

# **A REGULATORY STRATEGY FOR SITING AND OPERATING WASTE TRANSFER STATIONS**

**A Response to a Recurring Environmental Justice Circumstance:  
The Siting of Waste Transfer Stations in Low-Income Communities and  
Communities of Color**



***Prepared by the***

***National Environmental Justice Advisory Council  
Waste and Facility Siting Subcommittee  
Waste Transfer Station Working Group***

***This report and recommendations have been written as a part of the activities of the National Environmental Justice Advisory Council, a public advisory committee providing extramural policy information and advice to the Administrator and other officials of the United States Environmental Protection Agency (EPA). The Council is structured to provide balanced, expert assessment of matters related to environmental justice.***

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## **ACKNOWLEDGMENTS**

The NEJAC Waste and Facilities Siting Subcommittee would like to recognize the Waste Transfer Station Working Group for the time and effort that went into preparing this document. The Subcommittee thanks the following working group members for volunteering their valuable time to produce such a comprehensive, high-quality report:

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## **EXECUTIVE SUMMARY**

### **I. Background**

The National Environmental Justice Advisory Council (NEJAC) is a Federal Advisory Committee established in 1993 to provide independent advice, consultation, and recommendations to the U.S. Environmental Protection Agency (EPA) on matters related to environmental justice. NEJAC has established six subcommittees which address various issues corresponding to EPA's areas of authority, responsibility, and structure. Among the subcommittees is the Waste and Facility Siting Subcommittee.

NEJAC and its subcommittees meet semiannually to plan their activities and address pressing issues raised by the public. During the December 1997 NEJAC meeting in Durham, North Carolina, the closing of New York City's Fresh Kills Landfill and the proliferation of waste transfer stations (WTSs) in low-income communities and communities of color in Brooklyn and the Bronx were raised to the Waste and Facility Siting Subcommittee. WTSs are facilities where municipal waste is unloaded from collection vehicles and subsequently re-loaded onto larger transport vehicles to be taken to a disposal site. Most of the waste comes from outside the communities that are home to the WTSs and, in part, from outside the local municipality. WTSs are part of regional waste streams and serve the economic needs of the region and the waste industry. The affected communities assert that WTSs, in combination

The clustering and disproportionate siting of noxious facilities in low-income communities and communities of color led to the creation of the environmental justice movement. The siting and operation of waste transfer stations is such an example. For several years, communities around the country have raised the issue of waste processing facilities that are disproportionately sited in and impact on environmental justice communities to the National Environmental Justice Advisory Committee (NEJAC).

NEJAC formed the Waste Transfer Station Working Group to conduct a factual examination of waste transfer station siting and operation, with a focus on alleviating the impacts of clustering, disproportionate siting, and unsafe operations in low-income communities and communities of color.

In deliberating on its recommendations, the Working Group was challenged with resolving the issue of the clustering of waste transfer stations with few environmental controls and the legitimate role that waste transfer stations play in providing an essential municipal service—the economical disposal of solid waste. The recommendations in this report are intended to identify areas that will allow for the sustainable management of waste transfer stations and promote equality in the distribution and siting of these facilities.

Some of the recommendations in this report focus on policy and regulatory changes, while other recommendations focus on voluntary standards and partnerships between local, state, and federal governments. The Working Group sought to implement NEJAC's mission to provide recommendations to EPA to achieve environmental justice. However, these recommendations also call on all levels of government, in the spirit of collaboration that existed among the Working Group, to work with their communities, the waste trade, environmental justice and environmental organizations, and all other stakeholders to implement these recommendations. It must be remembered, however, that these recommendations are merely a beginning. The realization of safe siting and operation of waste transfer stations and livable communities requires good-faith collaboration for its implementation.

with historic patterns of other negative-impact facilities in their neighborhood, have resulted in degraded health and environmental conditions, as well as displacement of community revitalization plans and economic activity.

These concerns were consistent with concerns raised by citizens that have approached NEJAC and the Waste and Facility Siting Subcommittee about local conditions at WTSs and EPA's role in ensuring more consistent protection at these facilities. In tours conducted by NEJAC, public comments, calls to NEJAC members, and discussions during subcommittee meetings, citizens from New York City, Atlanta, San Francisco, Las Vegas, Philadelphia, Baton Rouge, Washington, DC, Los Angeles, Birmingham, and other cities asked NEJAC to examine EPA's authority under the Resource Conservation and Recovery Act (RCRA) to develop baseline standards for WTSs.

In response, the Waste and Facility Siting Subcommittee developed and approved a resolution that called for a number of EPA actions including examining the risks associated with the siting and operation of WTSs. In February 1998, NEJAC's executive committee approved the resolution and forwarded it to EPA Administrator Carol Browner. The resolution called upon EPA to support the formation of a NEJAC Working Group to evaluate issues such as: 1) the adequacy of current standards that address WTS emissions; 2) illegal commingling of hazardous and medical wastes; 3) the adequacy of regulatory standards to address the transport of waste from city, interstate; and 4) regional environmental and health impacts, and means to ensure public participation.

At the May 1998 meeting of the subcommittee in Oakland, California, the Office of Solid Waste and Emergency Response (OSWER) agreed to support the establishment of a NEJAC Working Group. The Waste Transfer Station Working Group was formed to conduct a factual examination of WTS siting and operation and to recommend actions to alleviate the impacts on communities and ensure safe operation of WTSs. The Working Group is made up of individuals with the diverse perspectives necessary to provide a thorough and fair examination of these difficult issues. They included representatives of community-based and environmental justice organizations, private and public waste trade associations, and local governments.

Given the significant budget constraints of the project, the subcommittee decided to conduct fact-findings in two cities in which citizens had expressed concerns representative of the issues associated with WTS siting and operation across the United States. New York City and Washington, DC, were known to have WTSs with considerable controversy and were accessible within a small travel budget. Although the subcommittee report focuses primarily on the concerns of these two urban environments, it was supplemented by members' experiences in other cities. The Working Group was mindful that the concerns raised by clustered facilities in New York City and Washington, DC, were serious, and similar situations in other parts of the country have been raised to NEJAC. However, the Working Group was also made aware that there existed well-designed and well-sited WTSs in parts of the country, and that its examination did not address differences in rural, tribal, and suburban communities. Therefore, the Working Group endeavored to outline a national baseline that would be consistent with good practices in place throughout the country, and that would upgrade standards in cities with the kinds of problems seen first hand in New York City and Washington, DC, in a manner that acknowledged the limitations of its examination.

In November 1998 and February 1999, the Working Group held fact-finding sessions in New York City and Washington, DC, respectively, to gather information regarding the operation of WTSs and their impact on surrounding communities. These sessions followed a two-day format. The first day the Working Group toured the WTSs in the area; the second day the Working Group hosted a public



meeting to which representatives from various stakeholder groups were invited to present information about WTSs. At both the New York and Washington meetings, the Working Group heard from residents and business owners, environmental justice and environmental groups, community representatives, waste industry representatives, technical organizations, and state and local government officials.

After the meetings, the Working Group began drafting this report based on the information gathered. The Working Group also researched the ways that other parts of the nation are managing WTSs. Even though the meetings were only held in New York City and Washington, DC, the Working Group sought to gain information on the perspectives of other areas of the nation. This information was gathered by Working Group members communicating directly with several stakeholders from across the nation, and by soliciting input and comments on a draft recommendations report issued October 7, 1999.

The draft report was sent to more than eighty people, representing state and local agencies, environmental, community, industry, and technical groups and associations. Following the distribution of the draft report, several of the reviewers pointed out that the cities of New York and Washington represent extreme and, perhaps, atypical urban settings. They indicated that other areas of the country have their own, unique set of challenges that can best be addressed at the state and local level. Reviewers' comments are summarized in a report appendix.

## **II. Waste Transfer Stations And Environmental Justice**

WTSs are facilities where municipal waste is unloaded from collection vehicles and temporarily stored before being reloaded onto larger long-distance transport vehicles for shipment to landfills. Based on observations by the Working Group and information presented to it, WTSs are disproportionately clustered in low-income communities and communities of color. They are commonly found adjacent to high-density housing, recreational areas, food establishments, and small businesses.

These temporary storage areas for waste can bring many problems to a community if they are not managed correctly. In addition to quality of life issues such as noise, odor, litter, and traffic, WTSs can cause environmental concerns associated with poor air quality (from idling diesel-fueled trucks and from particulate matter such as dust and glass) and disease-carrying vectors such as rodents and roaches.

Currently, there are no national standards or regulations that apply directly to the management of WTSs. Because WTSs are managed mainly at the local level by local ordinances and enforcement agencies, the variance at which they are operated can be great. Moreover, many WTSs in urban areas are located in mixed zoned neighborhoods of color. WTSs in New York and Washington process waste that is generated not only within the municipality, but also from surrounding municipalities and states.

From the Working Group's perspective, the issues surrounding WTSs should be raised to EPA, states, and local governments. The recommendations provided in this report support the need for national standards, more community involvement in local land-use decisions, and tougher enforcement at the local level. The Working Group recognizes that the recommendations in this report are gathered from a limited number of meetings and with a limited amount of resources. It is the Working Group's desire to bring this important issue to light and challenge community groups and federal, state, and local governments to respond aggressively to a problem that will continue to grow with the population.

### **III. Recommendations**

The recommendations in this report call for actions that systematically address the issues associated with siting and operating WTSs. These recommendations range from regulatory actions and the development of a best practices manual to immediate actions in the communities suffering from the clustering and disproportionate siting of WTSs, WTSs in close proximity to residential uses, and the unsafe operation of WTSs. At the core of these recommendations is the direct and continuous participation of communities in every aspect of the development and implementation of these recommendations.

To ensure a thorough and fair examination of these difficult issues and to develop recommendations that could be implemented from a regulatory, technical, and political perspective, the Working Group consisted of individuals representing a variety of stakeholders such as nearby residents, business owners and employees, community groups, environmental justice organizations, the private and public waste trade, and local government. In conducting its work, the Working Group consulted with EPA and sought information and recommendations from individuals representing diverse perspectives.

With a focus on solution-building, the Working Group sought to develop recommendations using a consensus-based process to develop as much as unanimity as possible for its recommendations. This process required every member to understand the complexity of the issues, their representative positions, and to struggle with recommendations that would respond to the issues of WTS siting and operation. The Working Group did achieve consensus on all recommendations—a significant feat in light of the diversity of the Working Group. The achievement of agreement on these recommendations does not mean that the Working Group does not have concerns regarding their full implementation. Only through the full and complete implementation of these recommendations will the suffering of communities from the clustering, disproportionate siting, and unsafe siting and operations of WTSs be addressed, and all future WTSs be designed and operated in a safe manner. The full implementation of these recommendations will require the commitment of resources and the collaboration of EPA, state and local permitting agencies, with local communities.

The Working Group strongly urges EPA and state and local regulatory agencies to review these recommendations in the light of the good faith and hard work of the Working Group. Moreover, it must be noted that these recommendations are presented as a packaged, comprehensive strategy to fully address the issues of WTSs and should be viewed as an initial framework for further development and implementation. It is the view of the Working Group that the elimination of any of these recommendations would not fully respond to the conditions observed.

The following is an overview of the recommendations set forth in the report.

#### **a. Resource Conservation Recovery Act (RCRA)—Solid Waste Management Planning**

RCRA Sections 6942 and 6947 provide the authority to the EPA to issue regulations for the establishment of solid waste management plans by states. In developing these plans, this authority permits EPA to consider the “characteristics and conditions associated with solid waste management, including collection, storage, processing, and disposal methods and practices; location of facilities; reasonable protection of ambient air quality; population density; distribution and projected growth, type and location of transportation; constituents and generation of waste and the political, economic, organizational, financial, and management problems affecting comprehensive solid waste management.” EPA is also provided the authority to review and approve solid waste management

plans and withdraw approval if they fail to comply with minimum requirements.

The Working Group believes that the above-noted provisions provide EPA with the authority to directly address the impacts of WTSs. Moreover, WTS siting and operations observed during the Working Group's fact-finding tours, as well as issues raised to NEJAC over several years, justifies EPA's use of such authority. There is unanimity for the issuance of federal siting and operation criteria to be included in state solid waste management plans. The Working Group also considered recommending the promulgation of federal standards for WTSs comparable to those EPA has published for municipal solid waste landfills. However, one member of the Working Group, representing a solid waste professional association, did not agree that EPA should establish enforceable federal regulations for WTSs; he did not believe that the Working Group's effort demonstrated the existence a nationwide problem of such severity to justify federal regulation, and he does not agree that RCRA provides EPA with the legal authority to do so.

Based on these considerations, the Working Group recommends that EPA:

- Issue federal criteria to revise solid waste management plans to address the safe and equitable siting and operation of WTSs;
- Review solid waste management plans of states where the presence of WTSs has been implicated as a threat to public health, the environment, and environmental justice;
- Convene a meeting of organizations that can provide resources to support the coordination of solid waste planning; and
- Convene regional planning workshops to address the clustering of WTSs and the siting of new facilities in an equitable fashion where solid waste handling involves multiple jurisdictions.

### **b. Facility Siting**

The report includes recommendations that address the two fundamental challenges of siting new WTSs and the existing clustering of WTSs in a manner that reflects the principles of environmental justice. The basis for the recommendations to address these challenges is that local land uses have, in effect, predetermined the siting of negative land uses to low-income communities and communities of color. While WTS siting is "limited" to purportedly race- and class-neutral manufacturing zones, WTSs are sited disproportionately in areas adjacent to poor communities and communities of color. Among the reasons cited for this circumstance are that communities in such areas were grandfathered into industrial zones; such areas are adjacent to industrial zones; such areas permit a mixture of commercial, industrial, and residential uses; and rezoning decisions to eliminate such negative land uses come from affluent white communities. Therefore, the recommendations presume that local land-use decisions alone cannot ensure the prevention of clustering or disproportionate siting of WTSs in low-income communities or communities of color or the protection of public health.

***Clustering and disproportionate siting of WTSs:*** With respect to existing circumstances of WTSs that are clustered, or disproportionately sited in communities, the Working Group recommends the following transition strategy to provide funding and technical assistance for a neighborhood-specific facilitated process to develop a "transition strategy" to reduce the total number and capacity of WTSs in such communities and to identify uses acceptable to the community. The transition strategy would be based on:

- Identifying the total number of WTS, total throughput, and capacity of waste processed with the community;

- Identifying WTSs that have a high degree of incompatibility with adjacent community land uses;
- Establishing fair goals for reducing total solid waste throughput in the community and consolidating and closing WTSs that have high degree of incompatibility with adjacent community land uses by working with facility owners;
- Establishing a mechanism to transition closed facilities to uses acceptable to impacted communities and in consideration of investments by facility owners;
- Establish a plan for WTSs continuing operation to implement best management practices, transportation impacts, and community complaint systems.

***Future siting of WTSs:*** With respect to the future siting of facilities, the Working Group recommends that the siting of WTSs be based on an examination of the entire area or region that solid waste is handled, particularly because WTSs provide an essential municipal service. The Working Group recommends the following process for selection of such sites:

- Establish an advisory panel of representatives of communities (particular from communities with existing WTSs), municipalities, public and private waste trade groups, environmental justice and environmental organizations, local community development organizations, and permitting agencies.
- The advisory panel should establish site-selection criteria—to which all WTSs (public or private, small or large) would be subject—that prevent clustering and disproportionate siting and ensure the protection of public health and the environment.
- Subject the criteria to public review and finalize them based on the review.
- In consultation with the advisory panel, identify sites meeting the criteria and subject them to public review.
- Subject the sites identified to environmental and community impact analyses. Provide communities adjacent to each site with independent technical services to review the impacts from the proposed site.
- Select sites based on an affirmative demonstration that they will not result in clustering or disproportionate impacts.

***Permitting:*** With respect to processing applications to site and operate WTSs, the Working Group recommends that EPA work with local permitting agencies to:

- Identify all neighborhoods potentially impacted by the proposed WTSs and their transportation routes;
- For all potentially impacted neighborhoods, establish a baseline of information needed to assess impacts for the proposed facility including demographics, sensitive receptors, health statistics, and impacts from similar facilities;
- Require the identification of the source and volume of waste to be processed;
- Require an affirmative demonstration that clustering and disproportionate impacts will not result from the proposed WTSs;
- Require the demonstration of the application of best management practices for the proposed WTS; and
- Require the submission of a transportation plan.

### **c. Best Management Practices**

Separate from the recommendation for the federal regulation of WTSs, the Working Group unanimously recommends that EPA develop a manual of best management practices for WTSs. The

Working Group learned of methods used at some WTSs around the country and the world that are effective in eliminating or reducing impacts. A manual discussing such methods would serve as an information base for facility operators, government regulators, and the public of practices deemed best for addressing various types of facilities and impacts.

In developing a comprehensive best management practices manual, the Working Group recommends developing a baseline of impacts from WTSs. The Working Group recommends that the baseline consider the various types of settings (e.g., urban, suburban, rural, and tribal), location (e.g., waterfront, land-based), and proximity to human populations. The baseline also must include the variability of impacts depending on the type of waste processed. The Working Group was made aware of various facilities that are functionally equivalent to WTSs but process such diverse wastes as asbestos, medical, and low-level radioactive wastes. The best management practices manual would be developed based on the baseline of impacts. The report provides an initial framework for the major areas that must be considered in the manual.

The Working Group recommends that EPA convene a diverse focus group to ensure that the best management practices consider all pertinent variables in siting, operation, geography, and governmental structure. At a minimum, the focus group should include representatives from:

- State, tribal, and local regulatory agencies responsible for issuing design and operating permits for WTSs and for ensuring compliance;
- Public and private solid waste professionals with expertise in planning, designing, and operating WTS; and
- Community, environmental and environmental justice organizations that have been involved with solid waste and WTS issues.

