Draft Generic Environmental Impact Statement

supporting the

Draft New York State Hazardous Waste Facility Siting Plan

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DRAFT GENERIC
ENVIRONMENTAL IMPACT STATEMENT

By the

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

As Lead Agency

Concerning the

NEW YORK STATE
DRAFT
HAZARDOUS WASTE FACILITY
SITING PLAN

- STATEWIDE ACTION -

Accepted: July 21, 2008

Comments must be submitted to
the contact person listed below by 11/26/2008

Prepared by NYS Department of Environmental Conservation

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Draft Generic Environmental Impact Statement

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1.0 Scope of Required Generic Environmental Impact Statement

The development of any major planning document is subject to the requirements of the New York State Environmental Quality Review Act (SEQR). SEQR is a process that introduces the consideration of environmental factors into the early planning stages of actions directly undertaken, funded, or approved by local, regional, and state agencies. The primary tool of the SEQR process for activities such as this Hazardous Waste Facility Siting Plan (Plan) is the Generic Environmental Impact Statement (GEIS). A GEIS is an assessment of a broad based action or a group of related actions and is more conceptual in nature than a site-specific EIS. This section describes the scope of this GEIS.

The major topics of a GEIS are:

- description of the proposed action;
- description of the environmental setting;
- statement and evaluation of the potential significant adverse environmental impacts;
- a description of the mitigation measures;
- a description and evaluation of the range of reasonable alternatives to the action that are feasible; and
- a list of any underling studies, reports and other information obtained and considered in preparing the statement.

Information for each of these topics are provided in this draft GEIS.

This GEIS does not replace the need for a separate and distinct site specific EIS for any hazardous waste management facility that is proposed to be sited or expanded in New York State in the future. The Plan does not commit any agency, board, commission, authority or private entity to a definite course for specific future decisions. Accordingly, each specific Hazardous Waste Facility Siting action by any agency, commission, authority or private authority is independently subject to SEQR.

2.0 Description of the Proposed Action

The proposed action is to adopt, as written, the Plan which is required by Article 27, Title 11, Section 27-1102 of the Environmental Conservation Law (ECL). The primary purpose and benefit of the Plan is the identification of any facilities that are necessary for the proper management of hazardous waste in NYS. The lack of sufficient capacity for the environmentally sound management of hazardous waste could result in increased improper management of hazardous waste and in increased costs to hazardous waste generators.

Hazardous waste is generally defined in statute in ECL Section 27-0901.4, and more fully defined in regulation 6 NYCRR Part 371. A waste can be deemed hazardous because it is specifically listed in the regulation based on how it is generated. If a waste is not specifically listed, it can be determined to be hazardous based on the characteristics of the waste: whether is it ignitable, corrosive, reactive, or toxic.

Generators of hazardous waste are located throughout the State, with greater

concentrations in industrialized areas. A generator of hazardous waste can include, as examples, the local dry cleaner, an auto repair shop, a large manufacturing company, or the State Department of Transportation when they strip lead based paint off of a bridge in preparation for painting.

A hazardous waste treatment, storage or disposal (TSD) facility manages hazardous waste by temporary storage, recycling, incineration, treatment, or land disposal. As with hazardous waste generators, TSD facilities are also located throughout the State, with greater concentrations in the industrialized areas.

Chapter 618 of the New York Laws of 1987 directs the New York State Department of Environmental Conservation (Department) to develop a Plan to address issues specified in the Statute regarding the siting of hazardous waste TSD facilities. The Plan is to be used as guidance by any Hazardous Waste Facility Siting Board (Siting Board) reviewing proposals for siting certain new or expanded hazardous waste management facilities. It is also to be used by the Department and other State agencies to guide them in meeting their responsibilities and to assure the availability of sufficient hazardous waste facility capacity.

A facility Siting Board, established pursuant to ECL Section 27-1105, must consider a number of elements, including the Plan, when evaluating a specific proposal for a new or expanded hazardous waste TSD facility. A facility Siting Board is convened by the Governor upon request from the Department when a certificate of environmental safety and public necessity is needed for certain new or expanded hazardous waste management facilities. The facility Siting Board consists of the commissioners of transportation, environmental conservation, health and commerce (now economic development), the Secretary of State and three ad hoc members appointed by the Governor, two of who must be residents of the county in which the facility is primarily proposed to be located.

In 1987, the need for new or expanded hazardous waste TSD facilities was a particular concern of the Legislature. Therefore, the Department was directed to develop a Plan that would include the methods to determine the need for a specific facility. However, hazardous waste management as an industry has evolved dramatically since the criteria for this Plan was established in 1987. At that time, the State believed that it was necessary to achieve self-sufficiency for the management of hazardous waste generated within the State. The hazardous waste management industry, the associated regulation of this industry, and the status of solid waste under the Commerce Clause of the U.S. Constitution which impacts interstate transportation, were still in their infancy and evolving.

Since that time, the industry of hazardous waste management has significantly matured. Hazardous waste reduction has become a key component of the State's hazardous waste management strategy. The industry has taken on a regional character which crosses state and international boundaries as dictated by economics. Supreme Court decisions have concluded that interstate transport of waste, including hazardous waste, cannot be inhibited, thus requiring a more national perspective on hazardous waste management needs. In addition, hazardous waste

regulations now provide a strong base for assuring proper management and disposal of these materials.

With all this in mind, the Plan provides information on New York hazardous waste generation and management trends, the involvement of other states and nations in the management of New York's hazardous waste, and the evaluation of future needs and locations for siting TSD facilities. The Plan meets the requirements of Chapter 618 of the New York Laws of 1987. The Plan does not compel the siting of hazardous waste TSD facilities, rather, the focus is to assist in the analysis of need for a facility under evaluation.

