Final Generic Environmental Impact Statement

supporting the

New York State Hazardous Waste Facility Siting Plan

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FINAL GENERIC
ENVIRONMENTAL IMPACT STATEMENT

By the

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

As Lead Agency

Concerning the

NEW YORK STATE
HAZARDOUS WASTE FACILITY
SITING PLAN

- STATEWIDE ACTION -

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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 underlying 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 SEQR determination and likely an 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.

Process to Develop the Plan with Public Input

As required by law, the draft Plan, along with a draft Generic Environmental Impact Statement (DGEIS), was subject to two rounds of public comment, with hearings held in each of the Department's nine regions.

The first draft Plan and DGEIS was released for public review and comment on the Department's web site on July 28, 2008. Electronic copies were available by mail and paper copies were made available at all 9 Department regional offices. The notice of public hearing was published on September 3, 2008 in the Environmental Notice Bulletin and on September 10, 2008 in the Niagara Gazette and the State Register. Hearings were held in all nine Department regions with two hearings held in Region 9. The comment period closed on November 26, 2008.

Taking comments into consideration, the documents updated and a Response to Comment prepared, and the revised draft Plan and DGEIS along with the Response to Public Comment was released for public review on September 29, 2009, available on the Department web site. Notice of 10 public hearings, one in each Department region with two in Region 9, was published in the State Register and the Environmental Notice Bulletin on September 30, 2009 and in the Niagara Gazette on October 6, 2009 with public comment to be received by December 14, 2009, which was later extended to January 14, 2010. Copies of documents were also available electronically by mail, and paper copies were available at all nine Department regional offices.

This final Plan and associated Generic Impact Statement take comments received into consideration along with updated data. A second Response to Public Comment has been prepared.

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 to assure the availability of facilities that are necessary for the proper management of hazardous waste in New York State and provide guidance to State Agencies, Authorities and Siting Boards in the discharge of their responsibilities on this topic. Any lack of sufficient capacity for the environmentally sound management of hazardous waste could conceivably result in increased improper management of hazardous waste and in increased costs to hazardous waste generators in New York State.

Hazardous waste is generally defined in statute in ECL Section 27-0901.4, and more fully defined in regulation at 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 it is 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 directed the New York State Department of Environmental Conservation (Department) to develop a Plan to address issues specified in ECL Article 27 Title 11 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 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 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 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 whom 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 to provide guidance to decision-making entities and to assure the availability of industrial hazardous waste TSD facilities. 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. Pollution prevention and hazardous waste reduction have become key components of the State's hazardous waste management strategy. The industry has taken on a large 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 for siting hazardous waste TSD facilities, and guidance for State Agencies and Authorities and facility Siting Boards on this topic. The Plan meets the requirements of Chapter 618 of the New York Laws of 1987.

Chapter 1: Chapter 1 is a discussion of the current status of hazardous waste management in New York State. The table below provides 2008 information by county on the 13 commercial treatment, storage or disposal (TSD) facilities located in New York State.

TREATMENT, STORAGE AND DISPOSAL FACILITIES – 2008

EPA ID Number	Name/Address	County/ DEC Region	Handling Method	Quantity received from Off-Site (tons)
COMMERCIAL FACILITIES				
NYD080469935	Norlite Corporation Cohoes, NY	Albany/4	I	24,062
NYD986872869	Safety-Kleen Systems, Inc. Cohoes, NY	Albany/4	S	148
NYD049253719	Ashland Distribution Co. Binghamton, NY	Broome/7	S	4,229
NYR000129015	American Lamp Recycling LLC [1] Fishkill, NY	Dutchess/3	R	1
NYD981556541	Safety-Kleen Systems, Inc. Lackawanna, NY	Erie/9	S	150
NYD980753784	Safety-Kleen Systems, Inc. Avon, NY	Livingston/8	S	170
NYD049836679	CWM Chemical Services Model City, NY	Niagara/9	ww L S	677 198,699 924
NYD002113736	Tulip Corporation [1] Niagara Falls, NY	Niagara/9	R	2,587
NYD982743312	Safety-Kleen Systems, Inc. Syracuse, NY	Onondaga/7	S	167
NYD013277454	Solvents & Petroleum Service Syracuse, NY	Onondaga/7	S	397
NYD030485288	Revere Smelting & Refining Middletown, NY	Orange/3	R	107,718
NYD077444263	Triumvirate Environmental NYC LLC (formerly CWD) Astoria, NY	Queens/2	S	736
NYD082785429	Chemical Pollution Control Bayshore, NY	Suffolk/1	S	1,955
1 - Exempt from 6 NYCRR Part 373 permitting.				