#### **d. Community Participation**

The direct participation of community residents, particularly those that reside in the communities burdened by the clustering and disproportionate siting of WTSs, is critical to the development of solutions that are responsive to community needs and concerns. All the recommendations in this report call for meaningful and continuous community participation in every aspect of the development and implementation of these recommendations.

The Working Group recommends that the process of community outreach and consultation be guided by the “NEJAC Public Participation Model.” In addition, because components of implementing these recommendations are inextricably linked to issues of local land use, the Working Group recommends that community consultation to identify community uses, plans, and environmental justice circumstances be based on the NEJAC Waste & Facility Siting Report: “Environmental Justice, Urban Revitalization, and Brownfields: The Search for Authentic Signs of Hope,” and EPA’s “Land Use Based Remedy Selection Guidance.”

The Working Group also recommends providing of technical assistance to communities to promote meaningful participation.

#### **e. Marine Waste Transfer Stations**

The use of marine WTSs was identified by community residents during the Working Group’s fact-finding sessions as an equitable method to process solid waste in a manner that would minimize

impacts to the community. EPA had initiated a rule-making process for such facilities under the authority of the Shore Protection Act, entitled: “Waste Handling Practices for Vessels and Waste Transfer Stations.” The Working Group recommends that EPA finalize this rule.

#### **f. Air Quality and Clean Air Act**

The degradation of air quality by WTS operations was a consistent issue raised during the fact-finding sessions. The Working Group held preliminary discussions with EPA’s Office of Air and Radiation on strategies to address air quality impacts. It should be noted that some Working Group members expressed the view that the topic of air quality was outside their area of expertise. However, the Working Group recommends that EPA move forward on a program to characterize air emissions from WTSs and to develop strategies to address them. The Working Group recommends EPA’s further investigation of the following:

- Examine comprehensively air quality controls for inclusion in the best management practices manual such as air monitoring, odor elimination technologies, and negative air pressure designs for the types of air contaminants at WTSs.
- Issue guidance to calculate emissions from WTSs includes emissions from combustion engines within WTSs.
- Work with states to develop an indirect source review program pursuant to the authority of the Clean Air Act [42 U.S.C. 7401(a)(5)] to mitigate the effects of “any facility, building structure, installation, real property, road or highway which attracts, or may attract, mobile sources of pollution.”
- Mitigate the emissions from heavy-duty diesel vehicles by establishing programs for converting older, high-emitting engines to cleaner engines; establishing a program to identify and monitor diesel trucks with pollution control systems that can be disabled and retrofit them with low-NO<sub>x</sub> kits; and dedicating a portion of settlement funds in the settlement reached with truck engine manufacturers for clean air projects in communities clustered with WTSs.
- Examine the increase in vehicle miles traveled associated with the transport of solid waste.
- Foster the establishment of clean fuel fleet.

#### **g. Waste Reduction**

During the Working Group’s fact-finding sessions, it was clear that part of the capacity needed for WTS was due the inadequate waste reduction programs. While waste reduction was not the focus of the Working Group’s activities, the Working Group recommends that EPA examine and assess the effectiveness of waste reduction strategies and programs throughout the country. In particular, the Working Group recommends the following be examined:

- Effective technologies and techniques to reduce the total volume of solid waste generated and to maximize recycling levels;
- Incentives to encourage waste reduction and recycling; and
- Creation of local businesses involved in waste reduction and recycling.

#### **h. Regulatory Review and Enforcement**

Inadequate enforcement was commonly cited by participants in the Working Group’s fact finding sessions as a key reason for the impacts from WTSs operations. Among the enforcement issues that they raised included confusion or conflict regarding the lead local enforcement agency; unclear

standards to undertake enforcement actions; unresponsiveness of local regulatory agencies in addressing patterns of non-compliance identified by community residents; inadequate enforcement staffs; and the hindrance of regulatory enforcement by court injunctions brought by facility owners.

To begin addressing these issues, the Working Group recommends that:

- Permitting agencies charge a fee as part of each WTS permit to fund adequate enforcement;
- Environmental monitors be required as part of every permit;
- Multi-jurisdiction enforcement agreements be developed where waste is processed and handled in more than one jurisdiction;
- The federal government exhibit leadership in implementing these recommendations in Washington, DC, since the federal government is a major generator of solid waste; and
- Independent third-party inspectors be hired for all municipally owned or operated facilities.

Because enforcement of WTS standards is primarily a local municipal function, these recommendations set forth a strategy for the local lead enforcement agency. The Working Group recommends the implementation of these recommendations by EPA and other federal enforcement agencies providing assistance to the local enforcement agencies.

## **BACKGROUND**

### **I. History of NEJAC and the Waste Transfer Station Working Group**

The National Environmental Justice Advisory Council (NEJAC)<sup>1</sup> is a federal advisory committee established in 1994 to provide advice to the Administrator of the U.S. Environmental Protection Agency (EPA) on issues related to environmental justice. The Federal Advisory Committee Act (FACA) was passed in 1972 to achieve an open government through the establishment and operation of independent committees. These committees furnish advice and diverse opinions to government decision makers on essential objectives and public policy.

The NEJAC consists of members who are appointed in a balanced representation among the following areas: community-based groups; industry and business; academic and educational institutions; federal, state and local government agencies; federally recognized tribes and indigenous groups; and other non-governmental groups as deemed appropriate. The NEJAC is organized by six Subcommittees that represent various environmental issues. This report is a product of the Waste and Facility Siting Subcommittee, which covers issues associated with hazardous and solid waste.

For several years, citizens from across the country have been approaching the Subcommittee with concerns about local conditions at waste transfer stations and EPA's role in ensuring more consistent protection at the facilities. In December 1997 at a NEJAC meeting in Durham, North Carolina, the issue of waste transfer stations in poor communities and communities of color was raised to the Subcommittee. Since then, citizens from cities such as Atlanta, Baton Rouge, Birmingham, Las Vegas, Los Angeles, New York City, Philadelphia, and San Francisco have asked NEJAC to examine EPA's authority to develop baseline criteria for waste transfer stations.

*Waste transfer stations (WTSs) are facilities where municipal waste is unloaded from collection vehicles and subsequently re-loaded onto larger transport vehicles to be taken to a disposal site. WTSs allow communities to move waste economically over long distances.*

In response to the citizens' requests, the NEJAC passed a resolution to investigate the impacts of waste transfer stations on adjoining poor and minority communities (see Appendix 1). The resolution passed by NEJAC established the Waste Transfer Station Working Group (hereinafter referred to as the "Working Group") to lead the investigation. Its members bring diverse perspectives from environmental justice groups, community-based organizations, local government, and the waste industry (see Appendix 2 for a list of Working Group members). The Working Group has prepared this report as a basis for the EPA to implement a national strategy for addressing the impacts of waste transfer stations on poor and minority communities.

### **II. Investigation of Impacts**

The Working Group began its investigation of the impacts of WTSs by convening fact-finding sessions in New York City and Washington, DC. These sessions included tours of the impacted communities and their facilities followed by public meetings. At both public meetings, representatives of various

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<sup>1</sup> NEJAC was chartered in February 1994 under the Federal Advisory Committee Act and pursuant to the Executive Order No. 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," which is commonly referred to as the "Executive Order on Environmental Justice."



interests—community groups, technical experts, waste industry personnel, and local and state government officials—presented their perspective on WTSs. Agendas of these meetings are provided in Appendix 3.

The Working Group selected New York City and Washington, DC, to hold its fact-finding sessions because both cities are home WTSs with considerable controversy—and both were easily accessible within a small travel budget. Although the Working Group’s investigation focused primarily on the concerns of these two cities, this report also takes into consideration input the Working Group received from other cities. The Working Group acknowledges that many of the impacts caused by the clustering of WTSs in large urban environments are not typical concerns of rural and suburban communities. Therefore, the Working Group endeavored to outline national baseline criteria that are consistent with good practices already practiced in some parts of the country and that will upgrade criteria in cities with the kinds of problems seen in New York City and Washington, DC.

As part of its investigation, the Working Group also participated in a training course on state-of-the-art WTS design and operation. The training included a visit to a modern, WTS and recycling facility in suburban Virginia that has won awards for its design and operation. The training helped the Working Group learn about effective approaches for minimizing WTS impacts.

### **III. Drafting the Report**

Following its investigation, the Working Group drafted this report for submission to EPA Administrator Carol Browner and the Assistant Administrator for Solid Waste and Emergency Response, Timothy Fields, Jr. Input from the New York and DC fact-finding sessions as well as input from residents of other communities formed the basis for the Working Group’s recommendations for national baseline criteria. The Working Group also solicited input on the draft report from additional municipalities and national organizations before submitting it to the full NEJAC in order to reflect a broader perspective of concerns and issues nationwide. After reviewing this input, the Working Group submitted the draft report to a variety of stakeholders for review and input (see Section IV below).

### **IV. Comments from Reviewers**

In an effort to gain a nationwide perspective of WTS issues, the Working Group selected report reviewers from around the country and representing the broad spectrum of stakeholders and stakeholder groups concerned with WTSs (see Appendix 4 for a list of reviewers). Eighty-nine reviewers representing environmental justice organizations, tribal councils, solid waste associations, environmental groups, solid waste professionals (from both private companies and local governments), and local, state, and federal government agencies were asked to review the report. Written comments were received from 10 of the reviewers, and four additional reviewers provided written comments after the specified comment period.

A detailed listing of the comments received is contained in Appendix 5. In summary, many of the reviewers felt the report and the recommendations to EPA will be valuable in addressing the impacts of WTS clustering. However, general philosophical differences do exist. Several reviewers expressed concern that federal regulatory authority and the need for national criteria have not been demonstrated. They believe that existing state and local regulatory controls are adequate if properly enforced. Representatives of rural and suburban areas, in particular, do not feel the impacts associated with clustering in large urban settings are relevant to their communities.

In addition, some reviewers cautioned against making recommendations based on public perceptions of the problem. They recommended further investigation to verify that the problems exist before drawing conclusions. Other reviewers suggested additional resources to include in the report and ways to clarify or strengthen the recommendations.

The Working Group tried to address review comments by acknowledging differences of opinion and by building a stronger foundation for the report recommendations. This report reflects the reviewers' comments to the furthest extent possible.

## **FACT-FINDING SESSIONS AND TRAINING**

The Working Group convened two fact-finding sessions to investigate the problem of WTS clustering in poor and minority communities. The fact-finding sessions were held in the communities within New York City and Washington, DC, that most strongly feel the impact of clustering. Each session included a facility tour to get a first-hand look at the problem and a public meeting to listen to the varied perspectives of the communities, local government officials, and the waste trade industry. The fact-finding sessions are summarized in Sections I and II that follow. Section III summarizes the steps recommended to the Working Group by both the New York City and DC communities to address the problem of clustering. The Working Group's training to learn about state-of-the-art WTS design and operation is summarized in Section IV.

### **I. New York City Session**

#### **a. Facility Tour and Public Meeting**

The Working Group conducted their New York City fact-finding session in November 1998. The fact-finding session began with a tour of Red Hook, South Bronx, and Greenpoint/Williamsburg—three minority and low-income communities that are home to most of New York City's WTSs. The tour of these communities focused on visits to WTSs, recycling centers that perform WTS functions, and unpermitted waste handling facilities that create environmental and health concerns comparable to WTSs.<sup>2</sup>

The tour was followed by a public meeting at which the Working Group heard perspectives from residents of the three communities, non-governmental organizations with expertise in WTSs, a representative of the New York State Department of Environmental Conservation (NYSDEC), and a member of a waste industry trade association. Because of imminently pending litigation, the invited waste industry representatives chose not to attend.

The public meeting focused on the residents' concerns over the WTS operations clustered in their communities. The following section summarizes the feedback they provided to the Working Group.

#### **b. Community Feedback**

The residents of Red Hook, South Bronx, and Greenpoint/Williamsburg shared many similar concerns about the impacts of WTSs on their communities. It was apparent that WTSs impact many aspects of

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<sup>2</sup> For purposes of this report, other facilities that perform waste transfer activities (e.g., recycling, construction and demolition, and processing facilities) are included in the term "WTS."

day-to-day life in these communities. Concerns ranged from impacts on health and safety to nuisance and quality of life, traffic, and the local economy. Residents raised further concern about the cumulative impact of WTSs together with many other industrial facilities in the communities. They also voiced concerns about how the city is managing the regulation of WTSs, such as the permitting of facilities and the enforcement of local ordinances and regulations.

The following sections summarize the concerns raised by the community at the public meeting held in Brooklyn. The types of issues listed below are very familiar to those who have worked with environmental justice concerned communities nationwide, especially as they relate to the siting and operation of facilities located in neighborhoods where people live and work. However, it is important to point out that although the residents' concerns are real, no data have been collected to support their claims.

***Health and Safety:***

- The communities believe they experience unusually high asthma rates, as well as high numbers of fibroid tumors, miscarriages, respiratory problems, and nose bleeds.
- The communities see the large volume of truck traffic as a potential danger to pedestrians.
- Emissions from the large volume of trucks idling as they wait on residential streets to unload are a health concern to communities.
- Residents feel the potential impacts from air emissions are exacerbated by inadequate access to health care facilities and the high cost of health care in these areas.
- The proximity of the waste handling facilities to meat and produce handlers is a concern.

***Nuisance/Quality of Life:***

- Dust and odor from WTSs are deemed intolerable by nearby residents.
- WTSs reportedly contribute to rat and other vermin problems, particularly because facility doors are often open.
- Noise levels of WTSs operating at night are said to deprive nearby residents of sleep.
- Facilities reportedly lack green buffer zones to enhance neighborhood aesthetics and to mitigate potential air emissions problems.
- Residents feel the exteriors of the facilities are poorly maintained. In the worst cases, trash falls from open doors and windows onto public streets.
- Residents of some communities are worried that the recommended marine transport facilities may cut off their access to the waterfront and mar their views.
- Dust-laden, unsightly "recycling" activities reportedly take place in open air. Piles of trash collect under bridges.

***Traffic:***

- Residents report that truck routing does not appear to be controlled or monitored by regulators to restrict trucks to designated truck routes.
- Trucks reportedly use residential streets for other than pickup purposes.
- Truck traffic is particularly a concern where there is only one access route.

***Local Economy:***

- Residents are concerned that the poor appearance of WTSs depresses nearby property values and has contributed to the exodus of local businesses.
- Residents are concerned that WTSs drive out prospective new businesses that could bring new jobs and services into the neighborhood.
- The presence of WTSs may contribute to employee absenteeism.

***Cumulative Impacts:***

- The communities believe that the cumulative impact on traffic, health, and the environment of having several WTSs in a community should be evaluated as should the cumulative impact of WTSs combined with other sources of similar concern (e.g., sewage facilities, hazardous waste transporters and treatment facilities, scrap yards, auto shops, and sludge plants).

***Permitting:***

- Residents claim that permitting procedures lack early notification and public participation by residents and neighbors.
- According to representatives of community groups and non-governmental organizations, permits appear to be “grandfathered” without public review, and requests to increase permitted solid waste capacity are granted as a matter of course without public review.
- Spanish translations are desired.
- Residents feel that the New York State Department of Environmental Conservation (the state’s regulatory agency) does not respond adequately to their requests for permit information.
- The residents would like to see a zoning review performed during the permitting process. The proximity of industrial properties to residential areas should be reviewed, as should conflicting land uses and impacts to residents living in areas zoned industrial.

***Enforcement:***

- Although New York City has passed “fair share” legislation that should ensure that the WTSs are equitably distributed throughout the boroughs, residents feel this has not occurred.

- Residents complained of many apparently unpermitted dump sites.
- “Recycling” facilities appear to be performing WTS functions with no regulatory controls.
- Residents believe that the city does not have a sufficient number of inspectors.
- Residents say the current air, noise, odor, and vibration restrictions do not seem to be enforced.
- The Department of Sanitation’s WTS standards are written in very general terms (e.g., “adequate” loading area, or traffic managed in “a safe and efficient manner”). It is felt that this provides little guidance on good practices and little enforceability.
- Environmental impact studies reportedly are not conducted as required, either for individual facilities or for areas with multiple facilities.

***Community-Specific Concerns:***

In addition to shared concerns listed above, residents of Greenpoint/Williamsburg, Red Hook, and South Bronx expressed concerns specific to their own communities. The following paragraphs summarize these community-specific concerns.

*Greenpoint/Williamsburg:* Traffic and related health and environmental concerns are prominent in Greenpoint/Williamsburg because a large number of trucks are needed to transport waste to a large number of WTSs (reportedly 550 trucks and 15 WTSs). The high volume of truck traffic is aggravated by traffic on Brooklyn Queens Expressway and Williamsburg Bridge.

*Red Hook:* Red Hook residents are concerned that their community, which is made up largely of minority residents—more than half of which have incomes below the poverty level—are not zoned similarly to more affluent communities. They noted that permitted WTSs must be in industrial zones; however, more affluent communities have been rezoned to become exclusively residential, while low-income and minority communities are forced to live with industry. In Red Hook, one low-income housing development is located within *one block* of a WTS.

In addition to their concern about non-equitable zoning, Red Hook residents fear that they will continue to be cut off from access to the waterfront and views of the Verrazano Narrows Bridge, New Jersey, the Statue of Liberty, Ellis Island, and Manhattan because of WTSs and other industrial facilities.

