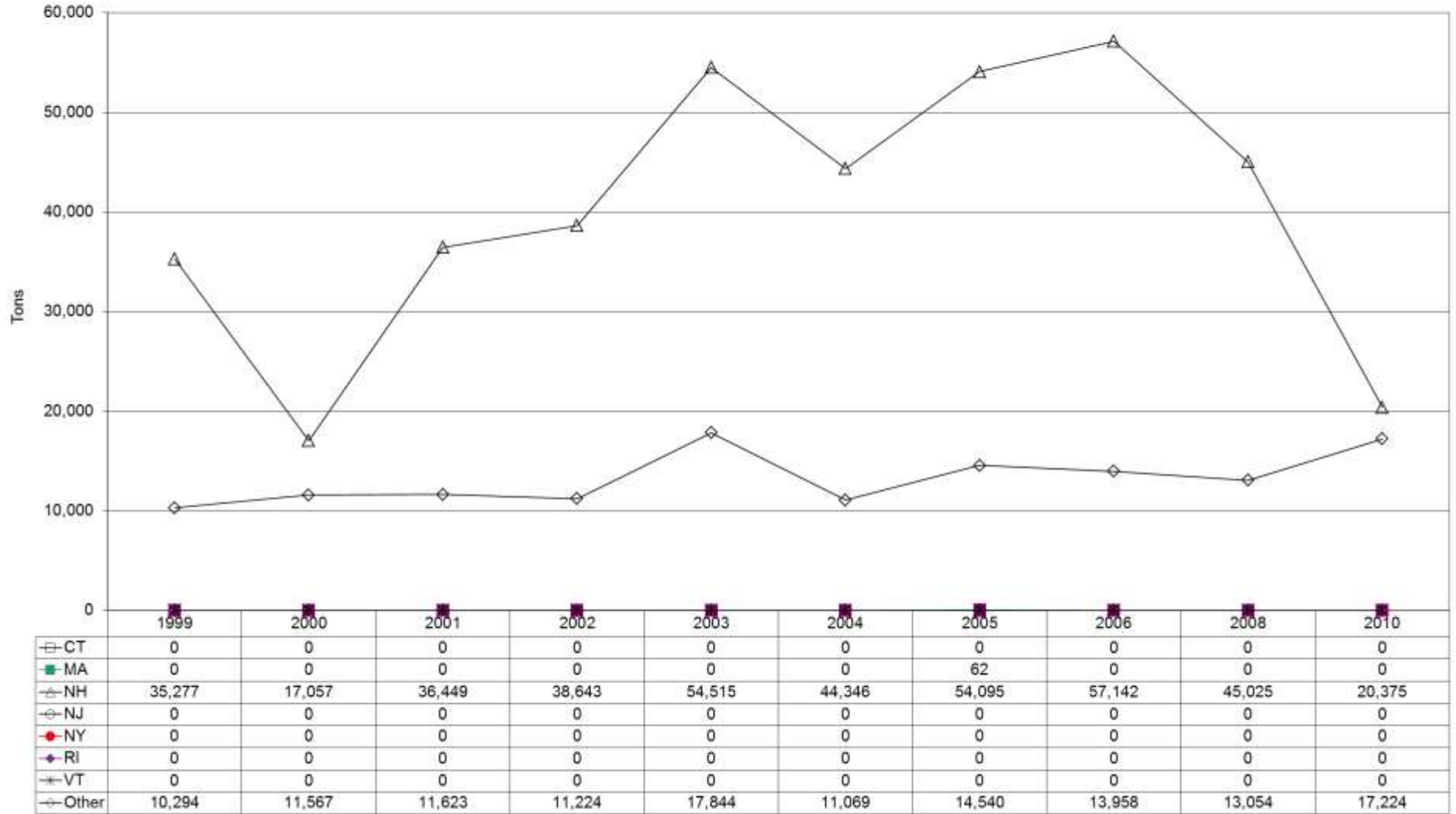


**Figure 12: MSW Imports to Maine: 1999 through 2010  
(Tons)**

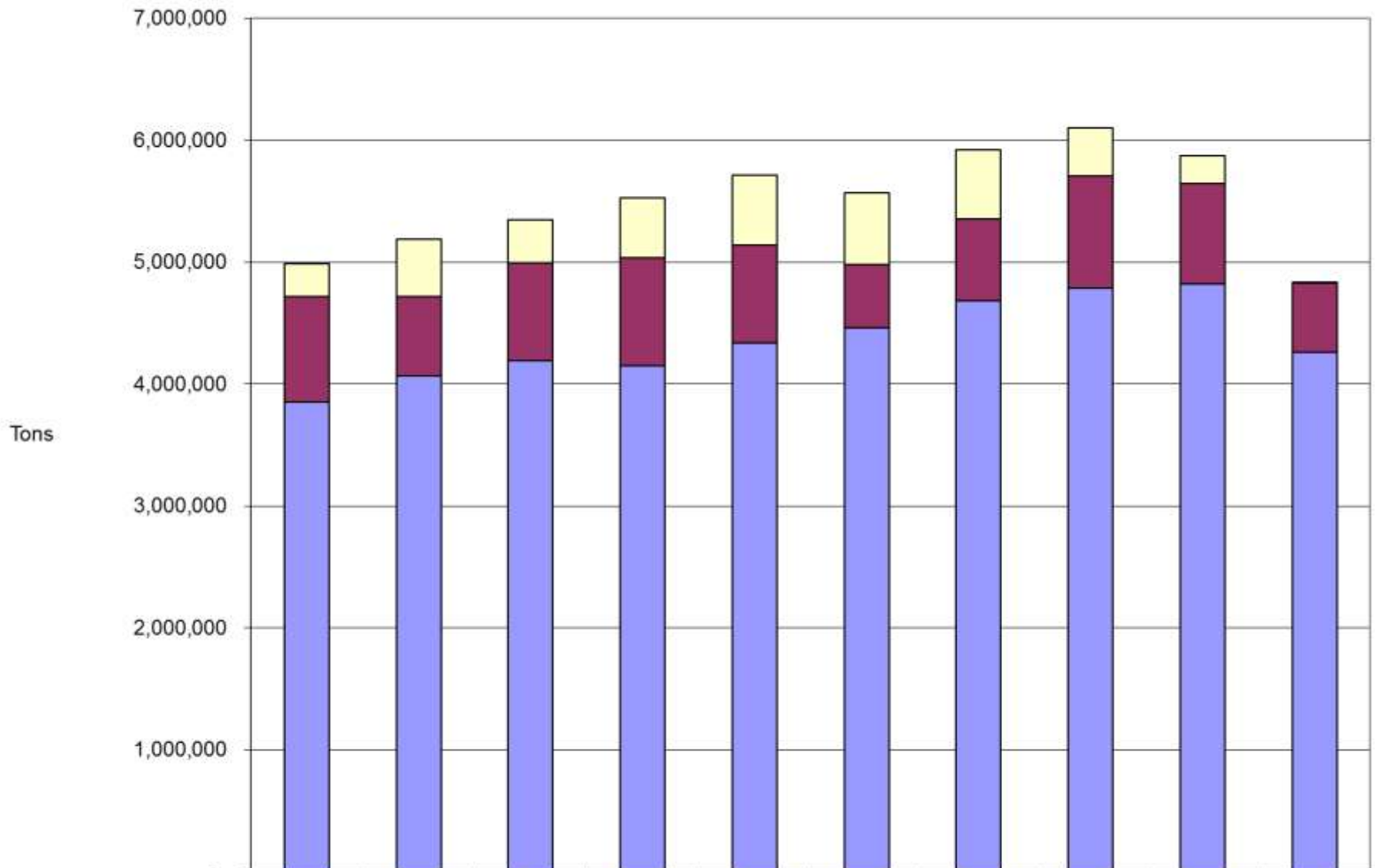




**Figure 13: MSW Exports from Maine: 1999 through 2010  
(Tons)**

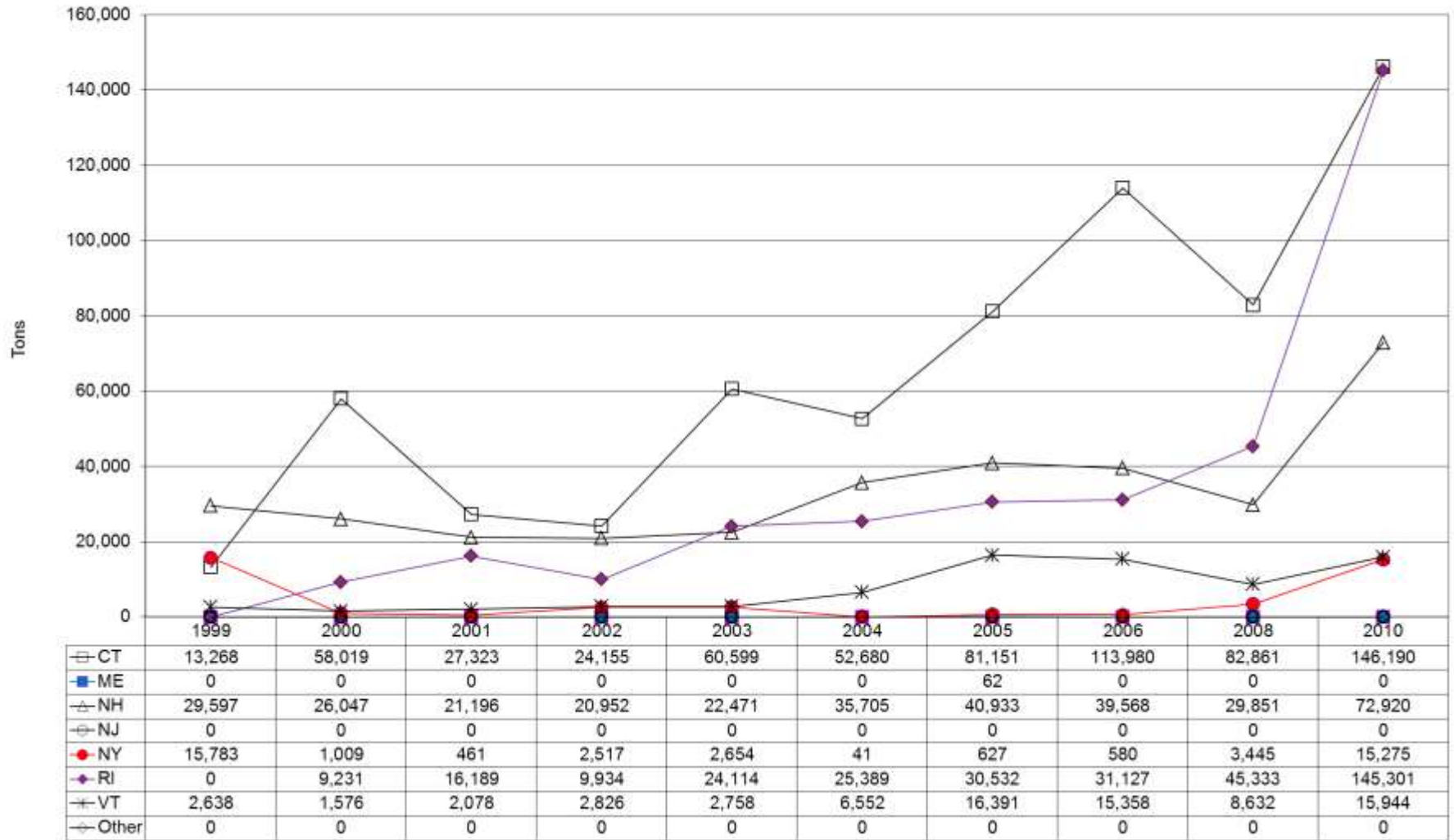


**Figure 14: MSW Generated in Massachusetts & Disposed of: 1999 through 2010  
(Tons)**

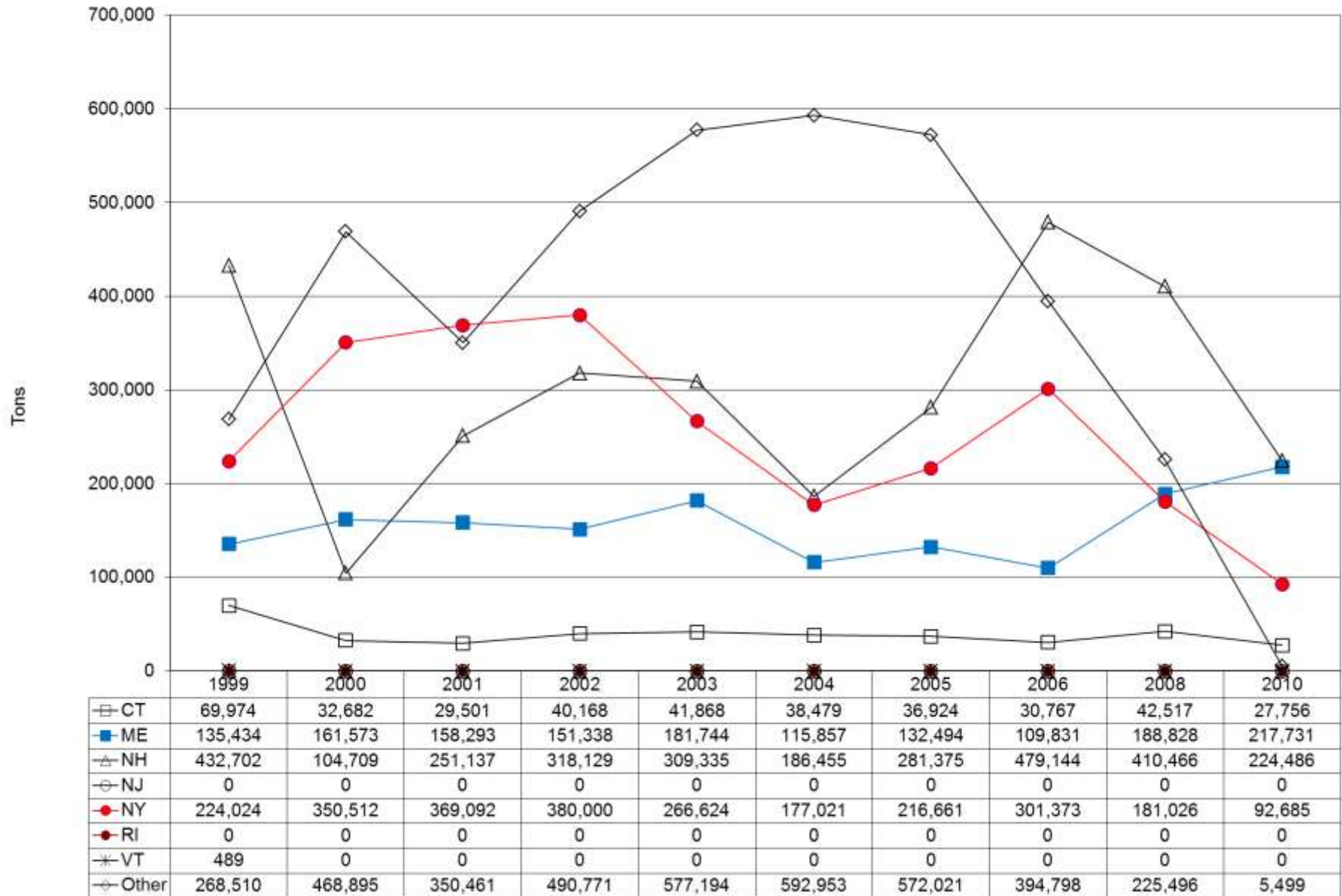


	1999	2000	2001	2002	2003	2004	2005	2006	2008	2010
□ Exported to Non-NEWMOA	268,510	468,895	350,461	490,772	577,194	592,953	572,021	394,798	225,496	5,499
■ Exported to NEWMOA	862,623	649,476	808,023	889,635	799,572	517,812	667,454	921,115	822,837	562,658
■ Disposed In State	3,856,000	4,069,137	4,189,359	4,147,413	4,337,266	4,459,730	4,685,484	4,785,491	4,823,591	4,262,599