The Major Findings and Recommendations of this Hazardous Waste Siting Plan are as follows:

Major Findings

- New York State has enacted hazardous waste reduction and pollution prevention programs, consistent with the State hierarchy for preferred hazardous waste management practices. Through these programs, and as a result of the hazardous waste reduction planning and pollution prevention activities implemented by generators in recent years, New York has prevented the generation of more than 10 million tons of hazardous waste.

- Hazardous waste generation in the State is decreasing.

  - The number of large quantity generators in the State has been going down over time.

  - The quantity of hazardous waste shipped off-site for management by New York generators has generally been decreasing over the last ten years.

•I In 2005, New York State had 24 commercial and captive treatment, storage and disposal (TSD) facilities receiving waste from off-site. These facilities are located throughout the State, from Long Island, to the Capital District, to the Southern Tier, to Western New York; and their operations include a range of waste management functions such as recycling, incineration, storage, and land disposal.

- Land disposal of hazardous wastes that do not meet established standards has already been phased out. The federal Land Disposal Restrictions (LDRs), which have been incorporated into State regulation, were phased in from 1986 through 1994, and continue to be subject to ongoing review and revision. The LDRs address all currently listed or characteristic hazardous wastes. However, as recognized in ECL 27-1102.2(d), land disposal capacity for treated residuals remains necessary.

- The State must comply with federal requirements.

  - As a result of several U.S. Supreme Court decisions on solid waste and the Commerce Clause of the U.S. Constitution, states cannot erect barriers affecting or prohibiting the import or export of hazardous waste. Therefore, the Plan must consider out-of-state wastes coming to New York for management and New York

waste going to out-of-state facilities.

- Federal regulations located at 40 CFR 271.4(b) state, "Any aspect of State law or of the State program which has no basis in human health or environmental protection and which acts as a prohibition on the treatment, storage or disposal of hazardous waste in the State may be deemed inconsistent." In order to maintain authorization, the State cannot prohibit the siting of hazardous waste facilities in the State without a human health or environmental protection basis for such prohibition.

- Before 2002, New York imported more hazardous waste for management than it exported. Since 2002, New York has exported more hazardous waste than it has imported. This means that New York generators ship more tons of waste out-of-state for management than the out-of-state generators ship wastes to New York TSD facilities for management. New York also exports more municipal solid waste out-of-state than is managed in-state.

- For the past 20 years, there has been sufficient capacity, either within or outside of New York State's boundaries, to manage all of the hazardous waste generated in New York State from all sources. This is true even with the closing of or major operational changes at 15 hazardous waste management facilities in the State since 1991.

- The evolution of the hazardous waste management industry within the State has resulted in an equitable geographic distribution of hazardous waste management facilities.

- With the variety of hazardous wastes being generated, different types of treatment and disposal technologies are required to manage these wastes. No one state has all the various facilities necessary to treat or dispose of every type of waste generated in-state. For example, New York State presently has no in-state capacity for commercial hazardous waste solids incineration. Every state is dependent upon other states for certain hazardous waste treatment and disposal technologies.

- While the number of commercial hazardous waste management facilities in the State has been decreasing, the United States Environmental Protection Agency's (USEPA) national analysis has determined that national capacity remains available to handle the waste generated in New York State and across the nation at least through 2020. Our own State analysis conservatively estimates sufficient capacity at least through 2026 for the northeast quarter of the country.

- Based on the history of hazardous waste management facility capacity and hazardous waste generation trends, it is reasonable to conclude that the private sector will continue to provide sufficient, needed capacity for New York State generated hazardous wastes.

- The risk of a release of hazardous waste to the environment during transportation in New York State is exceedingly low. This risk will continue to be exceedingly low no

matter the distance from hazardous waste generators to existing or potentially suitable sites for hazardous waste receiving facilities.

- New York State's hazardous waste generation rates alone are not sufficient to support an economically viable commercial TSD facility other than for storage for trans-shipment. Thus, while it may be appropriate for a number of reasons, including interstate markets, for new facilities to be proposed within the State, there is no need for the State itself to pro-actively pursue the siting of new facilities.

- Since the Siting Law's passage over 20 years ago, certain provisions of the law have become irrelevant or antiquated because of the evolution of hazardous waste management. The writers of the bill could not have foreseen the myriad changes that have occurred in hazardous waste management since the law's enactment.

  - Most notably, since 1995, USEPA has taken over responsibility to determine national hazardous waste disposal capacity, relieving the states of the obligation to make the capacity assurances required under CERCLA section 104(c)(9).

  - The regulation of the hazardous waste management industry has developed with a strong federal base, with individual states incorporating federal standards, along with additional state standards addressing state specific needs. An example of the strong federal standards are the LDRs discussed in Chapter 4 of the Plan which prohibit the land disposal of hazardous wastes that don't meet established standards.

  - At the state level, New York State's waste reduction/pollution prevention programs have substantially evolved. New York State has enacted a preferred hazardous waste management practices hierarchy which is now an integral part of the State's hazardous waste management strategy.

Recommendations

- Preventing and reducing hazardous waste generation is a top priority for the Department and the State, as mandated by the preferred hazardous waste management hierarchy (ECL 27-0105.) This approach will continue to be used to guide all hazardous waste management policies and decisions of the Department, including permitting and other regulatory activities.

- In accordance with ECL section 27-1109, New York State should continue to rely on the private sector to build and operate hazardous waste TSD facilities based on business economics.

- While national capacity exists for New York hazardous waste, other factors such as economics and potential climate change issues may impact the handling or management of hazardous waste. While there is no present shortfall in management availability, any proposal for locating a new facility or expanding an existing hazardous waste facility should be evaluated on its own merit, taking into account the national need as well as state need, the distribution of other hazardous waste

management facilities operating within the State at that time, and the burdens and advantages such a facility may bring. For any proposed new or expanded facility, the applicant must identify the need for such facility, as required by ECL 27-1103. New York State should continue to rely on the private sector to initiate proposals for new or expanded facilities.

