

# Responsiveness Summary

for

## BEYOND WASTE: A SUSTAINABLE MATERIALS MANAGEMENT STRATEGY FOR NEW YORK STATE

NEW YORK STATE'S

SOLID WASTE MANAGEMENT PLAN

By notice in the New York State Register and the Environmental Bulletin Notice (ENB) on May 5, 2010, the New York State Department of Environmental Conservation began the process of revising and updating the State Solid Waste Management Plan with the publication of *Beyond Waste: A Sustainable Materials Management Strategy for New York State*, and a Draft Generic Environmental Impact Statement (DGEIS).

The Division of Solid & Hazardous Materials (DSHM) scheduled five information sessions and public hearings to explain the proposed State Solid Waste Management Plan and receive public comment. The hearings were conducted before a DSHM staff member and a verbatim transcript was made by a stenographer at each hearing session. Verbal and written comments on *Beyond Waste* and the DGEIS were received at each hearing location. Each session was opened with a summary statement explaining the procedure of the hearing and followed by presentations by Ms. Resa Dimino, Special Assistant to the Commissioner in the Commissioner's Policy Office, and Mr. Thomas Lynch, P.E., Chief of the Beneficial Use and Special Projects Section. The information sessions and public hearings were held at the locations and dates below as published in the ENB on May 5, 2010.

The comment period was extended to August 16, 2010 as published in the ENB on June 9, 2010. There were many commentors who chose to provide their comments electronically via fax or email as well as by regular mail delivery. There were also several organized mail-in campaigns utilizing form letters and emails. In all, over 430 form letter or email comments were received. A total of over 1300 comments were received. A list of the commentors is provided in Appendix A of the Final Generic Environmental Impact Statement (FGEIS).

The Stony Brook hearing was held on June 7, 2010 in the Stony Brook University, School of Marine and Atmospheric Sciences, Room 120, Endeavor Hall, South Campus, Stony Brook, New York at 5:30 pm. Approximately 27 attendees heard the presentations and approximately 2 attendees provided spoken and/or written comments. Syed Rahman, P.E. acted as Hearing Officer.

The New York City hearing was held on June 8, 2010 in the New York City Department of Health, 125 Worth Street, 2<sup>nd</sup> Floor Auditorium, New York, New York at 5:00 pm. Approximately 32 attendees heard the presentations and approximately 12 attendees provided verbal and/or written comments. Paul John, P.E. acted as Hearing Officer.

The Albany hearing was held on June 15, 2010 in the NYSDEC, Public Assembly Rooms 129A&B, 625 Broadway, Albany, New York at 5:00 pm. Approximately 40 attendees heard the presentations and approximately 17 attendees provided verbal and/or written comments. Jeffrey Schmitt, P.E. acted as Hearing Officer.

The Buffalo hearing was held on June 23, 2010 in the Sheridan Parkside Community Center, 169 Sheridan Parkside Drive, Tonawanda, New York at 5:15 pm. Approximately 20 attendees heard the presentations and approximately 8 attendees provided verbal and/or written comments. Mark Hans, P.E. acted as Hearing Officer.

The Syracuse hearing was held on June 24, 2010 in the New York State Fairground Art and Home Center, Martha Eddy Room, 81 State Fair Boulevard, Syracuse, New York at 5:00 pm. Approximately 26 attendees heard the presentations and approximately 15 attendees provided verbal and/or written comments. Tim DiGiulio, P.E. acted as Hearing Officer.

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**Comment 1:** Regarding the generic environmental impact statement, the biggest environmental impact to the state is the failure to adequately implement the increased diversion from disposal.

**Response:** The quantitative goal of the Plan is to reduce waste disposal.

**Comment 2:** While I support many elements of the Solid Waste Generic Environmental Impact Statement (GEIS) plan, I have major concerns regarding incineration and landfill capacity increases. I fear they would reduce efforts to expand recycling and composting, and would jeopardize your efforts in reducing waste.

**Response:** Comment noted.

**Comment 3:** This Draft Generic Environmental Impact Statement (DGEIS) clearly does not intend to meet high standards for alternative analysis. The choice of alternatives in the DGEIS is rather underwhelming. We expect better from DEC. It is claimed DEC is the state's materials manager. Can the statutory authority for this statement be provided?

**Response:** There are countless variations of core materials management strategies that could be analyzed in the DGEIS. An evaluation of all of the potential variations in a planning document is neither required by nor the intended purpose of the DGEIS. The Plan itself contains much of the evaluation that led to the path it proposes. The DGEIS evaluated more general alternatives and options available to the state, but not otherwise specifically addressed in the Plan. DEC does not make any claim to be the state's materials manager. The DGEIS rejects an alternative that would have the state assume management of materials and waste in the state.

**Comment 4:** On p. 24 of the DGEIS, it states that no negative environmental impacts will result from product stewardship. I do not believe that statement can be verified with certainty. Similarly, although the Plan will clearly require new waste management facilities in New York State, the authors disclaim any responsibility for evaluating impacts from these, suggesting site-specific reviews will suffice.

**Response:** DEC has proposed product stewardship as a central element of the Plan because it is expected to improve materials management systems by diverting materials that are toxic or otherwise difficult to manage. Similarly, other recommendations in the Plan are expected to reduce environmental impacts. Any facilities that resulted from product stewardship programs or other Plan recommendations would need to undergo their own SEQR evaluation. Since the Plan does not dictate specific facilities or technologies to be used by communities and companies in the state, it does not warrant a detailed SEQR facility-based analysis.

**Comment 5:** Can DEC provide: better citations for the waste composition studies used to develop the waste composition analysis; the method used to construct the data sets for waste composition studies; the inputs used to derive the data presented as an output from the NERC model; and information on how the waste stream volumes were derived.

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**Response:** Additional information has been added as a component of new Appendix H.

**Comment 6:** The DGEIS should have explored other options, such as meeting the goals of the 1987 Solid Waste Management Plan (SWMP) (50 percent diversion and the remainder to municipal waste combustion), or a less aggressive approach to some of the Plan's recommendations, like having PAYT mandatory only in non-urban areas.

**Response:** There are countless variations of core materials management strategies that could be analyzed in the DGEIS. An evaluation of all of the potential variations in a planning document is neither required by nor the intended purpose of the DGEIS. The Plan itself contains much of the evaluation that led to the path it proposes. The DGEIS evaluated more general alternatives and options available to the state, but not otherwise specifically addressed in the Plan.

**Comment 7:** The Plan is dependent on actions occurring at specific times and in particular ways. If these do not occur, it is entirely possible that important aspects of the Plan will be altered. If that is the case, then the existing EIS may no longer be appropriate.

**Response:** DEC will reevaluate progress toward the Plan's goals, and the need for revision to the GEIS, in biennial Plan updates.

**Comment 8:** If a planning unit were to craft a local SWMP that meets the criteria of the Plan, would this DGEIS reduce any of the SEQRA responsibilities for that planning unit? Could the planning unit simply conduct a supplemental review of the site-specific elements of its Plan?

**Response:** Final SEQRA determination responsibility for local solid waste management plans (LSWMPs) rests with the planning unit. All available information, including documentation in the Plan, is available for use by planning units as part of their evaluations.

**Comment 9:** Why is DEC promoting a treatment technology (composting) to reduce the volume treated at a waste-to-energy (WTE) facility when the GHG benefits of WTE are significant? The lack of an EIS for in excess of 4 million tons of composting proposed by the Plan supports that there is no proven benefit to compost rather than combustion. The Plan does not address whether an existing waste disposal infrastructure, including a WTE facility, benefits from diverting organics for composting, environmentally or financially. From a transportation viewpoint alone, one would have to conclude that additional collection routes would increase the contribution to the GHG inventory.

**Response:** The lack of an EIS for the increase in composting proposed by the Plan has no relationship to the benefits of composting as compared to combustion. Composting has multiple environmental benefits including capturing the value of the nutrients in organic materials to rebuild the state's soil structure, reducing greenhouse gases by avoiding the generation of methane and sequestering carbon

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in the soil, and creating a valuable product that can be used in landscaping and agricultural applications. According to EPA's Waste Reduction Model (WARM), composting food scraps provides a greater net GHG reduction than combusting those scraps for energy recovery. Because the Plan does not dictate which specific technologies or approaches must be used by planning units, it does not include modeling of the environmental impacts of various diversion scenarios. A full financial analysis is outside of the scope of this Plan. It should be noted that many communities in the U.S. and Canada have implemented source separated collection of organics without adding truck routes or collection costs by reevaluating their collection systems when separate collection of organics is added.

**Comment 10:** Currently yard waste is banned from WTE facilities, yet the information presented in the Plan indicates there is a benefit to combustion of wood materials vs. composting. Based on this, why isn't the Plan proposing to lift the WTE ban?

**Response:** Composting has multiple benefits, including capturing the value of the nutrients in organic materials to rebuild the state's soil structure, reducing greenhouse gases by avoiding the generation of methane and sequestering carbon in the soil, and creating a valuable product that can be used in landscaping and agricultural applications. The disposal ban supports the composting infrastructure in place for leaf and yard debris. The August 2010 update of EPA's WARM model indicates a greater GHG reduction from composting yard trimmings and branches as compared to MWC.

**Comment 11:** Section 4.0 of the GEIS states that the Plan is a guidance document that lays out a foundation or a menu of options for local governments. What is the likelihood that the state will meet its goal of reducing GHG emission 80 percent by 2050 if it allows each locality to do its own thing?

**Response:** Solid waste and materials management has traditionally been a local responsibility and DEC expects that it will continue to be so. As a planning document, the Plan does not create any new mandates or obligations but recommends statutory changes in key areas – designating a minimum list of materials to target for recycling, more consistently requiring local solid waste management planning, etc.—to improve constancy in programs across the state.

**Comment 12:** The Plan notes that it is likely that new organics recycling technologies and methods will surface during the planning period. The Plan's aggressive goals do not allow much time for new technologies to be developed, regulated and evaluated. How will DEC address the "environmental concerns"?

**Response:** DEC has revised the goals of the Plan to phase them in over a 20-year timeframe. This should allow ample time for new technology to develop.

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**Comment 13:** In Section 8.4.1 – Organics Recycling Technologies and Methods, it is stated: “This is a dynamic area of waste management, new technologies for organics recycling and methods available will likely surface in the coming years, each posing environmental concerns that must be addressed prior to their use.” The GEIS states: “There are no anticipated significant adverse environmental impacts from adopting *and implementing* the Plan.” What is DEC’s position in regards to addressing the “environmental concerns” mentioned in this section? ECL Title 1, 27-103(d) requires DEC to address these issues in the Plan.

**Response:** The Plan addresses the requirements of ECL § 27-0103 (3)(d) with regard to current technologies. As with any new technology, environmental concerns will be evaluated through the solid waste management permitting process and addressed as appropriate in biennial updates to the Plan.

**Comment 14:** The Plan seeks legislative recommendations, yet legislation is exempt from SEQR. A full EIS and economic analysis must be conducted on the impact of the Plan. Legislation is exempt from SEQR and the legislature must be informed of the consequences of the proposed legislation. DEC has a responsibility to assess the economic as well as the environmental impact of a proposal that calls for a statewide infrastructure that will process a proposed 12 million tons of MSW annually.

**Response:** A full economic analysis is outside of the scope of this Plan. The DGEIS presents the best information DEC has available to evaluate the environmental impact of the Plan’s implementation.

**Comment 15:** DEC notes on p. 21 of the GEIS that NYC contributes 75 percent of the state’s exported waste. However, the GEIS claims erroneously that the reason for this high volume of export relates solely to Fresh Kills closure. It was politics at its worst that interfered with legal mandates, regulatory requirements, and good public policy, enabling NYC to export its waste stream and backtrack on its earlier recycling efforts.

**Response:** The text notes that the closure of Fresh Kills is “perhaps the most significant reason,” but not the only reason for increased exports.

**Comment 16:** EPA’s composition analysis is flawed; it is intended to be a conceptual depiction of what wastes in the U.S. might be like; it is not intended to be accurate for actual waste streams at any time or place, and trouble always ensues when this is forgotten. Still, deviations from the model need to be well justified. DEC describes a waste stream for New York State that is different in meaningful ways for some materials, but does not provide strong references, justification or method. Since important aspects of the analyses in the Plan depend on composition, it is important to provide strong justification.

**Response:** Additional information on DEC’s composition analysis sources and methods has been added as a component of new Appendix H.

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**Comment 1:** A published study suggests that the goal of waste management policies should not be to initiate change, but to alter the industry's product modification process so that impacts on the waste stream are considered.

**Response:** DEC concurs. The Plan proposes product stewardship as a key policy approach to ensure that the costs of end-of-life management are considered when products and packaging are designed. For more on product stewardship, see Section 5.

**Comment 2:** A published study argues that waste solutions must meet three standards: technical feasibility, market participation and personal responsibility. The Plan did not consider the first two standards.

**Response:** The Plan meets all three standards: it suggests approaches that are all proven to be technically feasible, distinguishing them from untested technology; it considers the state of the current marketplace and incentives for market enhancement; and it relies on responsibility of all parties including the public, the private sector and government.

**Comment 3:** All waste generators (i.e., residential, industrial and commercial) must be addressed in this Plan and meet similar requirements.

**Response:** DEC intends for the Plan to address all waste generators equally. At the local level, all sectors must be included and addressed in local solid waste management planning. However, implementation of various solid waste policies and programs will often vary among sectors due to local factors.

**Comment 4:** Fines must be associated with a failure to comply with the Plan and be large enough to incentivize compliance by the commercial and institutional sectors.

**Response:** The Plan is not an enforceable document and does not include any mandates or sanctions. However, DEC and local municipalities may use penalties as disincentives to noncompliance with state law and regulations, and local solid waste management and recycling laws and ordinances.

**Comment 5:** The state benefits from a mix of public and private collection, disposal and recycling operations. Waste flow is determined by economics and efficiency; it should not be forced into a system based on who operates it, as this would increase costs and reduce efficiency.

**Response:** The Plan does not recommend restricting waste flow, though it recognizes that flow control can be a valuable tool for local governments seeking to develop self-sufficient systems (see Section 3.4).

**Comment 6:** The Plan introduces the concept of consistency, which may require local solid waste management plans to be amended to include incoming and outgoing waste and recyclables. This could lead to inefficiencies and political intervention in decision-making. We

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urge DEC to let economics and environmentally sound practices dictate the flow of waste and recyclables.

**Response:** The Plan seeks to ensure that all of the state's communities consistently implement key programs, including planning and recycling. In developing local solid waste management plans, it is critical to include an accounting of all of the planning unit's recycling and waste capacity, management methods, and waste and recyclables quantities. This has been a requirement since the regulations for planning were promulgated in 1989 (see Part 360-15).

**Comment 7:** Counting and assessing solid waste is difficult, and the Plan does not have a very sophisticated discussion of these issues, although they are important to the analyses that underlie the Plan. The values used often have no or little verifiable documentation and are poorly presented.

**Response:** Additional information has been added as a component of Appendix H.

**Comment 8:** In reviewing the Plan and the 2008 Planning Unit Profile for our unit we've identified a number of errors. Some of the data related to tonnages from our region are incorrect. The Plan should be based on accurate data.

**Response:** The Plan is based on the most accurate information available to DEC at the time of writing. Absent any specific identification of errors, the data presented in the Plan will remain as listed.

**Comment 9:** DEC must carefully consider how the Plan harmonizes with the State Energy Plan and other state plans. For example, yard waste and wood waste are needed for large scale food waste composting and are also in demand as a biomass fuel source.

**Response:** The State Energy Plan is very broad in scope and general in its recommendations; it does not specifically address waste issues. DEC staff coordinated with staff who worked on the State Energy Plan to ensure that the goals and recommendations of this Plan are consistent with the State Energy Plan. In addition, competition for biomass is addressed in Section 8.4.4 of this Plan.

**Comment 10:** The Plan anticipates adequate staffing capacity at DEC to provide technical assistance to local planning units to help implement the Plan. Concurrently, the state is making efforts to reduce its workforce through both retirement incentives and attrition. It seems unlikely that there will be sufficient staff to provide the technical assistance promised in the Plan, in the near future.

**Response:** Current fiscal circumstances are certainly very challenging. DEC will work to provide the greatest level of technical assistance possible within current fiscal constraints. The planning period for this Plan is ten years. As with any long-term planning document, consideration must be given to both current and future



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circumstances and direction. DEC will revise the Plan as necessary in the biennial updates.

**Comment 11:** We urge you to implement the Plan as soon as possible.

**Response:** Comment noted.

**Comment 12:** We applaud the plan's emphasis on sustainable materials management, rather than waste disposal.

**Response:** Comment noted.

**Comment 13:** The Plan should more directly address the fact that failing to implement this Plan would have irreversible environmental impacts and lost opportunities for job creation.

**Response:** The Plan clearly articulates the benefits of its implementation, and by extension, the opportunities that would be missed without full implementation.

**Comment 14:** We strongly support the goals to “strive for public participation, fairness and environmental justice” and to “ensure that solid waste management facilities are sited, designed and operated in an environmentally sound manner.”

**Response:** Comment noted.

**Comment 15:** I support the Plan's recommendations that create disincentives for disposal (PAYT), promote product stewardship, (promote) comprehensive recycling across all sectors, and promote tip-fee surcharges to fund programs. I ask DEC to consider the impact of your decisions on the seventh generation, stand tough in your goals, and lead by example.

**Response:** Comment noted.

**Comment 16:** The Plan should be a zero-waste plan. It should recommend restricting capacity increases at the state's largest landfills and establishing a moratorium on municipal waste combustion. The GEIS dismissed zero waste as not achievable during the timeframe for implementation. We propose that you reconsider that and go for zero waste.

**Response:** New York State joins Washington State in using the term “beyond waste” to describe a comprehensive materials management approach. It stops short of zero waste by recognizing that some waste is inevitable, but also that looking “upstream” at how products and packages are designed and used will help to reduce or eliminate waste downstream. DEC believes that it is important to maintain flexibility in decision making with regard to disposal capacity. As the Plan is implemented, reliance on disposal should diminish substantially. Additional policies regarding disposal capacity will be evaluated in biennial Plan updates.

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**Comment 17:** Materials management programs and their GHG benefits should become a substantial part of the new state Climate Action Plan and its implementation.

**Response:** DEC materials management staff is coordinating with the Climate Action Plan team to ensure that the goals of the Plan are reflected in the Climate Action Plan.

**Comment 18:** The Plan should require that communities adopt incentive programs such as PAYT. We support extended producer responsibility; it is really important.

**Response:** The Plan recommends that DEC require planning units to evaluate and implement incentive programs, like PAYT, where feasible. It also focuses on product stewardship (also known as extended producer responsibility) as a key policy approach for the state.

**Comment 19:** We support provisions in the Plan to transition to a system that maximizes material diversion, with oversight by DEC, along with provisions that recognize the need for infrastructure to divert more materials.

**Response:** Comment noted.

**Comment 20:** I concur with the Plan's recommendations to: prohibit comingling of source separated recyclables with waste; ensure recycling is implemented in state agencies; increase state appropriations for municipal recycling; launch a statewide education campaign to promote reduction and recycling; and enact regulations to oversee electronic waste recycling.

**Response:** Comment noted.

**Comment 21:** The Plan needs to identify and implement real funding mechanisms and then recommend legislative support for these fees. It should explore the advantages of a plastic bag tax. Also, solid waste system "availability" fees have proven to be effective funding mechanisms.

**Response:** The Plan recommends that new revenue streams be established through legislation. A discussion of a potential plastic bag tax has been added to Section 6.3.1. System availability fees are discussed in Section 6.3.2 (f).

**Comment 22:** Research suggests that logical, information-driven planning is preferable to emotional or poorly grounded arguments. It is unclear whether the plan meets this preference. While the Plan contains useful information, it is not a realistic, practical planning tool. It is a bad plan, and DEC should not adopt it.

**Response:** Because of the diversity of circumstances among and between municipalities, ever improving management technology, and unknowns about future resources, the Plan cannot offer a step by step course of action for planners. Rather, the

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information and policy analyses set forth in the Plan are intended to serve as planning resources for the state and planning units, and the Plan's goals provide an overall direction and measure of success.

**Comment 23:** DEC should go back to the drawing board and develop a plan that: is based on facts and not assumptions; provides realistic goals; identifies markets for the materials targeted for recycling; provides feasibility analyses and assessments for technologies recommended; and identifies where the funding will come from and how it will be allocated.

**Response:** The Plan is based on the best data available to DEC. The goals have been modified to be phased in over a longer period of time (see Table 2.1). The Plan identifies materials that have consistently available markets, identifies those that need market development attention, and includes recommendations to develop markets. Technology assessments will be provided as follow up documents to the Plan. Initial assessments will focus on organics recycling technologies, and others will follow suit. The Plan recommends a menu of options for the Legislature to consider in establishing new revenue streams to fund the Plan's implementation.

**Comment 24:** The Plan is unruly and lacks clear direction for local planning units. DEC should consider issuing a 25 page report with SMART (specific, measurable, achievable, realistic and timely) goals. It may not last 10 years, but it will lead to better results than the current draft.

**Response:** Given the amount of time that has elapsed since the state has issued a Plan or Plan update, there is a wealth of information to share on materials management and disposal strategies and approaches. Therefore, the Plan is a lengthy document intended to serve as a resource to the public, local governments, and the private sector. In a parallel effort, DEC is working to develop tools and resources to assist planning units in developing the next generation of local solid waste management plans that take a materials management approach.

**Comment 25:** The implementation of the plan would significantly increase the cost to manage what is currently in the waste stream.

**Response:** DEC has seen no evidence to support this statement. Transitioning to a materials management approach will shift costs from disposal, to systems that capture more of the materials value. Whether or not costs increase depend on a host of factors that vary from one community to the next. Still, the Plan acknowledges the importance of assisting and providing incentives to local governments as they make new investments in infrastructure and other program elements, particularly in today's economic climate.

**Comment 26:** The Plan fails to designate who will do what or how the Plan will be enforced; it does not give preference to municipal waste combustion over landfilling; it ignores the budget realities facing the state and local governments; and it fails to estimate per capita costs or perform a cost-benefit analysis.