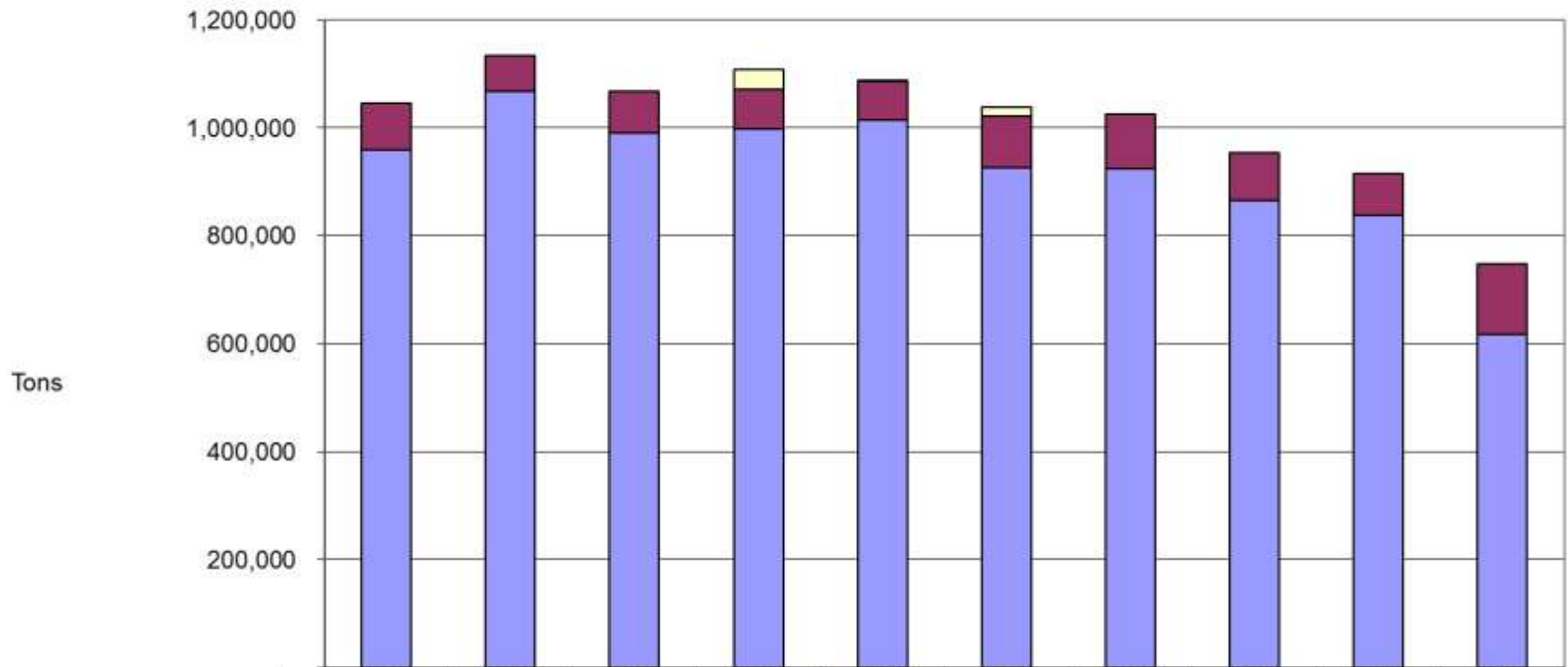
**Figure 15: MSW Imports to Massachusetts: 1999 through 2010 (Tons)**