R: Reclamation/Recovery
I: Incineration
L: Landfill
S: Storage, bulking, and/or transfer off-site
ww: Wastewater (which is treated)

Chapter 2: Chapter 2 discusses the programs underway across the State to reduce the use of toxics, along with the status of the State's hazardous waste reduction and pollution prevention programs, which were enacted 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, the generation of millions of tons of hazardous waste has been prevented.

Chapter 3: For the purpose of projecting long range hazardous waste generation trends, Chapter 3 presents an analysis of historic hazardous waste generation. Generation of primary hazardous waste shows a steady slow decline over time, leading to a prediction that it will remain static or in decline. Remedial waste generation, however, is much more unpredictable. While it is projected that there will continue to be 12 to 15 large hazardous waste cleanup actions each year, the quantity of hazardous waste generated will depend on the remedial plans developed for the individual sites, and, therefore, cannot be predicted.

Chapter 4: The Siting Law specifically requires that the status of hazardous waste land disposal be considered. The land disposal of hazardous waste has been severely restricted in compliance with ECL Sections 27-0105, 27-0900 and 27-0912 and federal regulatory requirements (referred to as the Land Disposal Restrictions or LDRs). The Department will, at least annually, review the status of USEPA LDR rulemaking efforts, including actions with regard to macroencapsulation of debris, and initiate amendments to its LDR regulations as appropriate.

Chapter 5: Chapter 5 discusses the potential for development of hazardous waste management and disposal capacity for specific regions of the State based on need. With present day hazardous waste management practices, there are no opportunities to address particular waste streams for discrete areas of the State for management on a regional basis. However, the overall goal embodied in this requirement of the Siting Plan statute, to identify like wastes to be managed at centrally located facilities, is being met in a larger national context by the generators, transporters and TSD facilities. Because the State is relying on the private sector to build and operate hazardous waste management facilities, economics argue against anticipating building of small, like facilities in numerous locations across the State.

Chapter 6: Chapter 6 discusses facility need, environmental justice considerations, and geographic distribution of facilities. Based on the national availability of facilities, there are sufficient TSD facilities for management of hazardous waste generated in New York, and will be for the foreseeable future. Periodically, USEPA will revisit the issue of national capacity and need through analysis of available data, and regulators at both a state and federal level will have years of lead time to address potential capacity shortfalls. Still, the issues of need, environmental justice and geographic distribution will be relevant in the review of individual TSD applications for the management of hazardous waste.

Chapter 7: Chapter 7 discusses hazardous waste transportation issues. Approximately 64,000 manifested shipments of hazardous waste either originate from the State or are received by a facility located in the State in recent years. Every year, approximately 6,000 to 8,000 locations from all areas of the State originate shipments of hazardous waste which is transported from generating facilities to in-state and out-of-state hazardous waste TSD facilities, using primarily public roadways, or railroad routes. Shipments by rail tend to involve large quantities.

The cost to transport varies as the cost of fuel fluctuates. Handling costs associated with transportation also varies and can be significant. One estimating tool using 2009 data shows the cost of transporting hazardous wastes within New York State to be $6.06 per mile per truck. One truckload can generally transport 20 cubic yards, 6250 gallons or 80 drums of waste.

In 2008, 0.028% of the total tracked shipments of hazardous waste in the state were involved in a reportable hazardous waste incident during active transport, indicating that the risk of a release of hazardous waste to the environment during transportation in New York State is low. Nor are the risks associated with the released wastes significant, as discussed in Chapter 7.

Chapter 8: Chapter 8 discusses cooperative approaches to hazardous waste management and procedures for updating the Siting Plan in the future. The Department will continue to encourage cooperative hazardous waste management through state, national, governmental and private avenues. As part of an annual Plan review, the Department will determine if an update to the Plan is necessary.

Chapter 9: This Chapter presents guidance for State Agencies and Authorities and Facility Siting Boards. In accordance with Statute, in making a decision on an application for a certificate of environmental safety and public necessity, a facility Siting Board may deny an application if:

- it is not consistent with the Hazardous Waste Facility Siting Plan, or

- the need for such facility is not identified in such Plan and the board finds that the facility is not otherwise necessary or in the public interest.