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**Response:** The programmatic and regulatory recommendations in the Plan guide DEC's own activities, unless otherwise noted. Legislative recommendations are for the Legislature's consideration. The Plan states that municipal waste combustion is preferable to landfilling both from a greenhouse gas perspective (see Section 4.1.4), and generally (see Section 9.3). The Plan acknowledges the financial pressures that local and state governments are under and recommends a host of new revenue sources for the Legislature's consideration. A full economic analysis is outside of the scope of this Plan. Since the costs and conditions vary from one community to the next, sometimes significantly, it is important that the comparative costs of program options be evaluated as a part of the local planning process. Finally, the Plan is not an enforceable document.

**Comment 27:** The Plan rests too heavily on packaging stewardship, which should be federal.

**Response:** Packaging stewardship is an important part of the Plan, but it is just one of a host of recommendations. While a uniform national system for packaging stewardship makes sense, like other stewardship legislation, it is likely to proceed at the state level first. DEC is part of a national dialogue, convened by EPA and including brand owners, local and state governments, and not-for-profit organizations. The dialogue aims to develop a consistent approach to packaging stewardship nationally.

**Comment 28:** This Plan's unfunded mandates, unreasonable projections, and proposals to divert finances already stretched will put our successful program in an impossible financial situation and increase the burden on our taxpayers to the breaking point.

**Response:** The Plan itself does not impose any mandates. Any new requirements proposed would be subject to the regulatory or legislative processes and their associated public review. The Plan does not recommend diverting funds or placing any planning unit in an impossible financial situation. The Plan's goals have been adjusted to phase in over a 20-year time period.

**Comment 29:** DEC should recommit this plan for further study, more review, more input and further refinement.

**Response:** DEC spent three years researching and drafting the draft Plan, engaging hundreds of stakeholders in the process. Further input during the public comment period has yielded revisions that will strengthen the Plan's implementation. Given the effort that has been expended on its development, the Plan will not benefit from delay or further review. Any new information and input will be reflected in biennial Plan updates.

**Comment 30:** The Plan suggests new legislation that would apply only to New York and would increase the cost of doing business or buying goods in our state. Actions such as product

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stewardship, packaging reduction, and dramatically expanded recycling are laudable goals but must be implemented at the regional if not national level to ensure no economic harm is inflicted on the state.

**Response:** DEC is working regionally, through the Northeast Waste Management Officials Association, the Northeast Recycling Council, and a new group of northeastern states and eastern Canadian provinces, to develop collaborative approaches to programs and legislation. Nationally, DEC works through the Product Stewardship Institute, the Association of State and Territorial Solid Waste Management Officials, and EPA to collaborate with other states on product stewardship and other initiatives. There are more than 30 states that have product stewardship laws in place for one or more products. Studies have documented economic benefits, such as job creation, but have not documented negative economic consequences. See *Preliminary Analysis of E-Cycle Programs in WA and OR*, Northwest Product Stewardship Council, March 2010 ([www.productstewardship.net/PDFs/productsElectronicsEcycleWAORReport.pdf](http://www.productstewardship.net/PDFs/productsElectronicsEcycleWAORReport.pdf)).

**Comment 31:** DEC should: revise and reissue the plan after developing a financial impact assessment; develop realistic and achievable goals; and not base any permit conditions on the Plan until it has been revised.

**Response:** DEC has made revisions to the Plan based on public input, but has not developed a full financial impact assessment. Such an assessment is outside the scope of this Plan. Since costs and conditions vary from one community to the next, sometimes significantly, it is important that the comparative costs of program options be evaluated as a part of the local planning process. The Plan's goals have been adjusted to phase in over a longer period of time, and, therefore, be more readily achievable. Language in the Plan has been clarified to reflect that it is a planning tool and is not intended to create any substantive or procedural rights, enforceable by any party in administrative and judicial litigation with the State of New York, including the permitting of solid waste management facilities.

**Comment 32:** The Plan has an advocacy tone that is inappropriate.

**Response:** Without actual examples of inappropriate language it is difficult to respond to a comment about tone. In any event, by definition, a Plan is meant to convey support and a rationale for a particular course of action. In that sense the Plan constitutes advocacy for the underlying mission, which is statutory requirement to produce and update a plan "taking into account sound principles of solid waste management and relevant considerations of natural resource conservation, energy production and employment creating opportunities..."

**Comment 33:** The Plan calls for radical changes in waste management and identifies powerful needs and purposes that the changes will fulfill. However, it is unclear whether there is fiscal support. Has the governor or the Legislature expressed support?

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**Response:** The Plan lays out a new vision and articulates a path to achieving that vision. It is intended to provide the information and basis on which to build support for legislative changes, including the establishment of new revenue streams to fund implementation.

**Comment 34:** Research indicates that involving the public in decision making where societal change is at issue leads to greater results. The public may not support this direction.

**Response:** The Plan development process included hundreds of stakeholders from around the state, including representatives of local planning units and grassroots organizations that represent members of the public. During the expanded comment period and five public hearings on the draft, more than 1,300 comments were collected and considered. DEC also expects that there will be additional public engagement at the local level as planning units develop and implement local solid waste management plans.

**Comment 35:** The Plan calls for state and local governments to dedicate additional staff and resources to implementing it. This is contrary to current trends in government. It is not wise to adopt a plan dependent on staff and resources that are not available.

**Response:** The Plan includes a host of recommendations, some that require additional resources, and some that can be accomplished by focusing existing state, local and private sector resources toward the Plan's goals and recommendations. It is expected that local planning units will perform economic evaluations to determine the most appropriate steps to take in their circumstances. It is also important to note that it is a ten-year Plan. While it is important to take into account current resource constraints, it is also critical to plan for the time when the state's economic condition improves.

**Comment 36:** Our company provides full service solid waste management to residential, commercial and industrial customers. The Plan is an attack on our business model. It advocates the state-controlled takeover and monopolization of the market in which we operate jeopardizing our existence.

**Response:** The Plan is not an attack on existing businesses but, rather, acknowledges the important role that private enterprise plays in the management of New York's waste. It does not recommend state control, takeover or monopolization of the marketplace. The Plan sets forth, for state and local government, a common vision and direction that will also help private companies adapt and grow in a changing marketplace.

**Comment 37:** The Plan endorses anaerobic digestion of organic materials, yet downplays the twenty years of acceptable performance of municipal waste combustion in the state.

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**Response:** The Plan addresses many means of materials management and waste disposal. Municipal waste combustion is addressed in Section 9.3, which includes a discussion of the state's experience with the technology and support for combustion over landfilling.

**Comment 38:** Under the Plan, the planning units will become data collectors, enforcement agents, and responsible parties for public and private waste management operations. The state fails to realize that local governments do not have the resources to assume the tasks in the Plan.

**Response:** Materials and waste management have traditionally been local responsibilities and all of the tasks identified in the comment have been local municipal obligations since the Solid Waste Management Act was passed in 1988. DEC realizes that municipalities are sometimes unable to fulfill all of these roles without assistance. For that reason, the Plan includes recommendations to: develop an online reporting system to ease data collection and management (Section 3.13.1); increase DEC's enforcement authority (Section 3.13.1) to assist municipalities with this effort; increase state oversight of private waste haulers (Section 3.13.1); and develop a new grant program and funding stream to provide consistent annual funding to planning units (Section 6.5.3).

**Comment 39:** The Plan needs to address the use and encouragement of more durable and long lasting goods.

**Response:** Durable and longer lasting products are encouraged through product stewardship (also known as Extended Producer Responsibility), which is one of the reasons that product stewardship is such an important piece of this Plan. By making manufacturers more responsible for the end-of-life management of products and goods, product stewardship forces manufacturers to consider alternative management issues including reduced toxicity, design for recycling, and longer lasting products. For more on product stewardship, see Section 5.

**Comment 40:** I am concerned that local governments will be able to use this document as guidance only. Local conditions may derail portions of this plan.

**Response:** The Plan is meant to provide guidance. It recognizes the diversity of the communities in the state and presents a menu of options available to planning units and others engaged in waste reduction efforts. To be consistent with this Plan, local solid waste management plans should evaluate and then propose methods to reduce waste and increase reuse, recycling and composting within the planning unit. Planning units will be afforded flexibility in determining how to best implement their programs. They will not be ordered to establish specific facilities or programs, or be held to firm or mandatory goals. Rather, they will be asked to work as aggressively as possible to reduce the amount of waste destined for disposal.

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**Comment 41:** The Plan is only as good as the new regulations that will result from the Plan's recommendations. These regulations should include specific benchmarks to discourage new landfill expansions.

**Response:** The objectives of the Plan's legislative and regulatory recommendations are to achieve the goals of the Plan and minimize the amount of waste requiring disposal, while also offering flexibility in local decision making and permitting. Based on both DEC's experience with the Plan and the availability of resources, waste-reduction, recycling and composting benchmarks may be considered in biennial Plan updates.

**Comment 42:** The Plan does not discuss how solid waste management compares to the state's other priorities, such as renewable energy, water treatment systems, etc. If available funding is an indication, solid waste is not high on the list of priorities. If that's the case, it is not appropriate for the state to put out such an aggressive plan.

**Response:** Sound materials and waste management is a high priority for DEC because of its resource conservation, energy, and greenhouse gas implications. In detailing the environmental and conservation benefits of thoughtful materials management, the Plan makes the case for higher priority funding.

**Comment 43:** There is a sense that the Plan will be used as a vehicle to propel the state's municipalities into a new "green" economy. There are other agencies better suited to moving the state in a new economic direction. DEC could lose its credibility as an engineering and public health authority by taking sides in technology and management debates on the local level.

**Response:** References to job creation and economic benefits of moving *Beyond Waste* are intended to illustrate the multiple benefits of this approach beyond the core environmental analysis. DEC does not intend to engage in local debates, but rather to provide the tools, resources and technical support for planning units to minimize waste and maximize materials diversion.

**Comment 44:** The Plan includes many initiatives, but what happens if they do not work? Is there a point at which we take stock to see if the Plan is working?

**Response:** DEC will issue biennial Plan updates, as required by the Solid Waste Management Act. Those updates will assess progress and recommend mid-course corrections.

**Comment 45:** The Plan does not articulate a reason for its aggressiveness; it relies on arguments about a conversion to the green economy and reduction in greenhouse gases. Our disposal facilities are safe. There is no public health crisis.

**Response:** There are many reasons for aggressive action to reduce waste in addition to job creation, economic development, and greenhouse gas reduction. As economies



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and populations grow, they place an increasing demand on natural resources that are becoming increasingly scarce, arguing for strong conservation measures. Reducing reliance on fossil fuels for energy generation is also an emerging national priority. The extraction, processing and manufacturing of products from virgin materials is very energy intensive; making products from recycled materials, much less so. And, while disposal facilities in New York are well designed and no longer pose imminent health threats, they represent a finite capacity that will need to be conserved to avoid difficult siting and land-use commitments, including long-term maintenance, in the future. (For more details, see Section 2.)

**Comment 46:** Achieving the aggressive goals of the plan will require public demand, political will, engineering solutions, and funding. No one believes that will happen.

**Response:** The goals have been revised to phase in over a 20-year period.

**Comment 47:** The Plan should explicitly acknowledge existing legal arrangements. It should identify some as being out of sync with its intent, and acknowledge that the legislation recommended by the plan may result in uncomfortable legal conditions for existing arrangements.

**Response:** DEC expects that local governments will evaluate their contracts and agreements as a part of the local planning process and determine a path forward that either changes those agreements, or works within their constraints.

**Comment 48:** The model used to generate GHG emissions from the Plan's implementation requires that a disposal means be specified. What parts of the current disposal system were projected to be used for the 2 million tons of MSW expected to remain when the goal is met?

**Response:** In running the model, DEC assumed that the state would adhere to the solid waste management hierarchy. Therefore, the model projected that reliance on landfill disposal would decrease, and the amount of waste managed by municipal waste combustion facilities would remain constant.

**Comment 49:** We take issue with the intent to force implementation of "green" programs without giving due consideration to the costs and challenges faced by local governments.

**Response:** The Plan does not intend to force implementation of particular elements on communities. It recognizes the diversity of the communities in the state and presents a menu of options available to planning units and others engaged in waste reduction efforts. To be consistent with this Plan, local solid waste management plans should evaluate and then propose methods to reduce waste and increase reuse, recycling and composting within planning units. Planning units will be afforded flexibility in determining how to best implement their programs. They will not be ordered to establish specific facilities or programs, or be held to

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firm or mandatory goals. Rather, they will be asked to work as aggressively as possible to reduce the amount of waste destined for disposal.

**Comment 50:** While we support the underlying concept of materials management in the Plan, there are areas that should be changed to assure that the goals are met cost-effectively.

**Response:** Comment noted.

**Comment 51:** Yard waste composting appears infeasible in the downstate regions. New York City and its core suburbs (Suffolk, Nassau, Westchester and Rockland counties) contain 64 percent of the state's population. The composting solutions that appear workable upstate are not accepted downstate.

**Response:** The generation of yard waste is not strictly population based. Residents in urban areas generate significantly less than their suburban counterparts, so the downstate region is not necessarily responsible for two-thirds of the yard waste generated in the state. New York City has an active yard waste composting program that is set to expand under a new local law. Though facility siting is very difficult there, New York City operates two successful yard waste composting facilities and awaits a permitting decision on a third. Long Island is served by a myriad of public and private composting operations. Some of the facilities have had odor concerns, but the vast majority operate without problems. Rockland County manages all of its yard debris at in-county composting facilities. Westchester County hosts a number of small yard debris composting sites, and two permitted sites. For communities in Westchester that choose not to have their own composting site, the county offers a transfer site to consolidate yard waste for processing outside of the county.

**Comment 52:** The Plan casually mentions changing state procurement rules to facilitate reuse. Did anyone clear this concept with legal staff?

**Response:** Yes. DEC and OGS legal staff were consulted.

**Comment 53:** The current economic situation must be addressed and any tentative schedule must only slowly grow the use of state funds, if at all.

**Response:** The Plan acknowledges the challenges of the current economic situation, and its quantitative goal has been revised to phase in over twenty years in light of those challenges.

**Comment 54:** DEC should consider conducting a statewide tour with workshops in various locations to promote the plan and discuss its schedule, goals and expected activities.

**Response:** DEC is planning this type of outreach to occur after the Plan's release.

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**Comment 55:** There should be a list of appendices.

**Response:** A list of appendices has been added to the table of contents.

**Comment 56:** The Plan should include an executive summary for decision makers.

**Response:** The executive summary was provided on pages 1-14 of the draft, and is also included in the final Plan in a revised format.

**Comment 57:** DEC should provide more technical assistance in the form of case studies, best management practices, and other tools and resources.

**Response:** DEC will provide these assistance tools to the greatest extent possible within existing staff and resource constraints.

**Comment 58:** The references in the plan were oddly chosen and the style was often very bad.

**Response:** DEC has reviewed, clarified and expanded the references in the Plan.

**Comment 59:** The Plan does not address the threat posed by PVC plastic. It should recommend: phasing out the use of PVC plastic; educating the public about the hazards of PVC; designating PVC as a hazardous waste; requiring disclosure of PVC content; require warning labels on PVC products; and give preference to PVC-free purchasing.

**Response:** A discussion of issues related to PVC plastics in the waste stream has been added to Section 8.1.6.

**Comment 60:** The lack of clarity regarding the eligibility of emerging waste-to-energy technologies for Renewable Energy Credits is a grave flaw in the Renewable Portfolio Standard. It is causing New York to be behind other states in implementing new technologies.

**Response:** The Renewable Portfolio Standard (RPS) is outside of DEC's jurisdiction. The RPS and resultant renewable energy credits are regulated by the Public Service Commission. The New York State Energy Research and Development Authority (NYSERDA) is responsible for administering the RPS, and procuring renewable energy resources.

**Comment 61:** The Plan emphasizes that our current way of doing business is not sustainable. This is valuable, but waste management is not entirely responsible for the problem. The Plan needs to focus on what it can do, and not worry so much about how the world should be.

**Response:** The Plan provides contextual information on the role that materials and waste management can play in the larger quest for sustainability. However, it focuses primarily on the status of materials and waste management in the state, and the

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measures that can be taken to aid the state in conserving more resources and energy.

**Comment 62:** The private sector must play a role in achieving the goals of the Plan. Privately operated disposal facilities should not be allowed to accept mixed waste from communities that lack adequate reduction and recycling programs. Regional facilities should receive greater oversight and enforcement from DEC.

**Response:** Existing regulations, codified in permit conditions, restrict disposal facilities in the state from accepting waste from communities that lack a comprehensive recycling analysis [See Part 360-1.11 (h)]. Larger facilities in the state, such as regional facilities, are generally subject to more frequent inspections than their smaller counterparts. In fact, most large facilities are assigned a DEC on-site environmental monitor in order to improve oversight and enforcement. The Plan also emphasizes and envisions more diligent local planning and implementation of aggressive waste reduction and recycling efforts on the part of both public and private materials and waste managers.

**Comment 63:** The fatality rates in the waste industry are unacceptable. Given the role of state policy in waste management, it must address worker health and safety. The Plan and the DGEIS should take a hard look at the current level of hazard in the industry. The legislative package should include provisions for the Department of Health and the Department of Labor to maintain relevant statistics so public and private employers can take effective measures to reduce the hazard level.

**Response:** Worker health and safety are outside of DEC's jurisdiction. However, DEC will discuss the potential legislative proposal with DOH and DOL.

**Comment 64:** Several cities and towns have taken the initiative to develop a successful zero waste program. Those should be expanded so there are consistent programs throughout the state.

**Response:** DEC will work to share information and case studies to help communities learn from each other.

**Comment 65:** We support the Plan, but are concerned that DEC may not follow it.

**Response:** DEC is committed to the Plan and will make every effort to promote its implementation.

**Comment 66:** A published study suggests that the amount of waste reduction can be determined by a formula that reflects population, affluence and technology. If you presume that population and affluence need to grow, then you must presume that technology must improve substantially.

**Response:** Comment noted.

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**Comment 67:** Many published studies support the conclusion that affecting waste generation requires participation by both manufacturers and consumers; neither one can alter the waste stream in isolation.

**Response:** DEC concurs. It is for this reason that the Plan proposes product stewardship as a central policy approach moving forward. By making manufacturers responsible for the end-of-life management of the materials they put in the marketplace, they have an incentive to design less wasteful products. Product stewardship programs must also include methods for engaging consumers in recycling in order to be effective.

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**Comment 1:** The Plan calls for more government staff and spending. This is contrary to the wishes of the public and mandates from our elected leaders. The Plan should not recommend dedicating additional staff at a time when elected leaders are calling for layoffs; it should not recommend potential taxes and fees when the public and elected officials are demanding lower taxes and fees. We must create private sector jobs instead of building government bureaucracy.

**Response:** DEC supports efforts to create private sector jobs. The Plan recommends creating a new funding source that is flexible enough to help finance private sector growth as well as government programs (see Section 3.13.3). However, there are certain recommendations that are clearly government responsibilities, such as planning, program development, education, incentives, and enforcement. Resources are required to support these public sector efforts and provide services that the public needs and expects while ultimately building a green economy.

**Comment 2:** You should do an autopsy of our past and present practices. The 1987 Plan should be expanded using its format to build our next solid waste management plan. The findings statement of past impacts would conclude that this was and still is the path forward for the next 10 to 20 years.

**Response:** Development of the Plan has taken into consideration past and present practices of the state and has built upon the founding information of the 1987 Plan, the Solid Waste Management Act of 1988, and the 1997/1998 Plan Update. All of these have helped lead to the recommendations in the current Plan.

**Comment 3:** The Plan's discussion of infrastructure and market development puts too much emphasis on government programs, and it relies too heavily on state actions to achieve its goals. The most significant progress in waste reduction, recycling and composting has arisen from the initiatives of local government and the private sector.

**Response:** The Plan makes clear that materials and waste management are primarily local government functions, and DEC agrees that local governments, with significant assistance from the private sector, have made substantial gains in improving materials management and reducing waste. The Plan is intended to create appropriate incentives for continued action and investment at the local level and in the private sector. Because this is a state Plan, however, it focuses on the actions the state will take.

**Comment 4:** The Plan should use available information from programs in the U.S. and internationally to quantify every recommended action, program and regulation in terms of impact on reducing disposal.

**Response:** DEC has quantified the impact of its proposal to the greatest extent possible using available information and the uncertainties attending evolving technologies and available resources. Certain recommendations, such as improving education and enforcement, are not easily quantifiable even with substantial experience. DEC will continue to assess potential impacts of all Plan elements in the biennial updates as additional information becomes available.

**Comment 5:** DEC has repeatedly stated that the Plan is visionary and aspirational and will not be used as an enforceable document against regulated entities. This should be clearly stated in the Executive Summary. Further, the Plan needs to include a clear explanation of its role in the solid waste facility permitting process.

**Response:** A text box has been added to the first page of the Executive Summary that articulates the role of the planning document. It includes the following statement: *"It is a planning tool and the contents of this Plan are not intended to create any substantive or procedural rights, enforceable by any party in administrative and judicial litigation with the State of New York, including the permitting of solid waste management facilities."*

**Comment 6:** The Plan states that the vision can only be realized with additional staff and resources at the state and local level and the engagement of the private sector. This is not realistic given the fiscal crisis faced by the state and

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local governments and the condition of the private marketplace. Has the State Legislature made a commitment to increase these staff and resources?

**Response:** DEC has adjusted the timeframe for implementing the goals of this Plan to 20 years, from the initial 10, to allow for additional time for the economy to recover and state and local governments to obtain sufficient resources to implement programs that will achieve the Plan's vision. The State Legislature has not been asked to commit to the Plan and the necessary staff and resources. When finalized, the Plan will be shared with the legislature.

**Comment 7:** The Plan seeks to decrease reliance on waste disposal facilities. Given the investment in existing disposal infrastructure, the goal should be to extend the lifespan of existing facilities, not to eliminate them altogether.