*South Bronx:* Residents of Hunts Point, which is in the South Bronx, are very concerned with the apparent lack of regulation of its 32 WTSs. Some of these WTSs are within four blocks of schools and residences, and many reportedly do not have Department of Sanitation licenses. WTSs in Hunts Point often are backyard industries operating out of garages. Some of them appear to have been grandfathered by the City, and their operations appear to be unregulated. Due to heavy truck traffic and the presence of three busy highways, the Hunts Point community is interested in marine WTSs as a means of reducing the traffic problem.<sup>3</sup>

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<sup>3</sup> This statement should not be construed as an endorsement for the proposed American Marine Rail WTS for Hunts (continued...)

The Port Morris area of the South Bronx is particularly concerned with zoning and the impact WTSs have on their local economy. Port Morris has numerous permitted and unpermitted WTSs. Although the area is zoned for heavy industry, residents assert that light industry used the area for some time before the proliferation of WTSs drove them out. Moreover, residential zones border industrial zones.

### **c. Government Perspective**

Council members representing Red Hook, South Bronx, and Greenpoint/Williamsburg were critical of the regulatory framework under which New York City's Department of Sanitation operates. They described the Department's regulations as vague and criticized their lack of siting criteria, the excessive grandfathering of existing uses, the use of interim operating authority pursuant to consent order rather than permit, and the failure to provide additional independent inspections of facilities operated by companies with "tainted" backgrounds. Council members also were concerned that the regulatory framework lacked provisions for public participation in the siting process.

The council members stressed the need for continuous and universal enforcement of WTS regulations. They deemed WTS environmental impact statements as inadequate, if performed at all. However, they did commend one permit that had incorporated an environmental impact statement and had rigorous restrictions on truck traffic.

The council members asserted that EPA clearly has jurisdiction over WTSs under Title V of the Clean Air Act. They urged EPA to proceed with its August 30, 1994, proposal to regulate the transport of garbage by barge, which would considerably relieve traffic in some communities. They also expressed interest in using railroads to reduce truck traffic. The council members requested a report from the New York City Department of Sanitation (which declined to participate in the fact-finding meeting) addressing its ability to use existing marine WTSs to export waste.

### **d. Waste Trade Perspective**

The waste trade was represented at the public meeting by an environmental consultant in WTS design and construction. He explained that WTSs have emerged in the past 15 years as a necessary interim measure to transport waste economically to landfills. As solid waste landfills have become more stringently regulated, the trend has been to operate fewer, larger, regional landfills; thus, WTSs are increasingly important. He further explained that an additional role of WTSs is to serve as the location for substituting large capacity trailer trucks for much smaller packer trucks that pick up garbage at residences and businesses.

The consultant noted that a permittee must follow three steps when siting a WTS: 1) The permittee must find property that is zoned industrial and near transportation infrastructure (interstate highways, rail, or barge); 2) The permittee must plan the WTS so it is compatible with the neighborhood in terms of noise control, landscaping, and good external design; and 3) The permittee must satisfy all applicable permit conditions.

In response to questions from other meeting participants, the consultant indicated that state and local

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<sup>3</sup>(...continued)

Point. This report only endorses the use of marine WTSs where they are fully supported by the impacted community. Furthermore, the Working Group only endorses the use of marine WTSs if they mitigate negative impacts to the community, not exacerbate them.

governments regulate WTSs, and therefore operation practices vary widely. There are no uniform requirements for the use of state-of-the-art WTS technologies.

## **II. Washington, DC, Session**

### **a. Facility Tour and Public Meeting**

In February 1999, the Working Group toured seven permitted WTSs in Washington, D.C.. At the public meeting the following day, the Working Group listened to two community panels, two city and local official panels, a waste industry panel, and a community technical organization panel. The meeting participants discussed concerns raised by residents and businesses near the WTSs, the roles the DC government plays as regulator and operator of these stations, and the market circumstances in which the solid waste industry operates.

### **b. Community Feedback**

The residents of Washington, DC, voiced a number of concerns about the impact of WTSs on day-to-day life in their communities. Like New York City, these concerns encompassed impacts to health and safety concerns, nuisance and quality of life, traffic, local economy, and cumulative impacts of WTSs and other industrial facilities.

Several communities raised many site-specific regulatory issues regarding the legal status of certain facilities, their compliance with existing regulations, and in some cases their exemption from applicable requirements because they are municipally owned or sheltered by judicial consent decree. They frequently expressed concern about the siting of WTSs in communities of color and near residential areas. Recent DC legislation on WTS siting and operations was often referenced.

The following sections summarize the feedback the community provided to the Working Group at the public meeting.

#### ***Health and Safety:***

- Residents believe that their high rate of health problems are directly related to the numerous undesirable facilities located nearby, especially WTSs. Claims were made that 1990 census data show an unusually high rate of health problems for DC (e.g., the infant mortality rate was the highest in the country—four times the national rate; death rates from heart disease are one third higher than the national rate; death rates from cancer are two-thirds higher than the national rate; the birth rate is 16.8 percent lower than the national rate).
- No testing is being done to identify health problems in the vicinity of WTSs.
- Pervasive dust aggravates allergies. Deodorizers used to mitigate the odors also may be aggravating these allergies.
- Odors cause nausea among residents.
- The potential carcinogenic effect of breathing the emissions from trucks is a concern.
- Children at schools located near WTSs play right behind trucks as they enter and exit the station.

- Frustration with the failure to enforce adequate criteria for WTSs is causing “excessive anxiety and mental anguish.”
- Residents are concerned that WTSs may be receiving biological, hazardous, and radioactive wastes.

***Nuisance/Quality of Life:***

- Odors from the trucks and WTSs is a common problem, particularly during hot Washington summers. Residents reportedly must stay inside and incur the costs of running air conditioners to avoid the odors. Attempts by the facility operators to address the odor problem with deodorizers have been ineffective.
- Pervasive dust causes housekeeping problems.
- WTSs contribute to infestations by rodents and other vermin.
- Truck traffic produces excessive noise at early hours.
- Vibrations from the trucks deteriorate roads and the foundations of homes. Trucks also cause damage when turning corners on narrow streets.
- WTSs fail to wash trucks, creating an eyesore.
- Streets need better maintenance due to wear and tear from large trucks. Also, they often need cleaning due to trash that falls from the trucks.

***Traffic:***

- There were several complaints about traffic congestion and noise, traffic violations, and accidents.

***Local Economy:***

- Dust and other air emissions from the facilities have decreased property values and made homes difficult to sell.

***Cumulative Impacts:***

- WTSs are clustered with other industrial facilities in minority and low-income communities. The city zoning process fails to fairly distribute such facilities. Large, primarily Caucasian areas of the city have no property allowable for WTS use.
- WTSs are located in neighborhoods with other, pre-existing environmental concerns.

***Permitting:***

- Public participation in WTS siting and permitting was deemed inadequate, lacking advance notice and ignoring recycling facilities, which pose concerns comparable to WTSs.



- Residents consider the 500-foot buffer required by the DC Solid Waste Facilities Permit Act of 1995 inadequate. They would prefer a 1,000-foot buffer requirement.

***Enforcement:***

- Residents perceive that the District of Columbia does not enforce existing law effectively, including permit requirements, certificate of occupancy requirements, or the 1995 Solid Waste Facilities Permit Act, which imposes a 500-foot buffer, traffic control plans, limits on the hours of operation, enclosed operating area standards with effective entry system requirements, rodent and disease controls, and private rights of action. For example, one facility has obtained a court injunction that bars implementation of existing regulatory standards and bars inspection and enforcement. Residents are particularly concerned because the federal government is a substantial customer for this facility.
- A number of residents have taken the initiative to encourage facility operators to take action on the issues of traffic control, hours of operation, street cleaning, and improvements to the exterior of facilities. Because these efforts were unsupported by a regulatory structure or enforcement, they could not be relied upon to ensure community protection over the long term.
- Enforcement of regulations governing toxic wastes and the lack of effective sewage facilities are concerns.
- The effect of pending litigation at many WTSs has been to immunize them from public accountability, as well as, in some cases, from regulatory enforcement.

**c. Government Perspective**

The panel of government officials from the District of Columbia described DC's regulatory structure, new regulations regarding WTSs, and new enforcement efforts to the Working Group. They followed up with a summary of resources they need to enhance their regulatory control of WTSs. They indicated that the District lacks funds to pay inspectors to evaluate WTSs. The District also needs additional federal funding to pay for the proper disposal of waste generated by the federal government, who is the principal landowner/tenant within DC.

DC officials also see a need for expert technical advice from EPA on best management practices for WTSs, federal air standards enforcement, federal financial assurance requirements for all facilities, and federal recycling standards.

Several panel members argued that DC is unique and should be exempt from waste handling and environmental and inspection requirements required in other jurisdictions and for all private sector activities. That view was rejected by other members of the panel and all Working Group members, who stressed the need for uniform, stringent criteria.

**d. Waste Trade Perspective**

The waste trade panel explained that WTSs are needed to move solid waste from the concentrated areas in which it is generated to a proper disposal site. Panel members stressed that these facilities help reduce the number of trucks on the road, save fuel, reduce vehicle emissions, lower residential and

business waste disposal costs, and allow the customer to use the most efficient and environmentally protective disposal sites.

The panel noted that WTSs operate in a highly competitive market. There is competition to provide residential and commercial service between public and private entities, between large and small companies, and among the several large companies that operate in the District. The market will go to the lowest cost provider—whether environmentally protective or not—in the absence of clear regulatory criteria enforced evenly across all competitors.

With clear universally enforced criteria that remain relatively stable over time, however, facility operators could make the capital and operating investments needed to provide protective WTSs at a cost the market will accept. As one company representative stated, “Every responsible company wants to incorporate best practices, but we need to know what the regulators think these best practices are. There has to be regulation in place that is readily understandable and accepted that we all agree is the standard.”

Several meeting participants pointed out the advantages of using marine and rail transport, where available, to reduce truck traffic and the resulting environmental, safety, and health concerns. They stressed the need to account for logistical features such as rail lines, interstate highways, waterways, and existing zoning requirements when proposing new sites for new WTSs.

Members of the panel agreed with residents and citizen representatives that zoning has not worked to ensure equitable distribution of WTSs. The panel would like to see clear and fair procedures to more effectively respond to citizen concerns. Like the other panels, the waste industry panel indicated they would like EPA to issue best practices.

### **III. Recommendations Made to the Working Group by Many Participants at both the New York City and Washington, DC, Public Meetings**

During the public meetings, various participants from the communities, local governments, and waste trade panels recommended actions they believe can help solve the problems of WTS clustering. Many recommendations were common to participants from both New York City and Washington, DC. These recommendations addressed establishing appropriate regulatory authority, improving WTS siting and operation, requiring stricter enforcement, and increasing community participation. The Working Group considered these recommendations when developing their own recommendations to EPA (discussed in the chapter entitled “Recommendations”). The participants’ recommendations were:

#### ***Regulatory Authority:***

- Establish a clear federal role over WTSs.
- Improve coordination within local agencies, as well as with surrounding jurisdictions.

#### ***WTS Siting and Operation:***

- Adopt a planning process that limits the total number of sites to those needed in the city. A clear planning process and definitive regulations were deemed critical for making both private and public sector investments, and for ensuring that the needed WTS capacity is available.

- Distribute facilities fairly throughout all neighborhoods—even if this requires rezoning.
- Ensure that environmental impact statements include proximity to residential areas, other noxious problems, and clustering (cumulative impact) as evaluation criteria.
- Perform independent traffic studies for all proposed WTSs.
- Require a more substantial buffer (1,000 feet preferred).
- Require the control of litter in the neighborhoods that house WTSs.
- Compare the materials coming into the facilities and the emissions going out.
- Completely enclose WTSs.

***Enforcement:***

- Hold all facilities owned and operated by the municipal government to the same standards and procedures required of private sector facilities.
- Separate regulatory oversight responsibility from the governmental unit that operates or contracts for operating WTSs.
- Perform spot checks on facilities.
- Augment city enforcement by testing air quality, requiring environmental impact statements, and requiring soil and geological testing before siting WTSs.
- Provide enforcement “teeth” through heavy fines or closing down facilities.

***Community Participation:***

- Improve community outreach.
- Establish a web page to disseminate “best practices” information.
- Adopt an effective citizen complaint system. Distribute hotline information to the community.
- Provide technical assistance to community groups.

**IV. Working Group Training Session and Site Visit**

To better understand state-of-the-art in WTS design and operation, the Working Group participated in a short training course presented by the Solid Waste Association of North America (SWANA). The course was an abbreviated version of SWANA’s two-day training course on WTS design and operation and included a site visit to a modern, well-designed, and well-operated WTS.

The training course was presented by Keith Gordon, a member of the SWANA training faculty and professional engineer with more than 20 years of experience in the siting, design, and operation of

WTSs across a broad range of facility sizes and geographic locations. He covered WTS planning, technology selection, design fundamentals, siting considerations, and mitigative measures. The training helped provide a reference baseline for evaluating the facilities viewed by the Working Group .

As part of the training, the Working Group visited the Fairfax County (Virginia) I-66 Solid Waste Transfer Station, which is owned and operated by the Fairfax County Department of Public Works and Environmental Services. The WTS opened in 1982 and operates under a permit issued by the Virginia Department of Environmental Quality. The WTS has a citizen recycling and disposal facility that accepts normal household refuse, brush, yard debris, and bulky waste for transfer or processing and offers leaf and wood mulch free of charge to county residents. The facility also supports a range of recycling activities.

Three days a week, household hazardous waste is accepted at the citizens' center. The center accepts acids, aerosol sprays, automotive fluids, coal tar products, creosote products, driveway sealers, floor care products, fungicides, solvent-based glues, herbicides, inks and dyes, insecticides, kerosene, mercury products, mothballs, oil-based paints, paint thinner, pesticides, poisons, polishes, pool chemicals, rust removers, varnishes and stains, weed killers, and wood preservers. Used motor oil and used antifreeze collection facilities are open every day.

The 21-bay facility has waste disposal chutes for loading 18-wheel tractor trailers. The facility receives over 1,500 tons of solid waste per day and employs 52 transfer vehicles and 74 drivers and other staff.

The WTS operates entirely from funds collected from tipping fees and does not receive any money from the general fund or through tax revenue. In 1998, the Fairfax County Solid Waste Transfer Station received the SWANA Gold Award, the highest level award made by the professional association for excellence in design and operation.

## **RECOMMENDATIONS**

Based on information gained during its fact-finding sessions, the Working Group recognizes that there is a clear problem of WTS clustering in poor and minority communities in New York City and Washington, DC, as well as other population centers in the U.S. The clustering has led to numerous impacts on residents in these communities. These impacts range from relatively minor nuisance problems, such as unsightly WTS building exteriors, to potentially increased incidences of serious health problems. Many of the same impacts and concerns are being felt in population centers across the country.

The NEJAC Working Group recommends that EPA take action to alleviate the problems caused by WTSs. These include exerting regulatory authority that the Working Group believes to exist under the Resource Conservation and Recovery Act (RCRA) and Title V of the Clean Air Act. The Working Group also recommends that EPA enhance consideration of marine WTSs as alternatives to land-based WTSs by finalizing a 1994 proposed rule. The Working Group makes further recommendations to improve the facility siting process, facilitate community participation, develop best management practices, and develop waste reduction strategies. Finally, the Working Group recommends that EPA strengthen enforcement of new and existing regulations.

The following sections review the problems surrounding WTSs and the Working Group's specific recommendations to EPA to address them.

## **I. Resource Conservation and Recovery Act**

One of the concerns raised most frequently in the Working Group’s fact-finding sessions was the clustering of WTSs in communities of color. The impact of clustering is of particular concern to residents when the waste comes from other communities, or in the case of Washington, DC, from neighboring states.

Participants in the public meetings expressed a desire for a WTS planning process that ensures that all areas of a city host their “fair share” of WTSs. They pointed out that it is difficult to implement a fair share approach in cities where there are few parcels zoned for industry. Maps showing land-use predetermination in New York City and Washington, DC, illustrate that the zones permitting WTSs are only in or adjacent to communities of color or poor communities. Many zoning plans are decades old, and grandfathering of non-conforming land uses often juxtaposed residential and industrial properties. Rezoning occurs infrequently, and even when it does occur, meeting participants said that the zoning process often lacks broad-based citizen input—particularly from communities of color.

The Working Group believes that RCRA provides authority and some mechanisms to initiate a better planning process for WTS siting and operation to reduce the impact on adjacent communities and the environment. Pursuant to RCRA Sections 6942 and 6947, EPA has authority to:

- Publish guidelines for identifying areas that have common solid waste management problems and are appropriate for planning regional solid waste management services.
- Consider available means of coordinating regional planning with other related regional planning and with state planning.
- Issue guidelines to assist in the development and implementation of state solid waste management plans.
- Review such guidelines at least every three years.
- Consider in such guidelines the characteristics and conditions associated with solid waste management, including collection, storage, processing, and disposal methods and practices; location of facilities; reasonable protection of ambient air quality; population density; distribution and projected growth, type, and location of transportation; constituents and generation of waste; and the political, economic, organizational, financial, and management problems affecting comprehensive solid waste management.
- Approve each state solid waste management plan based on EPA regulations, including occasional reviews to ensure compliance with minimum requirements and *withdrawal* of approval if any approved plan fails to comply with minimum requirements.

EPA has exerted these authorities with regard to landfills. For example, EPA has published extensive planning, siting, design, and operating criteria and regulations to be implemented by the states for landfills for the disposal of municipal solid waste. Although developed specifically for landfills, the Working Group believes RCRA is relevant and can be extended to EPA development of criteria for WTSs. EPA also should develop a “best practice” technical manual. A process for full implementation of these authorities, including the review of solid waste management plans, is needed. Priority in facili-

tating implementation of the criteria should be placed on states in which WTS siting and operation have been implicated as threats to public health, the environment, and environmental justice.