**Figure 16: MSW Exports from Massachusetts: 1999 through 2010  
(Tons)**

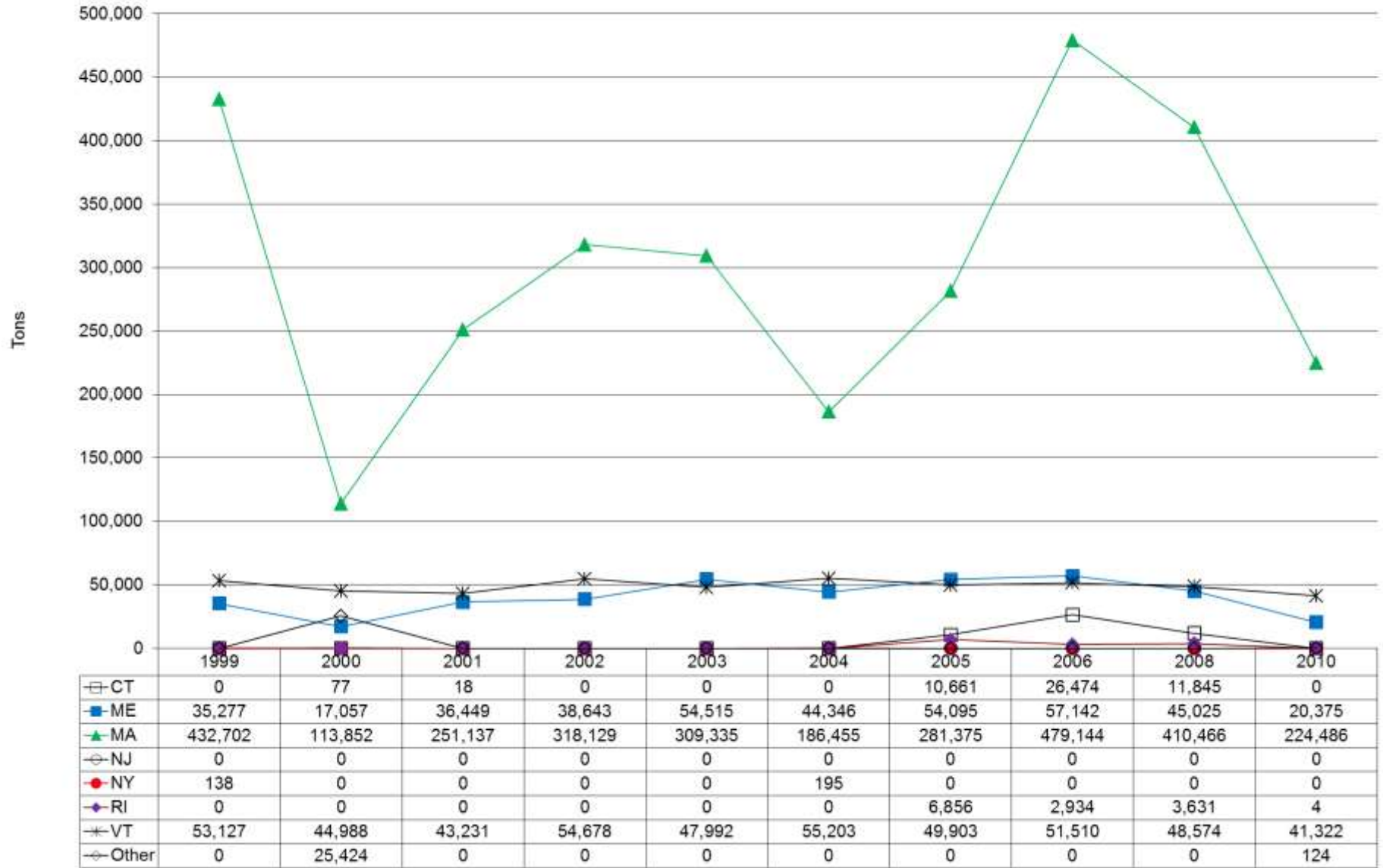


**Figure 17: MSW Generated in New Hampshire & Disposed of: 1999 through 2010  
(Tons)**

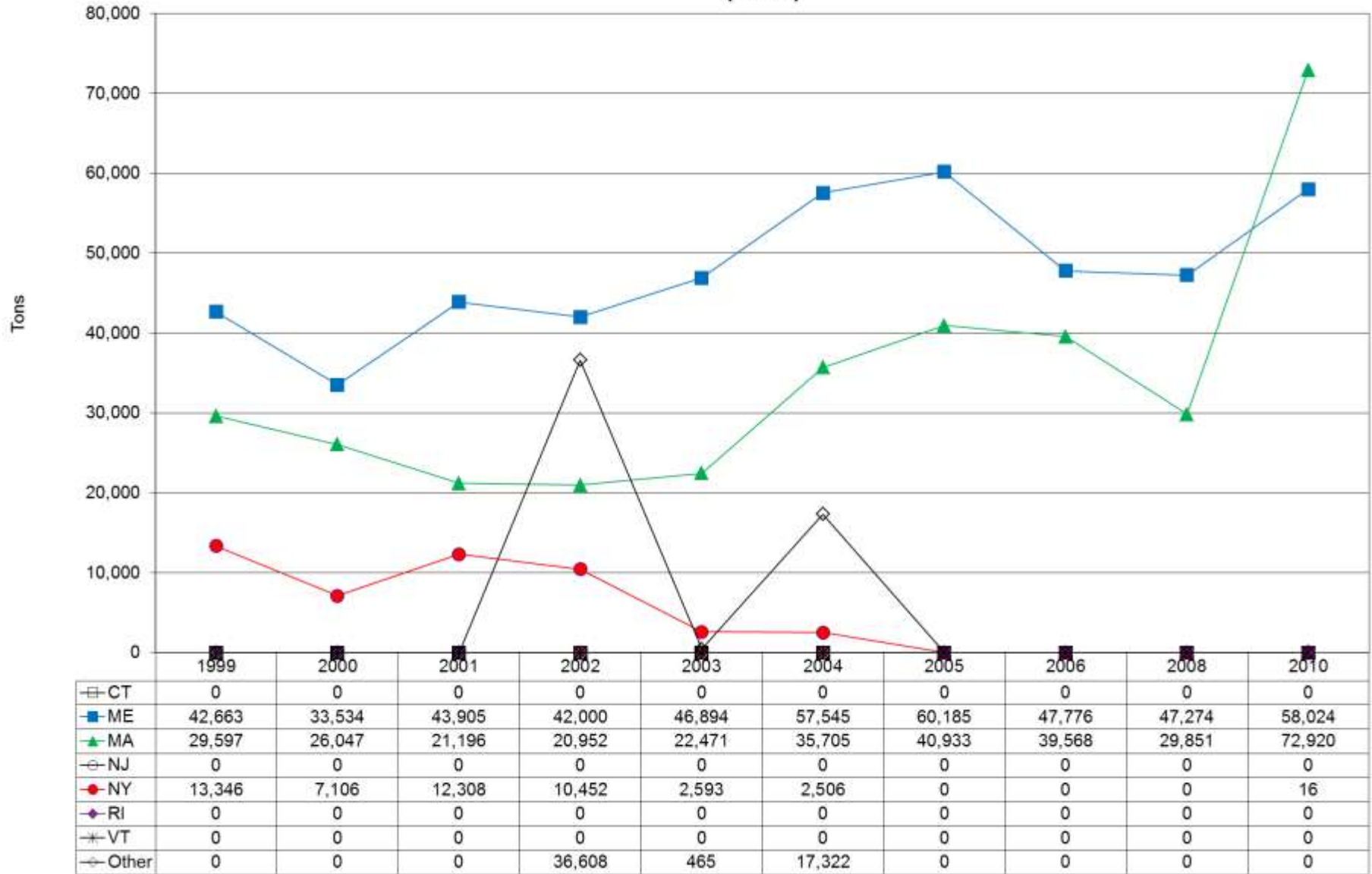


	1999	2000	2001	2002	2003	2004	2005	2006	2008	2010
□ Exported to Non-NEWMOA	0	0	0	36,609	466	17,322	0	0	0	0
■ Exported to NEWMOA	85,606	66,688	77,409	73,404	71,958	95,756	101,118	87,344	77,125	130,960
■ Disposed In State	959,200	1,067,92	990,586	998,000	1,013,82	926,018	923,429	866,020	838,589	617,068

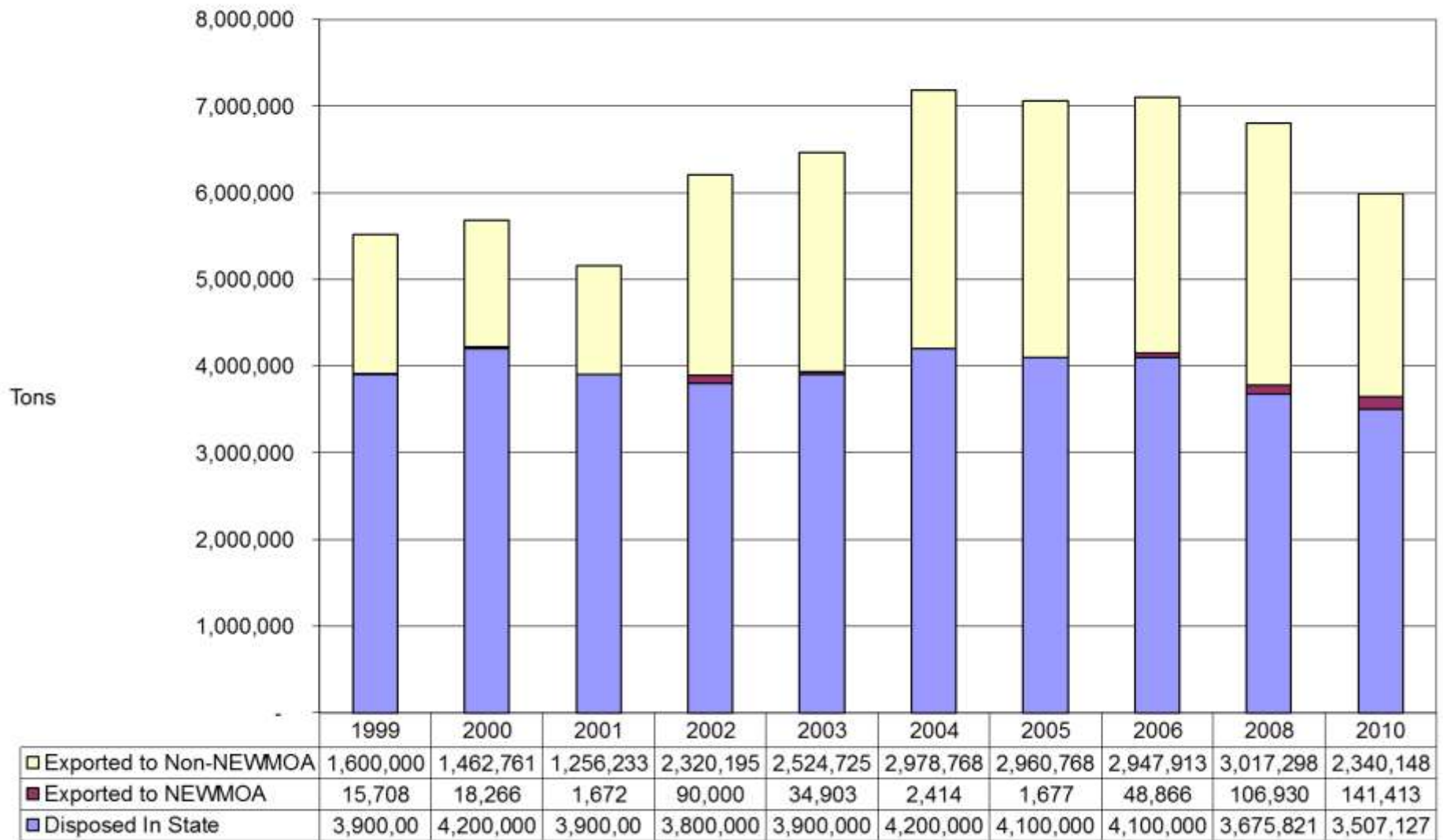
**Figure 18: MSW Imports to New Hampshire: 1999 through 2010  
(Tons)**