**Response:** It is not the intent of the Plan to ignore or eliminate existing and compliant disposal facilities, and DEC concurs that the goal should be to extend the life of existing facilities. The word "facilities" has been deleted to clarify that point. New York State's communities and facility owners have made significant investments in some of the most environmentally responsible disposal facilities in the nation. DEC's focus on reducing waste is driven by the belief that environmentally protective disposal capacity is a valuable resource that should be used judiciously.

**Comment 8:** The Plan should have an Executive Summary.

**Response:** The Executive Summary was presented on pages 5 through 14 of the draft Plan.

**Comment 9:** The Plan's estimate of waste generation, 4.1 lbs./person/day, does not apply to all planning units and is based on assumptions and incomplete data. DEC must compile complete and accurate data before recommendations can be made. DEC does not have a uniform system for accounting for waste and recyclables; planning units each compile numbers in a variety of ways, making the state's numbers impossible to trace or replicate.

**Response:** The 4.1 lbs./person/day figure relates to the amount of waste disposed in the state and managed at disposal facilities, both in state and out of state. DEC uses this metric because the data gathered from transfer and disposal facilities is more consistent and reliable than data reported by planning units. The Plan acknowledges that collecting complete and accurate data is a continuing challenge and makes recommendations to improve data collection and analysis. For a full discussion of reporting, data and recycling rate calculations, see Section 8.3.1.

**Comment 10:** The Plan does not appear to factor in recycling in excess of 6 million tons of municipal solid waste (MSW) from New York City and Long Island.

**Response:** The Plan does factor in recycling of the materials generated in New York City and Long Island. It addresses all of the materials and waste generated in the state, whether that material is currently disposed of within or outside of the state. Recommendations will be applied to all the regions of the state.

**Comment 11:** The Plan states that to achieve its vision, it must engage manufacturers through product and packaging stewardship. How can the state control the manufacturing activities of companies in other states and overseas? Will this end up hurting local manufacturing here in New York State if they are the only companies subject to these requirements?

**Response:** Product and packaging stewardship are tools to engage manufacturers in the management of their products or packages at the end of their useful life. Through these programs, manufacturers are required to establish or finance collection and recycling programs. Being responsible for the costs of end-of-life management gives them an incentive to design products that are easily and cheaply

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recycled. Stewardship requirements can be applied to all companies that sell products in the state and, therefore, do not unfairly burden in-state manufacturers. DEC works with the New York Product Stewardship Council, as well as regional, national and bi-national (U.S. and Canada) organizations to harmonize policy approaches and ensure a level playing field for all companies. For a relevant example, see the Electronic Equipment Recycling and Reuse Act at <http://www.dec.ny.gov/chemical/65583.html>. For a full discussion of product and packaging stewardship, see Chapter 5.

**Comment 12:** The Plan suggests that recycling and composting programs will be funded from disposal fees but does not address how to make up for the loss of revenues when disposal is reduced. This could devastate local systems that rely on integrated system tip fees to fund their waste reduction and recycling programs. What is DEC recommending for funding these programs when tipping fees are dramatically reduced?

**Response:** Section 6.3 includes options for financing *Beyond Waste* programs at the state (6.3.1) and local (6.3.2) levels. DEC recommends that planning units evaluate various funding options and identify which works best within their local context. At the same time, DEC will work to secure additional funding at the state level that can help support local programs, and ESD will work to enhance markets. Some sources, such as the tip fee surcharge, plastic bag tax and unclaimed bottle deposits, will yield reduced revenues as the programs become more successful. A tip fee surcharge would generate the greatest revenues in the short term, when it is most needed for new infrastructure and programs. When the infrastructure for enhanced recycling and composting is in place and materials are being diverted from disposal to this infrastructure, the amount of resources generated would be reduced as would the need for those resources. This is because once the infrastructure is established, only program and operating expenses would remain. If this occurs, DEC will work to ensure the availability of resources through other sources, as it has through the Environmental Protection Fund.

**Comment 13:** One of the goals of the Plan is to “Maximize the Energy Value of Materials Management.” Many municipal waste combustion facilities are already doing this, but this does not appear to be addressed in the Plan.

**Response:** The Plan does address the energy value of MWC, which is discussed in Section 4.1.4 and 9.3.1. DEC acknowledges the contribution of municipal waste combustion facilities to the state’s energy needs and represents that contribution in Section 9.3 and Table 9.3.

**Comment 14:** One of the goals of the Plan is to “Engage all New Yorkers—government, business, industry and the public—in Sustainable Materials Management.” Who is going to fulfill this role in New York State? Local government does not have the resources to do this.

**Response:** DEC will lead this effort, and expects other state agencies and local governments to work toward this goal within their programmatic and budgetary constraints. Many local governments already make substantial efforts to engage the public and local business and industry in recycling programs, household hazardous waste collection days, and other materials management programs. DEC hopes those efforts will continue and, to the extent they are replicable, will be shared with others.

**Comment 15:** We support the Plan’s emphasis on materials management and many of its recommendations, but we are concerned that the Plan does not go far enough to achieve its ambitious goal. While it embraces a new vision, it relies on the same faulty hierarchy for solid waste management adopted in 1987. A fresh look at both materials management and “residuals” management is warranted.

**Response:** In the planning process, DEC revisited the hierarchy and determined that current research, data and information supports the structure put in place in 1987, with some clarification to define reuse as preferable to recycling, composting and organics recycling as equivalent to recycling, and to identify product stewardship as a preferred approach to implementing the hierarchy.



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**Comment 16:** It seems the Plan has a one-sided philosophy that does not accept the current waste management systems put in place at the cost of millions of dollars based on direction from DEC two decades ago. Planning units are now being told they must make drastic changes and spend millions more dollars in the process.

**Response:** The intent of the Plan is to build on the progress made over the past 20 years and assess the best path forward for the next decade and beyond. The Plan recommends an evolution in materials management that reinforces the ultimate goal of the solid waste management hierarchy established in the 1987 Plan and the 1988 Solid Waste Management Act and details opportunities for meeting that goal. Planning units will be afforded flexibility in determining how to best implement programs to that end. They will not be ordered to establish specific facilities or programs or be held to firm or mandatory goals. Rather, they will be asked to work as aggressively as possible to reduce the amount of waste destined for disposal.

**Comment 17:** Waste bans should not be proposed unless the infrastructure is in place to manage all the waste that will be banned.

**Response:** DEC concurs and has specified that waste disposal bans will be implemented where alternative materials management infrastructure exists.

**Comment 18:** The Plan points out that the state's recycling rates are lower than the national average and that the Solid Waste Management Act is not moving the state beyond minimum rates. An analysis of why rates are low and what needs to be done to improve weaker programs would be helpful. There are practical reasons why certain communities' recycling rates lag.

**Response:** Section 8.3 discusses a range of issues related to improving recycling in the state, including discussions on engaging all sectors in recycling (Section 8.3.4) and improving recycling rates and participation (Section 8.3.5). DEC agrees that there are practical reasons why certain communities' recycling rates lag; however, those reasons are often context specific and are best addressed in LSWMPs. As a result, DEC was not able to make broad generalizations regarding how to improve programs beyond what is presented in Section 8.3.

**Comment 19:** The Plan notes that there are insufficient state and local resources allocated to waste reduction and recycling; however, there are many public and private sector employees dedicated to reuse, recycling and composting. The Plan should take into account the existence and work of these professionals to develop an effective strategy for providing support where it can be most helpful.

**Response:** DEC did consider the work of the dedicated professionals in recycling as it developed the Plan and included many, either directly or through representatives, in the advisory group that helped to craft the Plan.

**Comment 20:** The Plan should assess what percentage of the waste stream currently being disposed is subject to the mandatory source separation law (GML 120-aa) and why all of that material is not being recycled, and offer solutions that address the causes of the current failure to recycle these materials.

**Response:** The current mandatory source separation law does not designate a list of recyclables that communities must recycle but rather requires communities to recycle all materials for which "economic markets exist." Therefore, DEC is not able to quantify with any precision what materials are subject to source separation requirements. To the extent that information was available to determine why materials are not being source separated, it was presented in Section 8.3.

**Comment 21:** The Plan fails to address that the management of materials or waste is a regional marketplace that is not constrained by municipal or state boundaries.

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**Response:** In Section 9.5, the Plan acknowledges that the flow of waste is dictated by economic and market forces, as well as regulatory and policy directives.

**Comment 22:** The 1987 solid waste management plan's goal of recycling 50 percent was not realistic for heavily developed urban/suburban communities.

**Response:** Many urban and suburban communities have met or exceeded a 50 percent recycling goal. EPA's report "Cutting the Waste Stream in Half: Community Record Setters Show How" ([www.epa.gov/osw/conservation/downloads/f99017.pdf](http://www.epa.gov/osw/conservation/downloads/f99017.pdf)) profiles 18 communities that have exceeded that rate. Urban and suburban communities profiled in the report include: Bergen County, NJ; Worcester, MA; Madison, WI; San Jose, CA; Ann Arbor, MI; Seattle, WA; Portland, OR; and others.

**Comment 23:** A state plan cannot be credible unless it is based on consistent, reliable data. The recycling rates presented are highly misleading. Waste reduction since 1987 appears to be ignored. DEC randomly chooses to discount reported recycling numbers and adopt others, making the numbers "guesstimates" and not factual. There is a high variability in the ability of planning units to capture recycling data; the municipally reported data is of questionable quality.

**Response:** DEC concurs with concerns that the data reported by planning units is variable and not uniformly reported. This Plan moves away from relying on planning unit data as the main metric for measuring the state's progress. It uses the data provided by facilities because that data is more consistent and reliable than the planning unit reported data. The methodology used to develop the recycling rate estimates in the Plan is presented in Section 8.3.1. Additional information is provided in the new Appendix H. Limitations in the data are noted. Waste reduction is not represented because it cannot be documented. The Plan recommends improving data collection, consistency and reliability by developing an electronic reporting system (See Section 3.13.1).

**Comment 24:** The Plan notes that staffing was a problem for implementation of the 1987 Plan, yet again it is embarking on a course of action that will require increases in staffing. This makes no sense.

**Response:** In taking stock of the progress made during the last 20-year planning period, it is important to note that DEC has fewer staff positions and many more mandates than existed in 1987. That dynamic has led to a shift of staff away from the solid waste program which has been a hindrance to achieving the goals of the 1987 Plan. The Plan makes the case for increasing staff dedicated to solid waste when resources are available.

**Comment 25:** The Plan references a report published by the Grassroots Recycling Network, entitled "Wasting and Recycling in the US 2000." The organization's website notes that landfills are "a cancer on the land." This runs counter to DEC's efforts to promote environmentally protective landfills. The Plan should not be using such biased references.

**Response:** DEC's use of a reference does not constitute an endorsement of an organization. DEC acknowledges that the state's landfills represent some of the best environmental containment systems in the nation, as substantiated by monitoring data.

**Comment 26:** Economically viable infrastructure to manage the materials recommended for diversion does not currently exist in proximity to the major waste generation centers within the state. The cost of this infrastructure is beyond the reach of most local governments. The state needs to take the initiative to develop the necessary infrastructure.

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**Response:** DEC does not expect that the Plan's goals will be met entirely through public investment. In addition to harnessing state government resources to develop critical infrastructure, DEC expects to engage the private marketplace to drive investment in materials management infrastructure.

**Comment 27:** DEC's characterization of EPA's report on greenhouse gas emissions through materials management, which finds that 42 percent of the national GHG inventory is influenced by the products and packaging that become waste, is misleading. This undermines the Plan's environmental basis. Will DEC revise the data to provide a straightforward document to the public?

**Response:** DEC drew its characterization directly from the language of the EPA's report (see *Opportunities to Reduce Greenhouse Gas Emissions Through Materials and Land Management Practices*, USEPA, 2009, p. 22.) which takes a systems-based view of the GHG inventory, in contrast to the sector-based (transportation, energy, etc.) view that was previously used. The systems-based view categorizes the life-cycle emission related to key systems: provision of goods; provision of food; buildings and lighting, etc. The EPA considers the provision of goods and the provision of food to be influenced by materials management decisions.

**Comment 28:** The Plan notes that public education and enforcement are critical tools to prevent waste and increase reuse, recycling and composting. Education is a great tool, but there are always segments of society that will not follow rules or recommendations.

**Response:** DEC concurs with the notion that not all members of the public are motivated through education. It is for that reason that the Plan recommends robust education programs designed to improve participation, followed by incentives, with enforcement as a method of last resort.

**Comment 29:** The Plan promotes the redistribution of consumable food to food banks or animal feed. Has the state examined the health impacts and potential handling problems of separating this material? How could a planning unit possibly ensure that redistributed food maintains the proper temperature, and that other safeguards are taken, on a cost-effective basis? Is this appropriate?

**Response:** Health regulations regarding the redistribution of consumable food and other related issues are discussed in Section 8.2.2. Generally speaking, food redistribution activities have been taken on by not-for-profit organizations and volunteers in the case of food to be consumed by humans, or farmers or private vendors in the case of animal feed. Planning units can choose whether to engage directly in food redistribution activities or work to promote or facilitate actions by others within their area of influence.

**Comment 30:** The conclusion that the current operating landfills are large emission sources for GHG is not supported by actual data. Landfills contribute only four percent of the GHG. The Plan fails to acknowledge that the landfill emissions segment is the only segment to show significant reductions of the recent term.

**Response:** DEC stands by the statement that "landfill gas contributes to climate change." The percentage of emissions is clearly stated and is not characterized as "large" sources or otherwise in the Plan. Indeed, recently released GHG emissions data for 2008 demonstrate a significant reduction in landfill gas' contribution to the statewide inventory.

**Comment 31:** The creation of a hierarchy does not imply that the subject of the hierarchy will necessarily arrange itself according to that Plan. The Plan (p.9) implies that the hierarchical approach to waste management means most wastes must be reduced, the second greatest amount recycled, etc. That is not logically necessary nor is it required by adoption of a hierarchy of action.

**Response:** DEC does not intend to imply that "most waste must be reduced, the second greatest recycled, etc.," but rather that the hierarchy should be a guide in developing materials management

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programs. The Plan notes that the vast majority of the MSW stream—more than 65 percent—is managed by the lowest strategies on the hierarchy.

**Comment 32:** The Plan notes that recycling has stalled in the last decade, but it does not take into account lightweighting of packaging. Less weight and higher volume appear to stall the recycling rate, when in fact waste reduction has risen. The Plan needs to reflect that fact.

**Response:** The impact of lightweighting on recycling rates is discussed in the text box “Measuring Success” in Section 8.3.2, and the issue of lightweighting, more generally, is discussed in Section 8.1.1. There are no data to support the claim that there has been a reduction in waste generation. To the contrary, EPA data indicate that, despite lightweighting and recycling, per capita MSW generation has remained relatively constant (between 4.5 and 4.65 lbs./person/day) since 1990 (See “Municipal Solid Waste Generation, Recycling and Disposal in the US: Facts and Figures for 2008,” <http://www.epa.gov/epawaste/nonhaz/municipal/msw99.htm>)

**Comment 33:** The Plan states that source-separated recycling is inconsistent, with many schools not participating. This is correct; mandating recycling in schools may be helpful.

**Response:** Source separation is required for all generators in the state. DEC worked with the Department of Education to inform all school districts in the state that they are subject to local recycling requirements. Unfortunately not all local recycling laws clearly identify that schools and other institutions are required to comply with their laws. DEC continues to work with local planning units and to educate the schools and local government about this issue.

**Comment 34:** The Plan states that the well-established recycling industry in New York State meets the challenge of developing new markets for secondary materials. While there has been progress, this statement is overly optimistic as markets for glass, tires, plastic bags, and other materials are lacking. Who has identified that these “well-established markets” continue to exist?

**Response:** According to the Northeast Recycling Council’s (NERC) *Recycling Economic Information Study*, published in 2009, there are more than 450 recyclable material wholesalers, more than 100 recycled metals smelting and product producers, 28 paper mills that use recycled content, and more than 55 recycled plastics reclaimers and product manufacturers in New York State. In total, there are more than 2,500 companies engaged in recycling that support more than 25,000 jobs in the state. Despite this strong base, the Plan recognizes the need to develop additional markets. It specifically identifies organic materials, plastic film, glass and construction and demolition debris as examples of materials in need of market development attention. Tires have been added to the list of materials requiring market development attention. (See sections 1.3, 8.3.8, 8.3.10 and 8.3.14(a)).

**Comment 35:** The Plan states that recycling markets are variable, but, on average, market values for key recyclables—metals, plastic containers and many grades of paper—have been consistently strong for the past two decades. This is not true. Markets change continuously. The value fluctuates to such a degree that they become a net loss by municipalities. To make any assumption about these markets is dangerous. Fuel and transportation costs are another variable that must be considered.

**Response:** DEC stands behind its statement that recycling markets for conventional recyclables have, on average, been strong. The Plan clearly states that markets are variable, and the statement is based on assessment of average revenues over two decades. DEC understands that markets do fluctuate and that during market downturns, this can mean a cost to municipalities, just as in market upswings, it can yield revenue.

**Comment 36:** The Plan summary states that continuing to rely on waste disposal comes at a significant environmental and economic cost and references contributions to climate change and squandered opportunities for

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job creation, energy and natural resource conservation, and pollution reduction. This is an extremely generic statement that does not consider the millions invested in infrastructure, including recycling programs by many planning units, and ignores the fact that billions more will be needed for new infrastructure that may not be as environmentally sound as that which it replaces.

**Response:** The statement referenced in this comment is intended to be a summary statement. A full discussion of the impacts of disposal is provided in Section 9 of the Plan. The statement has no relationship to the investments of planning units in solid waste and recycling infrastructure, which is discussed in Section 6 of the Plan. DEC's intent is that the infrastructure developed to achieve the goals of this Plan will provide greater environmental benefit than disposal facilities alone.

**Comment 37:** The Plan recommends that Pay as You Throw/Save Money and Reduce Trash (PAYT/SMART) programs be mandatory but does not address how it would be implemented in challenging conditions, such as dense urban areas or rural parts of the state. We strongly disagree with mandating this throughout the state.

**Response:** The Plan's recommendation on PAYT/SMART has been revised to focus on a series of programmatic and planning activities instead of a mandate. The activities include DEC providing additional resources, tools and information to local governments and planning units evaluating and implementing PAYT if locally appropriate and feasible. DEC will evaluate the need for additional measures in biennial plan updates.

**Comment 38:** PAYT/SMART will foster illegal dumping and littering and increase the use of burn barrels. Some communities already have illegal dumping problems without this type of system, and those problems will be exacerbated with it. It may work in affluent communities but not in moderate or low-income neighborhoods.

**Response:** According to USEPA, more often than not, illegal dumping and inappropriate diversion are more a perceived barrier than an actual problem. (See <http://www.epa.gov/waste/conserve/tools/payt/top8.htm>). A study performed by Duke University found that 48 percent of the PAYT/SMART communities surveyed saw no change in illegal dumping with program implementation, while 6 percent felt illegal dumping declined. Only 19 percent felt it had increased. A recommended best practice is to have a strong enforcement initiative when a PAYT/SMART program is introduced. DEC will develop additional tools and information on this and other topics related to PAYT/SMART. PAYT/SMART programs have been successful in moderate and low-income communities as well as in more affluent areas.

**Comment 39:** The Plan states that New York State communities made significant progress between 1987 and 1997, but progress has stalled in the last decade. That early progress came at great expense to municipalities. The cost and effort associated with recycling does not increase proportionally with the percent of material recycled; it increases substantially as the percent of material recycled increases.

**Response:** DEC acknowledges that the gains in recycling to date have come at a substantial cost to government. Whether the incremental cost of additional recycling diversion is significant depends on local program conditions and the material targeted for increase. For example, increasing the capture of materials currently designated for recycling for which processing infrastructure exists (i.e., metal, plastic containers and paper) may come at a very low cost, while adding a material that requires dedicated infrastructure (i.e., organics) may come at a significant cost.

**Comment 40:** The Plan notes that the implementation of recycling programs has been inconsistent. It seeks to homogenize recycling programs throughout the state and does not take into account the different circumstances in each planning unit.

**Response:** DEC does not seek to homogenize recycling programs but rather to ensure that all planning units in the state implement the requirements of the Solid Waste Management Act of 1988. To clarify, the following statement is being added to the Executive Summary of the Plan: *This Plan*

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*recognizes the diversity of the communities in the state, including variability in financial capacity, and presents a menu of options available to planning units and others engaged in waste reduction efforts. To be consistent with this Plan, local solid waste management plans should evaluate and then propose methods to reduce waste and increase reuse, recycling and composting within the planning unit. Planning units will be afforded flexibility in determining how to best implement their programs. They will not be ordered to establish specific facilities or programs or be held to firm or mandatory goals. Rather, they will be asked to work as aggressively as possible to reduce the amount of waste destined for disposal.*

**Comment 41:** The Plan calls for enacting a new regulation to oversee the collection, handling and recycling of electronic waste. This is unnecessary and will create a new regulatory burden for a recyclable material. This market had developed on its own based on demand for e-waste materials. Why create another regulatory burden for the private sector and local government? This could be a disincentive to recycle these materials.

**Response:** Electronic waste may contain hazardous materials that, if not managed properly, can ultimately impact human health and the environment. The Electronic Equipment Recycling and Reuse Act (<http://www.dec.ny.gov/chemical/65583.html>) requires e-waste collection sites, consolidation and recycling facilities to register with DEC and meet certain basic operating standards to reduce the risk of hazard from operations and ensure overall proper management. Subsequent regulations will add detail to those requirements. The requirements are not onerous to operators but do provide a basic level of environmental protection. In addition, the Electronic Equipment Recycling and Reuse Act will help shift the responsibility, burden and costs of collecting electronic waste from municipalities to manufacturers.

**Comment 42:** The Plan recommends new revenue-generating programs, including solid waste disposal fees and solid waste facility permit fees. We oppose such fees and believe that they should not be pursued given the state's dire financial condition.

**Response:** The Plan does not recommend any one approach to raising revenue but rather identifies the need for additional resources and a host of potential sources.

**Comment 43:** Large-scale composting is problematic in suburban areas because of odors and health concerns. Residents have protested both municipally and privately operated facilities in Suffolk County. One size does not fit all in the realm of solid waste management. Composting may make sense in rural areas where there is low density development and more tolerance of odors.