- Of the available types of facilities, landfill capacity for treated residuals is a diminishing resource, since as a landfill unit is used for disposal, the available capacity is decreased. As a result, as a landfill unit is filled the need for a replacement unit should be evaluated.

- The Plan should not discourage the consideration of siting proposals that meet the requirements of the Siting Act, regulatory siting criteria, business needs and other regulatory requirements, because the future need for hazardous waste TSD facilities is extremely difficult to assess at this time.

- State agencies and authorities and future Siting Boards should evaluate a proposed or expanded facility from a national as well as a State perspective in its determination of need, volume of waste imports and exports, availability of commercial TSD facilities, and impact on New York's businesses.

- State agencies and authorities and any future Siting Board should also consider the potential impact of a proposed or expanded facility on the surrounding area, particularly environmental justice impacts.

- Applications for new and expanded facilities should be expected to fully address climate change issues, such as greenhouse gas emissions from transportation, treatment and disposal. Mitigation methods may include reduced energy usage, expanded use of biofuels and other alternative energy sources, and use of alternate or modified transportation, treatment or disposal methods.

- Policy decisions by state agencies and authorities and any facility Siting Board must include an integrated assessment of all waste management issues, as New York is a net exporter of both municipal and hazardous waste and many hazardous waste facilities also manage non-hazardous industrial waste.

The Plan should be updated in the future if there is a material change in critical assumptions or conditions. Specifically, the Plan will be updated as necessary if:

- a future USEPA assessment identifies a current or projected shortfall in national hazardous waste management capacity;

- changes in interstate or international transport law allow limitations on the transportation of hazardous waste. For example, Congress might choose to enact legislation giving states the authority to ban or limit the import of hazardous waste. Such legislation has been proposed for solid waste and was enacted many years ago for low level radioactive wastes;

- in the Department's annual review, it concludes that there is a trend showing a significant increase in-state hazardous waste generation over time or changes in required management methods that would increase the need for additional management capacity; or

- in the Department's annual review, it identifies a significant decrease in commercial hazardous waste treatment or disposal capacity or required management methods without capacity available elsewhere in the nation.

The Draft GEIS must be read in concert with draft Plan.

3.0 Environmental Setting

The enabling statute mandates that the Plan consider Statewide issues, and as such, this draft GEIS considers impacts on the State as a whole. However, the Plan goes beyond this level of analysis to look at the movement and management of New York's hazardous waste throughout the northeast area of the United States and even internationally. While New York has little legal authority over activities outside of State boundaries, the impact of import and export of hazardous waste across State boundaries must be considered when evaluating trends in hazardous waste management and potential future needs for additional TSD facilities.

Existing hazardous waste facilities can be found throughout the State, with greater concentrations in the vicinity of the more industrialized areas (see Table 1-1 of the Plan for the regional distribution of TSD facilities). This correlation is also true for the distribution of hazardous waste generators across the State (see Figure 3-7 of the Plan for regional distribution of large quantity generators).

Hazardous Waste TSD Facilities

In Chapter 1 of the Plan, hazardous waste TSD facilities are divided into three groups: "onsite" facilities that manage their hazardous waste at the generating facility; "captive" facilities that receive hazardous waste for management generated by a separate facility which is owned by the same company; and "commercial" facilities that receive hazardous waste for management from businesses owned by different companies. Chapter 1 of the Plan discusses these facilities in detail, using a 14 year time frame for analysis. The number of facilities in the state has dropped dramatically over time, as can be seen in Table 3-1.

In 2005, there were 16 commercial TSD facilities. Ten of these were for temporary storage only. The remaining 6 commercial facilities in the State employ one or more of the following handling methods: reclamation/recovery, incineration, fuel blending for incineration off-site, treatment, or land disposal of treated residuals.

Table 3-1
TSD Facilities Breakdown

Types of TSD facilities	**1991**	**2001**	**2005**	**Decrease 91 - 05**
On-Site Treatment Facilities	301	293	204	32%
(wastewater only)	-*	(60)	(56)	
Captive Facilities	23	11	8	65%
Commercial Facilities	29	19	16	45%
TOTAL	353	323	228	35%

* Due to reporting methods, this number cannot be determined accurately.

Facilities that treat, store, incinerate, reclaim or recycle hazardous waste can operate indefinitely with appropriate maintenance and equipment upgrades/replacement, and will have no projected end life. Between 2001 and 2005, four facilities in the State have, however, closed or converted to exempt 10 day transfer facilities. Since 2005, an additional facility has converted its operation into a 10 day transfer facility. There is no information available to project the possible closure or change in operation of other facilities of these types, or the addition of new ones. Land disposal facilities, on the other hand, have a finite volumetric capacity which can be calculated based on permitted designs and therefore, have an estimated life expectancy.

Hazardous Waste Generation

The number of large quantity generators in the State has been declining steadily, as can be seen in Figure 3-2.

Chapter 3 of the Plan discusses the trend in number of hazardous waste generators and the type and quantity of hazardous waste generated in the State. This information can be evaluated in a number of ways. Figure 3-3 shows the tons of hazardous waste shipped off-site for management from 1996 to 2005, exhibiting a general decline. Some of this reduction can be attributed to waste reduction efforts. It must be recognized that the slowdown of the economy and the shift in the State from a manufacturing to service based economy is reflected in the decrease in hazardous waste generation over time. Much of the variation in these numbers may be attributed to remedial waste generation.