The Working Group recognizes that EPA's Office of Solid Waste lacks sufficient funds to thoroughly implement RCRA's planning and oversight authorities for waste disposal facilities—and as a result, funds are not currently available to staff a new WTS planning initiative. Thus, the Working Group recommends that EPA's future budget requests include adequate funds for approving and updating state WTS plans to ensure they incorporate new WTS guidelines.<sup>4</sup>

Improved planning processes need not await the next budget cycle. EPA can work creatively and proactively with state and local governments to encourage regional coordination, fair and equitable planning, and adoption of best management practices in the planning and operation of WTSs. EPA is encouraged to take advantage of existing coordinating mechanisms, grants, and regularly scheduled meetings (e.g., with SWANA, U.S. Conference of Mayors, National Association of Counties, League of Cities, Association of State and Territorial Solid Waste Management Officials, International County Managers Association, Environmental Council of the States, and others).

In the box on the next page, the Working Group makes six recommendations to EPA to improve the WTS planning process. Specifically, recommendations I-1 and I-2 address EPA's regulatory authority under RCRA, and I-3 through I-6 address how EPA can forge a proactive partnership with state and local governments to increase fairness in siting WTSs.

## **II. Facility Siting**

This section makes recommendations to EPA on two expected challenges: 1) to consider all relevant community impacts and avoid clustering when siting new WTSs; and 2) to create strategies that reduce the impact on communities from existing WTS facilities. Meeting these challenges must involve addressing the predetermination of land uses that often confine potential WTS sites to zones adjacent to poor and minority communities. It must also facilitate an area-wide and regional facility selection process and sustainable transition strategies to address impacts from existing WTSs.

The recommendations are intended to be implemented by the government agency having primary responsibility for permitting WTSs. However, EPA must determine the best approach to ensure that the government agency having lead responsibility for permitting WTSs adheres to recommendations. Such approaches could include regulatory action, guidance documents, and inter-governmental cooperative agreements coupled with financial and technical assistance.

### **a. Predetermination of Land Uses**

Predetermination to locate negative land-use facilities (including WTSs) in or adjacent to certain communities occurs when these facilities are permitted only within certain areas. Communities that

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<sup>4</sup> During the Working Group fact-finding sessions, representatives of communities, waste trade associations, local governments, environmental organizations, and environmental justice organizations, articulated the need for national criteria for WTSs. They indicated that the need for national criteria could be satisfied under the provisions of RCRA listed above. Although the majority of the Working Group supports the need for national criteria and sees applicable authority under RCRA, one member of the Working Group, representing a solid waste professional association, disagreed that EPA should establish enforceable federal regulation for WTSs. He added that he did not believe the Working Group's efforts demonstrated the existence of a nationwide problem of such severity to justify federal regulation.

***I. Recommendations: RCRA and Solid Waste Planning***

**I-1:** Issue federal criteria to revise solid waste management plans to address the safe and equitable siting and operation of WTSs.

**I-2:** Examine the application of RCRA authorities to WTS siting and operation. In future budget requests, include adequate funds to develop a comprehensive program for reviewing, approving, and updating WTS plans, and for coordinating them with state and local governments.

**I-3:** Initiate an immediate review of solid waste management plans in states where WTSs have been implicated as threats to public health, the environment, and environmental justice.

**I-4:** Convene a meeting involving local and state organizations to identify existing opportunities and resources for coordinating solid waste planning.

**I-5:** Designate grant money for pilot regional planning workshops in cities where wastes from more than one jurisdiction (state or local) are consolidated at WTSs for transport to a disposal facility.

The workshops should involve strong community participation and:

- I-1 Explain how to avoid clustering WTSs (particularly in residential communities of color) that process wastes generated in a much larger waste shed;
- I-2 Develop a template for effective outreach in communities where WTSs have been proposed, as well as to the larger communities in which waste is generated; and
- I-3 Foster inter-community communication and cooperation among residents and businesses within the waste shed.

**I-6:** Issue annual awards to counties and cities that have exemplified best planning practices.

typically are predetermined for negative land uses include residential zones that were grand-fathered into industrial zones, residential zones that are adjacent to industrial zones, or zones that permit a mixture of residential, commercial, and certain industrial activities. These communities predominantly consist of residents that are poor and of color. Predetermination is exacerbated by rezoning decisions that eliminate negative land uses in affluent white communities, thereby further limiting WTSs to low-income communities and communities of color.

The limited areas in which WTSs can be established are permitted generally “as a matter of right.” This means that the local permitting agencies have no discretion to deny such use, nor do impacted communities have the opportunity to review or object to such use. Urban planners have long assumed that zoning can protect public health from incompatible land uses. However, as evidenced in New York City and Washington, DC, this assumption has proven invalid. In fact, the failure of zoning to protect public health and the environment led to the establishment of federal and state environmental laws more than 30 years ago.

To prevent predetermination to locate WTSs in poor communities or communities of color, local decision makers must modify their regulatory review of applications to site WTSs. The following recommendation by the Working Group lists measures to modify the review process.

## ***II. Recommendation: Facility Siting—Predetermination of Land Uses***

**II-1:** Work with states and local decision makers to incorporate the following measures into the review process for applications to site WTSs:

- Presume that local zoning will not protect human health, nor prevent clustering or disproportionate impacts in poor communities or communities of color.
- Identify neighborhoods potentially impacted by a proposed WTS and its transportation routes (the “potentially impacted neighborhoods”).
- Gather information on the potentially impacted neighborhoods (e.g., demographics, sensitive receptors, health indices and the impact of the proposed facility on these indices, and quality of life issues).
- Identify WTSs and other negative land-use facilities within potentially impacted neighborhoods.
- Consult with residents, elected officials, and local transportation agencies in the potentially impacted neighborhoods to identify local land-use planning initiatives, community land-use practices, local business and economic development initiatives, and conflicts with the proposed WTS. Identify potential conflicts caused by proposed transportation routes.
- Require a transportation plan that clearly delineates transportation routes (based on a presumption that truck routes alone do not prevent conflicts with residential uses), hours of use, contingency planning, and non-compliance penalty provisions for any contracted transport services.
- Require that the applicant examine the potential for clustering.
- Require that the applicant demonstrate compliance with best management practices and that clustering or disproportionate impacts will not occur from the siting or operation of the proposed WTS.
- Require the applicant to identify the anticipated source and volume of solid waste that is proposed to be processed at the WTS.

### **b. Area-wide and Regional Facility Selection Process**

Both community and industry participants in the Working Group’s fact-finding sessions agreed that currently there is no systematic process to safely and fairly select sites for WTSs. Along with predetermination (see Section IIa), the lack of a systematic process has led to the clustering of WTSs in poor communities and communities of color. Factors that contribute to the problem of site selection of WTSs include the bifurcation of the commercial and residential solid waste streams (often by municipal government action), the large number of commercial service providers, localized increases in tipping fees, flow control and other manipulations of market choice, and inadequate and unclear regulatory criteria.

WTSs in New York City and Washington, DC, are typically truck-dependent, land-based facilities. Regulatory review tends to include no public input regarding the appropriate location of facilities. The public’s health and safety, nuisance/quality of life, traffic, and economic concerns are expected to worsen as additional WTS capacity is needed. Capacity needs are expected to increase as more waste is imported from surrounding areas and as more landfills close<sup>5</sup>.

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<sup>5</sup> New York City’s only landfill is scheduled to close on January 1, 2002.

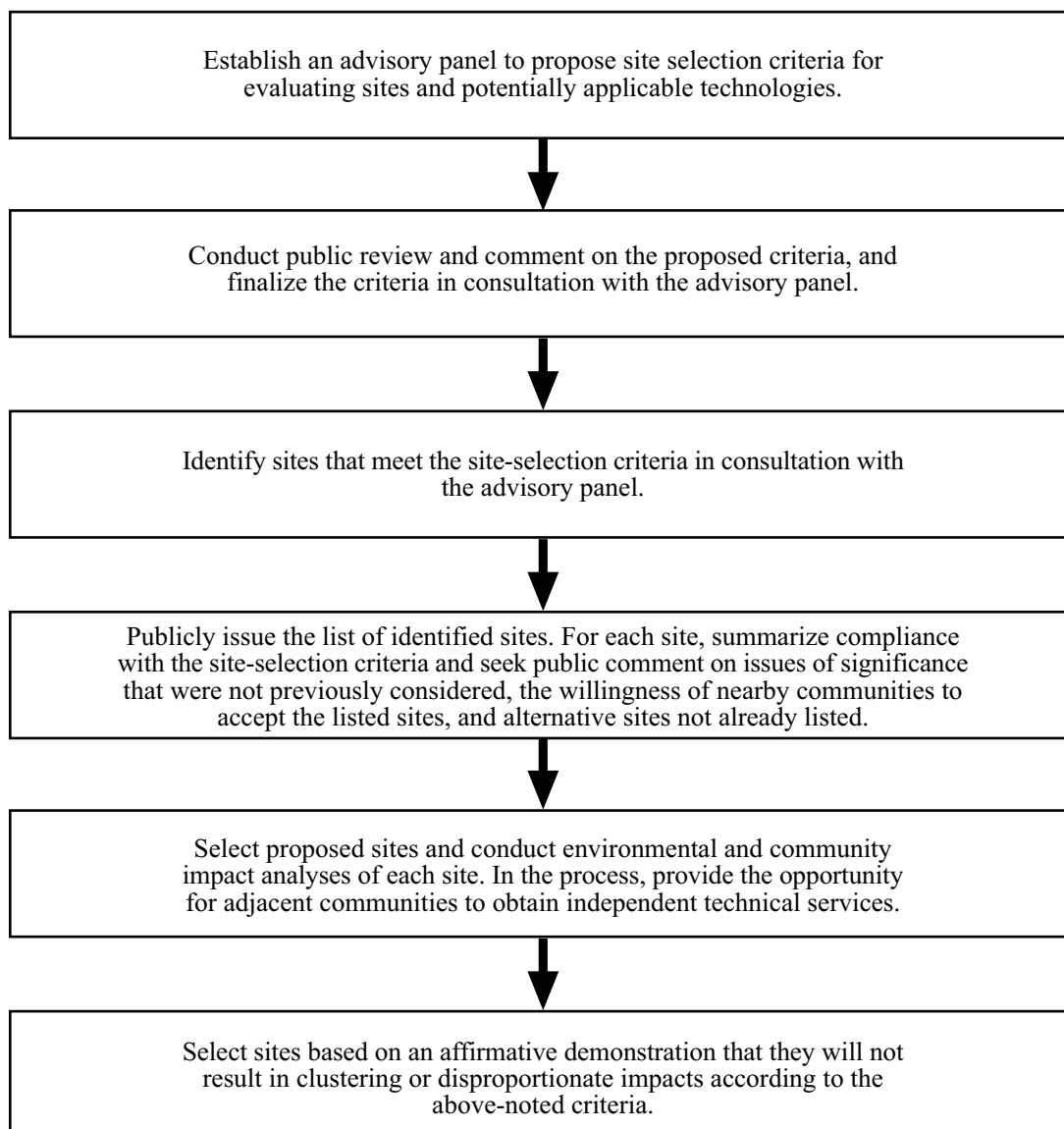


To solve the problem of WTS siting, total capacity needs within a municipality or waste shed must be addressed comprehensively. Selection of appropriate WTS sites must be based on an area-wide examination of environmental and community impacts, rather than on an individual site basis. The guiding principles for an area-wide selection process should be:

- There is a public need for WTSs.
- The burden of fulfilling the need for WTSs must be borne fairly and equally and not fall disproportionately on any community.
- The siting of WTSs must be done through a systematic plan that considers the waste shed as a whole.

An example of the steps to follow in implementing an area-wide selection process is shown in Exhibit 1.

**Figure 1 Exhibit 1: Steps in Implementing an Area-wide Facility Selection Process**



Contrary to the “Not in my backyard” mentality, representatives of communities currently burdened by the clustering of land-based WTSs in their neighborhood expressed willingness to accept a site selected through this process as long as: 1) the WTS is located at the periphery of their community (e.g., marine WTSs); 2) it uses the best technologies for environmental controls; 3) the WTS is coupled with a net reduction of waste currently processed in their neighborhood; and 4) the site contributes to a fair distribution of WTSs in the municipality.

Because area-wide selection may involve several government entities, EPA needs to evaluate ways to foster regional government cooperation in selecting the best sites for WTSs. The process should encourage cooperative allocation of responsibilities that address each local government’s solid waste needs, protection of human health and the environment, and prevention of disproportionate burdens and impacts. EPA should work with ICMA, the Conference of Mayors, and other organizations representing local governments, as well as private service providers, environmental justice representatives, and environmental and community-based organizations with experience in addressing WTS issues.

The Working Group makes the following three recommendations to EPA to improve area-wide and regional facility selection processes.

***II. Recommendations: Facility Siting—Area wide and Regional Facility Selection Process***

**II-2:** Work with state and local decision makers to establish criteria for an area-wide site selection process that considers the environmental and community impacts within the region as a whole.

**II-3:** Encourage state and local decision makers to include the following criteria in the area-wide site selection process to which every WTS, small and large, public and private, must be subject:

- Do not limit the selection of sites based on existing zoning restrictions.
- Set minimum buffer zones to separate WTSs from residential and commercial uses.
- Include the best management practices recommendations (Section III).
- Provide communities adjacent to proposed sites with reliable technical services to evaluate the proposed site, technologies, transportation modes, potential impacts, and mitigation measures.
- Provide benefit packages to communities agreeing to accept a WTS in their neighborhood. Such benefits could include financial incentives, infrastructure enhancements (e.g., rerouting), and free waste disposal for neighborhood residents.
- Reduce total throughput of solid waste in communities currently burdened by the clustering.

**II-4:** Establish an advisory panel consisting of representatives of the municipalities, public and private waste trade groups, communities impacted by the clustering of WTSs, environmental and environmental justice organizations, local community development organizations, and experts on the technology options for WTSs.

### **c. Sustainable Transition Strategy to Address Impacts from Existing WTSs**

Participants in the Working Group’s fact-finding sessions described most of the WTSs in their neighborhoods as having minimal environmental controls. Clustering of WTSs in cities like New York and Washington, DC, has led to the occurrence of many WTSs in close proximity to each other as well as to residential areas, schools, grocery stores, and restaurants. The lack of environmental controls has led to many concerns about health and safety, nuisance and quality of life issues, and impacts to the local economy. Thus, in addition to addressing the problems of siting new WTSs, a sustainable transition strategy must be developed to reduce the impacts of existing WTSs. Although this is the most difficult aspect of these recommendations to implement, it is also the highest priority.

Such a strategy must reduce the total WTS capacity in clustered communities, address retrofitting of existing WTSs to achieve maximum reduction in impact, and provide uninterrupted solid waste disposal services while recognizing the legitimate investments made by both public and private waste service providers. Additional problems unique to rural, suburban, or tribal settings must be identified and considered as well.

Reducing the number of WTSs and total WTS capacity in a clustered community will require collaboration among the community, environmental justice and environmental organizations, operators of the WTSs, municipal officials, and regulatory agencies. Potential options include consolidation

## ***II. Recommendations: Facility Siting—Sustainable Transition Strategy***

**II-5:** Provide funding and technical assistance to facilitate neighborhood-specific processes for developing transition strategies in problem areas that will: 1) reduce the total number of WTSs; 2) reduce the total solid waste processed in the clustered communities; and 3) identify uses of closed facilities that are acceptable to the community.

**II-6:** Convene focus groups of representatives of rural, tribal, and suburban communities to develop recommendations or to modify the urban-based recommendations provided here.

*The Workgroup also recommends that EPA require that sustainable transition strategies:*

**II-7:** Identify the total number of WTSs, their throughput, and the total capacity in the WTS-clustered communities.

**II-8:** Identify WTSs that have a high degree of incompatibility with community land uses based on the facility siting criteria and consultation with the impacted community.

**II-9:** Identify facilities that can comply with best management practices and establish a schedule for implementation.

**II-10:** Establish fair goals for reducing total solid waste throughput handled in all WTSs in the impacted community.

**II-11:** Establish a mechanism to transition closed WTSs to uses acceptable to impacted communities.

**II-12:** Establish a community-wide advisory panel to produce a plan that addresses future operations (including facility-specific retrofit plans), transportation plans, and a community complaint system for all remaining WTSs.

**II-13:** Establish an equitable mechanism for WTS owners and operators in or adjacent to the community to provide technical assistance and limited grants to community-based organizations to enable their participation in decision making.

of facilities and closure of incompatible WTSs where there is a high degree of conflict based on sensitive receptors and where community concerns cannot be resolved by other means.

The Working Group makes recommendations II-5 and II-6 to EPA to facilitate development of sustainable transition strategies. Recommendations II-7 through II-13 suggest specific elements that should be required in any sustainable transition strategy developed by local and state decision makers.

### **III. Best Management Practices**

Proper siting, design, and operation can minimize or even eliminate potential adverse health and environmental impacts from WTSs. Municipal and state standards for WTSs are often vague and hard to enforce. Best management practices currently employed at many WTSs, on the other hand, have proven very effective in providing high levels of environmental and health protection. The solid waste industry representatives at the Working Group's public meetings endorsed the need for voluntary industry guidance on best management practices. This voluntary technical guidance should be provided in addition to EPA's more general criteria for state implementation.

Development of a best management practices manual must be as specific as possible and focus on potential environmental and public health impacts caused by the design and operation of WTSs. Potential impacts include degradation of air quality (particulates, odors, microbes, volatile organic compounds, and other potential contaminants found in the solid waste stream), noise, migration of contaminated wastewater offsite, and disease vectors such as rats. Impacts from truck transportation to and from the WTSs include traffic congestion and air quality degradation (e.g., high levels of particulates, nitrogen oxides, and volatile organic compounds from vehicle emissions).