**Response:** Siting of any materials management facility can be challenging. The Plan recognizes the diversity of communities in the state and expects planning units to determine what range of programs, technologies and approaches they will use to move forward with implementation of their local solid waste management plans. For example, in-vessel technologies such as those used in anaerobic digestion facilities may be more appropriate organics recycling techniques for densely populated areas.

**Comment 44:** The Plan calls for restricting the disposal of recyclable materials for which alternative infrastructure exists. The market for recyclables is always in flux. Requiring communities to recycle when materials may not have enough value would be disastrous at best, creating a no-win situation for a municipality holding a stream of recyclables for which a market no longer exists.

**Response:** This recommendation is intended to support the recycling infrastructure created by planning units by maximizing the flow of materials to that infrastructure. While DEC understands that markets regularly fluctuate, most recycling programs in the state have maintained a consistent list of materials designated for recycling. During severe market downturns, such as the fall of 2008, communities may stockpile those materials or market them at a loss. However, with rare

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exceptions, communities have not reported ceasing collections of a material due to low market value.

**Comment 45:** The Plan calls for DEC to provide outreach and technical assistance to municipalities, businesses, institutions and agencies. DEC does not have the resources to carry this out.

**Response:** DEC is already obligated to provide these services and will implement this and other recommendations to the greatest extent possible with available staff and resources, while continuing to pursue new resources.

**Comment 46:** In the Plan, DEC is moving toward enforcement of source-separation requirements. If the market for the recyclable material is lost, the municipality or private entity will be left with a no-win situation. This is very disturbing.

**Response:** The Plan acknowledges this concern by recommending that a list of designated recyclables be developed along with a process by which communities could apply for a waiver from the recycling requirement if it creates an economic hardship.

**Comment 47:** The Plan states that New York State will allocate additional resources to develop recycling infrastructure and establish a state center for C&D recycling. To date, local government and private business have been responsible for creating infrastructure. This recommendation represents a substantial change.

**Response:** The recommendation is not intended to represent a substantial change in the way infrastructure is developed but rather to acknowledge the need for the state to provide funding and assistance to local governments and private entities that develop infrastructure.

**Comment 48:** The Plan indicates that DEC will evaluate strategies to promote development of recycling and composting facilities in the SEQR and regulatory review process for solid waste management facilities. It is not clear how markets could be promoted through the SEQR process. This needs further explanation.

**Response:** SEQR requires that alternatives be evaluated during the review process. Such alternatives would include recycling and composting facilities. Thus, the SEQR process could result in development of new infrastructure. This recommendation is included in a section entitled “Infrastructure and Market Development” and was intended to address the infrastructure element, not necessarily market development.

**Comment 49:** The Plan calls for implementation of packaging stewardship legislation. Data on packaging materials recycling is now captured by planning units. If materials are sent back to the manufacturer, how will the planning unit capture this data?

**Response:** Under a packaging stewardship system, manufacturers would be required to track and report data on the amount of materials captured for recycling.

**Comment 50:** Has the state examined the gas/carbon emissions of food waste decomposition in connection with composting versus combustion?

**Response:** Yes. The greenhouse gas emissions or reductions associated with various materials management techniques are addressed in Chapter 4. According to the EPA, composting food waste reduces GHGs by 0.2 tons of CO<sub>2</sub> equivalent per ton managed, as compared to combustion, which reduces GHGs by 0.13 tons of CO<sub>2</sub> equivalent per ton of food waste managed.

**Comment 51:** The Plan seeks to change legislation to support its implementation. Legislation is exempt from SEQR, but the legislature must be informed on the consequences of the proposed legislation. DEC has a responsibility to perform a full EIS and an economic analysis on the impact of the Plan.

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**Response:** The Plan articulates a goal of maximizing recycling and the diversion of organic materials but does not dictate which technologies, programs or approaches are to be developed by planning units or the private sector to achieve this end. The generic EIS that accompanies the Plan addresses the environmental impacts associated with it. A comprehensive economic analysis is outside of the scope of this Plan.

**Comment 52:** The state should not look to local planning units that rely on disposal fees to operate integrated systems to contribute to financing the state's solid waste programs. Local governments are already overburdened by high taxes and get less state aid when environmental funds are "swept" for the general fund.

**Response:** The Plan recommends a menu of options for funding its implementation for the legislature's consideration. The details of any funding mechanism would be decided by that body.

**Comment 53:** The value of product stewardship is to allow the party evaluating their purchasing options to understand the true life cycle costs of competing products, but, in any event, the consumer will bear the additional cost for this shifting of materials management responsibilities.

**Response:** DEC contends that it is appropriate for the user of a product to share the cost of managing the product at end-of-life with the manufacturer, rather than having the public at large fund programs when individual taxpayers may or may not use or dispose of a problematic product.

**Comment 54:** The Plan calls for updating the requirements for construction and operation of solid waste management facilities. New York State regulations are among the strictest in the country. Is there a problem with the current regulations? Where do they need to be improved to accomplish better protection than currently exists? No technical basis is presented for increasing the regulations.

**Response:** The current effort to update the Part 360 solid waste management facility regulations predates development of the Plan. Many of the existing regulations were developed as early as 1988 and haven't been updated since 1993. The new requirements are intended to: bring the regulations up to date with current engineering and operating standards and practices; include revisions of those sections of the regulation which contain burdensome mandates to local government that can be removed without harming human health and the environment; eliminate loopholes; address legal or policy developments; and improve enforcement and compliance and enhance implementation of the goals of this Plan. As with any state rulemaking, the proposed regulations will be subject to public review and comment.

**Comment 55:** The Plan proposes significant implementation of new technologies and practices, but it does not provide any technical information on any of the proposed technologies. DEC must provide a technology assessment for use by the planning units to avoid duplication of effort at the planning-unit level. The ECL requires DEC to assess resource needs and alternative resource recovery practices. The Plan does not address either. When will DEC come forward with this information?

**Response:** Section 8 of the Plan includes an assessment of organic recycling technologies and methods. Further technical information will be developed in the form of a technology assessment and updated guidance documents as recommended in Section 8.4.6 (a). As discussed in prior responses, because the Plan does not dictate what particular technologies or facilities must be developed in the various communities in the state, a precise assessment of resource needs is impossible. The Plan does identify the need for resources, and Section 6 provides several alternatives for obtaining those resources.

**Comment 56:** The Plan's failure to mention waste-to-energy benefits is a major shortcoming. Numerous studies have demonstrated the superior climate change mitigation that would arise from including waste-to-energy in a solid



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waste management system. The Programmatic Recommendation for Combating Climate Change (Section 1.4.3) should include waste-to-energy as a mechanism for achieving greenhouse gas reductions.

**DEC Response:** The Plan does mention the benefits of waste-to-energy in Section 4.1.4 and Section 9.3. Although waste-to-energy is favored over landfilling from a GHG perspective, the long-term goals of waste reduction, recycling, and composting provide even greater GHG and other environmental and social benefits.

**Comment 57:** The Plan's emphasis on state agencies improving their programs is laudable, but greater statewide benefit could be derived if these agencies included capacity to accept materials from surrounding planning units.

**Response:** DEC will facilitate this approach to the greatest extent possible.

**Comment 58:** In discussing the goal of combating climate change, the Plan states that connecting landfill gas to energy projects to the grid is a good thing. So, in effect, LFGTE contributes to combating climate change.

**Response:** DEC concurs.

**Comment 59:** The executive summary's conclusion references expanded financial assistance for progressive and sustainable materials management programs but does not state where the funds will come from.

**Response:** Existing and potential funding sources on the state and local level, and in the private marketplace, are discussed in Section 6.3.

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**Comment 1:** We support using per capita waste disposal as a metric for gauging progress toward the Plan's goals, and moving away from using a recycling percentage. Per capita disposal is a better measure because 1) not all waste prevention, reuse and recycling can be easily quantified or reported; 2) recycling rates are a weight-based percentage, so recycling heavier items like asphalt and concrete creates an artificially high rate and, conversely, lightweighting materials has a positive environmental impact, but a negative impact on recycling rates.

**Response:** Comment noted.

**Comment 2:** The Plan says the goal is to reduce the amount of waste managed in landfills and municipal waste combustors but also says the state should recover energy from remaining waste. This is contradictory and should be corrected in favor of energy recovery.

**Response:** The statements are not contradictory. The Plan aims to reduce the amount of material handled in disposal facilities and places a priority on recovering energy from the waste managed in waste disposal facilities.

**Comment 3:** The Plan should recognize that outreach and education requires significant financial resources and that the state is prepared to pay for such investments and provide that support in a timely manner. DEC must take a more aggressive role in developing a high-profile public education campaign that promotes the policy goals of the Plan.

**Response:** Section 10.2.1 includes a regulatory recommendation to fast track Environmental Protection Fund resources for recycling coordinators and educational activities. Section 8.3.14 includes a recommendation for an aggressive statewide education campaign.

**Comment 4:** There are three main drivers to reduce the waste associated with products: reduce waste associated with consumption, reduce waste toxicity, and/or increase reuse or recycling. These drivers are not necessarily in harmony. German legislation to establish a closed cycle economy and implement product stewardship are similar in thrust to the *Beyond Waste* plan. The German legislation has led to an increase in reliance on waste to energy approaches, as well as anaerobic digestion. So, other planners working toward similar goals ended up with a very different solution, perhaps because they intended to be practical and implement the plans within the planning horizon.

**Response:** The Plan sets out a vision and overarching strategy to guide planning at the local level. Planning units will develop local plans to implement the Plan's goals and the state's solid waste management hierarchy.

In that context, it is likely that municipalities in New York will follow the path of German planners.

**Comment 5:** We support the ambitious goal of 90 percent diversion from disposal by 2018 and the emphasis on "upstream" strategies that prioritize waste prevention, reuse and recycling. Such strategies tend to be more cost-effective and environmentally responsible. They alleviate the localized effects of waste management on communities that are disproportionately affected.

**Response:** Comment noted.

**Comment 6:** We support disincentives for disposal, such as a per-ton surcharge on waste going to disposal facilities. Such surcharges can support needed programs, education and infrastructure as well as state technical assistance, compliance and enforcement.. We recommend a surcharge of \$20-\$30 per ton.

**Response:** DEC proposed the tip-fee surcharge primarily as a revenue enhancing measure, not as a policy to change behavior. If adopted, a surcharge would be established by state legislation that would enumerate details, such as the level of the fee.

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**Comment 7:** We are pleased to see the state's efforts to further engage the public and the private sector with other stakeholders to move our communities forward with cradle to grave thinking. We support efforts to enhance the quality of data collected statewide. Such data is essential for developing quality programs.

**Response:** Comment noted.

**Comment 8:** I hope that our solid waste management public policy decisions will be based on facts, sound engineering and logic—and not on misconceptions or fiction.

**Response:** DEC concurs.

**Comment 9:** The waste generation figures provided on page 15 are different from those presented on page 6. Why?

**Response:** On page 15, the Plan presents DEC's estimate of the amount of waste generated on a per capita basis, which includes the materials that were recycled and composted, as well as the waste that went to disposal. On page 6, the Plan presents the estimate of the amount of waste sent to disposal facilities (landfills, municipal waste combustors) and exported for disposal on a per capita basis. The text will be adjusted to clarify this.

**Comment 10:** The Plan projects that 74,000 jobs will be created by recycling an additional 12 million tons of waste, and it references Appendix 1 for explanation. The reference for the job calculation is to an R.W. Beck report; DEC appears to have interpreted the data in that report to arrive at its estimate. DEC fails to take into account that most of these jobs would be in the manufacture of recycled goods, which may not take place in the state. The Plan needs to clearly identify how the numbers it uses are generated. Almost all of the data included on job creation, greenhouse gas (GHG) reduction, carbon storage and energy conservation are allegedly pulled from reports referenced in the Plan; however, none of the data is clearly available in the referenced reports and therefore appears to have been manipulated in the Plan. DEC needs to provide a clear explanation for all the quoted benefits and reductions used in the Plan.

**Response:** The estimates of job creation, energy conservation, and GHG emission reductions are illustrative and based on the best data available to DEC at the time of the analysis. Appendix A provides an explanation of the data and methodology used to arrive at those estimates. Because the Plan does not dictate the particular technologies, programs and methods to be employed, DEC cannot estimate how many jobs or how much energy conservation or GHG reductions would occur within the state or outside of the state. The appendix and references to impacts have been expanded and clarified.

**Comment 11:** In preparing its estimate of GHG emissions reductions that could be achieved through the plan, DEC uses a web-based calculator provided by the Northeast Recycling Council (NERC). Will DEC allow communities to use the NERC program for an EIS?

**Response:** Yes. DEC's *Guide for Assessing Energy Use and GHGs in an Environmental Impact Statement* (<http://www.dec.ny.gov/regulations/56552.html>) recommends that project proponents use the NERC model or EPA's Waste Reduction Model (WARM), on which the NERC model is based, to evaluate energy and GHGs related to waste and materials management.

**Comment 12:** Product stewardship may drive product manufacturers out of the state or cause consumers to go out of state to purchase products that don't have end-of-life expenses at the point of purchase. How will that impact the state's economy?

**Response:** DEC favors product stewardship programs that factor the cost of end-of-life management into product price, rather than assigning visible fees to the consumer. There is no evidence that this internalization causes a direct increase in product price. For example, Minnesota, Washington, and Oregon have electronics product stewardship programs that foster cost-internalization, and none

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have experienced an increase in the cost of electronics as a result. Most product stewardship legislation like the Electronic Equipment Recycling and Reuse Act regulates manufacturers of products sold in the state, including products manufactured elsewhere. Since New York State is a market of substantial size, it is unlikely that manufacturers would stop distributing their products here. Economic analyses of product stewardship programs have documented positive economic impacts such as job creation, local government cost savings, and reduced demand for tax dollars. There have been no reports of product stewardship leading to business relocations or retraction, or of other negative economic consequences.

**Comment 13:** Does a city, town, village or county that doesn't collect waste have the legal authority to mandate that private companies operating within the municipality use a PAYT/SMART billing model?

**Response:** Yes. Such authority can be obtained by passing a local law or ordinance. Some local jurisdictions already use their authority to require PAYT/SMART billing by private companies (e.g., Tompkins County).

**Comment 14:** The Plan suggests that enforcement of comprehensive recycling requirements needs to be improved. There is no explanation in the Plan of how enforcement will be improved and no acknowledgement of the financial burden enforcement poses. This must be addressed.

**Response:** Recycling enforcement is discussed in Section 8.3.5; recommendations on how enforcement can be improved are also in Section 8.3. Section 8.3.14 (a) notes that planning units will be asked to evaluate incentive, education and enforcement programs and implement those programs where possible. Section 8.3.14 (c) recommends that DEC's enforcement authority be increased to supplement local efforts, particularly where planning units do not have the resources or capacity to enforce on their own.

**Comment 15:** The plan does not address the carbon footprint of recycling, including emissions from transportation, equipment, etc. How much CO<sub>2</sub> was used to save the 3.7 million tons of recycled material? How much CO<sub>2</sub> is generated by composting facilities?

**Response:** The GHG reduction estimates presented in the Plan are illustrative in nature and were developed based on the WARM model and the associated NERC model. These models are based on life-cycle GHG emissions and therefore factor in the emissions from transportation and operations of recycling and composting facilities.

**Comment 16:** The Plan notes that moving "beyond waste" requires influencing product and packaging design and increased investment in recovery and distribution/reverse distribution infrastructure to ultimately reduce waste. This would be a monumental task, and we question DEC's ability to carry this out. Would it be implemented through regulatory requirements?

**Response:** This comment refers to a summary statement that articulates the change sought by the Plan. The Plan includes a host of programmatic, regulatory and legislative recommendations that together will work toward the ends described.

**Comment 17:** The Plan notes that achieving its vision will require updating, strengthening and expanding DEC's regulatory and statutory authority. DEC's current authority over local government is already overreaching. The Town of Babylon cannot afford any additional unfunded mandates from DEC; local government cannot be stretched any further.

**Response:** The Plan itself does not impose any mandates. Any new requirements proposed would be subject to the public review procedures of regulatory or legislative processes.

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**Comment 18:** The Plan proposes PAYT/SMART programs as a waste prevention measure. The Town of Babylon opposes PAYT. While it may work in some affluent communities, it will yield illegal dumping and associated community health impacts.

**Response:** The Plan's recommendation on PAYT/SMART has been revised to focus on a series of programmatic and planning activities instead of a mandate. DEC will provide additional resources, tools and information to local governments and planning units evaluating and implementing PAYT if locally appropriate and feasible. DEC will evaluate the need for additional measures (i.e., mandate) in biennial Plan updates. According to EPA, more often than not, illegal dumping and inappropriate diversion are more a perceived barrier than an actual problem (see <http://www.epa.gov/waste/conserve/tools/payt/top8.htm>). A study performed by Duke University found that 48 percent of the PAYT/SMART communities surveyed saw no change in illegal dumping, while 6 percent felt illegal dumping declined. Only 19 percent felt it increased. A recommended best practice is to have a strong enforcement initiative when a PAYT/SMART is introduced. DEC will develop additional tools and information on this and other topics related to PAYT/SMART.

**Comment 19:** The plan recommends that comprehensive recycling programs include public space recycling. The Town of Babylon had a public space recycling program using igloos. It was abandoned because of contamination with non-recyclable materials.

**Response:** DEC is aware that some public space recycling programs have been unsuccessful, while others have had a more positive experience. In 2007, New York City did a pilot program on public space recycling. The results are helpful in designing successful programs. See [http://www.ci.nyc.ny.us/html/nycwasteless/html/resources/reports\\_psr\\_2007.shtml](http://www.ci.nyc.ny.us/html/nycwasteless/html/resources/reports_psr_2007.shtml).

**Comment 20:** The Plan calls for an increase in organics recycling. Composting facilities face significant siting hurdles in urban and suburban communities. Municipalities that have municipal waste combustion plants must be allowed the opportunity for energy recovery of these materials.

**Response:** Siting of any materials management facility can be challenging. The Plan recognizes the diversity of communities in the state and expects planning units to determine what range of programs, technologies and approaches they will use in their solid waste management programs. For example, anaerobic digestion facilities may be a more appropriate organics recycling technique for densely populated areas. The Plan does not restrict municipalities from handling organic materials in municipal waste combustion facilities.

**Comment 21:** The Plan notes that recycling rates have stagnated. Has DEC considered that municipalities have maximized recycling activities to the greatest extent possible, given resources and market conditions?

**Response:** Yes. Many municipalities in the state have made significant strides, and some may be approaching the practical limits of the current system. For this reason, the Plan recommends generating new revenue to fund municipal programs (Section 6.3) and implementing product and packaging stewardship programs to relieve local governments from the responsibility for managing them (Section 4). However, it is important to recognize that program implementation across the state has been inconsistent, and there are many municipalities that could achieve higher levels of recovery within existing market and fiscal constraints.

**Comment 22:** We believe that a significant portion of the recycling stream is being diverted and recovered outside the municipal system. Planning units lose this data, and that reduces the overall recycling rate for the municipality.

**Response:** This is in part why the Plan uses facility data for evaluating the statewide recycling levels.

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**Comment 23:** The Plan notes that it addresses what each of the many entities—including state and local government, the private sector, and individual consumers—can achieve if we work collectively and in partnership with other states and the federal government. It also notes that success will be measured by sustained and continual improvement in maximizing recovery and minimizing waste. Who is going to collect the data associated with these many entities? This is a daunting undertaking which we believe may not be realistic.

**Response:** To gauge progress toward the Plan’s waste disposal goal, DEC will continue to track the amount of materials that are managed at landfills and municipal waste combustion facilities and exported for disposal. In addition, Section 8.3.14 (a) includes a recommendation to establish an on-line reporting system. DEC hopes to establish such a system to allow public and private sector entities to report in a consistent format and platform to improve the data available to the state.

**Comment 24:** The Plan states that DEC wants to partner with local communities and planning units to successfully implement the Plan’s goals. How will this partnership be accomplished? Will DEC commit staff to assist local governments?

**Response:** Yes. DEC staff are available to assist municipalities and planning units. Central office staff will provide support and assistance in cases where regional staff are not available, particularly for planning and programmatic issues.

**Comment 25:** Studies show that people are more comfortable dealing with single-cause problems and that payoffs for change need to be immediate and clear. Moving toward more closed loop systems involves a complex array of issues. Some argue that maximizing reuse and recycling of common materials leads to waste and believe that a new class of materials needs to be developed to achieve sustainability. The scope of changes called for in the Plan cannot be addressed in 10 years.

**Response:** The Plan has been revised to phase in the goals over a 20-year period.

**Comment 26:** A 2004 study found there is no harm in setting unenforced recycling targets, but there is a weak association between state recycling goals and actual achievements. Thus, setting ambitious goals serves no useful purpose in increasing recovery.

**Response:** The Plan’s goals are meant to set the stage for aggressive efforts to reduce waste going to disposal and, as noted, the Plan has been revised to phase in the goal over a longer time period.

**Comment 27:** A plan should be grounded in reality and set out a realistic course of action toward achieving its goals. This plan’s targets will be unachievable and go largely ignored, at best, and at worst, will impose immense costs on New York State’s municipalities, residents and businesses before it is abandoned as unworkable.

**Response:** The Plan has been revised to phase in the goals over 20 years, instead of 10.

**Comment 28:** The numeric goals of the Plan are unclear. In one place it notes that the goal is to achieve 90 percent diversion of municipal solid waste (MSW) by 2018; in another it says the goal is to reduce waste going to disposal by 15 percent every two years, which would achieve less than 50 percent reduction by 2018. This needs to be clarified. We support the higher goal. There should be similar goals for other waste streams (i.e., construction and demolition (C&D) debris, industrial waste and biosolids).

**Response:** The goals for MSW reduction have been clarified and are presented in Table 2.1. While the overarching goals of maximizing waste reduction and recycling are applied to all waste streams including C&D debris and industrial wastes, DEC lacks similar generation, recovery and disposal data for these that it has for MSW. Accordingly, the goals identified in the Plan for MSW will initially serve as general goals for the reduction of these other waste streams as well. As the Plan is implemented, more detailed information for these waste streams will be obtained, and specific

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goals will be established for C&D debris and industrial wastes as part of the biennial Plan updates. The Plan has been revised to reflect these goals.