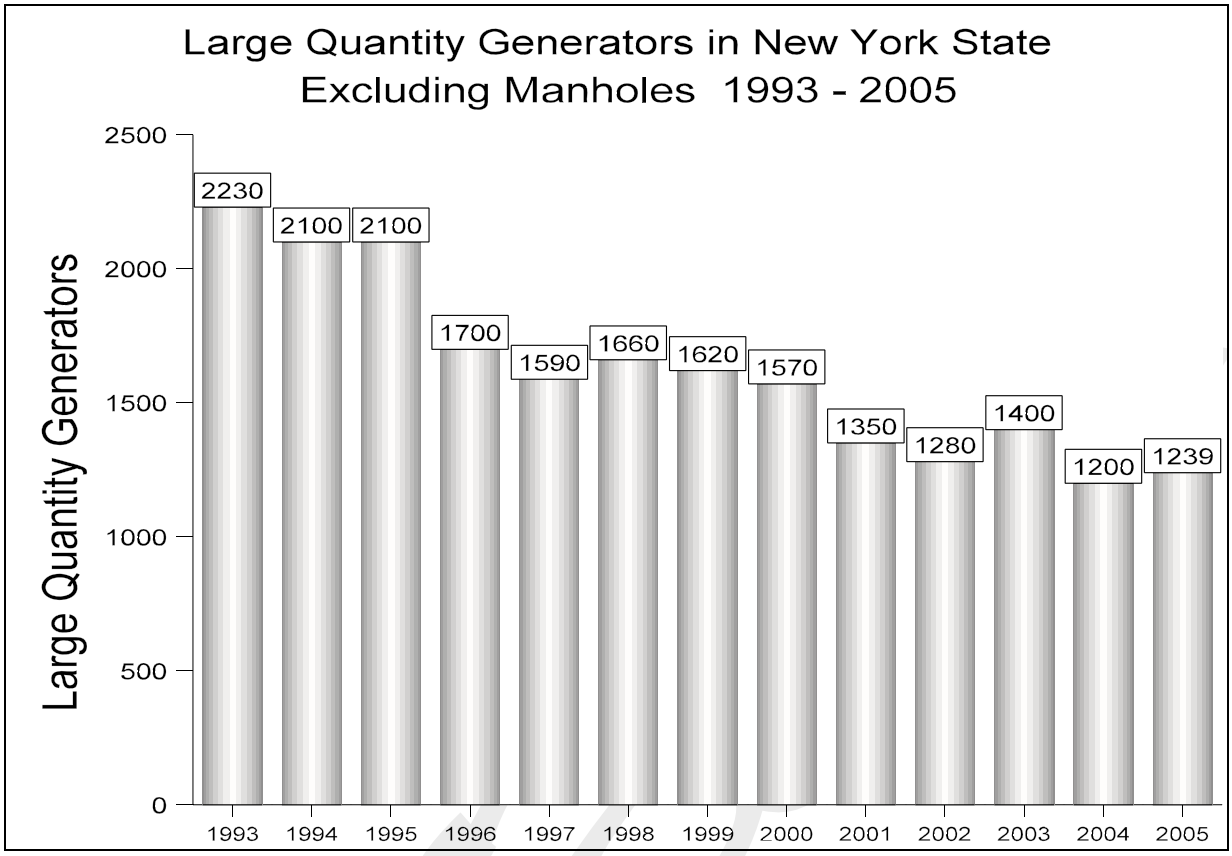

Figure 3-2

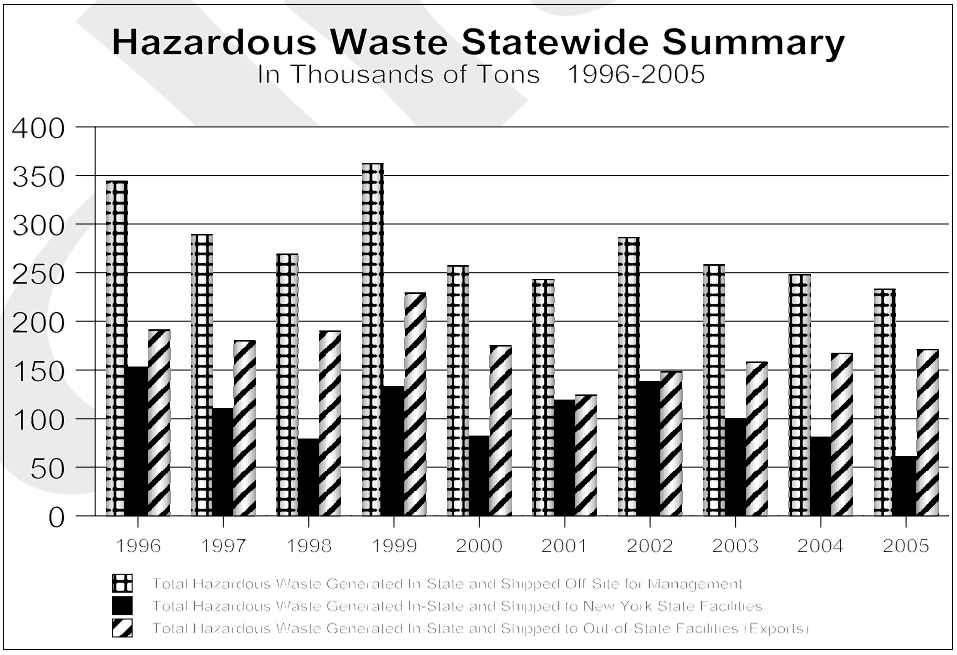

Figure 3-3

4.0 Potential Significant Adverse Environmental Impacts

This draft GEIS is for the Plan, which is a guidance document. The document itself does not prescribe where hazardous waste TSD facilities will be located, rather, in anticipation of the potential for siting such facilities in the future, it provides information on hazardous waste generation and management trends to assist the Siting Board and government agencies in evaluating future proposals.

Transportation Risk Assessment

Chapter 7 of the Plan evaluates hazardous waste transportation issues.

Many decisions that regulatory agencies face today require that risks be evaluated in the context of impacts on public health and environment by a specific event. These analyses may foster certain enhanced regulatory actions designed to minimize the potential impacts of such events. These may include the implementation of new rules, data gathering, guidelines for interpreting data, and criteria for applying a specific set of actions.