These environmental impacts are a starting point for EPA to develop a comprehensive baseline of potential impacts from WTSs. Accurate baseline impacts are essential because incomplete or inaccurate baselines can seriously affect public health, quality of life, and the environment. In developing baseline impacts, EPA should consider two major variables: 1) the setting of the WTS; and 2) the type of waste processed at the WTS.

The three basic types of settings to consider in developing best management practices are rural, suburban, and urban. The type of setting for a WTS can affect adjacent land uses, the

#### ***III. Recommendations: Best Management Practices***

**III-1:** Develop best management practices for the design and operation of WTSs to minimize environmental and public health impacts.

**III-2:** Consider all pertinent variables when developing best management practices, such as the types of waste, siting, operation, setting, geography, and governing bodies (e.g., lead agencies and tribal governments). Moreover, separate best management practices or categories of such should be developed to effectively address these variables.

**III-3:** Convene a focus group to ensure that best management practices consider all pertinent variables in siting, operation, geography, and governmental structure. The focus group should consist of representatives from:

- State/tribal and local regulatory agencies responsible for issuing design and operating permits for WTSs and responsible for compliance monitoring and enforcement of permits.
- Public and private solid waste professionals with expertise in planning, designing, and operating WTSs.
- Community, environmental, and environmental justice organizations that have been involved with solid waste and WTS issues at the local level.

size of the buffer zone, and the availability of land and transportation infrastructure. NEJAC recommends that EPA work with states, municipalities, and appropriate associations to ensure that the differences in settings are accurately reflected and concerns regarding their implementation addressed.

The second major variable is the types of wastes processed. The Working Group learned that some facilities that functionally operate as WTSs process a wide variety of wastes, such as medical, low-level radioactive, and asbestos waste, in addition to yard compost, paper, metal, and other recyclable materials. Because there are impacts specific to the types of waste processed, best management practices (as well as criteria) should address impacts for all facilities that process waste prior to disposal or recycling.

#### **a. Framework for Best Management Practices Manual**

The framework for a best management practice manual should be established based on rigorous outreach to secure a broad database on best practices. Exhibit 2 provides an initial framework for this effort. Exhibit 3 lists factors that should be included in best management practices for site selection. The Working Group acknowledges that application of this framework will vary depending on whether the WTSs are located in communities that are urban, suburban, or rural.

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#### **Exhibit 2: Initial Framework for Best Management Practices Manual**

*NOTE: These issues will vary as they apply to urban, rural, or suburban settings.*

##### **1. Planning and Siting Issues:**

- environmental justice issues
- noise
- odors
- prevailing air currents
- emissions, including the combined effect of emissions from neighboring sites
- traffic patterns and adequate space for truck movement
- zoning restrictions
- buffer zones
- minimum site size requirements
- use of existing buildings
- evaluation of alternative sites
- economics
- waste volume projections
- waste stream characterization
- materials recovery and processing
- public versus commercial waste streams
- technology selection
- community concerns including public participation
- zoning of adjacent property
- transitional land uses
- proximity to rail service and navigable waterways

2. Design Considerations:

- capacity
- site and floor plans, including adequate space for support activities such as parking, staff offices, and first aid
- transfer equipment
- rolling stock
- building design/aesthetics
- recycling
- environmental concerns—noise, odors, air and water emissions, traffic patterns, and buffer zones
- community concerns
- compliance issues—medical and hazardous waste, industrial Subtitle D wastes
- adequate space for future expansion
- use of closed containers, compactors, balers, and other consolidation equipment; wrapping and containerization of waste
- separation of vehicle types and commodities within the facility

3. Operation and Maintenance:

- scale house/gate attendant duties
- tipping floor operator duties
- transportation and transfer duties
- equipment operation and maintenance
- emergency operations, including spill containment
- housekeeping
- queuing and scheduling of truck traffic
- control of fugitive dust and odor emissions
- safety of operating personnel
- fire-fighting strategies
- public access and safety
- minimizing truck emissions and noise during deliveries, unloading, and loading
- site security and control of illegal dumping

4. Environmental Regulation, Compliance, and Record Keeping Issues:

- compliance and record keeping duties
- enforcement inspections
- acceptance of appropriate materials (status of medical, hazardous, and industrial Subtitle D wastes)

5. Community Participation in Facility Operations:

- complaint process
- community advisory panels
- local hiring
- amenities
- host community agreements

6. Non-Conforming Existing Facilities Clustered in Communities:

- existing facilities that are not able to conform with recommended best management practices (e.g., facilities that cannot create a sufficient buffer zone, achieve more stringent controls, modify operational hours, or use alternative clean fuel vehicles)
- existing clustering of WTS in some communities and strategies to reduce clustering and transition towards an equitable allocation of solid waste responsibilities throughout the municipality

### **Exhibit 3: Site Selection Factors**

*NOTE: These issues will vary as they apply to urban, rural, or suburban settings.*

#### **1. Access**

- access from unrestricted highways (maximum weight limits)
- proximity to collection routes and waste sources
- ready access to routes leading to disposal sites (e.g., expressway interchanges)
- minimum disruptions to travel times (traffic congestion, railroad crossings, toll booths, etc.)
- proximity to rail service and navigable waterways

#### **2. Physical Features**

- existence of buffer zones and natural screening (e.g., natural vegetation, elevation differential)
- wind direction with respect to adjacent land uses
- conditions that would impact site development (e.g., shallow groundwater or bedrock)
- presence of utilities, particularly sanitary sewer for washwater disposal
- prior site uses that could impact site development (e.g., buried tanks)
- site usability constraints (e.g., easements, pipelines, rights-of-way)
- presence of existing structures that could support transfer plans, or that require demolition
- potential for expansion as region grows and waste volume increases
- existing site constraints such as wetlands, utility easements, etc.

#### **3. Location**

- zoning or land-use restrictions
  - compatibility with existing and projected land uses
  - setbacks and isolation from sensitive areas
  - cost of land and number of owners involved in consolidating the properties into one parcel
  - taxes, fees, surcharges, and host community benefits costs
- 

### **b. Best Management Practices in Design and Operation of WTSs**

Development of best management practices for the design and operation of WTSs should demonstrate the governments' response to addressing the public's concerns about potential adverse effects. The SWANA training provided extensive information on how potential adverse effects can be mitigated in the initial facility design and during daily management operations. This information should be very helpful in establishing best management practices for WTSs. Exhibit 4 lists the operating factors that should be considered in best management practices. Exhibit 5 lists design and operational procedures that could be used to mitigate certain adverse affects.

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**Exhibit 4: Operating Factors**

*NOTE: These issues will vary as they apply to urban, rural, or suburban settings.*

1. Plan of Operations

- list of personnel and assigned duties
- equipment list and maintenance protocol
- waste screening measures specifying:
  - personnel training
  - visual inspection of all loads
  - intense inspection of random loads
  - temporary storage of hazardous or incompatible waste
  - record keeping and regulatory notification
- cleaning and wash-down procedures including washwater management
- site inspections
- onsite and offsite litter patrols
- personnel training
- waste receiving procedures (e.g., scales, computer tickets)
- materials recovery program
- enforcement of site rules
- waste shipping procedures

2. Contingency Plan

- management of hazardous or dangerous waste, including temporary storage, regulatory notification, and health and safety precautions
  - fire prevention and control, include outside emergency response
  - response to injuries and use of first aid equipment (e.g., an eye wash station)
  - contingency operations in the event that the disposal site, the haul route, or transfer equipment goes down
  - evacuation plans for major emergencies
  - contingency plan in event of loss of power or loss of communications
  - contingency plan in the event the scales or scale house software malfunctions
-



**Exhibit 5: Examples of Design and Operational Features to Mitigate Potential Impacts**

*NOTE: These issues will vary as they apply to urban, rural, or suburban settings.*

<b>Potential Impacts</b>	<b>Design Features</b>	<b>Operational Procedures</b>
Aesthetics and Land-Use Compatibility	Setback distances/buffer zones Visual screening (e.g., trees, fencing, etc.) Exterior treatments	Building exterior maintenance Building and grounds maintenance Good housekeeping practices
Dust and Mud	Automatic misting system Building orientation with respect to predominant wind direction	Road sweeping and watering Waste processing inside building
Fire	Sprinkler systems Fire extinguishers Hot load segregation area	Employee training Load inspections Local fire department input
Litter	Perimeter fencing Building orientation with respect to predominant wind direction Avoid horizontal ledges where litter accumulate	Enforcement of load tarping requirements Onsite and offsite litter patrols Good housekeeping practices Waste processing inside buildings Tipping floor cleaning
Noise	Proper setback distances Environmental screening Construction material selection	Waste processing inside building Mufflers and noise abatement on trucks and equipment
Odor	Proper setback distances Building orientation with respect to predominant wind direction Exhaust fans with air filters Odor-masking mist-system	Waste processing inside building Load tarping requirements Removal of all waste by end of day Tipping floor cleaning practices and wastewater management Good housekeeping practices
Traffic	Signs, signals, and pavement markings Acceleration/deceleration lanes Right-hand turns at highway intersection Reconfigured haul routes and designated routing Adequate queuing distance Onsite traffic pattern design Operating hours and delivery schedules Intersection/entrance design	Driver training Operational efficiency Compliance with site rules, signs, etc. Adherence to designated routes, mandatory right-hand turns, etc.
Unacceptable Waste	Appropriate signs at facility entrance	Employee training

#### **IV. Community Participation**

Participants in the Working Group’s fact-finding sessions consistently expressed a desire for increased levels of community participation in the WTS siting process. Prior to the formation of the Working Group, the Waste and Facility Siting Subcommittee heard similar complaints about the lack of community participation from communities across the country. All described the clustering of negative land-use facilities resulting from the absence of participation. For example, WTSs are being permitted or having their permits amended with minimum public notice and no real opportunities for the public to comment on the permit applications. This occurs with other types of waste processing facilities as well—such as recycling facilities and interim handling and storage facilities. As a result, the clustering of negative land-use facilities already experienced by poor communities and communities of color is compounded.

There are several examples where community participation is lacking in the WTS siting process. For example, when issuing permits for WTSs, local permitting agencies typically fail to consult with potentially impacted neighborhoods regarding the environmental impact of proposed WTSs. The permitting process ignores potential impacts such as economic displacement, loss of jobs, cumulative impacts, clustering, and traffic problems in decisions on whether to conduct an environmental impact analysis. Permitting agencies also fail to examine the potential for clustering or to conduct disproportionate impact analyses under Title VI of the Civil Rights Act.

Local permitting agencies also fail to consult with potentially impacted neighborhoods when developing and amending solid waste management plans. As a result, these plans fail to examine disproportionate impacts, clustering, and potential conflicts with community land-use planning.

Local planning agencies and building departments fail to provide any public notice or public comment on siting WTSs based on the justification that a WTS facility is permitted “as a matter of right” (See Section IIa). Furthermore, they fail to consult with communities when developing land-use plans (e.g., waterfront plans) to identify equitable allocation of uses, assess disproportionate impacts on communities, identify conflicts with community plans, etc. WTS operators fail to address community complaints or develop community complaint-and-response mechanisms.

Addressing the systematic failure to involve communities in WTS decisions ultimately will require changing the local decision-making process, which is not part of the Working Group’s recommendations below. However the recommendations call for specific and extensive community involvement in area-wide facility selection, development of RCRA solid waste management plans, sustainable transition strategies, development of a best management practices manual, and enforcement.

The Working Group makes the following three recommendations to EPA to foster increased community participation. In recommendation IV-1, the Working Group recommends that EPA have state and local decision makers consult the “NEJAC Public Participation Model” to ensure that these recommendations are implemented with effective and informed community participation.

#### ***IV. Recommendations: Community Participation***

**IV-1:** Suggest that state and local decision makers consult the following documents to help improve community outreach and participation:

- “General Process of Community Outreach—NEJAC’s Public Participation Model”
- “EPA Land Use Based Remedy Selection Guidance Document, NEJAC’s Brownfield Dialogues Report,” which provides a process for community consultation to identify community uses and plans and potential environmental justice circumstances.

**IV-2:** Require that state and local decision makers involve the community in regulatory reviews of RCRA solid waste management plans, area-wide and regional WTS facility selection processes; development of a sustainable transition strategy; and development of best management practices.

**IV-3:** Provide technical resources and federal funding, such as providing assistance to community groups to ensure effective public participation in area-wide and regional WTS facility selection processes and development of sustainable transition strategies.

#### **V. Marine Waste Transfer Stations**

A common complaint from communities adjacent to WTSs has been the high volume of truck traffic. Impacts caused by the increased traffic include noise, odor, road damage, and concerns about health problems caused by breathing vehicle exhaust. Many suggested the use of marine WTSs as an alternative to land-based WTSs, where appropriate. The Working Group makes the following recommendation to EPA to further the consideration of marine WTSs.

#### ***V. Recommendation: Marine Waste Transfer Stations***

**V-1:** Finalize the August 30, 1994, proposed rule *Waste Handling Practices for Vessels and Waste Transfer Stations* (Vol. 59 *Federal Register* 44798), considering the applicability of the Shore Protection Act of 1998 to marine WTSs.

#### **VI. Clean Air Act**

Questions regarding the applicability of the Clean Air Act and the need to reduce air pollution impacts resulting from WTSs were raised frequently throughout the Working Group’s investigation. Representatives of communities burdened by WTSs assert that regulatory agencies have failed to consider the full impact of WTSs on air quality—especially the impacts on local air quality—when making permitting decisions. One of their major concerns was the use of diesel trucks to transport waste to and from WTSs.

The Working Group discussed several approaches to minimizing impacts to air quality with staff in EPA’s Office of Air and Radiation including:

- preparing emissions inventory to determine Title V requirements and new source performance standards and new source review

- helping state programs to address increases in diesel traffic
- mitigating emissions from heavy-duty vehicles
- reducing vehicle miles traveled
- establishing clean fuel fleets

The following sections summarize these approaches and the Working Group's recommendations to address the issue of air quality.

**a. Emissions Inventory to Determine Title V Requirements and New Source Performance Standards and New Source Review**

A number of participants at the Working Group's public meetings were confused about how to calculate mobile emissions from vehicles that operate within an enclosed WTS and vented to the environment. This calculation is a key factor regarding the need to conduct new source reviews and to the applicability of new source performance standards and other potential requirements under the Clean Air Act's area sources and urban air toxics program. Guidance is needed to assist in the calculation.

Although most members of the Working Group were more familiar with solid waste rather than clean air program requirements, they noted that many states and local governments impose air pollution control obligations upon WTSs. They would like to urge EPA to seek ways to incorporate these kinds of controls in federal air pollution control initiatives, including their work with state implementation programs.

The Working Group is aware that a new source performance standard for WTSs or for any part of their operation do not exist currently. Furthermore, emissions from WTSs in the development of area sources and urban air toxics programs have not been considered. The Working Group sees the need for adequate air monitoring to characterize and quantify the emissions from WTS, particularly in urban settings. The Working Group believes that the a requirement for air monitoring may be possible through application of the Clean Air Act.

Regardless of the applicability of requirements under the Clean Air Act, however, the Working Group would like EPA to investigate and develop a comprehensive scheme for air quality control as part of the development of best management practices (as recommended in Section III). The Working Group believes that it is necessary that EPA embark on a focused investigation of air quality issues because air quality impacts and the absence of air standards and monitoring requirements were common concerns at the public meetings. EPA's investigation must begin with monitoring and characterization of the emissions from WTSs. Based on the results, EPA must establish best management practices with respect to:

- Emission control technologies for airborne compounds at WTSs, including microbes, volatile organic compounds, and particulates from diesel engines.
- Emission control technologies that consider a range of processes (e.g., putrescible solid waste processing, construction and demolition waste processing, metals recycling) and facility design.
- Air monitoring devices and protocols that are based on the airborne compounds at WTSs.
- Effective negative pressure designs and techniques.
- Odor elimination technologies.
- Accountability and penalty provisions in contracts between WTS owners and trucking companies to address non-compliance.

***VI. Recommendations: Clean Air Act—Emissions Inventory***

**VI-1:** Issue guidance on the applicability of Title V and new source review requirements to WTSs based on engine emissions from vehicles that operate within enclosed WTSs and are not being used for transportation.

**VI-2:** Conduct air monitoring and examine the applicability of substantive control requirements under EPA’s New Source Performance Standards, Urban Air Toxics Program, and Area Sources Programs.

**VI-3:** Ensure that best management practices comprehensively address air quality impacts from WTSs.

**b. Helping States Develop Programs to Address Increases in Diesel Traffic**

One of the most significant air quality impacts from WTSs is the degradation of air quality due to diesel trucks serving WTSs. The Clean Air Act permits states to adopt an *indirect source review program* to mitigate the pollution effects of any “facility, building structure, installation, real property, road, or highway which attracts, or may attract, mobile sources of pollution.” [See 42 USC 7410(a) (5)]. An effective indirect source review program would significantly improve the air quality of communities living adjacent to existing WTSs. Such a program should examine:

- Criteria to assess facilities that attract or may attract mobile sources of pollution;
- The methodology for calculating total mobile emissions from such facilities, including localized impact analysis; and
- Effective mitigation techniques that address the potential increase in mobile emissions, including integration mitigation techniques with the establishment of clean fuel fleet programs.

The Working Group makes the following recommendation to EPA to develop an effective indirect source review program.

***VI. Recommendation: Clean Air Act—Programs to Address Increases in Diesel Traffic***

**VI-4:** Work with states and municipalities as well as community, waste industry, environmental justice, and environmental groups to develop an indirect source review program to reduce the pollution from diesel trucks serving WTSs and to address the large number of facilities whose mobile emissions add to local pollution levels.