**Comment 29:** I strongly support the Plan's focus on sustainable materials management; however the strategy appears to be compilation of a number of vague strategies to achieve a very ambitious goal. I cannot imagine the staff and infrastructure investments that would be needed to achieve such an ambitious goal in such a short time frame, especially since the state is not offering concrete funding assistance. It appears we are headed for a colossal unfunded mandate.

**Response:** The Plan has been revised to phase in the goals over 20 years , instead of 10. The Plan itself does not impose any mandates. Any new requirements proposed would be subject to the review procedures of regulatory or legislative processes.

**Comment 30:** One of the goals of the plan is to create "green jobs." While job creation can be a good thing, it should be a benefit and not a goal of an environmental regulatory agency. Green job creation is presented as a multiplier of landfill jobs. The plan does not note that the labor cost is likely increased by the same multiplier. Green jobs will require subsidy through taxes, fees or other means. A study in Italy showed that a subsidy would create five more jobs in the non-green sector for each green job created. New York may be better served by investments in other segments of the economy. There are several studies that have shown net negative impacts to a regional economy when green jobs initiatives are implemented. The plan needs to account for offsetting impacts from green job creation, including job losses in the waste industry and indirect impacts from solid waste management cost impacts.

**Response:** Creating green jobs is one of sixteen qualitative goals of the Plan. The Plan envisions making a stronger connection between environmental protection and economic development. The job creation figures are intended to illustrate the potential job growth in this sector. Moving forward, DEC and Empire State Development (ESD) will track job creation and displacement to the greatest extent possible and will report any relevant findings in biennial plan updates. A more in-depth analysis of job creation and displacement is outside the scope of this Plan.

**Comment 31:** If communities are unable to develop the infrastructure necessary to implement the plan, if infrastructure and programs don't meet the state expectations, if legislation is not enacted or doesn't achieve intended goals, or if the state does not support the development of new or expanded disposal facilities, the result will be more waste exported and landfilled over the next ten years. This should be unacceptable to the state.

**Response:** Because such an outcome would be unacceptable, DEC is prepared, as a policy priority, to obtain the resources and partnerships necessary to advance this plan.

**Comment 32:** The per capita metric is confusing. Does DEC expect that the waste generated by each household would be weighed, tracked and reported?

**Response:** Per capita waste disposal estimates will be based on the total amount of waste managed at landfills and municipal waste combustors and exported for disposal, divided by the state's most recent population estimate.

**Comment 33:** DEC should take this plan back to the drawing board by identifying several smart goals and develop a clear and focused report that includes a per capita cost assessment and cost-benefit analysis.

**Response:** The Plan is intended to provide a comprehensive view of materials management in the state and therefore is lengthy. The endeavor is greatly complicated by the diversity of materials management systems and approaches throughout the state, making it both difficult and unwise to be more definitive in articulating goals. While cost will certainly be a factor as planning units develop local plans, a statewide economic analysis is outside of the scope of this Plan.

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**Comment 34:** Issues of self-sufficiency have been the subject of prior plans. The Plan should not require self-sufficiency. Instead, it should accept the concept of mutually beneficial arrangements, since urban areas provide jobs and entertainment, while rural areas provide food, goods and services needed in the urban area. Also, producers of products and packaging should be engaged in materials management through stewardship programs.

**Response:** The Plan does not require or set goals for self-sufficiency. Section 4 provides details on product and packaging stewardship.

**Comment 35:** It is responsible public policy for the state and its municipalities to take care of their own waste. While New York State is not an island and cannot always be 100 percent self-sufficient, that should be the goal. Meeting that goal will require new facilities, even if New York leads the world in reduction and recycling.

**Response:** Since waste moves freely in the marketplace uninhibited by political or public policy boundaries, it is difficult for the state to make significant efforts toward self-sufficiency.

**Comment 36:** The Plan relies too heavily on product stewardship initiatives to reach reduction goals. We support product stewardship; however we are concerned that implementing such programs in New York, and not federally, will make New York a more expensive place to live and operate a business, as compared to states without product stewardship.

**Response:** There are more than 30 states that have product stewardship laws in place for one or more products. Studies have documented economic benefits, such as job creation (see *Preliminary Analysis of E-Cycle programs in Washington and Oregon*, Northwest Product Stewardship Council, March 2010), but have not documented negative economic consequences.

**Comment 37:** The plan's goal of diverting 90 percent of materials from disposal and wasting only 0.6 lbs/person/day is certainly doable. My family is committed to zero waste. We generate an average of .75 lbs/person/year.

**Response:** Comment noted.

**Comment 38:** We support the plan's ambitious goals. The state needs stronger measures than the ones outlined in the Plan to achieve those goals. We support increased reduction, reuse, recycling, and composting, and we support disincentives for disposal and waste export.

**Response:** While the Plan has been revised to phase in the goals over a longer time frame, the ultimate quantitative goal of reducing waste disposal to 0.6 lbs/person/day has been retained.

**Comment 39:** We strongly support the Plan's goals to "strive for full public participation, fairness and environmental justice" and to "ensure that SWMFs are sited, designed and operated in an environmentally sound manner." The Plan can be improved to accomplish these and the overall waste reduction goals.

**Response:** Comment noted.

**Comment 40:** There should be specific goals for reuse. Waste prevention tends to be forgotten and when it's lumped in with recycling, reuse, it is not getting its due.

**Response:** The Plan does not include a reuse goal because DEC does not have the data available to set or evaluate progress toward a specific reuse goal. The Plan recognizes the importance of providing separate attention to waste prevention and reuse in its individual discussions of these topics (Sections 8.1 and 8.2 respectively). In addition, Section 10.1.1 (3) recommends clarifying the solid waste management hierarchy to explicitly state that reuse is preferable to recycling.



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**Comment 41:** The Plan's goal of reducing waste disposal to a rate of 0.6 lbs/person/day is too ambitious and unachievable in the time allocated. What science and economic policy is underlying the draft plan's goals? The goals should be replaced with more realistic goals that consider economic constraints and use data from existing programs that have achieved significant increases in recycling and waste reduction.

**Response:** The Plan has been revised to phase in the goals over a 20-year period, as presented in Table 2.1, at rates that presume that initial increases will result from improved capture of currently targeted materials and allow for time to develop infrastructure, markets and programs for new materials. See Appendix A.

**Comment 42:** We do not favor the plan's proposal to remove the economic markets test codified in GML 120-aa and replace it with a mandatory list of recyclables, including organics, without regard to costs or environmental impacts of the program, or whether the end product has economic value.

**Response:** The final plan recommends a designated list of core recyclables that must be recycled, supplemented with an "economic markets clause" for additional materials. This is not intended to divorce economic considerations from recycling, but to acknowledge market realities. Experience over the last 20 years has demonstrated that market downturns tend to be short-term, and communities are more likely to ride out the markets than to adjust their programs and face the costs of educating and re-educating the public to do so. By creating a core list of recyclable materials, the state can better educate the public, enforce requirements, and otherwise support local efforts. The Plan proposes that a waiver process be put in place to allow communities to vary from the designated list in the case of economic hardship.

**Comment 43:** Certain areas of the state have unique issues and challenges with regard to reducing per capita waste disposal, for example, yard trimmings in New York City. A generic, per capita waste disposal goal will be difficult for certain communities to meet. Local factors need to be considered when developing local recycling and disposal goals.

**Response:** The text in the Executive Summary and Section 2 has been changed to clarify that the Plan's disposal goal of 0.6 lbs/person/day is a statewide average. Each planning unit's progress in reducing waste destined for disposal will be gauged on that planning unit's baseline, not the statewide average. Planning units are expected to develop goals specific to their own unique circumstances.

**Comment 44:** DEC has described some goals as "aspirational." The state should not place unrealistic requirements on municipalities to install aspirational measures if they are not truly viable from an economic and technical basis.

**Response:** The Plan does not impose goals or establish new mandates for municipalities and does not dictate a specific or rigid approach to local planning and programs. Municipalities are expected to evaluate the technical and economic viability of various strategies to reduce waste and propose methods that will be workable within their local context.

**Comment 45:** The Plan is well intentioned and full of ideals and passion, but it does not define the role of the state in prioritizing, funding and accomplishing the goals. We need a short concise document with real priorities and accountability for the state to achieve its goals. The state should annually report for and be accountable for the success of the Plan. Stewardship legislation should have clear priorities and targets, not just an array of possibilities. Waste and packaging reduction should be state or national priorities, not municipal responsibilities. Without these changes, the Plan should not be approved.

**Response:** DEC will report on progress toward the Plan's goals in biennial Plan updates. Which products are prioritized for stewardship programs for each of the next ten years will depend on many variables, most of which are outside of DEC's control. Instead of prioritizing, the Plan provides a menu of options for the legislature's consideration. DEC does not expect municipalities to affect packaging

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reduction, but appreciates those that take on education and outreach efforts that help to reduce waste generation.

**Comment 46:** If the goal of the Plan is achieved, municipal waste combustion plants would likely not be able to continue operating. Municipalities would fall short of their obligated waste delivery rates and not enough waste would be available to run the plants.

**Response:** The longer phase-in period should allow municipalities and waste disposal facilities to adapt business models, contractual agreements, and service areas to ensure that sufficient waste is available to continue operations. As disposal volumes diminish, waste will be diverted from export and from closed facilities to facilities within the state that are still operating.

**Comment 47:** Local plans will have to be consistent with these goals, and if DEC is wrong about what is possible, the planning unit will be out of compliance with its own plans and face enforcement actions and public criticism.

**Response:** Planning units are required to submit biennial compliance reports in which they can identify progress toward their goals, problems encountered, and mid-course corrections. Therefore, the planning process allows for planning units to continually evaluate their programs and investments and adjust according to their experience.

**Comment 48:** If the Plan's goals are tied to facility permitting, the state may see a disposal capacity shortfall.

**Response:** The Plan's goals are not tied to facility permitting. New disposal facilities will be evaluated against regulatory standards.

**Comment 49:** Our county has been extremely innovative in the operation of its solid waste, recycling, reuse and associated programs. The Plan in its present form would jeopardize the \$37 million in infrastructure that was built pursuant to the 1987 plan.

**Response:** DEC does not intend for the Plan to undermine existing investments in infrastructure and does not believe that it will have that effect. New York's communities and facility owners have made significant investments in some of the most environmentally responsible disposal facilities in the nation. DEC's focus on reducing waste is driven by the belief that environmentally protective disposal capacity is a resource that should be used judiciously.

**Comment 50:** There is inadequate discussion in the Plan of the feasibility of reaching the goal, including the cost to achieve this target. The state and local communities need an understanding of the relative costs of various options to determine which waste reduction efforts provide the greatest marginal gains for the amount invested.

**Response:** A full economic analysis is outside of the scope of this Plan. DEC plans to issue technical guidance documents on key management techniques, including organics recycling, which will provide cost and performance information. Since the costs and conditions vary from one community to the next, sometimes significantly, it is important that the comparative costs of program options be evaluated as a part of the local planning process.

**Comment 51:** Municipal waste combustion (MWC) meets several goals in the plan, including: minimizing the climate impacts of materials management, maximizing the energy value of materials management, maximizing recycling, and maximizing reuse.

**Response:** DEC acknowledges the merits of MWC and the analysis in the Plan supports retaining its place as preferable to land disposal in the solid waste management hierarchy. See the responsiveness summary for Chapter 9 for additional responses to this comment.

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**Comment 52:** Although the architects of the Plan deny this is a zero-waste plan, it is clearly where their hearts lie. There is an active debate about whether or not we must have waste. However, pollution is a question of quantity. It is rare that a waste is always damaging, in all amounts, no matter how small. In some cases, wastes have value socially or as artifacts. Pragmatic solutions along a conceptual path that will lead to incremental improvements make for a much sounder approach than this plan.

**NYSDEC Response:** Comment noted.

**Comment 53:** We support a zero-waste goal. Your 90 percent goal certainly qualifies this as a zero-waste plan. New York State should join the other countries, states and cities to be a part of the zero-waste movement. A zero-waste plan would help communities that are financially and environmentally burdened by poorly operated municipal waste combustion facilities. No one understands *Beyond Waste* except maybe DEC.

**Response:** New York joins Washington State in using the term “beyond waste” to describe a comprehensive materials management approach. It stops short of zero waste by recognizing that some waste is inevitable. It also recognizes that looking “upstream” at how products and packages are designed and used will help to reduce or eliminate waste on the back end.

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**Comment 1:** The Plan does not address the coordination with other DEC Divisions such as the Division of Water.

**Response:** The Plan does not specifically discuss routine coordination with other DEC divisions, as this is the normal course of business within DEC. The exceptions are for specifically addressed joint initiatives such as that described in Section 8.5.5 (Upland Management of Navigational Dredge Material) where coordination between several DEC Divisions, including the Division of Water was noted. Additionally, coordination with staff of a specific division may be identified when a project or program-specific joint effort is called for in the Plan to foster a specific initiative, such as in Section 8.4.6 (a) where DEC's Division of Operations will be called upon to assist with efforts to increase state use of locally available compost.

**Comment 2:** The Plan places too much responsibility on the planning units for attaining goals with little assistance from the state.

**Response:** Since the first plan, issued in 1987, the state's goals have included maximizing waste reduction and recycling to the extent technically and economically practicable, and those goals will continue. Each planning unit, through the development and modification of its local solid waste management plan (LSWMP), establishes planning unit specific goals. The state will implement policies and programs to support and complement efforts at the local level, such as product stewardship policies, market development efforts, broad scale education, outreach, and technical guidance and assistance. Taken together, the efforts of the state and the individual planning units working in partnership are intended to lead New York to achieve the goals of the Plan.

**Comment 3:** It is a key to the Plan that the state must recognize the marketplace and realize that this is what drives the utilization of recyclables.

**Response:** The Plan discusses recycling markets in Section 8.3.10 and identifies materials for which market development attention is needed to drive greater utilization of materials. In addition, the competitive nature of the marketplace is recognized in several sections of the Plan.

**Comment 4:** Waste that is exported directly out of state would avoid any system fee.

**Response:** DEC supports applying a tip fee surcharge for waste disposed of in state, or transported directly out of state for disposal.

**Comment 5:** Waste that is directly exported may not be counted in overall calculations of waste generated in a planning unit or the state.

**Response:** LSWMPs are currently required to account for all waste generated within the planning unit, including exported waste, and that will continue under this Plan. In development of the Plan, DEC included waste destined for out-of-state disposal in the statewide generation quantities.

**Comment 6:** Communities with long-term contracts should not be given a pass while other communities are required to do more.

**Response:** All LSWMPs are required to fulfill the same regulatory criteria. As planning units develop local plans, existing contracts will necessarily have to be considered, but this should not negate requirements to assess materials management alternatives and undertake planning in the context of the goals of this Plan.

**Comment 7:** Instead of trying to push all planning units into new initiatives, the Plan should first establish a 5-10 year goal to bring all planning units to the levels of recycling achieved by leading planning units over the past 20 years. Moving to a whole new area of recycling—organics recovery—before many communities have maximized recovery of simple fiber and container components, just doesn't make sense.

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**Response:** Each planning unit is unique, as are their LSWMPs. Accordingly, the array of programs and program implementation differ, a fact which is reflected in the varying levels of recovery. While all planning units are expected to maximize waste reduction and recycling to the extent technically and economically practicable, the specific programs and implementation schedules will necessarily differ. It would be inappropriate to consider all planning units the same and not recognize these differences, and equally inappropriate to artificially restrict the advancement of leading planning units to the levels of the lower-performing planning units.

**Comment 8:** The Plan wants to re-emphasize the importance of LSWMPs. Many planning units followed their LSWMP by investing millions of dollars to build infrastructure to support an integrated solid waste management program, yet the Plan states it is going to prioritize investment. How can that be accomplished, considering the economic status of New York State?

**Response:** Financing is discussed in Section 6.3 of the Plan. An array of possible funding mechanisms are discussed and will be pursued to provide funding assistance to the planning units to implement aggressive materials management programs.

**Comment 9:** LSWMPs need to be enforced, or else they are purely a charade.

**Response:** While proper waste management will remain the responsibility of local government, DEC views the development and implementation of LSWMPs as a partnership between the state and the planning units. As part of that partnership, the state expects planning units to move forward with the activities and programs outlined in their LSWMPs, and the state will be monitoring progress. Though LSWMPs are planning documents and are not directly enforceable, elements may be, such as ordinances put in place in fulfillment of a plan. Permits for new and modified facilities sought by the planning unit must be consistent with LSWMPs.

**Comment 10:** The Plan must push LSWMPs to address construction and demolition (C&D) waste.

**Response:** All waste generated within a planning unit, including C&D debris, must be evaluated and addressed in LSWMPs.

**Comment 11:** Other states have followed a policy of auditing transfer stations, recycling facilities, and landfills on a regular basis to help guarantee that enforcement is working.

**Response:** DEC has an enforcement program that includes inspections and review of required reporting for all solid waste management facilities, including the facilities noted. In addition, DEC places on-site monitors at many facilities throughout the state. Those monitors provide a consistent DEC presence. DEC will address compliance and enforcement in biennial Plan updates.

**Comment 12:** In Massachusetts, fines are imposed on landfills that accept recyclable materials and improperly dispose of them. This has led landfill managers to better handle the materials coming in, while subjecting waste haulers to higher tipping fees if they don't pre-sort C&D waste.

**Response:** As part of the regulatory recommendations in Sections 8.3.14 (b) and 10.2.1 of the Plan, DEC proposes enforceable restrictions on the disposal of source separated recyclables in solid waste management facilities.

**Comment 13:** Haulers of C&D waste should be required to report the amounts recycled and the end destinations of materials.

**Response:** Proposed enhancements to the state's waste transporter program are discussed in Section 10.1.1 (13) of the Plan.

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**Comment 14:** Waste haulers that dispose of more C&D waste by export to other states should be subjected to higher fees or taxes.

**Response:** While the Plan does not include a proposal to assess specifically targeted fees for transportation of C&D debris out of state, possible enhancements to the waste transporter program are discussed in section 10.1.1 (13). To the extent fees are proposed for waste disposal, DEC supports including waste destined for export for disposal in the fee structure. Targeting exported materials specifically may raise interstate commerce issues as well.

**Comment 15:** All waste haulers should provide detailed reporting to DEC and municipal governments on their export of waste out of state, which DEC should then audit.

**Response:** Proposed enhancements to the waste transporter program, including reporting requirements, are discussed in Section 10.1.1 (13) of the Plan. The Plan acknowledges the need to track out of state disposal in order to accurately assess disposal rates, track waste reduction and inform future decision-making.

**Comment 16:** DEC should not only oversee the development of LSWMPs, but should also 1) ensure that every LSWMP adheres to the statewide goals, 2) ensure planning units provide funding and staffing appropriate to the goals and measures that they have represented in their LSWMP, and 3) ensure planning units make adequate annual progress toward stated goals and programs identified in their LSWMPs.

**Response:** While proper waste management will remain the responsibility of local government, DEC views the development and implementation of LSWMPs as a partnership between the state and the planning units. As part of that partnership, the state will provide technical assistance to planning units during LSWMP development and implementation and, as discussed in Chapter 6, will strive to maximize financial assistance to planning units to assist with implementation. However, as part of that partnership, the state expects planning units to move forward with the activities and programs outlined in their LSWMPs and will require all permits issued to planning units to be consistent with LSWMPs.

**Comment 17:** Where planning units are found lacking in the design of their LSWMPs or the implementation of their LSWMPs, there should be no waivers given in denying permits for new facilities. An additional disincentive such as a fine levied on a planning unit for not achieving specified diversion rates should be considered.

**Response:** A plan does not have the legal weight of a consent order or a permit and is not enforceable as such. The diversion goals developed as part of a planning unit's LSWMP are intended to be a guide for anticipated performance and achievement based on implementation of the programs outlined in the LSWMP. DEC efforts will focus on encouraging implementation of the specified programs intended to lead to the projected diversion rates and making mid-course corrections where performance falls short. The planning and reassessment processes are valuable in themselves as they help reveal opportunities and useful analysis that compel action and public interest in pursuing specific goals.

**Comment 18:** New York should require that state and local solid waste management planning efforts explicitly promote equity through a "fair share" approach. In New York City and elsewhere, low-income communities and communities of color disproportionately bear the environmental and health burdens of solid waste management.

**Response:** Because land use is a local issue, DEC's Part 360 regulations do not affect or supersede local zoning requirements. However, significant environmental impacts, including siting issues, are addressed in the SEQRA process, with DEC's Environmental Justice policy (CP-29) and enforcement efforts also playing a role in avoiding environmental and public health impacts of facility clusters.

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**Comment 19:** The existing planning unit activities should be reviewed to make sure they represent the entities that are responsible for managing the solid waste, and any soft or hard money grants should go to the governmental entity managing the waste.

**Response:** This is a consideration in grant eligibility determinations.

**Comment 20:** The Plan should articulate that community outreach and education requires significant financial resources and that the state is prepared to help pay for such investments and will provide such financial support to planning units in a timely manner.

**Response:** The Plan recognizes the significant costs related to all aspects of solid waste management including outreach and education activities. Recommendations related to funding enhancements for outreach and education activities are addressed in Section 6.

**Comment 21:** DEC must take a more proactive, aggressive role in developing a high-profile public education campaign that promotes the policy goals (increase waste reduction and recycling) set forth in the state Plan. Mass communication is an expensive undertaking and must be led by the state. There is an excellent opportunity for a statewide recycling/waste reduction campaign—coordinated by the state—that applies to all communities in the state.

**Response:** This activity is proposed in the Plan in Sections 8.3.12 (a) and 10.3.2.

**Comment 22:** Local governments are confused as to the role they are expected to play through their own LSWMPs. Are planning units expected to set realistic, incremental goals, thereby falling well short of the recycling success expected of the state as a whole, or should they draft aspirational plans like the state and risk disappointment if the money, technology and political will fail to materialize?