**Figure 19: MSW Exports from New Hampshire: 1999 through 2010  
(Tons)**

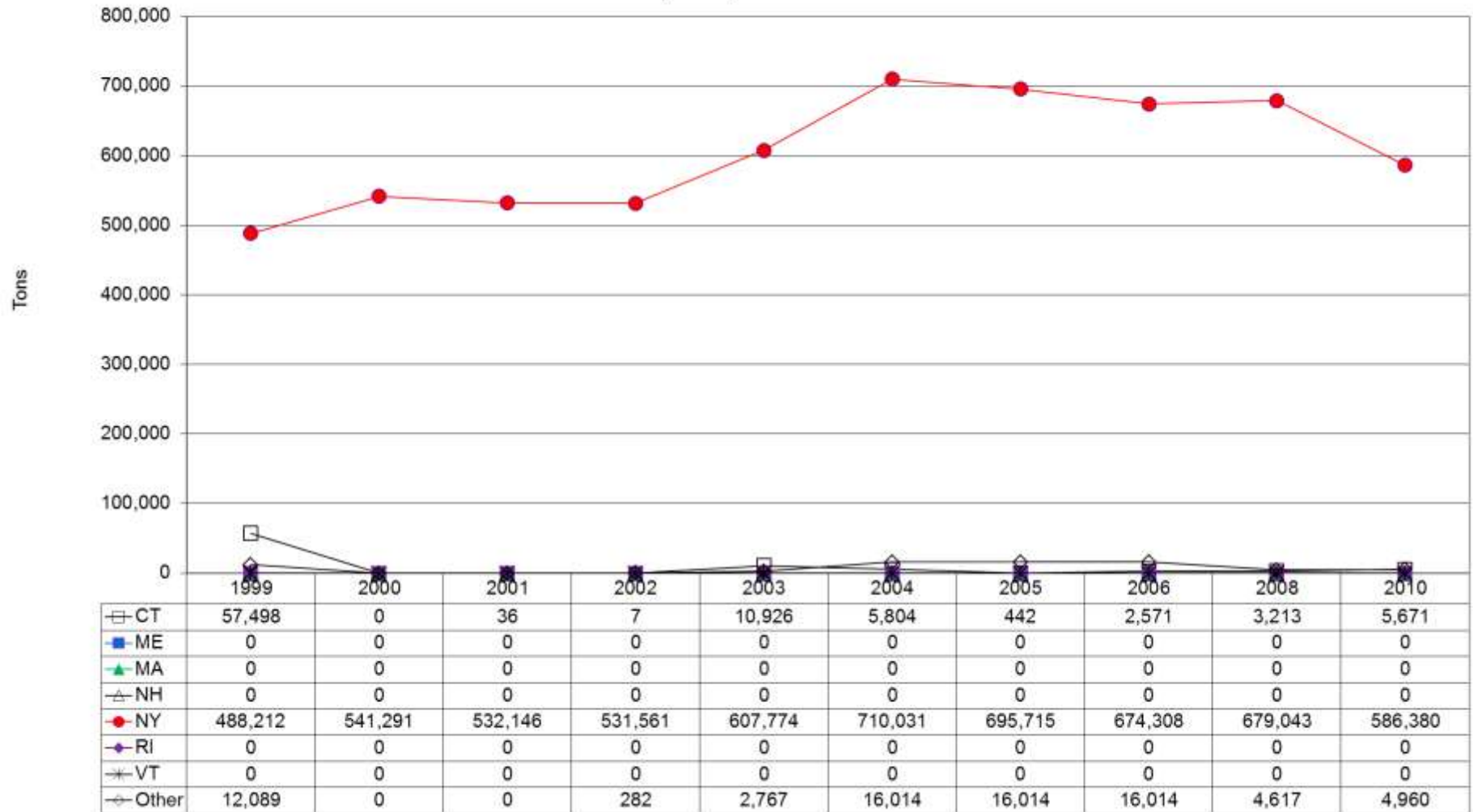


**Figure 20: MSW Generated in New Jersey & Disposed of: 1999 through 2010  
(Tons)**

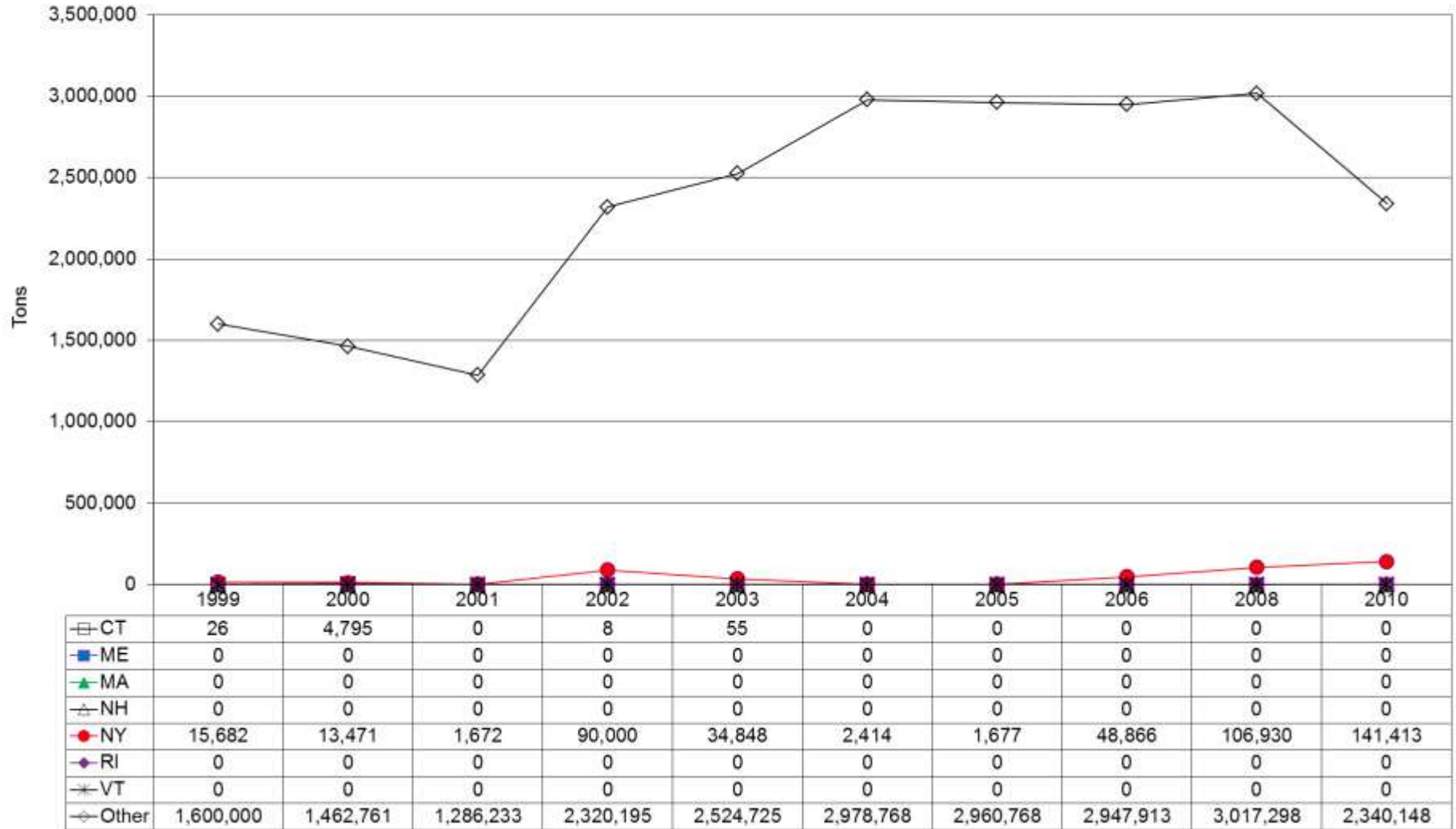