**c. Mitigating Emissions from Heavy-Duty Vehicles**

EPA’s Office of Air and Radiation is developing a best practices document for mitigating emissions from heavy-duty vehicles at WTSs. The Working Group sees an immediate need for this document. The WTS vehicles run on diesel engines that were designed in a way that enables operators to disable pollution control devices. Disabling of these devices in WTS vehicles may significantly degrade air pollution in communities near WTS transportation routes. As a result, EPA has fined engine manufacturers for violation of the Clean Air Act. EPA has entered into a settlement with the engine

manufacturers to address disabled systems including retrofitting them with low nitrogen oxide (NO<sub>x</sub>) kits. A portion of the settlement funds could be dedicated to environmentally beneficial projects in communities near transportation routes.

The Working Group makes the following three recommendations to EPA to help mitigate emissions from heavy-duty vehicles.

***VI. Recommendations: Clean Air Act—Mitigating Emissions from Heavy-Duty Vehicles***

**VI-5:** Address the conversion of older engines to cleaner engines and the disabling of diesel engine emissions control devices in EPA’s best management practices.

**VI-6:** Develop a program to identify diesel trucks designed with pollution control disabling systems and retrofit them with low NO<sub>x</sub> kits. Monitor the program to ensure its effectiveness.

**VI-7:** Dedicate a portion of settlement funds for environmentally beneficial projects in communities near transportation routes.

**d. Vehicle Miles Traveled**

The regional and local consequences of vehicle miles traveled (VMT) by trucks that transport waste to and from WTSs need to be examined. The increase in VMT caused by limited disposal options and the need to export waste to distant landfills has a direct affect on pollution levels in the communities that have WTSs. Any increase in VMT translates to an increase in total emissions from diesel engines. The communities’ problems are compounded by nearby highways and truck routes as well as commercial and industrial facilities that use diesel vehicles. The cumulative impact of these emissions—particularly diesel emissions—must be considered.

EPA has the opportunity to examine the impact of VMT through review of state implementation plans (SIPs). SIPs set forth the state’s strategy for complying with Title I of the Clean Air Act, which addresses certain criteria air pollutants such as carbon monoxide, sulfur dioxide, nitrogen oxides, ozone, lead, and particulates. SIPs are prepared by each state and approved by EPA.

The Working Group recommends the following three actions to EPA to address air impacts from VMT.

***VI. Recommendations: Clean Air Act—Vehicle Miles Traveled***

**VI-8:** Examine SIPs for localized and regional air quality impacts in areas with WTSs and where the export of waste is occurring.

**VI-9:** Examine the current SIP regulations that address the inclusion of localized and regional air quality impacts from diesel engines.

**VI-10:** Develop programs consistent with the Administration’s Livability Agenda for reducing the emissions from diesel engines.

### **e. Clean Fuel Fleets**

The diesel trucks that serve WTSs degrade the air quality in communities near WTSs and near the transportation routes that serve them. Establishing a clean fuel program to induce the use of clean fuel trucks would significantly improve the air quality in these communities. However, incentives are needed to encourage the use of clean fuel vehicles. The Working Group recommends to EPA the following three actions to encourage development of clean fuel fleets.

#### ***VI. Recommendations: Clean Air Act—Clean Fuel Fleets***

**VI-11:** Conduct pilot programs in collaboration with WTS owners, local municipalities, local and community development organizations, and community-based organizations to establish clean fuel fleets.

**VI-12:** Work with states, local trucking firms, and economic development organizations to develop a program to create incentives for the use of clean fuel vehicles at WTSs.

**VI-13:** Consult with the Department of Energy and other pertinent federal agencies to establish a clean fuel fleet program to serve WTSs and similar businesses.

### **VII. Waste Reduction**

Although it was not the focus of the Working Group’s fact-finding sessions, the need for waste reduction strategies was mentioned frequently. The necessary capacities of WTSs, waste transport, and landfills are inextricably linked to the amount of waste generated. The factors increasing the necessary capacities include:

- High volumes of solid waste are being created during manufacturing and shipment, but few incentives are available to reduce the amount of packaging materials, materials reuse, or recycling.
- There are few programs that address source separation prior to disposal.
- Successful innovative waste reduction programs, both locally and throughout the world, have not been examined.
- Recycling programs receive limited funding and support from local governments.
- Comprehensive waste reduction strategies do not include recycling programs, which creates a disincentive to reduce waste during manufacturing and packing.
- Recycling has not been examined as a vehicle for local business and job creation programs.
- Disparate levels of recycling and potential inequities in community access to recycling programs—particularly by low-income residents—have not been examined.

Waste reduction strategies that incorporate effective waste reduction and recycling technologies, financial incentive programs, and locally owned and operated business are needed to ease the burden

on WTSs. The Working Group makes the following recommendations to EPA to develop a waste reduction strategy.

***VII: Recommendations: Waste Reduction***

**VII-1:** Conduct a wide solicitation to identify:

- Effective technologies and techniques to reduce the total volume of solid waste generated, and maximize recycling levels and waste types;
- Incentives to encourage waste reduction and recycling; and
- New and potential locally owned and operated businesses to integrate into the strategy.

**VII-2:** Use the information gathered through grants to Cornell University's Waste Management Institute and the New York City Housing Authority as a foundation for developing a comprehensive waste reduction strategy.

**VIII. Regulatory Review and Enforcement**

According to participants in the fact-finding sessions, inadequate enforcement of WTS regulations is a key reason for the impacts they experience from WTS operations. Among the enforcement issues they raised were confusion or conflict regarding identification of the lead local enforcement agency, unclear criteria for undertaking enforcement actions, unresponsiveness of local regulatory agencies in addressing patterns of non-compliance identified by community residents, inadequate staffing to enforce criteria, and enforcement restrictions in court injunctions brought by facility owners.

Overlapping layers of regulatory jurisdiction frequently create obstacles to proper WTS management and enforcement of WTS violations. New York City and Washington, DC, have numerous primary regulators assigned to the many facets of WTS management and enforcement. While local regulatory authority clearly exists to manage WTS activities in a manner that protects human health, public welfare, and the environment, a number of limitations inhibit effective enforcement of those authorities.

Enforcement also is severely limited due to lack of resources, lack of best management practices, and opposition to effective enforcement. Appendix 6 of this report summarizes the many sources of regulatory authority in New York City and Washington, DC. The following sections illustrate the inadequacy of these municipal laws in the absence of constant, universal enforcement and resources. They also illustrate the need for clear, well-understood federal guidance on best management practices.

In New York City, for example, a common practice for WTSs has been to begin operation illegally and then sign a Consent Order with NYSDEC—in response to enforcement actions—and continue operating. In these cases, no environmental assessment or environmental impact statements are prepared, and the public cannot participate in the permitting and siting processes. As a result, the vast majority of WTSs in New York City are now concentrated in just three communities where the environmental and health impacts of the WTSs were never considered. In Washington DC, the District government has aggressively pursued WTSs operating in violation of District regulations, engaging in protracted litigation with the violating companies. However, the litigation has been unsuccessful, and adequate protection of public health and the environment has not been enforced. The District government is actually under a court injunction preventing it from enforcing duly-enacted regulations.



A review of the legal authorities indicates that in each city, local government has exempted its own facilities from the laws applicable to private industry. Furthermore, the Departments of Health have failed to enforce public nuisance laws that could protect public health and the environment. In New York City, compliance with the joint environmental review agreement between the city's Department of Sanitation and NYSDEC historically has not been observed. The Department of Sanitation and NYSDEC have limited resources and only about 40 enforcement officers. These officers must respond to all environmental crimes within New York City; therefore, they cannot focus entirely on WTSs. Citizen enforcement, authorized by state and city laws, could supplement enforcement, but citizen enforcement is restricted to misdemeanors and felonies.

Because enforcement of WTS criteria primarily is a local municipal responsibility, the recommendations to EPA in the following sections set forth a strategy for assisting local lead enforcement agencies.

**a. Enforcement Resources**

EPA must ensure that any best management practices that are developed are employed over the long term. To do this, states and local permitting or enforcement agencies should be encouraged to charge fees to fund adequate enforcement as part of each WTS permit. Adequate enforcement includes more frequent inspections of WTS facilities.

Although local governments should be responsible for inspecting privately owned WTSs, the Working Group recommends that EPA encourage the hiring of independent third-party inspectors for municipally owned or operated facilities. The Working Group further recommends that local residents be trained as inspectors.

The Working Group believes that it is vital that this requirement be applied to all WTSs, regardless of ownership (public or private) or legal status (i.e., no exemptions should be allowed where sites are operating under consent decree). A number of participants in the public meetings stressed that grandfathering, operation under consent decree, and carveouts from regulation (because the facility is municipally owned, calls itself a recycling facility, or commenced operation before the effective date of regulations) have created many of the adverse impacts seen at WTSs today.

The Working Group makes the following two recommendations to EPA to enhance enforcement resources.

***VIII. Recommendations: Regulatory Review and Enforcement—Enforcement Resources***

**VIII-1:** Encourage states and local permitting and enforcement agencies to charge a fee need to fund adequate enforcement at the facility, as part of each WTS permit.

**VIII-2:** Encourage the hiring of independent third-party inspectors, perhaps by training local residents to perform inspections, for all municipally owned or operated facilities, with no exceptions made for grandfathering, operation under consent decree, or other carveouts from regulation.

## **b. Coastal Zone Management Act**

The applicability of the Coastal Zone Management Act (CZMA) should be reviewed with regard to WTSs located in coastal zones. The CZMA's goal is to assist the states in protecting, preserving, developing, and enhancing the resources of the nation's coastal zone. Based on the Working Group's fact-finding session in New York City, the implications of the CZMA on WTSs approved for operation in the coastal zone do not appear to have been considered. All of New York's industrially zoned waterfront is located in communities of color.

In New York, the CZMA is implemented by the Department of State through its Coastal Zone Management Program. This program authorizes each political subdivision to develop a Waterfront Revitalization Program (WRP) as the principal coastal zone management tool. The policies set forth in New York City's WRP are not necessarily adhered to, however. Policy 2.1 requires that industries located on the waterfront must be primarily water dependent. Therefore, any WTSs on the waterfront that are not marine WTSs would violate this policy.

Solid waste facilities directly on the waterfront also must comply with policy 5, which requires protection and improvement of water quality in the coastal area. Policy 6 mandates that loss of life, structures, and natural resources due to flooding be minimized. In fact, many of New York City's WTSs are located along waterfronts in the 100-year flood plain. Policy 7 requires minimizing environmental degradation from solid waste and that managing solid waste in a manner protective of public health and coastal ecosystems. Policy 9 specifies that industrial facilities on the waterfront must protect scenic resources.

The Working Group makes the following recommendation to EPA to examine the applicability of the CZMA to WTSs in New York City and in other coastal communities.

### ***VIII. Recommendation: Regulatory Review and Enforcement—Coastal Zone Management Act***

**VIII-3:** Refer the issue of CZMA applicability to the National Oceanic and Atmospheric Administration. Condition any additional federal funding to implement the CZMA upon strict compliance with local or state policies.

## **c. Enforcement Strategies**

Article 9 of New York's Environmental Conservation Law requires environmental monitors at every solid and hazardous waste landfill. The monitors must be funded by the landfill operators. Similar environmental monitors would enhance enforcement at WTSs, and could be required as a permit or consent order condition.

Independent environmental monitors hired by the state would significantly supplement limited municipal enforcement resources and improve enforcement. Enforcement also could be enhanced through citizen enforcement. Training citizens to recognize and document violations can provide powerful enforcement support to regulatory agencies. In New York, citizens that report violations can receive half the fine, if successful. Citizen enforcement also would be an effective tool against illegal facilities, illegal dumping, and preventing transportation impacts such as prolonged truck idling. Only the community is present 24 hours a day to observe WTS operations.

Training of local law enforcement officials to recognize WTS violations also would enhance enforcement. New York City's more than 50,000 police are authorized by state and local law to enforce all environmental conservation, city sanitation, and public health laws addressing nuisances. With a limited amount of training, New York City police can undertake what the District of Columbia Police are already doing, enforcement of transportation impacts and other impacts of WTS operations.

In the District of Columbia, the Federal government must undertake a leadership role in addressing the District's WTS problem since much of the waste is generated by federal government operations. The federal government must improve its source reduction and recycling efforts, as well as its contracting policy to ensure that it uses only permitted facilities. Despite laws requiring waste minimization and recycling, government has done a poor job and has failed to set an example for the private sector. In New York City, the city had to be sued to be forced to comply with its own recycling laws. The Washington facility tour also revealed only minimally effective recycling efforts. It is therefore recommended that waste reduction and recycling be used more effectively as a primary tool in WTS management.

Finally, standing multi-municipality stakeholder groups, with representatives from the community, public health organizations, and governmental entities, should be created to develop waste shed agreements and address regional waste management problems with creative solutions that take into account the President's Executive Order on Environmental Justice, the EPA Regional Environmental Justice Plans, the Executive Agency Environmental Justice Plans and all other applicable environmental laws. This group should have power to address documented problems with all available tools, consistent with existing regulatory authority. It is not possible to protect public health and the environment if public health problems such as asthma, which can be exacerbated by WTS operations, are ignored.

The Working Group makes the following recommendations to EPA to help states and local governments develop better enforcement strategies.

***VIII. Recommendations: Regulatory Review and Enforcement—Enforcement Strategies***

**VIII-4:** Ensure that state and local decision makers require environmental monitors as a permit or consent order condition at every WTS.

**VIII-5:** Encourage state and local decision makers to train citizens to recognize violations and log or document them to provide enforcement support to regulatory agencies.

**VIII-6:** Encourage state and local decision makers to create standing multi-municipality stakeholder groups, with representatives from communities, public health organizations, waste industry, and governmental entities, to develop waste shed agreements and address regional waste management problems.

**VIII-7:** Ensure that the Federal government undertakes a leadership role in addressing the District of Columbia's WTS problem since much of the waste is generated by federal government operations.

**d. Federal Government Contracts**

It is critical that EPA use its authorities to support implementation of the better management practices embodied in the proposed WTS criteria. Federal agencies contracting for waste disposal services should include compliance with the WTS criteria as a bid specification. Education and outreach for federal agencies providing or contracting for waste services will be required to ensure compliance. The Working Group makes the following two recommendations to EPA.

***VIII. Recommendations: Regulatory Review and Enforcement—Federal Government Contracts***

**VIII-8:** Work with the White House Council of Environmental Quality and the Federal Interagency Task Force on Environmental Justice to require, through a federal executive order, that bid specifications from all companies contracting with federal agencies for waste services comply with WTS guidelines.

**VIII-9:** Undertake an education effort to ensure that all federal agencies that provide waste services, as well as those that contract for the service, comply with these standards.

## **PROPOSED PRIORITY STRATEGY FOR IMPLEMENTING RECOMMENDATIONS**

The following five priorities for the comprehensive implementation of the recommendations made in this report are presented in order of importance.

### **1. Best Practices Manual**

In developing the recommended best management practices manual, EPA should solicit information regarding WTS siting and operation through the SWANA WTS Focus Group, ASTSWMO, Environmental Industries Association, States of Illinois and New Hampshire, and National Association of Local Governments; develop proposed impact baseline and best management practices; convene focus groups to assess issues unique to tribal, rural, and suburban communities; and conduct formal public comment on the proposed best management practices manual.

### **2. Immediate Federal Government Interaction with States and Local Governments**

Immediate interaction by EPA and other federal government agencies is necessary to address clustering of WTS in communities. The Working Group strongly recommends immediate interaction to implement the recommendations regarding transition of facilities, coordinated enforcement, area-wide facility selection, and review of solid waste management plans. For the review of solid waste management plans, EPA requires—and should be granted—additional budget resources.

### **3. Research and Development**

The Working Group recommends that EPA's Office of Research and Development (ORD) evaluate existing air control and monitoring devices used in other industry categories for adaptation to WTSs. Based on its evaluation, and after consultation with public and private waste trade, technology development companies, technical assistance organizations, and community-based organizations, ORD should establish research and development strategies for solid waste management, transport, and reduction, including environmental quality controls and monitoring for areas incidental to WTS operation.

The Agency for Toxic Substances and Disease Registry (ATSDR) has been asked to conduct health studies of communities adjacent to WTSs in Washington, DC. In addition, the New York State Department of Health also is conducting similar health studies. The Working Group recommends that EPA evaluate the data collected and incorporate conclusions into the development or modifications of best management practices and other regulatory programs.

### **4. Interagency Activities**

Full implementation of the recommendations in this report will require coordination among many federal agencies, including EPA, the U.S. Army Corps of Engineers, the U.S. Department of Transportation, and the U.S. Department of Energy. The Working Group recommends the convening of an interagency task force responsible for: 1) ensuring that all federally supported housing conforms with minimum criteria regarding fair share and proximity to WTSs and similar facilities; 2) promoting the fair share approach; 3) developing manifesting requirements and incentive programs for clean fuels and lower emitting diesel vehicles; and 4) providing resources to implement the transition strategy.

## **5. Air Quality**

The recommendations in this report raise a number of issues related to air quality and the Clean Air Act. The Working Group recommends the EPA Office of Air and Radiation develop a schedule and strategy to address the issues raised.