**Response:** The role and process for local planning has not changed. Planning units are expected to continue to include aggressive programs striving to maximize waste prevention, reduction and recycling to the extent economically and technically practicable and to include those programs and efforts in their LSWMPs. The biennial compliance reporting process provides an opportunity for planning units to evaluate the effectiveness of their plans and programs and to initiate necessary mid-course corrections. These reviews should aid in ensuring that a plan's goals are met.

**Comment 23:** How will the state enforce Beyond Waste?

**Response:** The Plan itself is not an enforceable document. Implementation is expected to be achieved through the various DEC activities outlined, legislative initiatives, local planning, and enforcement of the state's laws and regulations.

**Comment 24:** All LSWMPs should have an array of specific program legislation and other measures designed to increase waste prevention, reuse, recycling and composting in order to move toward the goals stated in the LSWMP.

**Response:** Planning units are expected to undertake aggressive programs striving to maximize waste prevention, reduction and recycling to the extent economically and technically practicable and to include those programs and efforts in their LSWMPs and, where appropriate, in local ordinances.

**Comment 25:** Planning units should be required to fund and make reasonable annual progress on achieving their LSWMP goals and implementation of their plans, programs, legislation and other measures.

**Response:** Planning units are expected to note progress on all aspects of their LSWMPs in the biennial compliance reports they are required to submit to DEC. Any deviations and necessary program adjustments must be addressed in those reports.

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**Comment 26:** LSWMPs should include percentage diversion goals for reuse, recycling and composting, as well as for reducing generation. Their goals should match or exceed the goals in Beyond Waste.

**Response:** All LSWMPs include planning unit-specific projected diversion goals that are intended to guide anticipated performance and achievement based on implementation of the programs outlined in the LSWMP. However, these goals are necessarily based on a number of assumptions and factors inherent in solid waste management planning and are variable from one planning unit to the next. The statewide goals addressed in the Plan are intended to be broader statewide planning objectives.

**Comment 27:** DEC has a key role in requiring planning units to prepare LSWMPs that match the goals of the state plan and include a full suite of programs that include PAYT; waste reduction and reuse; expanded recycling and composting programs; and improved outreach, education and enforcement that goes beyond residential to commercial and institutional sectors and commercial carters. DEC must require local districts to meet state goals, and legislation at the state level needs to expand DEC authority. The Plan, as written, describes local planning units making all of their own decisions. Planning units cannot be allowed to just do their own thing and handle solid waste in any way they choose. As we plan to address climate change, we are certainly not planning on allowing counties or other jurisdictions to opt in or out of climate change provisions. If that is true, the same should be true for solid waste and the new materials management policy, since without a sustainable waste plan we cannot really deal with climate change. DEC needs to establish basic minimum requirements for all LSWMPs; this makes planning easier for all concerned. Requirements specific to the particular planning unit can be added.

**Response:** The Part 360 regulations contain the requirements for LSWMPs (Part 360-15), and DEC has many guidance documents concerning the preparation of LSWMPs. The issues raised in this comment are included as items to be reviewed and addressed in LSWMPs. Waste management has traditionally been the responsibility of local government. Absent a major shift in state and local government structure, this will likely continue. The state legislature has enacted important solid waste management requirements for local government, notably the requirement to pass source separation ordinances. However, there are too many differences between municipalities and their waste management statutes to either impose across-the-board goals and rules or to expect DEC to take over local planning.

**Comment 28:** Planning units must be required to enter into formal agreements that establish responsibilities and authorities for each member of the planning unit in order to ensure that the local plan is not just a paper exercise.

**Response:** DEC will require such agreements in cases where coordination and jurisdictional responsibilities under the LSWMP require emphasis.

**Comment 29:** Planning units must also be required to ensure ample public involvement and participation in the planning process.

**Response:** Public involvement in local planning continues to be guided by the requirements of SEQRA and Part 360-15.

**Comment 30:** DEC should require all communities to adopt incentive/disincentive programs, such as Pay-As-You-Throw, which are proven to increase diversion rates.

**Response:** The Plan's recommendation on PAYT/SMART has been revised to focus on a series of programmatic and planning activities, instead of a mandate. DEC may provide additional resources, tools and information to local governments and planning units evaluating and implementing PAYT if locally appropriate and feasible. DEC will evaluate the need for additional measures (i.e., mandate) in biennial Plan updates.



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**Comment 31:** Throughout the Plan, there are recommendations and findings which state that the initiatives and goals in the Plan will need to be addressed by the applicant or planning unit during LSWMP reviews or facility permit reviews. This raises many warning flags to local governments that DEC will expect local governments to actually put in place the infrastructure to implement the Plan before approvals will be granted. This form of persuasion has become standard practice in obtaining compliance with non-regulatory initiatives. This Plan will be used to further this practice and force significant costs onto local governments, regardless of the financial support the state may (or may not) provide.

**Response:** Reviews of LSWMPs and facility permit reviews will include consideration of the state's goals and objectives as articulated in the Plan, but local planning decisions will be made by local planning units based on feasibility, along with policy goals. Under existing law, permitting must be consistent with local planning decisions as described in the LSWMP.

**Comment 32:** There are planning units that are thinking about ways to get out of the waste business all together. Private sector waste management is attractive to some municipalities that have been laboring under heavy debt for 30 years. The private sector can handle all waste management in some areas and in many places already does. *Beyond Waste* may accelerate a trend toward privatization.

**Response:** It is clear that private facilities play a major role in materials and waste management in New York State and will continue to do so. As noted in Section 1.2, over the course of the past 20 years, much of the state's landfill capacity has shifted from municipalities to private companies, with 75 percent of the capacity now operated by private companies. The state will move forward on *Beyond Waste* with significant, and perhaps growing, participation by private industry. Section 3.2 discusses the concepts of industry consolidation and facility privatization, and Section 3.3 discusses overseeing privately operated waste management facilities.

**Comment 33:** The Plan should be specific regarding how each of the state goals will be implemented.

**Response:** The recommendations in each section spell out action plans as specifically as possible at this point in time. The Implementation Schedule (Chapter 11) includes a timeline for specific activities.

**Comment 34:** Given the major shift in waste management policy outlined in *Beyond Waste*, local planning units may choose to disband their solid waste programs, sell their solid waste system assets, and leave solid waste management to the state and private sector. How would this affect the implementation of the state solid waste management plan?

**Response:** Waste management has been and will continue to be the responsibility of local government. Accordingly, ownership and operation of facilities and programs need to be considered and addressed as part of LSWMPs, with the decisions about whether those facilities will be privately or publicly operated resting with the planning units, as is currently the case. Regardless of facility operation, municipalities are responsible for overseeing materials and waste management programs by putting in place laws and ordinances (e.g., mandatory source separation ordinances) and ensuring compliance.

**Comment 35:** New York State leadership in recycling is often touted in the Plan. For instance, the Office of General Services report was included as Appendix 3.1 and includes a section on recycling and disposal at state buildings. In office buildings, there should be much higher recovery rates. Also, the recovery rates are trending downward, suggesting that the program is not receiving adequate institutional support.

**Response:** Executive Order 4, issued in April of 2008, provides the institutional structure for invigorating the state's waste reduction and recycling efforts. While much more remains to be done, the state is committed to enhancing and expanding its efforts so that government can deliver a greener, cleaner environment as well as cost savings to the people of New York. In FY 08-09, reporting

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agencies generated 814,703 tons of solid waste, of which 390,866 tons was recycled (48%). This was the first year that waste disposal was reported, so comparisons with prior years are not possible.

**Comment 36:** Executive Order 4 requires each state agency and authority to appoint a sustainability and green procurement officer. Has each agency fulfilled this requirement? Is there a list of all the locations where the state sends its different waste streams?

**Response:** Of approximately 100 entities required to comply with the Executive Order, 93 have appointed sustainability and green procurement coordinators. Many of the agencies and public authorities participate in their local recycling programs; there is no list of locations where the state sends its different waste streams. A progress report on EO 4's first year of implementation is available at <http://www.ogs.state.ny.us/EO/4/Docs/FirstAnnualProgressReport.pdf>.

**Comment 37:** The implementation of an effective product stewardship program may have financial impacts on the existing local recycling programs which rely on certain of these materials for income.

**Response:** Most communities report that, while some materials generate revenue, those revenues rarely cover the full cost of collection and processing. So, in most cases, local programs will benefit because the expense reductions will be greater than the revenue reductions. In addition, some municipalities have been able to continue successful collection programs for materials covered in product stewardship programs working on behalf of a manufacturer. In these instances, municipalities have turned a cost into a revenue stream by serving as the manufacturers' collection agents.

**Comment 38:** The draft Plan needs to better consider how it will reward those communities and systems leading the way. All too often broad brush plans reward the losers and overlook the leaders. The Plan needs to take a hard look at how it will avoid the unintended consequences of forcing statewide percentage reductions on planning units that are already performing at levels far above the state average. One size does not fit all. Provide tangible incentives to leaders.

**Response:** DEC recognizes that each planning unit faces unique circumstances and will be proceeding from its own baseline. The Plan's discussion of goals has been revised to clarify that each planning unit's progress in reducing waste destined for disposal will be gauged on that planning unit's baseline, not the statewide average. In addition, the funding alternatives and mechanisms discussed in Section 6.3 of the Plan address rewards for strongly performing communities.

**Comment 39:** The Plan seeks to create statewide standards for all solid waste facilities without providing local flexibility in the implementation of these standards. This will likely impede local solid waste management efforts. Solid waste disposal capacity in the state has been primarily developed by local governments, local solid waste authorities, and private sector companies. These groups understand the critical components of their communities' environmental infrastructure and needs. Any state standard must give primacy to the unique needs of local communities instead of the disposal needs of the state.

**Response:** The Plan does not change the regulatory standards for solid waste management facilities in the state; nor does it create new standards. The Plan acknowledges the need for flexibility in light of local differences.

**Comment 40:** This policy would result in LSWMPs being redrafted and updated continuously as the state plan takes shape and evolves. This would create significant delays in LSWMP approval and even more delays in the permit application process if an updated and approved LSWMP is a prerequisite for permit completeness or issuance.

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**Response:** DEC's Part 360 regulations already require both biennial LSWMP compliance reports and LSWMP modifications and updates as necessary. The Plan does not alter those requirements.

**Comment 41:** The Plan wrongly equates all planning units. In reality, there are large differences between downstate and upstate waste exporters versus self-sufficient systems, public-based and private-based, mature, established, comprehensive solid waste management programs, and barely discernible programs, some with no LSWMP. The Plan simply does not take these differences into account.

**Response:** The Plan does not consider all planning units to be the same. In fact, DEC recognizes, both in the Plan and in implementation of the LSWMP program, that all planning units and their circumstances are unique, and all planning units are considered and treated as such. To clarify, the following statement is being added to the Executive Summary of the Plan: *This Plan recognizes the diversity of the communities in the state, including variability in financial capacity, and presents a menu of options available to planning units and others engaged in waste reduction efforts. To be consistent with this Plan, local solid waste management plans should evaluate and then propose methods to reduce waste and increase reuse, recycling and composting within the planning unit. Planning units will be afforded flexibility in determining how to best implement their programs. They will not be ordered to establish specific facilities or programs, or be held to firm or mandatory goals. Rather, they will be asked to work as aggressively as possible to reduce the amount of waste destined for disposal.*

**Comment 42:** The Plan notes that the present state Plan was to take its cue from local SWMPs that noted obstacles to carrying out Plan guidelines. It does not appear that this was done in creation of this Plan, as local circumstances and financial situations were not taken into account in developing this draft Plan.

**Response:** The differences between planning units' circumstances and management of waste and recyclables are discussed throughout the Plan and specifically noted in Appendix C. These differences were taken into account in developing the Plan.

**Comment 43:** We ask that the state continue to recognize the value of good municipal partners and continue to re-invest in proven successful local planning units, even while encouraging start-up initiatives in other parts of the state.

**Response:** DEC intends to continue to invest in successful planning units as well as their lower-performing counterparts. The Plan is intended to address the needs of both groups.

**Comment 44:** DEC should prioritize helping planning units study the effectiveness of their own outreach programs because very often outreach programs are designed and rolled out and then not analyzed to see if they are actually working or might be done better.

**Response:** This is a logical approach that is consistent with the idea of replicating successful programs.

**Comment 45:** LSWMPs varied in term from 10 to 20 years. Why is the state promoting 10-year planning periods, when in actuality, 20-year planning periods would be more desirable from a financial and practical viewpoint? The Plan should recognize that some planning units have long life spans for their existing technologies, and they should be allowed to project a 20-year planning period.

**Response:** DEC's experience with LSWMPs is that a planning period of 20 years is not practical, given continuing changes in markets, technology and management options.

**Comment 46:** Section 3.2.3 should mention that businesses, as waste generators, have an obligation to recycle.

**Response:** The last paragraph of Section 3.2.3 discusses the role of businesses as waste generators, including their responsibility to institute source separation programs.

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**Comment 47:** The Plan discusses flow control, registration, permitting and contracting as strategies for local governments to gain oversight over privately operated waste collection. If municipalities are unwilling to use these tools, will they be compelled to do so, or will the state take direct action to ensure effective participation by the private sector?

**Response:** DEC does not have the authority to compel local governments to implement the programs described. In Section 10.1.1 (13), the Plan recommends that the state's waste transporter program be expanded to ensure a basic level of compliance by private waste companies.

**Comment 48:** Public works projects should be specifically exempted from local flow control laws under any new state solid waste regulations. Many localities are adopting some form of flow control laws that require solid waste generated within their borders be sent to their landfills, incinerators, or recycling yards. These local laws have caused DOT to insert special notes into contracts to address these laws. Traditionally, in projects such as a bridge replacement project, the contractor factors the value of the recovered steel into their bid price for the project. Under some of the flow control laws, DOT would be required to pay a tipping fee to the locality, resulting in an increase in the cost of public works projects, and resulting in an unintended transfer of taxpayer funds from federal and state government sources to municipalities. The wording in some local flow control laws appears to include uncontaminated soil, rock and used pavement as regulated material, in addition to building demolition waste. This inclusion may be inadvertent, and these municipalities may not understand the scale of many DOT projects where more than 100,000 cubic yards of excess soil can be generated in a short period of time. These huge volumes of material would quickly overwhelm most localities' ability to handle and process these materials in a safe and timely manner and consequently do more harm than benefit for the environment.

**Response:** Flow control laws are local laws, and the provisions of such laws will remain local decisions, presumably subject to public debate.

**Comment 49:** While the state admits that waste reduction and recycling-related programs have been chronically underfunded, the Plan calls for local governments to supply more funds to the state if a disposal fee is mandated. This is unrealistic given the state's financial outlook and the lag time between grant submission and reimbursement.

**Response:** DEC's goal in recommending new funding mechanisms is to maximize funding to the planning units for program implementation. The details of the collection and allocation of new revenue streams will be determined through the legislative process.

**Comment 50:** The question of the validity and accuracy of the data generation is key to being able to make solid decisions regarding what has happened in the past and what we are trying to accomplish in the future. The DEC doesn't have defensible or definitive data from many of the areas within the solid waste management system but it isn't apparent that this state plan will correct this failure. Standardization of the data collection for all solid waste management facilities and on-line reporting of the data should be developed by the state and included in this plan.

**Response:** Collecting valid and accurate data is a continuing challenge. DEC has improved its reporting forms to aid in this effort, but issues and concerns persist. The Plan includes the best available data that is considered to be defensible and consistently calculated. While it is recognized that it may not represent a complete data set from all generating sectors, it is sufficient and appropriate for purposes of plan development. Additional improvements in data collection are proposed in the Plan (see Section 3.13.2) and will be implemented as outlined.

**Comment 51:** The Plan should recognize that there are significant costs and personnel time dedicated by the planning units that collect a rigorous data sample; few planning units have devoted those resources annually because of these costs.

**Response:** DEC recognizes that there are significant costs associated with data collection at the local level. The proposed on-line reporting system (Section 8.3.14 (a)) would centralize and facilitate data

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collection by allowing municipalities and facilities to report through a consistent platform. In addition, as DEC revises the Part 360 regulation, it will consider placing reporting requirements on additional recycling and waste facility categories.

**Comment 52:** The planning unit reports have been under-reporting material processed at private recycling and waste transfer and disposal facilities. To correct this problem, the state should be responsible for this data, as private recycling and waste transfer & disposal facilities that are permitted or registered by the state should have the responsibility of reporting to the state. The state should not rely on local planning units to provide this information.

**Response:** The numbers used in the Plan for the calculation of generation and diversion is based on private and municipal facility data. Planning unit data is presented for illustrative and comparison purposes only in Figure 8.1 and Appendix C in relation to materials recovered from the MSW stream.

**Comment 53:** It is important to evaluate one community against the next and to evaluate the state's progress in comparison to other states. The state must allow for unique circumstances within each planning unit, as no two programs are alike.

**Response:** The approach suggested in the comment is consistent with that taken in the Plan.

**Comment 54:** The Plan recognizes the considerable challenges associated with data collection by planning units and should also acknowledge the significant costs and personnel time to collect a rigorous data sample; few planning units have devoted the necessary resources to gather such rigorous data on an annual basis because of these costs. The plan should indicate how the state will support these costs if it considers such data to be critically important to its solid waste management goals.

**Response:** DEC's goal is to maximize funding to the planning units for program implementation, including data collection and evaluation. In addition, the Plan recommends developing a statewide on-line reporting system that would streamline data collection by both the state and planning units.

**Comment 55:** New York State must establish a clear, consistent and evenly applied methodology for quantifying and characterizing all categories of solid waste and recyclables generated in the state. The confusion, overlap, double-counting, and inflated recycling numbers serve no useful long-term purpose and must be resolved.

**Response:** The Plan acknowledges this problem. The use of a per-capita disposal metric, facility-reported data, and per-capita reporting of tonnage of municipal recycling and composting, as discussed in the Plan, represent an initial attempt at standardizing methodology.

**Comment 56:** It seems that DEC has used different numbers throughout the years to identify the amount of waste generated, reduced, reused, recycled, exported, landfilled and combusted. The Plan blames it on inaccurate reporting, but the bigger problem is that DEC has never taken the time to determine how and what must be reported by whom. Until DEC makes this determination, all numbers are suspect, including those reported to DEC, those calculated by DEC, and those reported in the Plan. The Plan should provide a methodology to standardize all reporting, require it of all waste management entities, and collect and collate it for at least two years in order to have an accurate idea of what is truly generated and handled in New York State.

**Response:** As part of the development of the Plan, DEC has established a clear, consistent, and evenly applied methodology for quantifying and characterizing all categories of waste and recyclables (see Section 8.3.1). Data collection will continue to be streamlined and refined throughout the planning period and will be adjusted as necessary to provide the best available data for planning purposes.

**Comment 57:** When the European Union was establishing its packaging regulations, it considered setting per capita waste generation caps, recognizing that this was the easiest quantity to determine, and that recycling was very

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difficult to compute. This unfamiliar approach was determined to be impractical, however, and so recycling standards were adopted instead (Eichstadt et al., 2000). Today, we have a Plan that reached exactly the opposite conclusion.

**Response:** The per capita disposal metric is an important measurement tool to gauge overall progress toward the Plan's goal of reducing reliance on waste disposal. It is not the only tool, however, and DEC and planning units will continue to track the amount of material recycled and otherwise diverted. DEC will continue to participate in discussions with EPA and other states on appropriate metrics and will report on any advances in biennial Plan updates.

**Comment 58:** DEC should publish an annual recycling report. This would provide a more complete picture of what is currently happening. It will also help spread the word about innovative programs and implementation approaches that other communities can learn from. This is a realistic goal that can be achieved within the next five years.

**Response:** The text and recommendations have been revised to include this goal.

**Comment 59:** DEC needs to improve data collection regarding deconstruction, tire recycling/reuse, and other recycling activities that are not part of local public recycling programs. Without this data, the state really doesn't know what the status quo is.

**Response:** DEC will consider additional reporting requirements as it revises the Part 360 regulations.

**Comment 60:** The per capita metric may be useful on a statewide basis, but it becomes more problematic at the planning unit level since it does not take into account differences in tourism levels and other seasonal influences on waste and recycling tonnages.

**Response:** DEC recognizes that each planning unit faces unique circumstances, and starts from its own baseline. These differences have been noted in Appendix C for several planning units that are affected by large seasonal population adjustments. The Plan's discussion of goals has been revised to clarify that each planning unit's progress in reducing waste destined for disposal will be gauged on that planning unit's baseline, not the statewide average.

**Comment 61:** Waste characterization studies (which primarily measure recyclable and compostable categories of discards, and not waste) have been done for well over 20 years in order to design and size material recycling facilities (MRFs) and other recycling and composting infrastructure. But these characterization studies most often do not look at the discard streams with an eye towards what could be reused (if repaired or refurbished) or what could be prevented. DEC should provide guidance and funding to characterize the existing and potential reuse streams.

**Response:** The recommendations related to waste characterization studies in Section 3.7 have been expanded to address this comment.

**Comment 62:** The Plan does not fully address the C&D waste and the crisis in current disposal methods. Nationally, C&D waste makes up 30 percent of all waste, but regionally that percentage is closer to 40 percent. New York's increasing reliance on neighboring states for disposal results in higher transportation and disposal fees. The long distance transportation of waste, waste of useful materials, and emissions of landfill gases lead to increasingly damaging environmental impacts. Reducing C&D waste will not only help fight climate change and the degradation of the environment but will also provide local jobs and renewable resources for the state.

**Response:** Section 8.3.14 includes a recommendation to establish a center for C&D debris recycling through Empire State Development (ESD) to gather information and help address many of these issues.

**Comment 63:** There are many substantial opportunities for increasing C&D waste recycling and reuse. More skilled labor positions could be created through higher diversion of the C&D waste stream to deconstruction and building materials reuse centers. We need policy and legislation requiring higher recycling and reuse rates to create

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the demand for recycling and reuse infrastructure and a change in construction industry practices. Infrastructure created to help recycle and reuse C&D waste will reduce waste disposal costs and keep money currently spent on disposal in New York.

**Response:** A recommendation included in Section 8.3.14 of the Plan includes the establishment of a center for C&D debris recycling through ESD to gather information and help address many of these issues.