The analysis of transportation risk, especially the risk from accidents, has often relied on a combination of 1) calculated probabilities of certain triggering events, which, for the purpose of facilities subject to this Plan, would likely include transportation route characteristics and event site characteristics such as proximity to ground water, surface water, wetlands, and structures, and 2) the ability of the existing infrastructure and equipment to accommodate potential hazards. This level of transportation risk analysis is suitable for site specific analysis.

From the Statewide perspective of the Plan, in the case of hazardous waste transport, improvements in design features of roads and rail, along with improvements in design and operation of transport vehicles used in rail or trucking, plus additional regulatory scrutiny, minimize potential risks no matter which route combination or mode of transportation is used.

NYSDOT traffic data found on it's web site shows that routes of transport are not operating at capacity, and, therefore, there is sufficient capacity to transport hazardous waste. If an accidental release does occur during transport, existing local and state hazardous materials and emergency response plans will be implemented and trained personnel will be deployed. Implementation of such plans along transportation routes are key to dealing with any potential impacts to human health and the environment. Data collected by the US Department of Transportation (USDOT) on hazardous materials incidents in New York State supports a conclusion that there are no risks associated with hazardous waste transport that would indicate a need for special statewide planning consideration. Hazardous materials, as defined by USDOT, include raw materials, products and wastes that meet certain defined hazardous characteristics, including all regulated hazardous wastes as specifically defined in New York State in 6 NYCRR Part 371, and federally in 40 CFR Part 261, including PCB wastes. Incidents related to the shipment of hazardous materials are reported to USDOT.

USDOT defines hazardous material and hazardous waste as follows in 49 CFR 171.8:

"*Hazardous material* means a substance or material that the Secretary of Transportation has determined is capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and has designated as hazardous under section 5103 of Federal hazardous materials transportation law (49 U.S.C. 5103). The term includes hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials table (see 49 CFR 172.101), and materials that meet the defining criteria for hazardous classes and divisions in [49 CFR part 173]."

"*Hazardous waste*, for the purposes of this chapter, means any material that is subject to the Hazardous Waste Manifest Requirements of the U.S. Environmental Protection Agency specified in 40 CFR part 262." (Note: This definition includes PCB waste.)

6 NYCRR Part 370, of the hazardous waste management regulations, defines spill as follows:

"*Spill* means the accidental leaking, pumping, emitting, emptying or dumping of hazardous wastes or materials which, when spilled, become hazardous wastes, into or on any land or water."

Each person in physical possession of a hazardous material at the time that any of the incidents listed in 49 CFR 171.16 occurs during an activity regulated by USDOT must submit a Hazardous Materials Incident Report to USDOT. Regulated activities include loading, unloading, in transit storage, and in transit. These incidents include the discharge of any quantity of hazardous waste, certain types of damage to large cargo tanks (even if there is no release of hazardous materials), or the discovery of an undeclared hazardous material. It does not include leakage of fuel from a vehicle resulting from an accident. All modes of transportation are covered including air, highway, rail and water.

Table 4-1 presents the total number of hazardous materials incidents in New York State which were reported over a 13-year time period. As can be seen in the table, of those hazardous materials incidents, an extremely small number of the reported hazardous materials incidents involved hazardous waste in transit. In New York State from January 1, 1994 through December 31, 2006 there were a total of 7,712 hazardous materials incidents reported, of which 47 involved hazardous waste in transit (0.6%).

Table 4-1
Hazardous Materials Incidents vs. Hazardous Waste Incidents In Transit - New York State
(all modes of transportation)

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Haz Materials incidents	757	763	748	558	682	627	617	633	440	395	478	458	556
Haz Waste incidents in transit	5	5	3	6	8	2	1	6	1	3	0	0	7

(Statistics based on U.S. Department of Transportation, Hazardous Materials Safety, Hazardous Materials Information System as of 06/26/2007)

As seen in Table 4-1, the total number of hazardous waste incidents that occurred during transport in the past five years were: one in 2002, three in 2003, zero in 2004 and 2005, and seven in 2006, for an average of just over two per year.

Table 4-2
13 Year Totals for Hazardous Waste Incidents in Transit by Region

Region	# Hazardous Waste Incidents 1/1/94 - 12/31/06
1	3
2	13
3	8
4	11
5	3
6	0
7	2
8	3
9	4
Total	47

(Statistics based on U.S. Department of Transportation, Hazardous Materials Safety, Hazardous Materials Information System as of 06/27/2007)

Table 4-2 looks at the distribution of the hazardous waste incidents during transport across the State by Department region over a 13-year time span. Hazardous waste transportation incidents in transit occurred in almost every region throughout the State, with higher numbers in

regions 2, 3 and 4. Over the 13 year period, the average maximum number of incidents in one region of the state is one incident per year while for all other regions it is less than one, and in some cases substantially less than one incident on average per year.

Table 4-3 shows the number of hazardous waste incidents in transit in New York compared to the number of manifested hazardous waste shipments in the State's tracking system over a 13 year time span. Over this time, the number of manifested hazardous waste shipments per year have been dropping from 100,171 in 1994 to 63,585 in 2006. Using the 2006 numbers, 0.011% of the total tracked shipments of hazardous waste were involved in a hazardous waste incident during active transport.

Table 4-3
Hazardous Waste Incidents in New York State
1994 - 2006

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Incidents in Transit	5	5	3	6	8	2	1	6	1	3	0	0	7
Manifested Shipments	100,081	99,340	105,780	109,030	107,706	111,667	101,754	97,239	88,712	78,183	66,762	64,003	63,587

(Statistics based on U.S. Department of Transportation, Hazardous Materials Safety, Hazardous Materials Information System as of 06/26/2007 and NYSDEC hazardous waste manifest data)

There are innumerable routes in New York State that are taken to transport hazardous wastes into and out of the State. All hazardous waste transported by truck in New York State utilizes roads that NYSDOT has designated as suitable for truck traffic, in accordance with federal and State requirements.