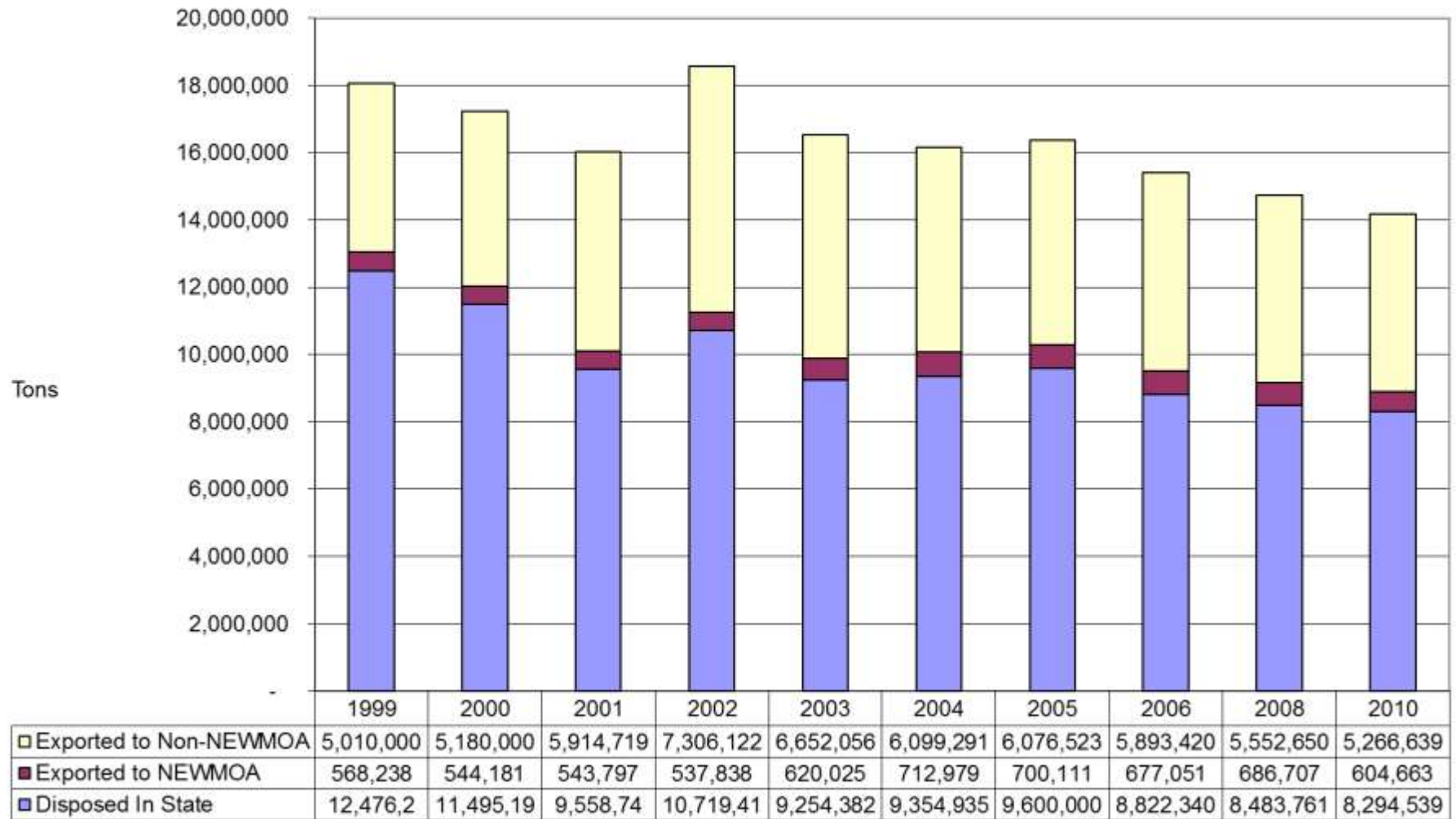
**Figure 21: MSW Imports to New Jersey: 1999 through 2010  
(Tons)**



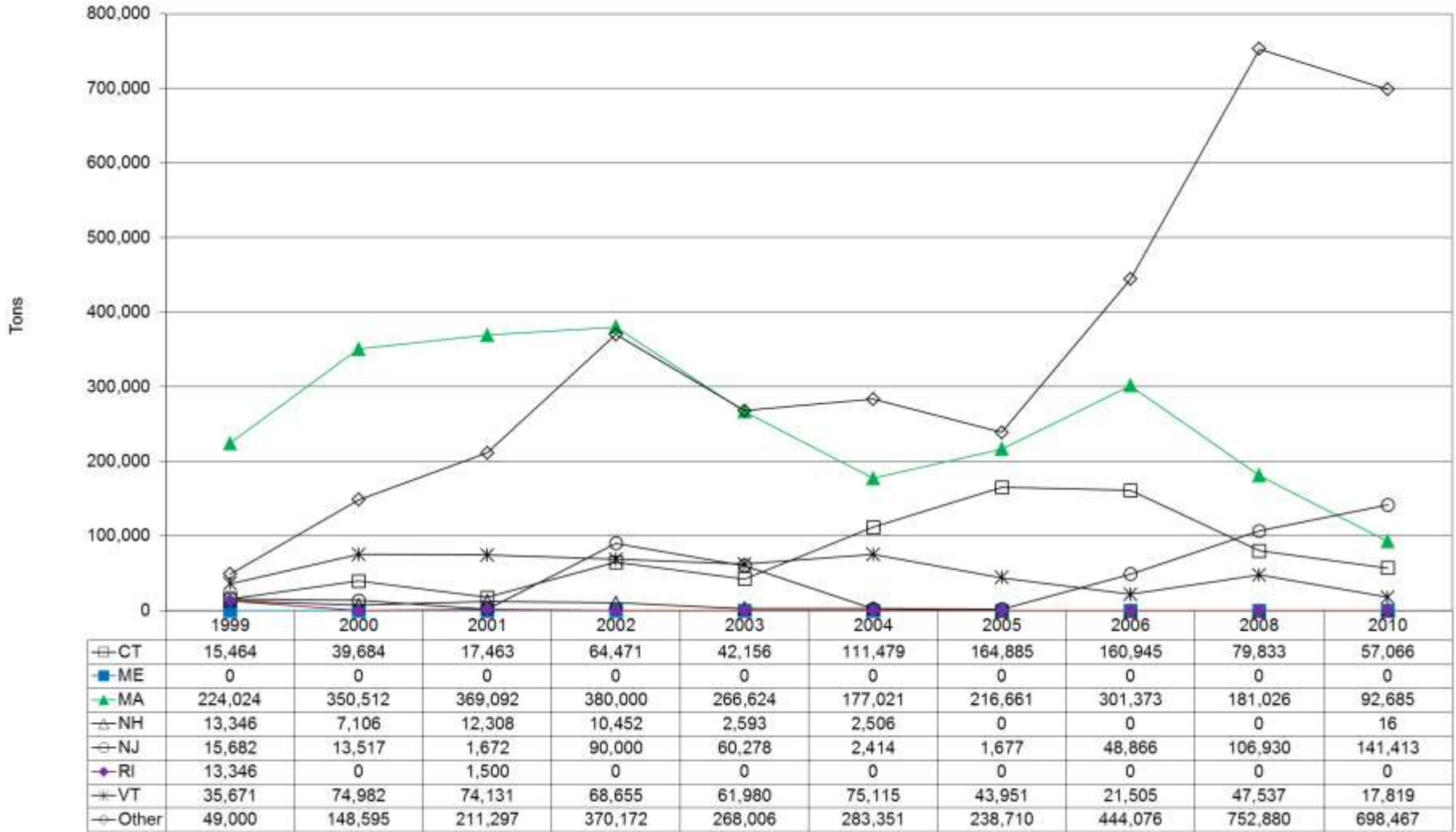
**Figure 22: MSW Exports from New Jersey: 1999 through 2010  
(Tons)**