**Comment 64:** C&D waste reduction can only be done once an unambiguous set of definitions for C&D materials are set down as policy. Definitions for “clean” and “dirty” must be specific to allow for regional recycling.

**Response:** DEC concurs. Enhanced definitions for C&D debris and its components will be addressed in revisions to DEC’s Part 360 regulations.

**Comment 65:** C&D recycling should only include the process of sorting, cleaning, treating and reconstituting materials for the purpose of using the altered form in the manufacture of a new product. Recycling should not include use as an alternate daily cover, burning, incinerating, or thermally destroying waste. The use and listing of concrete, asphalt, rock, brick and sand (CARBS) as alternate daily cover (ADC) cannot be seen as a form of recycling since the material is simply landfilled and not truly recycled.

**Response:** DEC does not include these uses as recycling, and these materials have not been included in the recycling calculations in the Plan. However, it is important to note that landfills are significant consumers of natural resources in both their construction and operation. Using ADC in place of soil conserves natural resources and aids in compliance.

**Comment 66:** Alternate uses such as construction and road base should be promoted heavily to the public, and the implementation of such uses should become common practice in government projects.

**Response:** DEC concurs. Through implementation of EO4, DEC is working with OGS and DOT to develop a green specification for the use of recycled products in road base and other road building applications.

**Comment 67:** Waste-to-energy should not be considered as recycling in the Plan. Waste wood and other municipal waste that is burned creates carbon dioxide, a greenhouse gas that the Plan aims to limit.

**Response:** DEC does not consider municipal waste combustion (MWC, also known as waste-to-energy) to be recycling and does not characterize it as such in the Plan. DEC does acknowledge that MWC offsets the use of fossil fuels for energy production, and therefore is preferable to land disposal.

**Comment 68:** The state should undertake a statewide waste characterization study. Other states have done this; New York State should do this to obtain better data for decision-making and to remove this burden from local planning units.

**Response:** DEC concurs. The recommendation related to waste characterization studies in Section 3.13.1 has been expanded to address this comment.

**Comment 69:** In Section 3.7, the Plan references a 2005 Onondaga Waste Quantification and Characterization Study. While the collected data provided helpful insight into the local waste composition for this community, there have been significant changes in both local and statewide solid waste management policy since that time. Changes include the addition of additional items to the local curbside program, and the implementation of a statewide plastic bag recycling law, as well as the continued reduction in major components of the recycling stream due to product thin walling and reductions in newspaper circulation and size. If the state expects local communities to invest resources in developing new waste reduction infrastructure, the plan should articulate that the state intends to generate current solid waste composition data by funding and executing a statewide waste composition analysis so

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as to ensure that such local infrastructure investments are appropriately aimed; a time frame for completing such a statewide study should also be provided in the Plan.

**Response:** The recommendation related to waste characterization studies in Section 3.13.1 has been expanded to address this comment.

**Comment 70:** Can I be provided with better citations for the waste composition studies used to develop the New York waste stream, and the exact method used to construct the data sets? The information in the Plan and the appendix is not sufficient to evaluate the work presented in the Plan.

**Response:** These citations have been added as a component of new Appendix H.

**Comment 71:** We recommend that the state seriously consider ways to engage citizens who live near waste management facilities in enforcement efforts. (Violations sometimes go unaddressed due to enforcement response times.)

**Response:** Comment noted.

**Comment 72:** Planning units need help with enforcement. Schools and businesses are places where DEC could help planning units enforce.

**Response:** Recommendations in Sections 8.3.14 (c) and 10.1.1 address DEC's proposed efforts to assist planning units with enforcement of recycling laws by increasing DEC's enforcement authority, particularly with regard to commercial and institutional recycling requirements.

**Comment 73:** A system should be established where waste haulers and collection systems are required to collect materials such as non-hazardous batteries on a periodic basis and have them processed and handled immediately.

**Response:** The type of program proposed in this comment is to be evaluated by planning units as part of the development of their LSWMPs. If such a program is determined to be desirable and feasible, the planning unit can establish the program.

**Comment 74:** Because enforcement efforts are essential to the effectiveness of the Plan and regulations, DEC should engage in ongoing evaluation of its enforcement efforts. As part of this, it should evaluate whether permit fees are sufficient to ensure effective enforcement. Should enforcement efforts be determined to lack funding, DEC should increase permit fees as necessary. DEC should involve community members in evaluating the sufficiency of current efforts and in developing new enforcement strategies.

**Response:** DEC currently evaluates its enforcement efforts and strategies on an ongoing basis. There are currently no solid waste management facility permit fees, although many facilities fund a DEC monitor at their facility as required by permit conditions specific to that facility. Permit and compliance fees are discussed in Section 6.3.1 (e) as a potential financing mechanism.

**Comment 75:** On p. 35 (3.8) of the Plan, it is stated that "As state solid waste planning staff and resources have diminished, DEC's oversight of LSWMP performance and updating has suffered. Nonetheless, the regulatory tools to create a vibrant and meaningful state and local solid waste management planning program remain in place to be more fully used and enhanced. Most particularly, the LSWMPs must have relevance and rigor beyond the permitting of facilities." This over-generalized statement has no meaning and should be explained or removed.

**Response:** The text has been expanded to provide a more complete explanation.

**Comment 76:** The provisions already mandated by law should be enforced.



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**Response:** Comment noted.

**Comment 77:** The Plan's discussions of enforcement and inconsistent implementation represent a gross generalization of perceived problems with implementation of the SWM Act and or inconsistencies with local implementation of LSWMPs. DEC needs to be more specific on where they identified problems. Resolving those should be the top priority of the state's Plan.

**Response:** These sections are intended to provide a general overview of enforcement and implementation. As noted in Section 3.9, differences between planning units are addressed more specifically in Figure 8.1 and Section 8.3 of the Plan. More specific descriptions of planning unit programs are also included in Appendix C. Understanding and assisting in the resolution of these inconsistencies is a DEC priority.

**Comment 78:** Why is there no analysis on why communities have not realized the intended results of the SWM Act? An analysis as a part of the state planning process will give insight on the possible success or failure of the current proposed Plan.

**Response:** The Plan includes an analysis of why the state has not met prior goals. See Sections 3 and 8. DEC will continue to evaluate opportunities and barriers as it implements this Plan and will include relevant analysis in biennial Plan updates.

**Comment 79:** New York State is not a homogenous community; Long Island, the greater New York City area and upstate differ from each other and are vastly different communities. Unfortunately, this is not reflected in the Plan.

**Response:** The differences between planning unit circumstances and management of waste and recyclables are discussed throughout the Plan and specifically noted in Appendix C. These differences were taken into account in developing the Plan.

**Comment 80:** The Plan states that recycling results differ due to "*lack of uniformity in local implementation.*" DEC must investigate recycling success and/or failures relating to differences in lifestyle and population density and incorporate scenarios that may have success in regions that show low recycling rates and lack of implementation.

**Response:** DEC has done the investigation suggested. The differences between planning units' circumstances and their management of waste and recyclables are discussed throughout the Plan and are specifically noted in Appendix C. These differences were taken into account in developing the Plan.

**Comment 81:** Oneida Herkimer has invested over \$100 million in a self-sufficient comprehensive system as well as spending hundreds of thousands to create and defend a legislative regime which has provided legal and financial security for system implementation at other planning units. The state should focus its efforts on the planning units that clearly are behind the curve instead of forcing all planning units to meet unfunded mandates which would, in effect, punish those planning units that complied with the state's current requirements while rewarding those that did not.

**Response:** The Plan itself does not create any mandates. It is intended to serve as a resource for both lower-performing planning units and their more successful counterparts. DEC does not intend to punish planning units that have performed well, but rather encourage all the state's communities to stay on a path of continual improvement. Each planning unit is different, as are their LSWMPs. These differences are embraced in the development of each planning unit's programs and goals. Some planning units programs are more diverse and encompassing and provide a valuable example to others; their substantial investments are consistent with this Plan and will serve them well into the future. DEC will look for ways to support advanced materials management methods they may pursue.

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**Comment 82:** We support any efforts by the state related to market development for materials.

**Response:** Comment noted.

**Comment 83:** The state must get broad residential support for changes such as product stewardship, as local municipal program staff will not be able to convince the municipal officials of the need to undertake any of these changes.

**Response:** Comment noted.

**Comment 84:** On page 36, Section 3.10 of the Plan, it is stated that “*Planning units can help to stabilize markets by providing a consistent supply of clean, uniform recyclable materials and entering into long-term supply agreements with local or regional markets.*” Some municipalities have moved away from long-term agreements, as having the ability to spot market items keeps the markets competitive and brings the best prices. Being locked into a long-term contract only creates problems when markets vacillate. The Plan should not dictate how a planning unit markets the wastes it collects. This decision should be left up to the locality, based on their unique circumstances.

**Response:** DEC does not intend to dictate how planning units market their recyclables. The discussion of long-term contracts is provided as background for planning units to use in their evaluation of alternatives. Ultimately, the decision rests with the planning unit. However, the language will be revised to ensure the intent and spirit of this discussion is better understood.

**Comment 85:** On page 37 of the Plan; 3.12 Findings, it is stated that “*DEC must uniformly apply planning requirements statewide.*” How can “uniformity” be part of the equation when DEC has never been able to apply rules and regulation uniformly? (Every permit has its own set of site specific conditions). All planning units are different and cannot be treated in the same manner. Does DEC have a plan on how to overcome the disparity between planning units? What is the track record for DEC overcoming disparities among different state agencies?

**Response:** DEC intends to apply the requirement for local governments to plan for materials and waste management, not to require a particular outcome of that planning. DEC is keenly aware that planning units are different. The differences between planning units’ circumstances and management of waste and recyclables are discussed throughout the Plan and are specifically noted in Appendix C. Consistent with that concept, there are special circumstances that need to be addressed through facility permit conditions, and therefore, not all permits are exactly the same.

**Comment 86:** Does DEC have a plan on how to overcome the disparity between planning units?

**Response:** DEC’s plans are provided in the recommendations in Sections 3.13 and 8.3.14 and Chapter 10.

**Comment 87:** What is the track record for DEC overcoming disparities among different state agencies?

**Response:** DEC provides technical assistance and guidance on waste reduction, recycling and composting to agencies as requested. Overcoming disparities between agency programs is not DEC’s responsibility; encouraging and assisting in improvements where possible is.

**Comment 88:** I would like to applaud the work that has been done in promoting the removal of compostables from the waste stream and requiring planning units to evaluate and implement programs on materials recovery, including food scraps and other organics.

**Response:** Comment noted.

**Comment 89:** Has the state completed an evaluation of the costs and merits of all of the specific program changes identified in the Plan and developed a prioritization of the changes to ensure our investment in resources and staff

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will have the greatest benefit to the environment or protection of public health? If so, it is not clearly articulated, but needs to be.

**Response:** Because the Plan does not dictate specific programs or mandates, a full cost benefit analysis on various program options is outside of the scope of this Plan. Instead, the Plan is a resource that provides options for the state, local governments, and the private sector to consider in reducing the amount of waste they dispose. The Plan recognizes the diversity of the state's communities and expects that the costs and merits of program options will differ from one community to the next. As such, prioritization of program options should be a critical part of the local solid waste management planning process.

**Comment 90:** Why take monies from the municipality or private sector through a tipping fee or pay as you go? All said and done, how much would it cost to redistribute the monies? If the Town of Babylon is charged a \$1,000,000 regulatory fee, what would be returned to the town for solid waste management?

**Response:** DEC's intent in proposing the various options for financing the Plan discussed in Section 6.3 is to generate resources for planning unit program implementation. One of those options discussed in Section 6.3.1 (d) is solid waste disposal fees and another is PAYT/SMART which is discussed in Section 6.3.2 (b). The details of any collection and redistribution funding mechanism pursued would be the subject of the legislative process.

**Comment 91:** The Town of Babylon is strongly opposed to an increase in DEC's regulatory authority concerning solid waste management planning and regulating waste transporters.

**Response:** Comment noted.

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**Responsiveness Summary**  
**Chapter 4**

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**Comment 1:** Zero waste programs and their greenhouse gas (GHG) benefits should become a substantial part of the new state Climate Action Plan and its implementation.

**Response:** DEC materials management staff are coordinating with the Climate Action Plan team to ensure that the goals of the Plan are reflected in the Climate Action Plan.

**Comment 2:** The Plan should address pollution related to black carbon, which is estimated to be 2,000 times more potent than CO<sub>2</sub>.

**Response:** DEC concurs that black carbon, a product of the incomplete combustion of fossil fuels, is a potent climate-forcing agent. However, it is a class of particles that is not completely understood. Reliable black carbon data exists for only some of the source categories. The U.S. Environmental Protection Agency (EPA) is currently conducting research to identify tools that improve emission inventories and models to evaluate black carbon emissions. Biennial Plan updates will include this information once it is available.

**Comment 3:** The Plan does not include a cost-benefit analysis to determine whether the energy and GHG gains projected outweigh the economic cost. It does not compare these strategies to other energy conservation and GHG reduction strategies to determine if this is a cost-effective approach. The energy conservation and GHG reductions are not significant in the context of other sectors.

**Response:** These types of analyses are outside the scope of this Plan. The state's Climate Action Plan, currently being drafted pursuant to Executive Order 24, will include a wide variety of policy options to achieve GHG reductions based on the gross emission reductions that are possible, and on a dollars/CO<sub>2</sub> equivalent basis. The goals of this Plan will be incorporated into the Climate Action Plan.

**Comment 4:** There are other sectors in the state, nation, and world that generate much more significant GHG emissions than waste facilities. Why focus on this small sector?

**Response:** Climate change is the most pressing environmental issue of our time. In order to perform DEC's core mission of conserving, improving, and protecting the state's natural resources and environment, we are committed to incorporating climate change considerations in all aspects of our activities, including waste materials management. Furthermore, the estimate of direct emissions from landfills in NYS (approximately 1.8 percent of the state's 2008 GHG inventory, according to the Climate Action Council's November 2010 Climate Change Action Plan Interim Report) does not fully reflect the potential reductions that could be realized by achieving the goals of the Plan. According to a consumption-based, life cycle, GHG inventory published in 2009, the EPA found that 44 percent of the national GHG inventory is related to the products and packaging that become waste. Therefore, the potential GHG reduction benefits of moving "beyond waste" are greater than the direct emissions reductions from waste facilities in the state.

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**Chapter 4**

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**Comment 5:** The data presented in Chapter 4 does not support the conclusion on page 51 that “mitigating and avoiding the impacts of methane generation of landfills can play a strategic role in the stabilization and reduction of atmospheric GHG concentrations and must be a priority for NYS,” and the subsequent recommendations to divert organics from landfills. The state should not move forward with organics diversion recommendations until better supporting information is available.

**Response:** Climate science supports the objective of mitigating and avoiding methane generation as a key element of a strategy to combat climate change for two reasons. First, methane has a more immediate impact on climate change because its potency as a GHG is greater in the short-term—measured on a 20-year time frame, methane is more than 70 times more potent than CO<sub>2</sub>; measured on a 100-year time frame it is 23 times more potent than CO<sub>2</sub>. Second, methane in the atmosphere absorbs radiation coming from the earth that would otherwise escape to space, which exacerbates climate change. DEC continues to conclude that diverting organics from landfills to recycling and composting is environmentally preferable and should be pursued where feasible.

**Comment 6:** While it is important to recognize the links between solid waste management policies and climate change, it is only one of the factors that must be considered (i.e., it is one of 16 qualitative goals) and may be in conflict with other goals. Local governments must retain the power to weigh and balance environmental concerns with other concerns such as budget impacts, service delivery, and land-use policies and plans.

**Response:** DEC acknowledges that, although important, climate change is only one factor that must be considered when making solid waste management decisions. Energy impacts, cost, land use, compliance with local solid waste management plans, and statutory requirements must all be evaluated and incorporated into the decision making process as well.

**Comment 7:** There has been a recent movement in NYS to transport more waste by rail, particularly to large landfills in Western NY. This would be a benefit in terms of GHG reduction. The state plan should recommend regulating hauling by rail as well as by truck; if a reduction in truck traffic is promised in exchange for rail transport agreements, such a reduction should be required. Further, there should be regulations governing how waste in rail cars must be contained and how long it can sit on a track.

**Response:** The regulation of railroad operations, transportation and rail lines is outside of DEC's jurisdiction. DEC has limited jurisdiction over solid waste rail transfer facilities. Railroad operations and interstate commerce are regulated by the federal government. DEC will continue to work with the federal agencies that govern railroads to help address the concerns raised.

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**Comment 8:** Viewing glass recycling from a GHG reduction perspective, it may not make sense to transport it long distances to recycle it into a closed loop application. Instead, one should consider using glass as roadbed or alternative fill.

**Response:** The use of glass in civil engineering applications is discussed in Section 8.3.10 and in the recommendation (8.3.14 (a)) to “Encourage local use of processed, mixed glass, chipped tires, and other appropriate recycled materials in engineering applications.”

**Comment 9:** The plan should better integrate federal and state incentives in the GHG/climate change arena into tangible funding sources for solid waste management.

**Response:** See Section 6.3.3 (a) for a discussion of the current and future role of carbon offset credits as a funding source.

**Comment 10:** The Plan at times appears to make energy issues its focus, while at other times focuses on CO<sub>2</sub> release minimization. Either would have made as much sense as the implied goal of eliminating waste.

**Response:** Solid waste management involves a variety of interrelated activities. It affects energy use, GHG emissions, air quality, social policy decisions, natural resource management, and other areas of concern, and should not be discussed as an independent enterprise.

**Comment 11:** The Plan proposes large impacts to energy use and GHG emissions, but does not reference the State Energy Plan; nor does the State Energy Plan reference potential benefits from implementing a different approach to solid waste management. Was there coordination with those planners? Is there coordination with the Pollution Prevention Institute, which, according to the request for proposal (RFP) by which it was established, was not supposed to be involved in waste issues?

**Response:** The State Energy Plan is both broad and general in scope and does not specifically address waste issues. DEC materials management staff has coordinated with staff who worked on the State Energy Plan to ensure that the goals and recommendations of this Plan are consistent with the State Energy Plan. Materials management staff also coordinated with the Pollution Prevention Institute and DEC staff who manage that contract to ensure the recommendations of this Plan were appropriate. The RFP does not preclude the Institute from working on waste issues. To the contrary, the goals articulated on the first page of the RFP and the pollution prevention statute (ECL Article 28-103) include reuse and remanufacturing, and reducing resource consumption and waste. Per the RFP, the Institute will promote "methods of reducing and eliminating the use of toxic substances in the manufacturing process" and focus on "toxic use reduction over the course of the product life cycle." Reducing toxics in products is an important

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part of waste prevention, and the product's life cycle includes its ultimate disposition at end of life.

**Comment 12:** Section 4.0 of the generic environmental impact statement (GEIS) states that the Plan is a guidance document that lays out a foundation or a menu of options for local governments. What is the likelihood that the state will meet its goal of reducing GHG emission 80 percent by 2050 if it allows each locality to do its own thing?

**Response:** Solid waste and materials management has traditionally been and will remain a local responsibility. As a planning document, the Plan does not create any new mandates or obligations. However, in the Plan, DEC recommends statutory changes in key areas to improve consistency in programs across the state. For example, DEC recommends designating a minimum list of materials to target for recycling, requiring more local solid waste management planning, etcetera. DEC will also encourage planning units to consider GHG reductions in their planning efforts.

**Comment 13:** The EPA-reported statistic that landfills make up 1.8 percent of the total GHG emissions in the US is based on the notion that 42 percent of landfills do not have active gas collection systems. This does not apply to NYS.

**Response:** According to the state's 2008 GHG inventory, as published in the Climate Action Council's November 2010 Climate Action Plan Interim Report, landfill gas contributes approximately 1.8 percent of the state's 2008 GHG inventory. This estimate is based on data reported by NYS waste facilities and is therefore the most accurate data available.

**Comment 14:** Tables 9.8 and 9.9 of the Plan provide landfill gas collection, destruction and gas-to-energy data collected in 2008. The tables should be updated to 2009 data, particularly since three of the energy recovery projects listed did not begin operation until late 2008.

**Response:** DEC used 2008 data throughout the Plan, as that data was the most complete available at the time of drafting. It would be confusing to provide landfill gas data for 2009, when a complete set of recycling, waste disposal and other data are not available for that year. A footnote will be added to the tables to provide additional updated information about facilities that came online late in 2008.

**Comment 15:** By the end of 2010, 24 landfills, that represent 98.5 percent of the annual permitted tonnage at landfills in the state, will be equipped with active gas collection systems. The US IPCC has reported that 90 percent of GHG recovery can be achieved at landfills with active landfill gas collection system. The information in Section 4 and Section 9 should be updated accordingly to reflect current practices to control GHG emissions in NYS.

**Response:** Text has been added to Section 4.1.5 and Section 9.4.7 to clarify the extent of landfill gas collection and destruction in the state.

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**Comment 16:** The Plan recognizes the value of life cycle analysis (LCA), but stops short of endorsing it as an ongoing process to assist in solid waste decision making. LCA, with regard to energy, GHG and costs, allows for high quality decision making. Caution should be exercised in endorsing fixed programs, like the Waste Reduction Model (WARM) model, as they will sometimes lead to erroneous outcomes.

**Response:** DEC does not currently have the authority to require local planning units to use LCA tools, and many do not have the resources to do so. The state does not have the resources to perform LCAs on a state or regional level. DEC recognizes and acknowledges the shortcomings of the WARM and Northeast Recycling Council (NERC) models and will continue to monitor and evaluate progress in life cycle assessment modeling and tools, and inform planning units of their assessment options.

**Comment 17:** In Table 4.1, it appears that the Plan randomly jumps between data sources and does not provide information on how data is compiled. Why is there no consistency in the presentation of the numbers?

**Response:** The reference for Table 4.1 was inadvertently omitted from the Plan. The table presents the basis of EPA's WARM model. In general, DEC used the best data available in preparing the Plan.

**Comment 18:** The statement "Overall, waste prevention, reuse, recycling and composting are better performing materials management strategies from a GHG perspective" is not correct according to EPA data referenced in the plan. Why is there no reference in the plan to the data that gives combustion a more beneficial rating than composting? DEC has not provided an environmental assessment on the benefits of composting versus other technologies.