In determining if there is a need for a facility, the Plan concludes that, based on the data and analysis, there is sufficient capacity within and beyond New York's borders for the management of the hazardous waste presently generated within New York State.

Further specific guidance is provided to assist a Siting Board in determining:

- if an application is or is not consistent with the Plan;
- if a facility is or is not otherwise necessary; and
- if a facility is or is not in the public interest.

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. 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 is also true for the distribution of hazardous waste generators across the State (see Table 5-5 of the Plan for regional distribution of large quantity generators).

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.

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 17 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 below.

In 2008, there were 13 commercial TSD facilities. Eight of these were for temporary storage only. The remaining 5 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	2007	Decrease 91 - 07	2008	Decrease 91-08
On-Site Treatment Facilities	297	280	202	155	48%	167	44%
(wastewater only) (manholes)	-* (0)	(53) (102)	(59) (51)	(54) (12)		(58) (23)	
Captive Facilities	23	11	8	9	61%	7	70%
Commercial Facilities	29	19	16	13	55%	13	55%
TOTAL	349	310	226	177	49%	189	46%
* 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 2007, six commercial facilities in the State have, however, closed or changed there operations to become 10 day transfer facilities, which are exempt from permitting requirements. 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 shows an overall continuing downward trend with a stabilizing of the number of LQGs over the last 5 years, 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 2008, exhibiting great variation over time. In 2007 and again in 2008, this number was higher than previous years mostly due to remedial hazardous wastes from a few sites. In general, much of the variation in the quantity of hazardous waste shipped off-site for management over time can be attributed to remedial hazardous wastes.

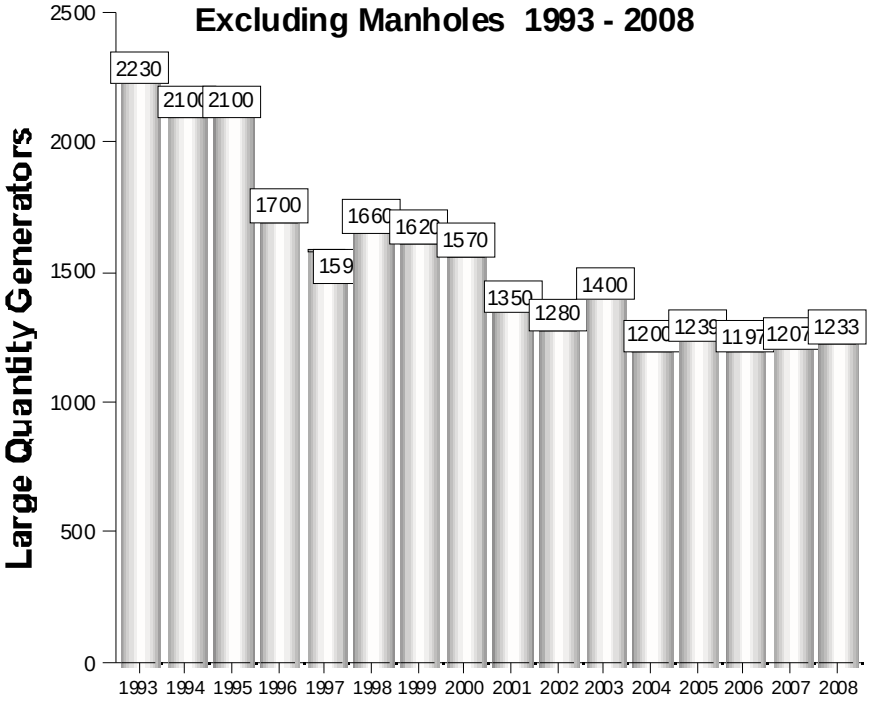

Figure 3-2 (above)