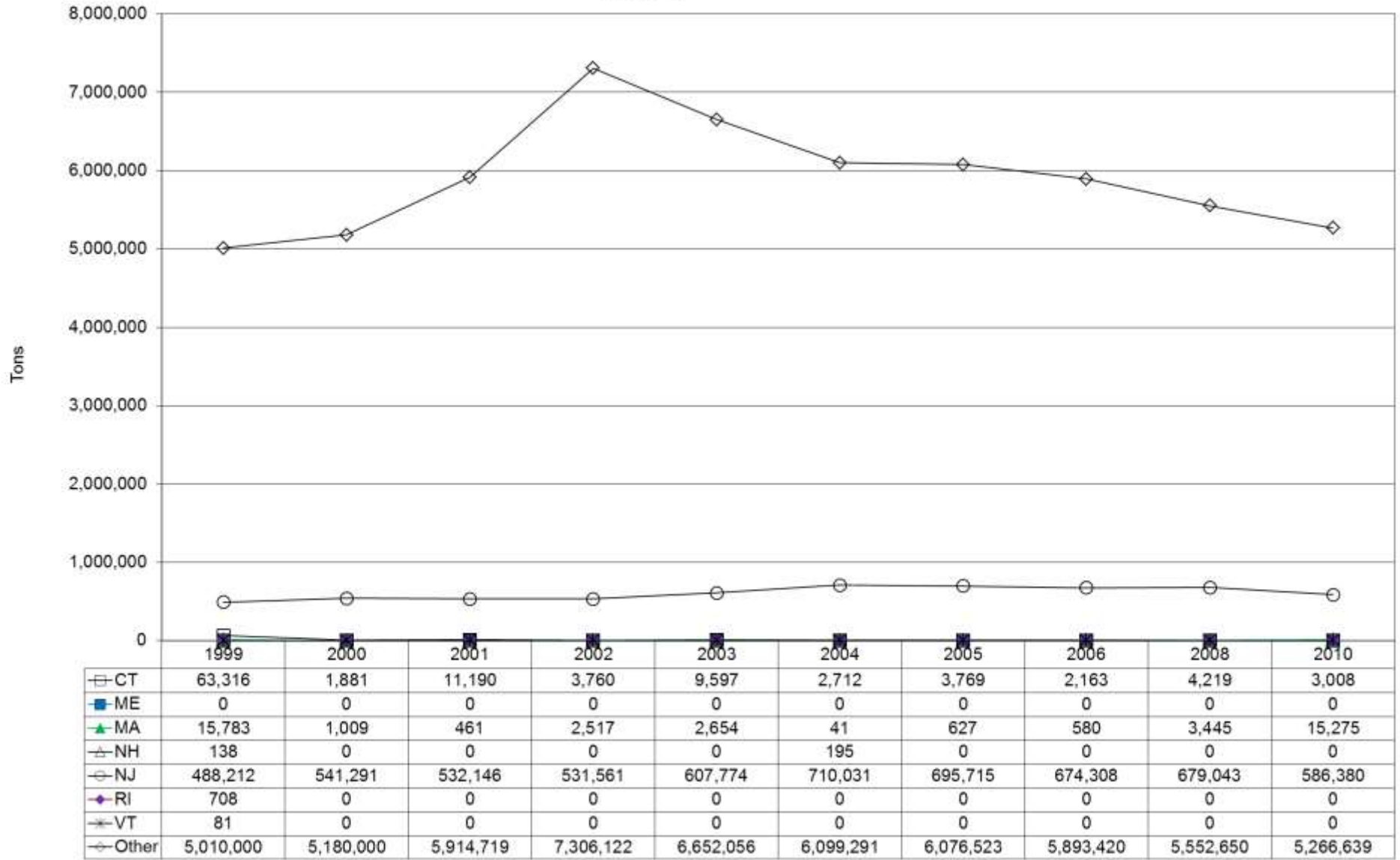
**Figure 23: MSW Generated in New York & Disposed of: 1999 through 2010  
(Tons)**



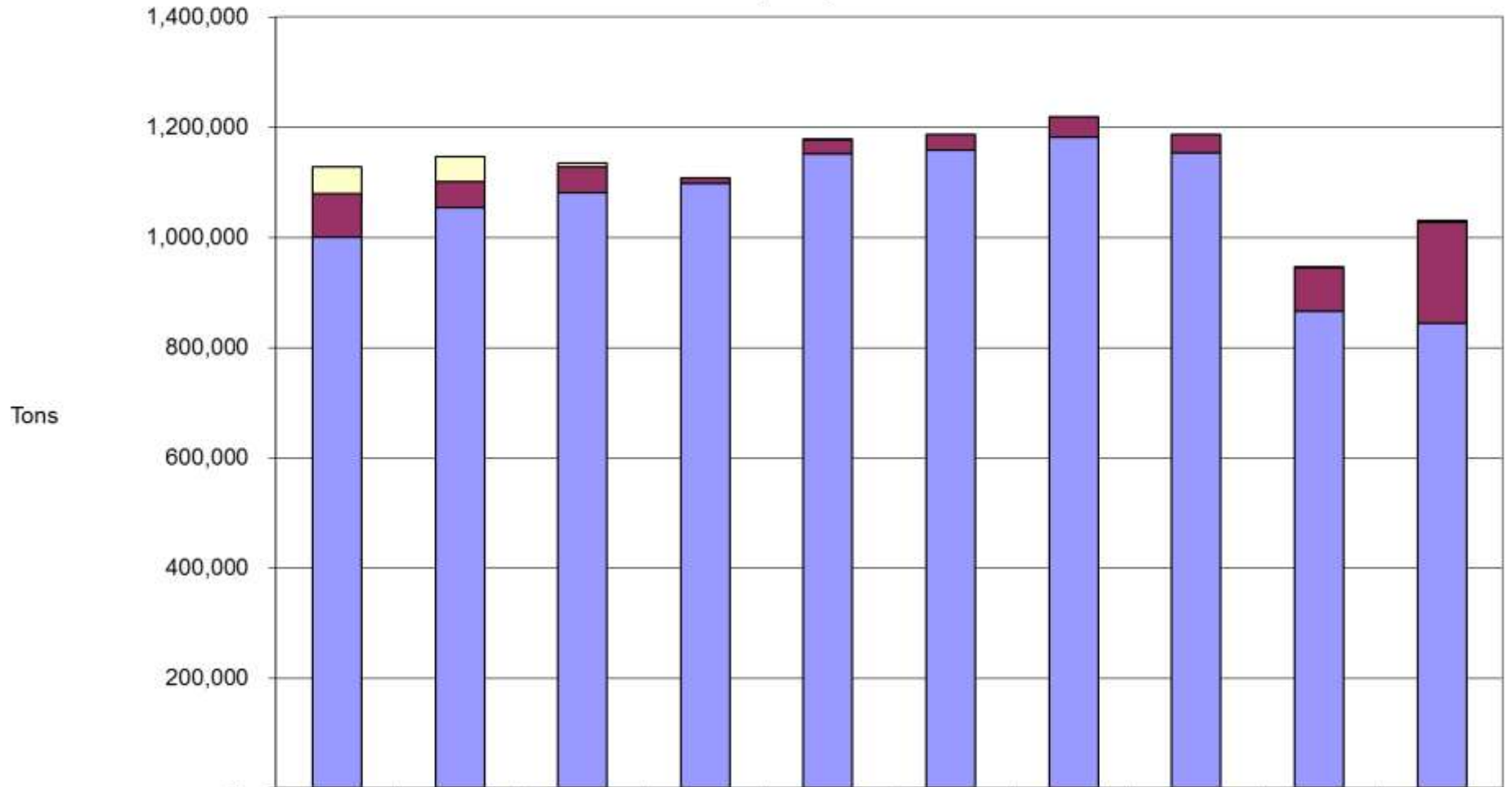
**Figure 24: MSW Imports to New York: 1999 through 2010  
(Tons)**