The major interstates connecting industrialized areas and providing access into and out of the State, Interstates 90, 87, 88, and 81, would be the roads with the highest concentration of use for transporting all hazardous material, including hazardous waste in the State.

One receiving facility in the southeastern portion of the State has direct rail access. This mode of transportation is also used by generators for large quantity bulk shipments, such as contaminated soils from remediation projects, where there is relatively easy rail access.

With the cost of transportation of hazardous waste by truck increasing, cost has become a more important factor in selecting a receiving facility for hazardous waste.

CERCLA liability is also a significant issue. Using the same disposal facility over time, thus having long-term liability for only one disposal location, is of critical importance to some generators.

The risk, as demonstrated by the information compiled by USDOT over a thirteen year period, of a release of hazardous waste to the environment during transportation in New York

State is exceedingly low. There is no reason to believe that the risk would change in the future.

Transportation routes associated with any new facility and the related impacts on the local community must be evaluated during the siting of any facility by taking into account site-specific conditions as part of the individual siting and permitting process if the facility is to be located in New York State.

Adverse Environmental Effects That Cannot be Avoided or Adequately Mitigated if the Plan is Finalized

There are no unavoidable adverse impacts resulting from the Plan itself. Unavoidable impacts associated with a specific new facility must be addressed in the facility-specific EIS as such impacts, if any, are very dependent on the location and nature of the new facility.

It is New York State policy, memorialized in statute and regulation, to encourage the reduction of hazardous waste generation as well as its reuse, recovery and recycling, in preference to land disposal. Among the benefits of this policy, waste reductions and recovery reduces potential adverse impacts resulting from transportation and disposal of hazardous wastes. As the State continues to pursue this policy, further reductions will accrue. Further discussion on mitigation methods inherent in State regulation are discussed in Section 5.0 below.

Irreversible and Irretrievable Commitments of Resources

The siting of any type of hazardous waste facility could result in irreversible and irretrievable commitment of resources. The Plan's impacts will be co-extensive with its use by the Siting Board and the Department in approving or denying the siting of new facilities or facility expansions. Physical resources that may be committed in the siting of a facility may include a parcel of land, and the labor and construction materials needed to build and maintain the facility. The facility site might restrict future land use. Upon site closure, the land might be used as open space or for other compatible uses depending on the nature of the facility. There could be significant alteration of undeveloped land and biological resources during site development depending on site location. For a land disposal facility, creation of a landfill is a permanent use for the land.

Locating a new facility at an existing facility, or expanding an existing facility could result in no new commitment of land resources or a reduced commitment.

Growth-Inducing Aspects

The Plan does not discourage the consideration of siting proposals that meet the requirements of the ECL and regulations. Construction of a new facility in an area could potentially have growth-inducing aspects for that area, both in the short-term and the long-term, due to labor and materials requirements. Specific effects on the stimulation or depression of economic growth in the area of the facility would be highly dependent on site specific conditions, which would be addressed in a site specific EIS for a facility located in New York

State.

Effects on the Use and Conservation of Energy Resources and Climate Change

Any projections of the effects on the use and conservation of energy resources and climate change as a result of the Plan would be speculative. Any proposal for a new or expanded hazardous waste facility would be subject to SEQR and any requisite EIS would have to evaluate the specific proposals effects on energy resources and climate change.

Generation, transportation and ultimate treatment and disposal of hazardous waste can impact greenhouse gas emissions. The transportation of wastes is a particular source of greenhouse gas emissions for evaluation. The Plan evaluates transportation issues in Chapter 7. Certain proactive measures can be implemented by handlers of hazardous waste to limit the impacts of hazardous waste management on global warming. Much information on this topic can be found on the USEPA web site, www.epa.gov, as well as at the NYSDEC web site at www.dec.ny.gov, under discussions on climate change and waste management issues.

Increased distance to be traveled to a TSD facility approved to receive the generator's waste has an increased negative effect on the conservation of energy due to increased fuel use. However, as the cost of fuel increases, the cost of transporting waste, particularly by truck, increases. Thus increased costs will affect decisions by generators regarding their waste management options. Generators of large volumes of waste that have rail access might switch to receiving TSD facilities that have rail access because the overall costs per ton shipped and disposed will be less. Other generators might find that the increased shipping costs will make a closer TSD facility with higher fees more cost competitive.

Decreasing vehicle miles traveled will have a positive impact on the environment by decreasing greenhouse gas emissions. Reducing vehicle miles traveled should be a goal for generators in choosing a TSD facility location for their hazardous waste. In the same vein, consideration of vehicle miles traveled vs greenhouse gas emissions should be part of the evaluation process for locating a potential TSD facility.

The treatment and disposal options for a particular waste are very limited, due to the mandates of the land disposal restrictions discussed in Chapter 4 of the Plan. Energy use varies dramatically with treatment technologies. On-site treatment, to the extent practical, rather than transportation to an off-site location will decrease greenhouse gas impacts. Large, centralized facilities may be more energy efficient than several small facilities of similar capacity, however, locating hazardous waste management facilities in close proximity to sources of generation can reduce vehicle miles traveled and the associated greenhouse gas emissions and should be considered where appropriate.

Handlers can undertake activities to reduce energy use, and thus greenhouse gas emissions. Examples include: practicing pollution prevention measures which reduce the quantity of waste generated; using recycled materials in processes and operations; substitution of chemicals to reduce global impacts; use of more energy efficient equipment; increasing energy efficiency of lighting and heating such as use of fluorescent lamps and restrictions on heat and air conditioning; use of less water in production processes; and using green building concepts when

expanding physical infrastructure. The increased costs of raw materials, transportation, energy and wastes management as well as laws and regulations, may drive competitive generators and waste management companies toward implementing these measures.