## **APPENDIX 1. The NEJAC Resolution to Investigate the Impacts of WTSs on Poor and Minority Communities**

WHEREAS, the imminent closure of the Fresh Kills Landfill, New York City's only municipal solid waste landfill, in 2002 has necessitated a massive increase in creation or expansion of interim solid waste facilities, otherwise referred to as waste transfer stations, and other problems associated with the transport of solid waste to out-of-city locations;

WHEREAS, the impacts of the impending depletion of existing municipal landfill space are likely to be most heavily felt in low-income and people of color communities; for example, three such low-income and people of color communities, (i.e., Greenpoint Williamsburg, Brooklyn, South Bronx, and Southeast Queens) currently have over 70% of the waste transfer facilities in New York City;

WHEREAS, a similar situation already exists or is soon likely to exist in other municipalities across the United States and its territories where landfill capacity is quickly running out;

WHEREAS, a number of environmental justice issues are highlighted by these developments, including the following:

- such facilities emit air-borne particulates and volatile organic hazardous air pollutants from processes conducted at the facilities and from vehicles providing transportation services to waste transfer facilities,
- such facilities are likely to be located in or adjacent to predominantly low-income and people of color communities,
- such communities are also impacted by pollution from other sources, including volatile organic hazardous air emissions and air-borne particulates from stationary facilities such as automotive and metal finishing facilities, and from emissions from mobile sources such as vehicular traffic,
- such communities suffer from disproportionately high incidence of disease including asthma and other respiratory illness, infant mortality and immune deficiencies, and
- the environment and public health of host communities are at risk because of the expansion of existing waste transfer stations and the siting of new ones;

WHEREAS, there has been no assessment of the total pollution loading and health impacts from emissions from individual waste transfer facility operations in the New York City area for purposes of determining requirements to control these emissions;

WHEREAS, there has been no assessment of the cumulative loading of waste transfer and other waste processing facilities in New York City to determine requirements to prevent health impacts associated with the clustering of such facilities in proximity to each other and residential communities;

WHEREAS, a number of existing statutes may play significant roles in developing a coherent set of guidance on the waste transfer station issue, including but not limited to the following:

- Resource Conservation Recovery Act (RCRA), which regulates the interstate transport, handling, and disposal of hazardous and solid waste,
- Clean Air Act , which regulates air emissions from mobile and stationary sources,
- Coastal Zone Management Act, which provides that facilities located in coastal zones be managed to protect ecological benefits,
- Clean Water Act, which regulates stormwater runoffs from point source facilities into waters of the United States.

WHEREAS, U.S. EPA has not conducted a public assessment of the adequacy of the environmental regulatory programs applicable to waste transfer stations in New York and across the country, particularly with regard to U.S. EPA's obligation to protect human health and the environment and to encourage pollution prevention, recycling and reuse;

THEREFORE BE IT RESOLVED, that the National Environmental Justice Advisory Council calls upon U.S. EPA to examine the risks from the siting and operation of waste transfer stations for the purpose of determining its regulatory responsibilities and prescribe requirements to reduce health risks associated with such facilities. A first step in this examination should be a study of impacted communities in New York City to consist of the following:

- assessment of pollution emissions from waste transfer facilities and connected transportation that at a minimum includes quantifying particulate and volatile organic hazardous air emissions
- assessment of cumulative impacts associated with the clustering of waste transfer and other facilities in NYC impacted communities
- conducting a risk characterization analysis to assess the health and environmental risks associated with pollutants emitted from waste transfer facility operations and connected transportation
- identification based upon the above studies of requirements and regulatory actions to address human health risks through control of pollution loading from waste transfer stations that consider individual facility based controls and multi facility controls to address both individual facility loading and facilities that impact a common impacted area;
- an assessment of the adequacy of coordination of responsibilities among federal, state and local officials and among environmental programs to address the risks from these facilities;

BE IT FURTHER RESOLVED, that NEJAC calls upon U.S. EPA to form a citizens advisory committee to consist of representatives of community based organizations in New York City impacted communities and local environmental justice, public interest, business interests, and elected officials from impacted communities for the purposes of advising on the design and implementation of this study;

BE IT FURTHER RESOLVED, that the NEJAC calls upon U.S. EPA to support the formation of a NEJAC Working Group to evaluate such issues as the adequacy of current standards to address emissions to all media, illegal commingling of hazardous and medical waste, and appropriate regulatory response, the adequacy of coastal zone regulatory standards to address the transport of



waste from city, interstate and regional environmental and health impacts, and means to assure public participation in all phases of the transition in waste disposal caused by closure of municipal land fills such as Fresh Kills;

BE IT FURTHER RESOLVED, that the NEJAC calls upon U.S. EPA to undertake a study on the demographic characteristics associated with the location of municipal waste transfer stations; and

BE IT FINALLY RESOLVED, that the NEJAC calls upon the U.S. EPA Administrator to communicate to the City of New York U.S. EPA's concerns regarding the problems associated with the proliferation of waste transfer stations and U.S. EPA's intended response actions to this resolution.

**APPENDIX 2. List of Working Group Members**

**Mathy Stanislaus, Esq.**  
**Chair, WTS Working Group**  
Environ-Sciences/MELA  
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**Sue Briggum,**  
(Sits on the NEJAC Full Advisory Committee)  
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WMX Waste Management  
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**Vernice Miller-Travis**  
Partnership for Sustainable Brownfields  
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Chair, NEJAC Waste and Facility Siting  
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Committee Against Toxic Waste)  
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**Samara Swanston, Esq.**  
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113 Berry St.  
Brooklyn, NY 11211

**Designated Federal Official (DFO):** Kent Benjamin, EPA Office of Outreach and Special  
Projects  
Phone: 202-260-2822, Fax: 202-260-6606; E-mail: benjamin.kent@epa.gov

### **APPENDIX 3. Agendas of the Public Meetings**

#### **New York City: November 10, 1998**

##### **9:00 am - South Bronx Panel**

Mr. Carlos Padilla  
South Bronx Clean Air Coalition  
PO Box #53  
Bronx, NY 10454

Ms. Yolanda Garcia  
Nos Quedamos/We Stay  
811 Courtland Avenue  
Bronx, NY 10451

Ms. Majora Carter  
The Point Community Development  
Corporation  
940 Garrison  
The Bronx, NY 10474

Ms. Helen Schaub  
Mothers on the Move  
928 Intervale Avenue  
Bronx, NY 10459

##### **10:00 - Greenpoint/Williamsburg Panel**

Ms. Cathleen Breen  
Neighbors Against Garbage  
c/o NYPIRP  
New York, NY 10007

Mr. Peter Gillespie  
Neighbors Against Garbage  
225 Bedford Avenue  
Brooklyn, NY 11211

The Honorable Chris Carruso  
Connecticut State Legislature  
Legislative Office Building  
Room 5000  
Hartford, CT 06106-1591

Mr. John Fleming  
El Puente de Williamsburg  
211 South 4th Street  
Brooklyn, NY 11211

Ms. Inez Pascher  
Brooklyn Community Board #1  
c/o Williamsburg Around the Block  
Association  
398 Wythe Avenue  
Brooklyn, NY 11211

##### **11:00 - Red Hook Panel**

Mr. Wally Bazemoye  
Red Hook Public Housing Representative  
450 Columbia Street  
Brooklyn, NY 11231

Ms. Sue Peeples  
Red Hook GAGs  
174 Beard Street  
Brooklyn, NY 11231

Mr. John McGettrick  
Red Hook Civic Association  
178 Coffey Street  
Brooklyn, NY 11231

Mr. Greg O'Connell  
Red Hook Businessman  
Pier 41  
204-207 Van Dyke Street  
Brooklyn, NY 11231



**12:30 - Community Technical Assistance Organizations**

Mr. Ron Shiffman  
Director, Pratt Institute for Community and  
Environmental Development  
Steuben Hall  
379 DeKalb Avenue  
Brooklyn, NY 11205

Mr. Eddie Bautista, Community Liaison  
New York Lawyers for the Public Interest  
30 West 21st Street, 9th Floor  
New York, NY 10010-6905

Mr. H. Claude Shostal  
Regional Planning Association  
570 Lexington Avenue  
New York City, NY 10022

Mr. Larry Shapiro  
New York Public Interest Research Group  
9 Murray Street, 3th Floor  
New York, NY 10007-2272

Ms. Barbara Warren, Project Director  
New York Toxics Project  
Consumer Policy Institute  
199 Thornycroft Avenue  
Staten Island, NY 10312

Ms. Leslie Lowe  
Executive Director  
New York City Environmental Justice  
Alliance, Inc.  
171 West 125<sup>th</sup> Street  
New York, NY 10027

**2:00 - Regulatory Agencies (45 min.)/Local Government (45 min)**

Mr. Stanley E. Michels, Chair  
Committee on Environmental Protection  
The Council of the City of New York  
City Hall  
New York, NY 10007

Mr. Frederick Ferrer, President  
Bronx Borough  
851 Grand Concourse  
Bronx, NY 10451

Mr. Howard Golden  
President, Brooklyn Borough  
209 Joralemon Street  
Brooklyn, NY 11201

Ms. Laurieann Silberfeld  
Regional Attorney  
New York State Department of Environmental  
Conservation  
Region 2  
47-40 21st Street  
Long Island City, NY 11101

Representative  
New York City Department of Sanitation  
125 Worth Street  
New York, NY 10013

Mr. Andy Lynn  
Executive Director  
New York City Planning Commission  
22 Reade Street, 32nd Floor  
New York, NY 10007

**3:30 - Waste Trade Panel**

Mr. Bruce Parker, President  
Environmental Industries Association  
4301 Connecticut Avenue, NW

Washington, DC 20008

Ben Victory, Waste Management  
123 Varick Ave  
Brooklyn, NY 11237

**Washington, DC: February 17, 1999**

**8:30 - 9:00 Welcome and Introductions**

Mathy Stanislaus, Chair of NEJAC Working Group and Vernice Miller-Travis, Chair of the NEJAC Waste and Facility Siting Subcommittee  
Timothy Fields, Acting Assistant Administrator, EPA Office of Solid Waste and Emergency Response  
Tom Voltaggio, EPA Region III Deputy Regional Administrator  
Bill Muszynski, EPA Region II Deputy Regional Administrator

**9:00 - 9:45 Community Panel I (45 minutes)**

George Boyd, Ward 5 Resident and Chair, ANC 5B  
Ruth Wilson, Washington Interfaith Network, Woodridge Resident  
Venious Parker, Resident near U-Line Arena  
Robert Nixon, Earth Conservation Corps

**9:45 - 10:30 Community Panel II (45 minutes)**

Helena Darden, Resident near U-Line Arena  
Kathryn Pearson-West, Near Northeast Task Force  
John Frye, Near Northeast Task Force

**10:45 - 11:30 City/ Local Officials: Panel I (45 minutes)**

Lloyd Jordan, Department of Consumer and Regulatory Affairs  
Chair of the D.C. Solid Waste Facilities Task Force

**LUNCH BREAK - 11:30 to 12:30**

**12:30 - 1:15 City/ Local Officials: Panel II (45 minutes)**

Councilmember Sharon Ambrose, Ward Chair, Committee on Consumer and Regulatory Affairs  
Councilmember Carol Schwartz, At-Large Chair, Committee on Public Works and the Environment  
Councilmember Vincent Orange, Ward 5

**1:15 - 2:45 Waste Industry Representatives (90 minutes)**

Bobby Smith, Operator Fairfax County Waste Transfer Station  
Ron Adolph, Waste Management Vice President Greater Washington  
Calvin Smith, Director, Market Development, BFI  
Keith Gordon, Weaver Bros. Consulting  
Ernie Ruckert, EMCON

**2:45 - 4:15 Community Technical Organizations/Experts (90 minutes)**

Neil Seldman, Institute for Local Self-Reliance  
David Fisher, Institute for Public Representation (Georgetown Univ. Law Center)  
Jim Shulman, Sustainable Communities Initiatives



**APPENDIX 4. List of Reviewers<sup>6</sup> on the Draft Report**

Mr. Khalil Abdallah  
National Black Caucus of State Legislators  
444 N. Capitol Street, NW, Suite 622  
Washington, DC 22001

Mr. Ron Adolf  
WMX Waste Management  
4900 Beech Place  
Temple Hills, MD 20748

The Honorable Sharon Ambrose  
Council of the District of Columbia, Ward 5  
One Judiciary Square Building  
441 Fourth Street, NW, Room 710  
Washington, DC 20001

Ms. Annette M. Barbaccia  
New York Mayor's Office  
1 Centre Street, Room 2358  
New York, NY 10007

\*Mr. Richard Barlow, Chief  
Bureau of Waste Management  
Connecticut Department of Environmental  
Protection  
79 Elm Street  
Hartford, CT 06106-5127

The Honorable Max Baucus  
United States Senate  
SH-511 Hart Senate Office Building  
Washington, DC 20510-2602

\*Mr. Eddie Bautista  
New York Lawyers for the Public Interest  
30 West 21st Street, 9<sup>th</sup> Floor  
New York, NY 10010-6905

Ms. Karen Blanchard  
U.S. EPA Office of Air and Radiation  
MD-12  
Research Triangle Park, NC 27711

The Honorable Thomas J. Bliley, Jr.  
U.S. House of Representatives  
2241 Rayburn House Office Building  
Washington, DC 20515-4607

The Honorable Christopher (Kit) Bond  
United States Senate  
SR-293 Russell Senate Office Building  
Washington, DC 20510-2503

Mr. George Boyd, Chair  
Advisory Neighborhood Commission, 5B  
1355-57 New York Avenue  
Washington, DC 20002

Ms. Cathleen Breen  
Neighbors Against Garbage  
225 Bedford Avenue  
Brooklyn, NY 11211

Mr. Chris Brockway  
c/o Black and Veatch  
8400 Ward Parkway  
Kansas City, MO 64114

Dr. Robert Bullard  
Environmental Justice Resource Center  
Clark Atlanta University  
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### **APPENDIX 5. Summary of Comments Received on Draft Report**

The following table summarizes comments received from the various organizations requested to review drafts of the NEJAC Waste Transfer Station Report. Comments were received from 10 of the 89 people who were sent copies of the report. The comments are grouped into categories according to the issues they address. The type of organization providing the comments also is identified.

Reviewer Category	Comments
<b>Effects of WTSs</b>	
Foreign Country Environmental Agency	Refuse collection vehicles usually generate more pollutants in neighborhoods than WTSs.
Community Organization	In Washington DC, multinational corporations have eliminated 80 small, disadvantaged waste hauling businesses. Many problems may be result of mismatched scale, for example size of trucks in residential areas.
Community Organization	The report is too brief on the potential health implications of WTSs.
Community Organization	The report does not adequately develop the aggregate, deleterious effects of WTSs on economic development and quality of life.
Local Government Solid Waste Professional	WTSs do not just affect disadvantaged communities. Suggest focus on impacts of WTSs and avoid classification by certain designations or classes of people to exclusion of others.
Community Organization	Historical haphazard siting of WTSs has created threat to public health discriminating against economically disenfranchised communities.
Engineering Consulting Firm	Solid waste transfer, as a technology provides overall benefits to society. In addition to economic savings, transfer systems by definition reduce vehicle miles traveled. This reduces for all of society air emissions, traffic density, highway wear and tear, fuel consumption, etc. In addition, the WTS provides opportunities for materials recovery, diverting waste otherwise destined for the landfill, and waste screening and inspection to preclude hazardous materials.
<b>Applicability of Case Studies</b>	
State Environmental Agency	Less than half of the citizen concerns listed in the report apply to NH waste transfer stations, which are located largely in rural areas.
State Association	Extensive field work on two urban problem situations does not support conclusion that this is a nation-wide problem of a severity that justifies federal intervention in state and local functions.
State Association	There is no analysis of urban areas where these problems are not encountered.
State Association	The need for suburban or rural best practices manuals is not demonstrated.
State Association	Report could mislead citizens as to where redress should be sought.
State Environmental Agency	Regulatory oversight often is criticized for drive to consistency at expense of a common-sense approach. Should not regulate a WTS in Keene, NH, in the same manner as a WTS in the Bronx.
State Public Works Agency	The need for national best management practices has not been demonstrated. Only two case studies were conducted. Existing state and local regulatory controls have not been shown to be inadequate, if enforced.
Engineering Consulting Firm	The WTSs visited in Washington, DC, and New York City are not representative of proper siting, design, and operational practices. These are poor examples upon which to base a regulatory framework. The vast majority of WTSs, like the one in Fairfax County, are responsibly sited, designed, and operated.

<b>Reviewer Category</b>	<b>Comments</b>
Member of the U.S. Congress**  Community Organization**	The Hunts Point community is interested in retrofitted municipal marine WTSs to the extent that they would handle Bronx waste and reduce truck traffic in the South Bronx. The statement in the report that “the Hunts Point community expressed interest in marine WTSs as a means of reducing area truck traffic.” should not be construed as the community’s interest in a private marine WTS such as the one proposed by American Marine Rail for Hunts Point. That proposed facility does nothing to reduce existing truck traffic in the South Bronx, but would add a 5,000 tons/day facility to a community already saturated with waste facilities.
<b>Verification of Findings</b>	
State Environmental Agency	Many of the concerns are statements of perception rather than of fact. Suggest perceptions be verified before being used as basis for national-level activities.
Local Government Solid Waste Professional	Terms like “enforcement fair share” are vague. Need facts to substantiate.
Local Government Solid Waste Professional	Define “high-conflict WTSs.” What stops a community from creating a high-conflict WTS through public outcry?
<b>Citizen Roles</b>	
County Government	Section VIII.c., second paragraph: Trained citizens should always forward information to environmental enforcement personnel.
County Government	Section VIII.c., fourth paragraph: Giving stakeholder groups “power” to address concerns is vague.
Local Government Solid Waste Professional	The reasons for lack of broad-based citizen input are not clear. Are they not included, bypassed, or not interested?
<b>State and Local Roles</b>	
State Public Works Agency	Siting waste transfer stations is primarily decided by local governments. States address public health, environmental protection, and use of public utilities in site-specific permits.
State Environmental Agency	Citizen concerns over insufficient local regulatory enforcement are repeated throughout report. Suggest that federal regulation will do little to improve local enforcement.
State Environmental Agency	Most waste transfer stations are located in areas of lesser value. Need proper siting criteria, inspection program, effective permitting, and well-crafted rules to prevent siting among populations with little empowerment to prevent the siting.
State Association	State solid waste plans will not provide the leverage envisioned in the report. No measurable federal funding will be provided. Focus should be on successful environmental planning models.
State Association	Remedies for solid waste problems are found primarily in state and local laws and regulations.
State Environmental Agency	Unconvinced that the failings presented in the report cannot be addressed by marrying local planning efforts with state oversight.
Community Organization	Using the phrase “financial programs” is vague. There are over 300 successful “green taxes” in use at state and local levels. Suggest small tax at wholesale level on non-recyclable packaging.
Community Organization	Comprehensive, area-wide planning is most important concept in document.
State Public Works Agency	Grandfathered or historical facilities will always present difficulties for regulatory agencies upgrading standards. Consent decrees should not be used to authorize illegally constructed facilities.
Local Government Solid Waste Professional	Stress ordinances, public meetings, and comprehensive planning will ensure compliance.