**Figure 25: MSW Exports from New York: 1999 through 2010  
(Tons)**

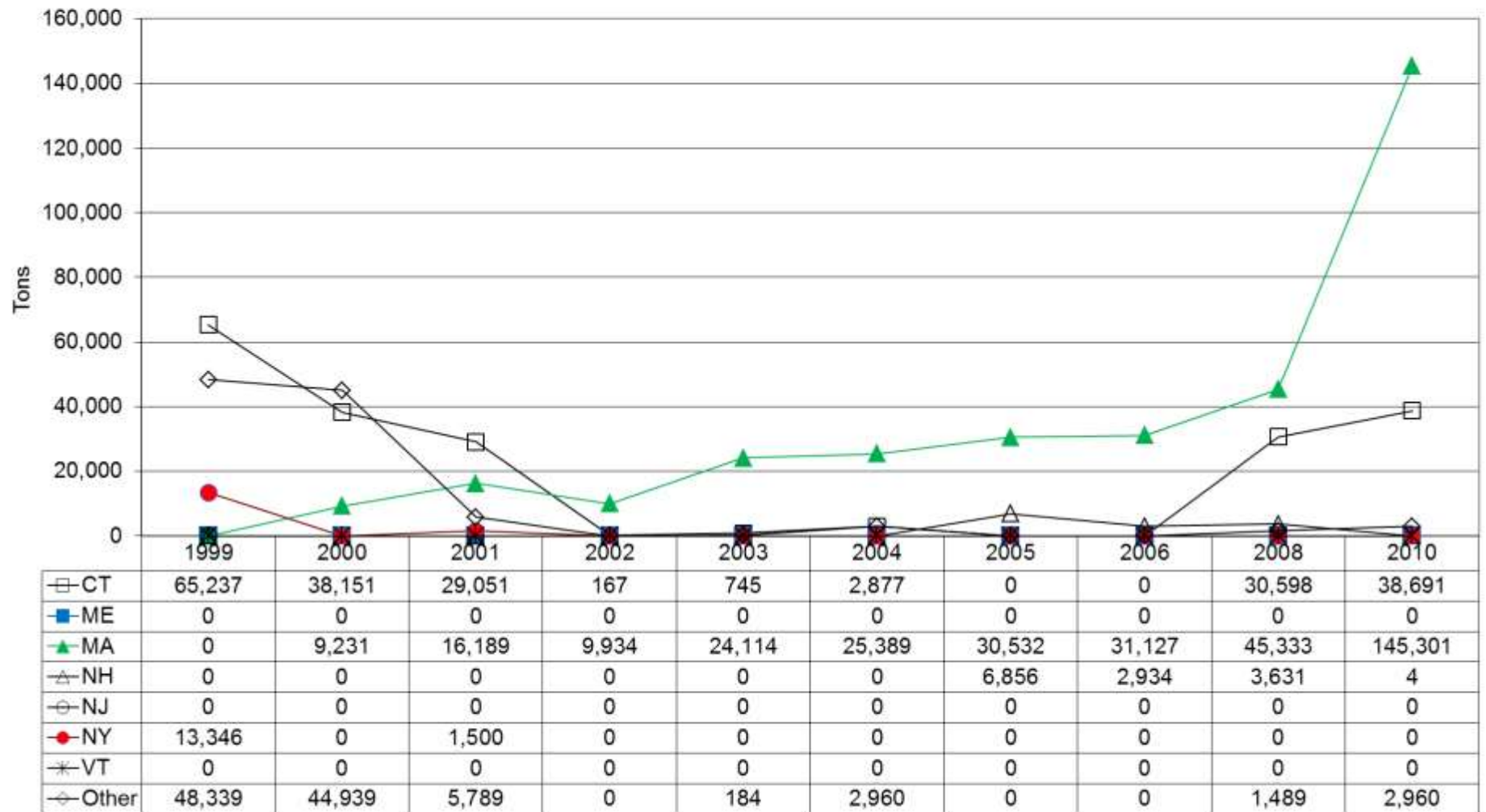


**Figure 26: MSW Generated in Rhode Island & Disposed of: 1999 through 2010  
(Tons)**

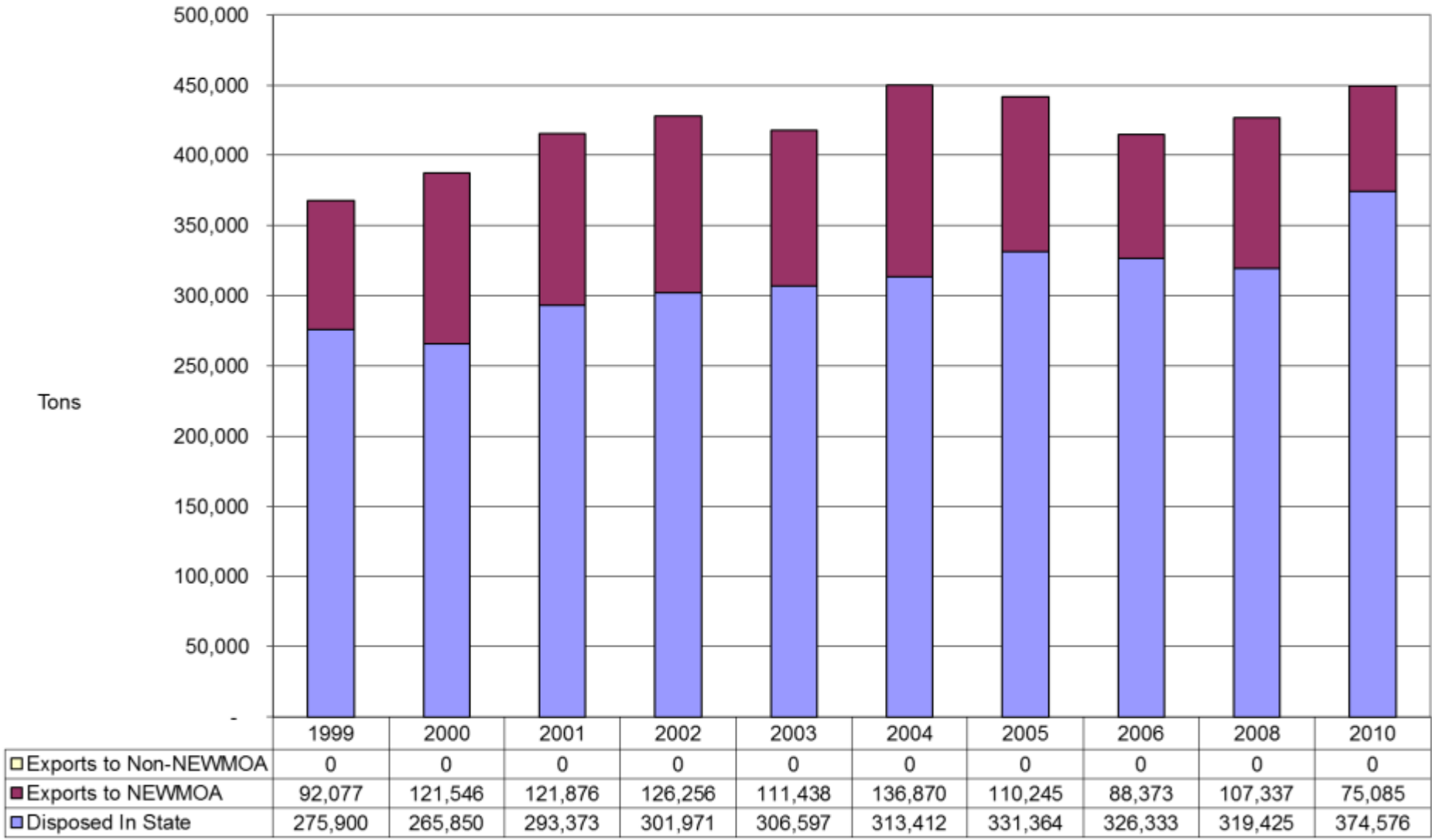


	1999	2000	2001	2002	2003	2004	2005	2006	2008	2010
Exported to Non-NEWMOA	48,339	44,939	5,789	0	184	0	0	0	1,489	2,960
Exported to NEWMOA	78,583	47,383	46,741	10,101	24,859	28,266	37,388	34,061	79,562	183,996
Disposed In State	1,000,879	1,054,290	1,081,663	1,097,452	1,151,887	1,158,991	1,181,607	1,153,080	866,084	844,124

**Figure 27: MSW Exports from Rhode Island: 1999 through 2010  
(Tons)**



**Figure 28: MSW Generated in Vermont & Disposed of: 1999 through 2010  
(Tons)**





**Figure 29: MSW Exports from Vermont: 1999 through 2010  
(Tons)**