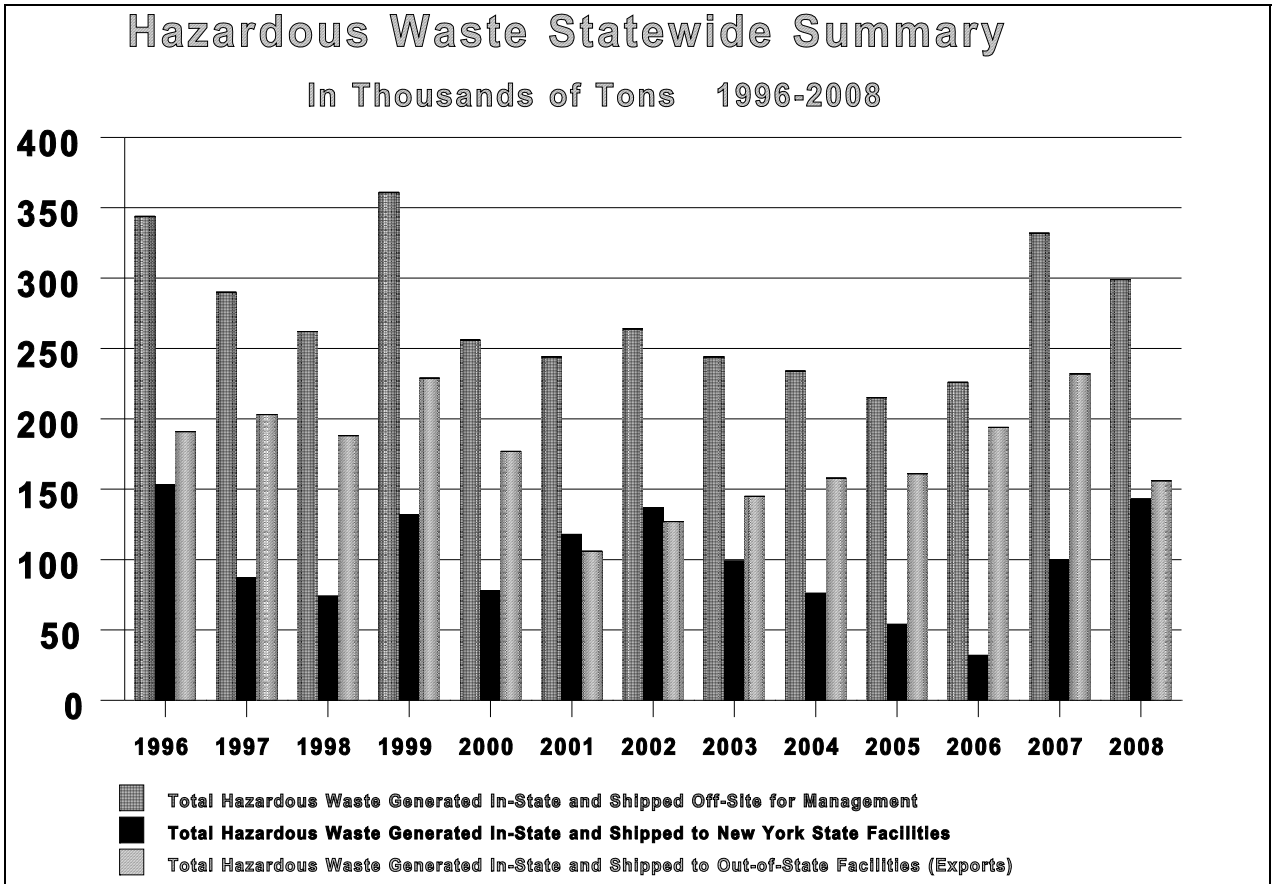

Figure 3-3 (below)

4.0 Potential Significant Adverse Environmental Impacts

The Plan is a guidance document. Based on the capacity data and analysis, the Plan finds sufficient capacity within and beyond New York's borders for the management of the hazardous waste presently generated within New York State. The Plan itself does not prescribe type, size or location for new hazardous waste TSD facilities, 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. When analyzing transportation risk for a site specific analysis, specifics of transportation route and site characteristics, such as proximity to ground water, surface water, wetlands, and structures, along with the ability of the existing community and facility infrastructure and equipment to accommodate potential hazards, can be incorporated into the analysis.

From the Statewide perspective of the Hazardous Waste Facility Siting Plan (Plan), in the case of hazardous waste transport, site specific criteria are not applicable. The general characteristics of hazardous waste transport, including the design features of roads and rail, and the design and operation of transport vehicles used in rail or trucking, along with emergency response protocols in place throughout the state, work together to minimize potential risks no matter which route combination or mode of transportation is used.

NYSDOT traffic data shows that routes of transport across the State 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 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 quantities of hazardous material over specified limits, 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 five-year time period. In New York State from January 1, 2004 through December 31, 2008 there were a total of 2,546 hazardous materials incidents reported, of which 58 involved hazardous waste in transit (2.3%).