Transporters of hazardous waste can consider expanded use of bio-fuel to decrease their carbon footprint. Rail and water transportation use significantly less energy than truck transport as they are more fuel efficient. As such, these modes of transportation should be considered where practical. Increased use of transfer stations and temporary storage facilities could decrease the total number of truck shipments by increasing the number of full load shipments.

When discussing climate change issues, USEPA states that a TSD facility should not be located in a flood plain. For any proposed facility, the details of a specific location must be evaluated, including accommodation for changing water levels, and potential changes in seasonal and total yearly precipitation impacts on facility operation. For example, while some models indicate increased levels of oceans over time, some modeling also suggests that the Great Lakes water level may drop over time due to drought.

5.0 Mitigation Measures to Minimize Environmental Impact

The Plan itself is a guidance document and has no direct environmental impacts. The Plan is one component of a broad and detailed program to assure measures are taken to minimize environmental impact in the siting and operation of hazardous waste TSD facilities.

Chapter 618 of the Laws of 1987 established a preferred statewide hazardous waste management hierarchy. This hierarchy is in itself a form of mitigation. The preferred hazardous waste management practice is to reduce or eliminate, to the maximum extent practicable, the generation of hazardous waste in New York State. Next in the hierarchy is to recycle or reuse to the maximum extent practicable those hazardous wastes that continue to be generated. Third is to treat or destroy those hazardous wastes generated that cannot be recycled or reused. Finally, the least desired practice is the land disposal of untreated industrial hazardous wastes. Section 4 of Chapter 618 (ECL 27-0105) expresses a preference for phasing out land disposal. This is discussed further in Chapter 4 of the Plan. ECL 27-0105, the hazardous waste management hierarchy, must be used to guide all hazardous waste policies and decisions. In fact, in accordance with 6 NYCRR Part 376 LDRs, hazardous waste must now meet chemical specific standards or be treated by specified technologies before being disposed of in a permitted hazardous waste land disposal facility. The toxicity and mobility of the treated residuals that are now allowed to be disposed in a hazardous waste land disposal facility are dramatically reduced compared to the toxicity and mobility of wastes being land disposed in 1987 when the laws were enacted requiring the preparation of the Plan. As a result of the implementation of the LDRs, the land disposal of untreated hazardous waste at TSD facilities, as described in ECL 27-0105, as the least desirable management method in the hazardous waste hierarchy no longer exists.

The hazardous waste hierarchy is used when implementing ECL 27-0908 which mandates the development of hazardous waste reduction plans by July 1 of the subsequent calendar year for any generator of equal to or greater than 25 tons of hazardous waste in 1995 or any subsequent year. Minimizing the generation of hazardous waste from existing or new manufacturing

processes will lessen the need for hazardous waste capacity. Hazardous waste reduction is discussed in Chapter 2 of the plan.

Any new hazardous waste facility must comply with numerous and protective Department regulations and obtain permits governing its activities. The Department has comprehensive regulations that govern the siting, construction and operation of commercial hazardous waste management facilities. With few exceptions, such facilities require hazardous waste facility permits, and, depending on the nature of the facility, may also require permits for air emissions and water discharges.

The Department's hazardous waste regulations that apply to any new hazardous waste facility are 6 NYCRR Part 370 (Hazardous Waste Management System, General), Part 371 (Identification and Listing of Hazardous Waste), Part 372 (Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities), Subpart 373-1 (Hazardous Waste Treatment, Storage, and Disposal Facility Permit Requirements), Subpart 373-2 (Final Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities), and Part 376 (Land Disposal Restrictions). Certain facilities will also be required to meet applicable parts of Part 374 (Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities). These regulations create a comprehensive system of regulatory standards and requirements that protect human health and the environment from the potential adverse impacts from the management of hazardous waste. Of particular importance are the permit requirements and standards set forth in Subparts 373-1 and 373-2. There are specific standards for each type of technology used for managing hazardous waste, including; storage facilities, incinerators, treatment facilities, and land burial facilities. Part 373-1 also gives the Commissioner of DEC the authority to impose additional permit conditions beyond those otherwise specifically authorized by the Part 373 regulations as the Commissioner deems necessary to protect human health and the environment.

In addition, certain significant new hazardous waste facilities, including certain facility expansions, are subject to ECL 27-1105 which requires the issuance of a "certificate of environmental safety and public necessity" issued by a facility Siting Board. New commercial incinerators and land disposal facilities are among the facilities that would be subject to this requirement. A new Siting Board is established for each application. A Siting Board is made up of representatives of the commissioners of transportation, environmental conservation, health, and commerce (now economic development); the Secretary of State and three ad hoc members appointed by the Governor, two of whom must be residents of the county in which the facility is primarily proposed to be located. These eight people bring a wide spectrum of knowledge to Siting Board hearings and decisions.

The Siting Board Application itself must address criteria that are focused on the environmental and demographic characteristics of the site where the facility is proposed, consistent with applicable regulations, including SEQR. The application of the criteria also takes into account the nature of the proposed facility (treatment incineration, land disposal, etc.) and the characteristics of the wastes proposed to be managed at the facility. The siting considerations include factors related to:

1. Population density in the vicinity of the proposed site

2. Population density adjacent to the transportation route
3. Risk of accident in transportation
4. Proximity to incompatible structures
5. Utility lines
6. Municipal effects
7. Contamination of ground and surface waters
8. Water supply sources
9. Fire and explosion
10. Air quality
11. Areas of mineral exploitation
12. Preservation of endangered, threatened and indigenous species
13. Conservation of historic and cultural resources
14. Open space, recreation and visual impacts

After a public process that includes hearings, a Siting Board makes its decision based on the record of the application proceeding. A Board may grant a certificate, deny it, or grant it with such terms, conditions, limitations, or modifications as a Board deems appropriate. A Board is to deny an application to construct or operate a facility: if residential areas and contiguous populations will be endangered; if the Board finds it does not conform to applicable siting criteria; or if a Board finds that the facility is not otherwise necessary or in the public interest. Finally, once the statewide Plan is adopted as final, a Board may reject an application if the facility is not
consistent with the Plan or if the need for the facility is not identified in the Plan. Prior Siting Boards have denied several applications in the past.