<b>Reviewer Category</b>	<b>Comments</b>
Community Organization	Include salvage period law as waste reduction strategy. Permit salvage contractors 30 days to deconstruct/recycle buildings before demolition/landfilling.
County Government	Recommendation II-5, fifth bullet: Disagrees with providing “financial” incentives to neighborhoods that accept WTS; agrees with providing other incentives.
County Government	Recommendation VIII-2: Disagrees with “no exceptions” to third-party inspectors for municipal facilities; consent decree may be appropriate exception.
County Government	Most state and local governments are doing a good job of permit review and enforcement.
Engineering Consulting Firm	Clustering can only be addressed effectively at local level. Regional siting efforts have track record of failure.
Member of the U.S. Congress** Community Organization**	Believe that an integrated enforcement strategy with the collaboration of local, state, and federal agencies is necessary to address the impacts from the <i>ad hoc</i> operations of WTSs.
Member of the U.S. Congress** Community Organization**	Believe that the Area-Wide Selection Process is critical to preventing disproportionate impacts, and to identifying the best locations based on environmental impacts, proximity to communities, equity, and fair share.
<b>Federal Role</b>	
State Association	Disagree with assertion that Subtitle D of RCRA includes authority for EPA to publish regulations, or other directives with force of law, concerning WTSs. Report should at least note that the existence of federal authority is a minority opinion.
State Public Works Agency	Regulatory authority for federal control of waste transfer stations is not clear.
State Public Works Agency	Federal attempts to further regulate solid waste practices may not be accepted by states strapped to meet existing federal mandates.
State Public Works Agency	Waste transfer stations vary in type, size, and complexity. “One size fits all” criteria will impose unnecessary burdens on some sectors.
Local Government Solid Waste Professional	Federal government should lead by example in promoting appropriate disposal methods.
Community Organization	Suggest EPA develop design standards for “complete enclosure” of WTSs.
State Environmental Agency	Priority 1: Agree with Priority 1. To be effective, best management practices must be associated with advocacy and outreach to operators. Suggest EPA encourage states to develop and implement best management practices.
State Environmental Agency	Priority 2: One size does not fit all. An additional layer of federal controls is undesirable.
State Environmental Agency	Priority 3: Welcome EPA support in evaluating existing air control and monitoring devices for adaptation to WTS monitoring.
State Environmental Agency	Priority 4: Endorse priority to establish federal interagency Working Group .
State Environmental Agency	Priority 5: Imposing additional monitoring and reporting burdens on rural sites may have unintended consequences.
Engineering Consulting Firm	RCRA standards for WTSs, similar to Subtitle D requirements for landfills, are likely not workable. For instance, siting standards for landfills relate to avoiding sensitive settings and maintaining the integrity of the encapsulated waste. Design standards are prescribed for liners, but performance standards for leachate management. Because a WTS is actually a truck terminal, national standards would most likely be performance based (e.g., noise levels at the property line). This initiative would conflict with local zoning requirements.
Engineering Consulting Firm	A best management practices manual would be welcomed by industry. Classification by urban, suburban, and rural a good starting point. Volume and traffic flow also relevant classification parameters.



<b>Reviewer Category</b>	<b>Comments</b>
Engineering Consulting Firm	Clear and uniform regulatory requirements are necessary at least on a regional basis to allow fair competition.
Engineering Consulting Firm	<p>Most states and/or local governments are doing a good job with respect to permit review and inspection/enforcement. Model regulations exist that could be a template for federal consideration.</p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Many states require environmental assessments, e.g. MI.</li> <li>• Traffic plans with impact analysis are required by TX, NM, IN, etc.</li> <li>• Illinois required “local approval” by the affected unit of government.</li> <li>• Permit Applications fees can be used by interveners to hire third party experts (IL).</li> <li>• Mandatory operator training and certification is an effective method to raise operator awareness (NM, IL).</li> <li>• Host community benefits are becoming common for urban areas..</li> <li>• Annual fees paid by the operator can be used to fund inspection and enforcement. Fees can be volume or traffic-count based to align with potential impacts.</li> <li>• A rigorous public participation process for new solid waste facilities is required in nearly every state.</li> </ul>
Community Organization	It is U.S. EPA responsibility to promulgate regulations to force municipalities to plan and implement comprehensive and fair solid waste management practices.
Community Organization	RCRA provides authority to initiate better siting processes and reduce impacts of WTSs. U.S. EPA has used this authority in other contexts, such as standards for disposing of hazardous municipal solid waste. Implementation process is needed, including review of state solid waste management plans.
Member of the U.S. Congress** Community Organization**	Agree that the adoption of best management practices will be beneficial to set common guidelines for WTS operation. However, a voluntary system cannot replace the need for enforceable requirements.
Member of the U.S. Congress** Community Organization**	Highly support the recommendation for a transition strategy to reduce the impacts from WTSs in communities that suffer from clustering of WTSs. Urge EPA to immediately embark on a neighborhood-specific process in each community that suffers from clustering to reduce the total number and capacity of WTSs.
Member of the U.S. Congress** Community Organization**	The EPA should immediately begin using its authority to address the impact on public health and the environment from WTSs by: 1) reviewing solid waste management plans in states where WTSs are a significant component of waste management; and 2) convene a regulatory process for issuing regulations on WTSs.
Consumer Policy Institute**	EPA should complete the study of WTSs called for in the NEJAC resolution. As part of the study, evaluate total air emissions from WTSs for Title V purposes. Include all equipment essential to the operation of the facility—trucks delivering and removing waste, and all onsite mobile and stationary equipment for waste processing.
Consumer Policy Institute**	EPA must pass national regulations for WTSs.
Consumer Policy Institute**	EPA should request a more substantial budget for solid waste and educate Congress that the lack of EPA solid waste funding and comprehensive solid waste planning is partly responsible for the current waste export problems.
Consumer Policy Institute**	EPA should promulgate regulations for solid waste planning, including requirements for preferred solid waste alternatives such as waste prevention, recycling, and composting.
Consumer Policy Institute**	EPA should review and approve/disapprove all state solid waste management plans. Where the sheer volume of waste, the regional implications, or the potential impacts are large, oversee local solid waste plans.

Reviewer Category	Comments
<b>Applicability of Clean Air Act</b>	
U.S. EPA, Office of Air and Radiation	More accurate to state “use of newer engines and/or the addition of after-treatment technology or engine retrofits.”
U.S. EPA, Office of Air and Radiation	Explain how addressing off-lining of diesel engine control devices contributes to objective to develop incentives for conversion to cleaner burning diesel engines.
U.S. EPA, Office of Air and Radiation	Diesel emissions control devices work primarily at highway speeds. Greatest impact of disabling these devices not necessarily on communities in proximity to WTSs. Suggest revising to “This practice may have impacted communities in proximity to WTSs.”
U.S. EPA, Office of Air and Radiation	Suggest recommending that older diesel trucks be retrofitted with low NOx kits being developed as result of consent decree.
U.S. EPA, Office of Air and Radiation	SIPs address regional, not local, emissions and vehicle miles traveled.
U.S. EPA, Office of Air and Radiation	Need to clarify whether “clean fuel fleets” refers to federal Clean Fuel Fleet program (under CAA), state requirements (not under CAA), or voluntary WTS commitments. Suggest avoiding term “clean fuel fleet.”
U.S. EPA, Office of Air and Radiation	Recommendation VI.b: Replace first sentence with “The CAA preempts states from promulgating emission standards for new (and some older) mobile sources.”
U.S. EPA, Office of Air and Radiation	Recommendation VI.a: Rephrase recommendation to “Guidance to determine Applicability of Title V and New Source Review Requirements.”
U.S. EPA, Office of Air and Radiation	Remove references to New Source Performance Standards because it is not possible to address mobile source emissions under NSPS.
U.S. EPA, Office of Air and Radiation	Remove references to Urban Air Toxics program because air toxics are not emitted by WTSs.
U.S. EPA, Office of Air and Radiation	Need to clarify the legal authority and types of noncompliance to be addressed by dedicating settlement funds for environmentally beneficial projects.
U.S. EPA, Office of Air and Radiation	Need information to substantiate statement that establishment of clear criteria for determining emission credits for retirement of high emitting engines is delayed.
<b>Additions to Text</b>	
Community Organization	Include enclosure of WTSs or containerization in Exhibit 5.
U.S. EPA, Office of Air and Radiation	Describe Carl Moyer Program and NESCOM study in footnote or attachment.
County Government	Exhibit 2, section 1: Add bullets on 1) zoning of adjacent property; 2) transitional land uses; 3) proximity to rail service and navigable waterways.
County Government	Exhibit 2, section 2: Add bullets on 1) containerization; 2) separation.
County Government	Exhibit 2, section 3: Add bullet on site security and control of illegal dumping.
County Government	Exhibit 3, section 1: Add bullet on proximity to rail service and navigable waterways.
County Government	Exhibit 3, section 2: Add bullets on 1) potential for expansion; 2) site constraints.
County Government	Exhibit 4, section 1: Add bullet on waste shipping procedures.
County Government	Exhibit , section 2: Add bullets on 1) power loss; 2) software malfunction.

\*\* Comments received after the deadline for comments on the draft report.

## **APPENDIX 6. Regulatory Authority in New York City and Washington, DC**

**NEW YORK CITY:** In New York City, state and local laws govern the operation of waste transfer stations. Titles 9, 11, and 13 of Article 27 of the state Environmental Conservation Law (ECL) provide for the treatment and disposal of solid and hazardous waste through the Solid Waste Management Plan which is updated and overseen by the New York State Department of Environmental Conservation (NYSDEC). Article 71 provides strong enforcement authority for the Environmental Conservation Law and prohibits, among other things, “depositing unwholesome substances on or near a highway or route of public travel, or on land or water” (NY ECL §71-3501). Violation of ECL §71-3501 is punishable as a misdemeanor. NYSDEC is authorized to regulate the operation of solid waste management facilities to prevent or reduce air, water, and noise pollution as well as odor, litter, flies, vermin, and other conditions affecting the public health, safety and welfare.

NYSDEC has issued detailed regulations pertaining to the operation of waste transfer stations. Construction and demolition debris landfills are governed by 6 NYCRR §360-7. This section also governs land-clearing debris landfills of 3 acres or less in size. Construction and demolition debris processing facilities are governed by 6 NYCRR §360-16. Regulated medical waste transfer stations are governed by 6 NYCRR §360-10,17; and a permit is required to construct and operate these facilities. Facilities that transfer or process solid waste are governed by 6 NYCRR §360-11. A permit is required to construct and operate a solid waste transfer station. Design requirements for waste transfer stations are set forth in 6 NYCRR §360-11.3, and operational requirements are found in §360-11.4.

**Non-putrescible solid waste transfer stations:** At the local level, Title 16 Chapter 4 of the Rules of the City of New York (RCNY), Department of Sanitation, regulates non-putrescible solid waste transfer stations. For coordination purposes, 16 RCNY §4-02 indicates that any person who owns, operates, maintains, or controls a non-putrescible solid waste transfer station shall comply with: 1) the state Environmental Conservation Law and all permit conditions stated in any permit issued thereunder; 2) Titles 16 and 24 of the Administrative Codes of the City of New York (Air Pollution and Noise Control); 3) Subchapter 3 of Chapter 1 of Title 26, and Chapter 1 of Title 27 of the Administrative Code of the City of New York (Building Code); 4) the Zoning Resolution of the City of New York; 5) the New York City Health Code; 5) and all other applicable local and state laws and rules including general transportation and vehicular transport routes. A permit is required to operate a non-putrescible solid waste transfer station (16 RCNY §4-03). The permit may be suspended or revoked upon violation of the terms of Subchapter 16, any of the applicable sections of the Administrative Code or the Environmental Conservation Law, or any applicable permit conditions, law, or rule.

**Construction and demolition debris waste transfer stations:** Permits are required for construction and demolition debris transfer stations, and such stations must be capable of complying with all the requirements of 16 RCNY §14-06 and 16 RCNY §4-05. The operation and maintenance requirements include ensuring adequate ventilation and sufficient space for ingress and egress (including the ability to accommodate emergency vehicles) and facilitating complete inspection of the transfer stations. Operation and maintenance of construction and demolition debris transfer stations are governed by 16 RCNY §4-06. Construction and

demolition debris transfer stations must be operated so as to avoid any nuisance or condition hazardous to public health or safety. They must be kept free of all vectors, such as rodents, insects, other pests, and conditions conducive to vectors. They also are required to have on-site proof of weekly engagement of certified exterminators. Transfer stations are not permitted to emit odors (including those of deodorizing materials) so as to violate the odor or air pollution codes of the Administrative Code of the City of New York. In an unenclosed facility located 300 feet or less from a residential zone, non-putrescible waste may not be maintained in piles greater than 8 feet high. Bay doors are required to be kept closed unless vehicles are entering or exiting. Vehicle exhausts must be vented through filters, and no burning is permitted at transfer stations. Permits are required for fill material transfer stations by 16 RCNY § 4-07. Operation and maintenance of fill material transfer stations are governed by 16 RCNY §4-08.

**Putrescible solid waste transfer stations:** Putrescible solid waste transfer stations also are regulated by the Rules of the City of New York. 16 (RCNY §4-11). Like non-putrescible solid waste transfer stations, putrescible solid waste transfer stations are required to comply with all state and local laws and rules, including general transportation and vehicle transport routes. Permits must include written plans for the control of noise and odors (16 RCNY §4-14). Permits are subject to suspension and revocation for violation of the terms of Chapter 4 or any applicable section of the Administrative Code or any other applicable permit condition, law, or rule. Design and equipment requirements are set forth in 16 RCNY §4-16; operation and maintenance rules are set forth in 16 RCNY §4-17.

**Transporting Recyclable Materials:** Licensees that collect or transport designated recyclable materials must transport them to putrescible or non-putrescible waste transfer stations or other facilities that accept such materials for recycling or reuse (16 RCNY § 5-12). Such materials may not be brought to a solid waste disposal facility containing recyclable materials in detectable amounts. Private transporters are required to recycle recyclable materials and to take them to transfer stations or other facilities that accept such materials (6 RCNY §2-186 and 16 RCNY §1-10).

**Asbestos waste:** Storage of waste containing asbestos is prohibited except in accordance with the provisions of the New York City Administrative Code (NYCAC) §16-117.1. This code requires, in pertinent part, that waste containing asbestos be wet down to prevent visible emissions and sealed in leak-tight containers. Moreover, stored asbestos is required to be inspected once every 24 hours to assure that there are no visible emissions of asbestos dust into the air.

**Permit Program:** Title 16 of NYCAC mandates permits for operators of dumps, non-putrescible and putrescible waste transfer stations, and fill material operations (16 NYCAC §116-130). This section prohibits any person or public agency other than the Department of Sanitation from operating a dump, solid waste transfer station, or fill material operation without a permit. The Department's Commissioner has the power to adopt rules for the operation of waste transfer stations and is required to adopt rules in consultation with the commissioners of health and environmental protection for the protection of public health and the environment (16 NYCAC §16-131). These rules can include regulation of siting, hours of operation, noise, odor control, ventilation, and other matters pertaining to waste transfer station operation.

**Nuisances:** Nuisances are also prohibited by the administrative code of the City of New York. Nuisances are defined as any conditions dangerous to human life or detrimental to health (17 NYCAC §17-142). Failure to abate a nuisance pursuant to the New York City Health Code constitutes a misdemeanor (17 NYCAC §17-143). Buildings, places or things that are dangerous to life or health also are declared public nuisances (17 NYCAC §17-145).

**WASHINGTON, DC:** In Washington DC, DC Code § 6-3401 supports recycling. DC Law §2-11, Chapter 34A Title 6 §6-3430 through §6-3439 defines solid waste transfer stations, dumps, recycling facilities, composting facilities and other facilities intended to be interim or final disposal sites for solid waste.

Permits are required for solid waste facilities pursuant to §6-3432. However, permits are not required for:

- Recycling facilities;
- Composting facilities;
- Existing construction and demolition debris facilities with a valid certificate of operation effective one year prior to 1994;
- Transfer, storage, or disposal facilities with a valid permit pursuant to Chapter 7; solid waste facilities owned or operated by the District of Columbia; and
- Temporary storage facilities for salt, sand, dirt, or other non-putrescible materials resulting from a municipal operation.

The Mayor of DC may require corrective action where a threat exists to human health, public welfare, or the environment as a result of the construction, operation, or modification of a solid waste facility. If there is failure to comply with mandated corrective action, the Mayor may direct that the action be commenced for injunctive or other relief. On April 9, 1999, the DC Council proposed to consolidate current public waste transfer operations into a single modernized waste transfer station. The proposal would redesign a municipally owned site as a citizens' convenience center for depositing recyclable materials.