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

	2004	2005	2006	2007	2008
Hazardous Materials incidents	461	458	557	538	532
Hazardous Waste incidents in transit	0	15	15	11	17

(Statistics based on U.S. Department of Transportation, Hazardous Materials Safety, Hazardous Materials Information System as of 9/2009)

Table 4-2 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 five year time span. The vast majority of these reported incidences were leaking transportation containers. These dump trucks and dump trailers typically contained soil or sludge material that was either wet when removed from the original location or became wet from exposure to rain during transportation. Less frequently, individual containers, such as drums, are discovered to be leaking. Over this time, the number of manifested hazardous waste shipments per year have been dropping from 66,762 in 2004 to 61,535 in 2008. Using the 2008 numbers, 0.028% of the total tracked shipments of hazardous waste were involved in a hazardous waste incident during active transport.

Table 4-2
Hazardous Waste Incidents in New York State
2004 - 2008

	2004	2005	2006	2007	2008
Incidents in Transit	0	15	15	11	17
Manifested Shipments	66,762	64,003	63,587	64,447	61,535

(Statistics based on U.S. Department of Transportation, Hazardous Materials Safety, Hazardous Materials Information System as of 9/2009 and NYSDEC hazardous waste manifest data)

There are innumerable routes in New York State that are used to transport hazardous wastes into and out of the State. Hazardous waste transported by large trucks 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 sometimes 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, though not the only factor, in selecting a receiving facility for hazardous waste.

The risk, as demonstrated by the information compiled by USDOT over a four year period, of a release of hazardous waste to the environment during transportation in New York State is low. There is no reason to believe that the risk would change in the future.

Transportation routes and the related impacts on the local community must be evaluated during the Siting Board process for a proposal subject to a siting board by taking into account site-specific conditions as part of the individual siting and permitting process.

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 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 State 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. The construction and operation of a TSD facility provides direct and indirect benefits such as: construction jobs, permanent jobs at the operating facility; jobs related to transportation; increased housing demand; food service; and increased tax base for the local community. 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.

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 its hazardous waste. In the same vein, consideration of vehicle miles traveled versus 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.

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.

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. As stated in ECL 27-1107.3(f), once the Hazardous Waste Facility Siting Plan is adopted, a facility siting board may deny an application, if it is not consistent with such plan, or the need for such facility is not identified in such plan and the board finds that the facility is not otherwise necessary or in the public interest.

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 a designated 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 is 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 is required.

Finally, for facilities subject to the Siting Board, an Environmental Impact Statement (EIS) and findings must be completed pursuant to 6 NYCRR 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, and similar action with different assumptions.

Under the no action alternative, no Plan would be written or adopted. 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, that is, less information or more information than is presented in the Plan. This choice is not viable because ECL 27-1102 requires the Plan to address a very specific list of elements, including:

"a. an inventory and appraisal including the identification, location and life expectancy of all industrial hazardous waste treatment, storage and disposal facilities located within the state.

b. a compilation and analysis of existing inventories, reports and studies of the sources, composition and quantity of industrial hazardous waste generated within the state and of existing programs for waste reduction, recycling and reuse.

c. long-range projections of at least twenty years of the amounts and composition of hazardous waste which will be generated within the state and, to the extent feasible, in neighboring states.

d. a schedule for phasing out land disposal, other than treated residuals in compliance with the policy established in section 27-0105 of this article.

e. the identification, if appropriate, of areas of the state which have compatible hazardous waste generation streams and similar interests in providing regional hazardous waste management and disposal capacity to primarily service such areas.

f. a determination of the number, size, type and location by area of the state of new or expanded industrial hazardous waste treatment, storage and disposal facilities which will be needed for the proper long-term management of hazardous waste consistent with the assurances required pursuant to subdivision one of this section and an equitable geographic distribution of facilities.

g. an analysis of transportation routes and transportation risk and costs from industrial hazardous waste generators to existing or potentially suitable sites for industrial hazardous waste treatment, storage and disposal facilities.

h. recommendations on regional and statewide coordination of methods and procedures to encourage cooperative treatment, storage, disposal and transportation of industrial hazardous waste and other such hazardous waste management methods.

i. recommendations on procedures for periodically updating the statewide hazardous waste facility siting plan and for future coordination of hazardous waste management and planning on a regional basis."

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 such as treatment, storage or incineration 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 the 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 possibility need not be entertained 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 is 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.