Hazardous waste facilities often have air emissions requiring a 6 NYCRR Part 201 air permit (State facility and Title V). State Pollutant Discharge Elimination System (SPDES) permits (6 NYCRR Part 750) are required for direct discharges to surface or groundwater and potentially for storm water discharges from construction activities. If the facility discharges to a Publicly Owned Treatment Works (POTW), SPDES pretreatment requirements may apply. Thus, an integrated multi-media review is conducted.

Depending on the location of the proposed facility, other environmental permits, may be required, for example, wetland permits. The Department's Environmental Justice Policy (Commissioner Policy 29, Environmental Justice and Permitting) would also apply if the facility is located in an Environmental Justice Area.

Also, certain federal permits may be necessary. If the proposed facility is managing USEPA regulated PCB wastes, a USEPA Toxic Substance Control Act 40 CFR Part 761 Permit would be required. If there are federally regulated wetlands, a permit from the U.S. Army Corp of Engineers pursuant to Section 404 of the Clean Water Act would be required.

Finally, for facilities subject to the Siting Board, an Environmental Impact Statement (EIS) and findings must be completed pursuant to 6NYCRR Part 617, SEQR. For every action subject to SEQR, a lead agency is designated. For hazardous waste facility permit applications subject to the Siting Board requirements, the Siting Board is generally designated lead agency. The lead agency is responsible for processing the draft EIS, including holding public hearings,

receiving comments from the public and other involved agencies, and issuing findings.

An EIS concisely describes and analyzes a proposed action which may have a significant impact on the environment. The draft EIS is available to the public for information and comment. An EIS must include:

1. a description of the action, including its need and benefits;
2. a description of the environmental setting and areas to be affected;
3. an analysis of all environmental impacts related to the action;
4. an analysis of reasonable alternatives to the action; and
5. an identification of ways to reduce or avoid adverse environmental impacts (mitigation measures).

At the end of the public process, a Final Environmental Impact Statement (FEIS) is prepared. The lead agency or the applicant can prepare the FEIS, but the lead agency is responsible for its adequacy and accuracy.

A lead agency must also issue findings. The findings must:

1. consider the relevant environmental impacts, facts and conclusions disclosed in the FEIS;
2. weigh and balance relevant environmental impacts with social, economic and other considerations, including environmental justice issues, as appropriate;
3. provide a rationale for the agency's decision;
4. certify that the requirements of Part 617 have been met; and
5. certify that consistent with social, economic and other essential considerations from among the reasonable alternatives available, the action is one that avoids or minimizes adverse environmental impacts to the maximum extent practicable, and that adverse environmental impacts will be avoided or minimized to the maximum extent practicable by incorporating, as conditions to the decision, those mitigative measures that were identified as practicable.

The EIS findings may result in additional restrictions (mitigation measures) being imposed on a facility to reduce or avoid adverse environmental impacts. In extreme cases, the findings can lead to the denial of permits, approvals, etc.

Taken together, these numerous and stringent environmental regulatory programs require a comprehensive and in-depth analysis of potential environmental and human health impacts of each proposed hazardous waste facility. They provide the authority for regulatory agencies to impose necessary permit conditions, and to limit the scope and nature of a proposed facility. They also provide agencies with the authority to deny an application if warranted.

6.0 Alternatives to the Proposed Action

This section identifies alternatives to the proposed action. It also examines the major impacts associated with each option and reasons for not choosing that alternative. This draft GEIS looks at the following alternatives: the no action alternative, different scales of action,

similar action with different assumptions.

The no action alternative would involve not writing and adopting the Plan. This option is unacceptable because ECL 27-1102 requires the Department to write and adopt a Plan.

The second possible alternative would involve a different scale of the proposed action. This choice is not viable because ECL 27-1102 requires the Plan to address a very specific list of elements. The scope and scale of the Plan is sufficient to address these elements.

The last alternative is to use different assumptions in developing the Plan. Different choices for these assumptions are discussed below:

1. The first assumption deals with facility life expectancy. The Department assumed non-landfill facilities to have an indefinite life expectancy and landfills to only last as long as it takes to reach capacity. Alternatives for this presumption include assuming different life spans for each facility. However, due to the nature of non-landfill facilities, it is impossible to estimate when they will close. Also, a landfill has limited space and thus it is realistic to estimate that it will last only until the landfill reaches capacity.

2. A second assumption is that companies that now manage their wastes on-site of generation will continue the same practice in the future. A different approach would be to assume that all facilities currently managing their waste on-site of generation would stop their on-site management and send their waste to commercial facilities. This option, particularly when considering the amount of on-site treatment of hazardous wastewater, would result in a tremendous increase in commercial treatment needs.

   The Department does not believe that this option should be used because these companies have a large investment in their management units and it is not likely they would abandon such facilities if they continue to generate the waste needing treatment. For wastewater, fiscally and practically, transporting large volumes of hazardous waste water off-site is not a viable alternative.

   The reduction in on-site treatment facilities over the last few years has been largely caused by the closing of manufacturing operations or the implementation of hazardous waste reduction activities.

3. The third assumption states that companies that now manage their wastes at captive facilities will continue the same practice in the future. A different approach would be to assume that all facilities currently treating their waste at captive facilities would stop this treatment and send their waste to commercial facilities in the future. This option would result in an increase in commercial treatment needs.

   Due to the small number of remaining captive facilities and the relatively small amount of waste being managed by these facilities, this assumption would not change the conclusions of the Plan.

7.0 Underlying Studies, Reports and Other Information Obtained and Considered in Preparing the Statement

All information obtained and considered in preparing the draft GEIS is in the Plan or is referenced in the Plan.