**Response:** DEC stands by the statement made in the Plan. Out of 34 categories of materials analyzed by EPA and presented in Table 4.1, only 4 (yard trimmings, grass, leaves and branches) produce fewer GHG emissions through disposal than composting. The EPA data that gives combustion a more beneficial rating than composting is presented in Table 4.1. The discussion in Section 4.1.3 (Composting and Organics Recycling) clearly refers to the composting of food scraps being preferable to landfilling and having a slight GHG advantage over combustion. EPA has acknowledged that composting was undervalued from a GHG perspective. In its August 2010 update, composting is preferable to municipal waste combustion in every case, while landfilling yard trimmings, leaves and branches has fewer GHG emissions as compared to composting. Although landfilling leaves and branches is depicted as having less GHG emissions than composting, the benefits are due to the fact that the leaves and branches are entombed in the landfill and do not degrade. Converting these organic resources into soil products has benefits that are difficult to quantify from a GHG perspective.



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**Comment 19:** Has DEC performed an economic analysis to determine the investment and operating costs of composting compared to the benefits of other technologies?

**Response:** A full economic analysis is outside of the scope of this Plan. It is anticipated that localities will weigh these costs as a part of their own planning processes.

**Comment 20:** DEC has not provided an environmental assessment on the benefits of composting versus other technologies. EPA provides data that credits GHG reductions of 0.2% when 100 percent of food scraps are composted.

**Response:** Section 8.4 provides an environmental assessment of composting and organics recycling. Further technical information will be developed, in the form of a technology assessment, as recommended in Section 8.4.6 (a). The data presented in Table 4.1, derived from EPA's WARM model, indicate that net greenhouse gas emissions are reduced by 0.2 metric tons of CO<sub>2</sub> equivalent per ton of material composted.

**Comment 21:** In Section 4.1, a litany of figures and references is provided; none of the numbers are clearly available in the referenced documents. The referenced GHG inventory by NYSERDA cannot be found.

**Response:** DEC has clarified references in the chapter. The NYSERDA GHG inventory was not formally published at the time the draft Plan was issued. At that time, the data had only been shared with DEC by NYSERDA staff. According to the state's 2008 GHG inventory, as published in the Climate Action Council's November 2010 Climate Action Plan Interim Report, landfill gas contributes approximately 1.8 percent of the state's 2008 GHG inventory.

**Comment 22:** The plan uses old studies that estimate landfill gas collection efficiencies that may no longer be accurate, given the design and operation standards at NYS landfills. It does not give enough credit to landfill gas collection efficiency and energy production benefits at modern landfills. There is no recent data on the GHG emissions from landfills with gas to electricity facilities used in the analysis. Shouldn't there be actual data used instead of EPA models?

**Response:** The Plan has been updated to include the EPA WARM Model update issued in August 2010. This version of the WARM model represents the most up to date information on landfill gas collection efficiency over the life of a landfill, based on the latest research available. The WARM model allows the user to choose the type of landfill gas collection available (typical, worst case, and aggressive gas collection). For each scenario (0-2 years, etc.) over the life of the landfill, the model has a different collection efficiency. This is the best method currently available for calculating a statewide value. The Plan has been revised to use data derived from this model.

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**Comment 23:** To perform useful comparisons, the Plan needs to provide data on how much GHG is produced in the remanufacturing of products from recycled materials, as well as data on GHG production in composting, including transportation to the site, processing and trucking to market.

**Response:** The WARM/NERC data provided in the Plan is based on a life cycle approach that includes emissions in processing, transportation and delivery to market.

**Comment 24:** The plan needs to address the possibility that emission for recycling could easily be doubled as these materials are typically half the weight. This fuel/carbon issue seems to be omitted.

**Response:** Emissions reduction estimates were based on the NERC/WARM model which provides a life-cycle assessment of the GHG emissions, including emissions from transportation. Modeling is presented on a material specific, per-ton basis, so that the differences in weight and related transportation emissions are accounted for.

**Comment 25:** How were the recycling numbers in Table 4.1 determined?

**Response:** Table 4.1 shows the data from the WARM and NERC models. This reference was inadvertently omitted from the draft and has been added to the final Plan.

**Comment 26:** The Office of Technology Assessment (OTA) report referenced in footnote 13 is from 1992 and the data presented is from 1985. Please explain how the number of 71 tons of industrial discards produced for every ton of municipal solid waste (MSW) is arrived at.

**Response:** The statement and reference have been removed to avoid confusion.

**Comment 27:** The statement, “Recycling one aluminum can conserves enough energy to power a television for three hours,” is highly suggestive and serves little purpose.

**Response:** This statement is used in the Plan to emphasize the indisputable fact that recycling aluminum offers significant energy savings over using virgin aluminum in manufacturing.

**Comment 28:** The statement, “recycling avoids production of GHG emissions associated with handling and disposal through conventional waste disposal methods,” is contrary to EPA findings. Transportation and handling are the same for recycling and waste.

**Response:** The emissions avoided by not disposing of recyclable materials as waste include those related to waste transfer and transportation, combustion, and landfill operations. The EPA report on which this statement is based, *Solid Waste Management and Greenhouse Gas: A Lifecycle Assessment of Emissions and Sinks*, considers emissions related to transportation and handling of recyclables not only at end-of-life, but also as compared to virgin materials in the

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manufacturing stage, since the materials are destined to be included in another product.

**Comment 29:** Why does the plan recommend source-separated organics collection and composting, or anaerobic digestion, when combustors capture energy and landfills capture methane gas for energy. What is a landfill if not a large anaerobic digester?

**Response:** Composting, anaerobic digestion and other methods of recycling organics have multiple benefits including: capturing the value of the nutrients in organic materials to rebuild soil structure; reducing greenhouse gases by avoiding the generation of methane in the case of composting, or capturing it completely in the case of anaerobic digestion; sequestering carbon in the soil; and creating a valuable product that can be used in landscaping and agricultural applications. Anaerobic digestion occurs in a landfill, but a landfill is not designed to optimize degradation and gas production. An anaerobic digester is specifically designed and operated to provide the optimum conditions for microbial degradation of the organic feedstock, and therefore maximize gas generation and volatile solids reduction. An anaerobic digester is an enclosed structure, so collection and conversion of gas is more efficient and complete than in a landfill. Finally, landfill gas systems do not capture 100 percent of the gas generated; estimates of gas capture efficiency vary, but optimistic estimates report the range as 75 to 99 percent.

**Comment 30:** The solution to landfill gas is to aggressively divert all organics. The state needs to invest in the infrastructure and institute a disposal ban.

**Response:** The Plan seeks to encourage the diversion of organics and recommends several financing mechanisms that could be used to build the necessary infrastructure to do so. The Plan's recommendations include adding food scraps to the list of mandatory recyclable materials and instituting disposal restrictions where alternatives exist. Restricting disposal prior to having recycling infrastructure available could cause market dislocations, encourage unlawful disposal, and that leave municipalities having limited or no disposal options for this portion of the waste stream.

**Comment 31:** The state should emphasize diversion of organics to reduce methane and greenhouse gases. Providing financial and technical assistance to programs that recover energy from organic materials in disposal facilities is counterproductive. Incentives should first go toward reducing organics going to landfill.

**Response:** The Plan emphasizes organics diversion and does not propose any incentives for municipal waste combustion or landfill gas to energy.

**Comment 32:** Aerobic composting of yard waste results in the release of more GHG emissions than when these materials are managed in a landfill.

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**Response:** The most recent release of the WARM model in August 2010 includes a breakdown of yard waste into grass, leaves and branches. Under this analysis, composting of grass has lower net GHG emissions than landfilling. The calculation of GHG emissions from composting leaves and branches is less favorable. However, an important element of the WARM analysis for yard waste is that the majority of the benefit from landfilling leaves and branches is derived from entombing of these materials in the landfill where the model assumes they do not degrade. Composting these materials and producing a value added product for soil enhancement has significant benefits over entombing the material, some of which are difficult to quantify under the GHG analysis. Composting of yard waste also saves room in the landfill for materials for which there is no other use.

**Comment 33:** Organics recycling facilities will lead to GHG reductions of more than 400,000 metric tons of carbon equivalent (MTCE) emissions annually. Utilizing existing infrastructure to improve the state's recycling rate 25 percent would reduce GHG emissions by more than 1 million MTCE annually without significant infrastructure and program expenditures.

**Response:** DEC supports maximizing the use of existing infrastructure and has begun an assessment of the existing composting facilities in the state to determine if they have the ability to accept additional organics.

**Comment 34:** The plan states that recycling food scraps through composting or anaerobic digestion has advantages over landfilling from a GHG perspective, but that is not necessarily true when a landfill is harnessing the methane to produce electricity. Most of the references are not specific nor based on real measurement of actual operating facilities. How many composting facilities provided data for these calculations and with what environmental controls are they operating?

**Response:** According to EPA's WARM model, composting food scraps provides a greater GHG benefit compared to landfilling with landfill gas to energy recovery. The WARM model does consider the gas collection from the landfill in its calculation. Composting food scraps reduces net GHG emissions by 0.2 metric tons of CO<sub>2</sub> equivalent per ton composted, while managing them in a landfill with energy recovery generates 0.28 metric tons of CO<sub>2</sub> equivalent per ton managed. Therefore, the net savings in GHG emissions is 0.48 metric tons of CO<sub>2</sub> equivalent per ton. The methodology used to estimate emissions from composting facilities was developed by EPA and is available at [www.epa.gov/climatechange/wycd/waste/downloads/composting-chapter10-28-10.pdf](http://www.epa.gov/climatechange/wycd/waste/downloads/composting-chapter10-28-10.pdf) on their website.

**Comment 35:** Anaerobic digestion and composting of 2.9 million tons of food scraps will have environmental and financial impacts which are not addressed in this Plan. The benefits of wholesale composting of organics have not been evaluated. Any proposal of this magnitude must be accompanied by a feasibility analysis and an environmental impact statement. Section 8

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contains a host of recommendations, however there is a gaping lack of detail provided to back up the financial and environmental impacts of expanding recycling and treatment of more than 12 million tons of MSW. Why is DEC not investigating the feasibility and perceived benefits of the Plan?

**Response:** The Plan articulates a goal of maximizing recycling and the diversion of organic materials, but does not dictate which technologies, programs or approaches are to be developed by planning units or the private sector to achieve this. The GEIS that accompanies the Plan provides an appropriate amount of detail for a broad and necessarily general assessment, while site specific analyses will explore the impacts of a detailed proposal. A financial analysis is outside of the scope of this Plan. Further technical information will be developed, in the form of a technology assessment, as recommended in Section 8.4.6 (a), to aid planning units and private companies in determining what organics recycling approach would work best in specific conditions.

**Comment 36:** The composting discussion in Section 4 (GHG and Waste) is a gross oversimplification of the treatment of organics through composting and recycling. It does not address the limited supply for wood chips as bulking agent and does not evaluate the impacts of the transportation and preparation of this wood additive needed to compost food waste, nor does it address impacts of on-site operations and emissions. The issue of the proper scale for anaerobic digesters to operate economically is not addressed.

**Response:** Evaluation of composting, anaerobic digestion, and other organics recycling techniques is provided in Section 8.4. The issue of increased competition for wood chips is discussed in Section 8.4.4. A precise estimate of what materials would be needed as bulking agents, and what the transportation and operations impacts would be is not possible without dictating the technologies to be used or the source of the materials. Environmental and technical issues related to each organics recycling technology will be addressed in the organics recycling technology assessment recommended in the Plan.

**Comment 37:** The Plan refers to European experience with anaerobic digestion, however there is not information provided for GHG generated. How many tons of CO<sub>2</sub> equivalent/ton of food waste digested and what is the number of tons of CO<sub>2</sub> equivalent/KWH generated?

**Response:** DEC was not able to identify a source for this data on the CO<sub>2</sub> emissions from food waste digestion. Unfortunately, EPA's WARM model does not yet provide GHG information for anaerobic digestion of food scraps. It is likely that anaerobic digestion will compare favorably to landfilling because of the greater methane capture achieved. DEC expects this will become part of the WARM model as the use of anaerobic digestion technology becomes more common in the U.S.

**Comment 38:** MSW should not be defined as biomass. Combating climate change requires that all GHG emissions be accounted for. Biogenic emissions should not be exempt from accounting.

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The 4<sup>th</sup> IPCC has said that biogenic emissions must be accounted for, and when biomass is burned for energy, biogenic emissions should be counted.

**Response:** The 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National GHG Inventories recommend that biogenic CO<sub>2</sub> emissions that result from the combustion of waste should not be included in national emission estimates. However, if the combustion is used for energy purposes, both fossil and biogenic CO<sub>2</sub> emissions should be estimated, but the biogenic emissions should be reported as an information item, while fossil fuel emissions should be included in national emissions of the energy sector ([www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/5\\_Volume5/V5\\_5\\_Ch5\\_IOB.pdf](http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/5_Volume5/V5_5_Ch5_IOB.pdf), page 5.5). The treatment of this issue in Section 4.1.4 is consistent with the IPCC guidelines because it provides estimates of gross CO<sub>2</sub> emissions from municipal waste combustion, including fossil fuel and biogenic emissions, and a net estimate that includes only fossil fuel emissions.

**Comment 39:** Issues of toxicity associated with biomass burning should be addressed. Contaminated waste wood may make its way to incinerators. DEC should understand these market forces and address this issue in permitting of wood burning boilers and incinerators.

**Response:** Air permitting issues are outside of the scope of this Plan.

**Comment 40:** Why is DEC promoting a treatment technology (composting) to reduce the volume treated at a municipal waste combustion (MWC) facility when the GHG benefits of MWC are significant? The plan does not address whether an existing disposal infrastructure, including a MWC facility, benefits environmentally or financially from diverting organics. From a transportation perspective, additional collection routes would increase the contribution to the GHG inventory.

**Response:** Composting has multiple environmental benefits, as described in the answer to Comment 29. According to EPA's WARM model, composting food scraps provides a greater net GHG reduction than combusting those scraps for energy recovery. Because the Plan does not dictate what specific technologies or approaches must be used by planning units, it does not model the environmental impacts of various diversion scenarios. It should be noted that many communities in the U.S. and Canada have implemented source separated collection of organics without adding truck routes or collection costs by revising their collection schedules when separate collection of organics is added.

**Comment 41:** Currently yard waste is banned from waste to energy (WTE) facilities, yet the information presented in the Plan indicates that there is a GHG benefit to combustion of wood materials versus composting.

**Response:** Composting has multiple benefits, as mentioned in the response to Comment 29. The yard waste disposal ban supports the composting infrastructure in place for

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leaf and yard debris. The August 2010 update of EPA's WARM model indicates a greater GHG reduction from composting yard trimmings and branches as compared to MWC.

**Comment 42:** The Plan addresses the financial and engineering hurdles related to grid connections for landfill gas to energy facilities. It should be revised to include air permitting difficulties. The Plan should address the need for DEC to revise its regulatory approach to ensure consistent implementation of air permitting requirements across the state.

**Response:** Comment noted.

**Comment 43:** Landfill gas recovery in NY is increasing and is well above national and international averages. Landfill gas emissions make up less than 2 percent of total GHG emissions in the U.S., whereas industrial, heating/cooling and transportation activities each average about 25 percent of GHG emissions.

**Response:** See response to Comment 4.

**Comment 44:** The inclusion of landfill gas to energy projects as renewable energy sources that receive economic incentives will likely create conflicts with the Plan's goals of waste reduction and composting.

**Response:** Landfill gas to energy projects significantly reduce methane emissions; however, the long-term goals of waste reduction, recycling and composting are likely to provide even greater GHG reduction and other environmental and social benefits in the long-term.

**Comment 45:** There is no finding of the benefits of MWC even though it has been provided in the Plan. The findings arbitrarily elevate anaerobic digestion as the most reliable method of methane abatement from landfills, yet no data is presented to support this finding.

**Response:** The third finding in Section 4.3 reports that an analysis of the climate impact of waste supports the existing solid waste management hierarchy which states a preference for treatment through MWC as opposed to land disposal. The fifth finding in that section reports that diverting organics to *composting or anaerobic digestion* is the most reliable method of methane abatement from landfills. This recognizes that these methods either avoid the production of methane gas (as does composting) or fully capture that gas (as does anaerobic digestion). A comparison of anaerobic digestion to landfill gas to energy is provided in the answer to Comment 29. A full discussion of anaerobic digestion is provided in Section 8.4.1 (b).

**Comment 46:** The GHG emissions reductions appear to be based on savings associated with changes in materials use on the products utilized by New Yorkers. So, those emissions reductions may not be realized within NYS.

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**Response:** Clarification has been added to Section 4.2

**Comment 47:** The NERC/WARM Model utilized to evaluate GHG emissions in the Plan has several methodological problems. Certain assumptions and calculations that were used are disconcerting, such as: it assumes all recyclables are managed in the U.S.; it assumes all recycling is closed loop; impacts from disposal of industrial waste are not considered; landfill gas generation was estimated based on lab studies; transportation data were somewhat uncertain; etc.

**Response:** The Plan acknowledges the weaknesses of the WARM model and will continue to seek and use other analytical tools and actual data as they become available.

**Comment 48:** Landfill gas to energy projects are one of the most reliable sources of alternative energy. If DEC bans organics from landfills, the landfill gas to energy industry will simply cease to exist.

**Response:** Landfills continue to generate gas for long periods of time, in some cases decades. The Plan does not recommend a wholesale ban of organics from landfills in the short term. In the event such a ban were to be put in place, landfill gas would continue to be generated for some time from the waste that was in place prior to the ban.

**Comment 49:** Landfills and MWC facilities have invested millions of dollars to control the gases from their facilities and believe that the numbers being reported are not accurate.

**Response:** DEC used all available data sources in preparing the Plan. DEC acknowledges that the investments in gas collection and conversion have been both extraordinary and successful. The Plan has been amended to better describe New York's landfills and the technology and investment they represent. Without specific references to perceived errors in the actual data beyond that used in the Plan, it is not possible to assess the need for correction.

**Comment 50:** Insert a new bullet in the recommendations in Section 4.4 to read: "For residual waste that has not or cannot be prevented, reused, recycled or recovered, seek to use MWC for disposal ahead of landfills. In particular, high disposal export regions in the downstate area should seek MWC disposal over landfilling.

**Response:** As local solid waste management plans are renewed, each planning unit will need to address their compliance with the hierarchy, which does place MWC higher than landfilling.



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**Comment 1:** The Plan identifies product and packaging stewardship as key aspects to significantly reduce landfilling rates. A detailed analysis needs to demonstrate the potential waste reduction and diversion that such programs can attain, the program elements needed to attain targeted levels, and the costs to attain those levels. While the Plan mentions Canada and Germany, the information is anecdotal and should be more fully discussed to demonstrate the levels of reduction and diversion (that) can be achieved.

**Response:** DEC has estimated the potential impact of product and packaging stewardship programs in Section 11. A more detailed analysis would depend on the specific legislative approach taken, and therefore is not possible at this time. As these proposals are developed and implemented, more detailed analyses will be provided in biennial Plan updates.

**Comment 2:** The Plan should focus on a product stewardship strategy of identifying the most difficult and toxic materials in the solid waste stream and eliminate them in priority.

**Response:** Toxicity and difficulty in recycling are principle concerns, but other factors are also taken into account in creating a list of potential products. Based on discussions with numerous stakeholders, DEC also considers costs to taxpayers and local and state governments, public and private inputs, existing stewardship efforts by others, and the likelihood of legislation being adopted. As DEC pursues this strategy, it will gauge these factors as it determines annual product priorities. DEC expects the list to change over time in terms of priorities and materials considered.

**Comment 3:** The plan's reliance on product stewardship as a waste reduction/recovery tool is strongly overstated and should be reduced, especially under the present legislative climate.

**Response:** Product stewardship, though still in its infancy in NYS and the US, holds great promise among the many strategies discussed to reduce waste and increase recycling. As DEC and the state continue to tackle materials and waste management, this strategy will continue to be refined over time. It will require legislative action and, based on an anticipated positive experience with the recent electronics, beverage container expansion and proposed battery legislation, DEC is hopeful that the state's legislative leaders see product stewardship as a positive tool.

**Comment 4:** We applaud and support DEC's product stewardship goals and efforts to create additional product stewardship systems to manage difficult wastes. Manufacturers need to take on more responsibility for what they produce. You should add additional products such as pharmaceuticals, CFLs, needles, PVCs, BPA and phthalates to name a few. We also support the work and efforts of the New York Product Stewardship Council.

**Response:** The Plan recommends product stewardship for pharmaceuticals (see Section 5.2.2) and CFLs (see mercury containing products in Section 5.2.3). Additional

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products and packaging will be considered in the future as discussed under the Product Stewardship Framework in Section 5.2.5.

**Comment 5:** PVC use should be reduced through fees on products containing PVC, and the funds collected should fund further PVC reductions efforts.

**Response:** While no specific fees are recommended on individual product types or materials within the Plan, and PVC is not presently included in DEC's list of targeted materials for product stewardship, DEC will continue to evaluate and consider including additional materials in the future.

**Comment 6:** Fees should be placed on various products and used to fund public education, diversion strategies and labeling.

**Response:** For a variety of reasons, including the cost of implementation and administration of such fees, the Plan does not propose specific fees on products as a tool for waste reduction. Instead, DEC recommends that costs for reduction strategies, like education, diversion and labeling of specific products, be internalized in the way that product stewardship is structured.

**Comment 7:** The Plan should focus on expanding community recycling programs instead of product stewardship strategies.

**Response:** DEC sees expanding community recycling programs and implementing product stewardship as complementary strategies, and therefore recommends that the state pursue both approaches.

**Comment 8:** We support the product stewardship strategy and believe DEC should strengthen the product stewardship language to go further.

**Response:** DEC does not have the authority to require product stewardship without further legislative direction.

**Comment 9:** A patchwork of state extended producer responsibility legislation is less efficient than a national extended producer responsibility policy.

**Response:** DEC concurs that a national extended producer responsibility policy would be preferable. However, while waiting for federal action, DEC is working with several multi-state, national and Canadian organizations to promote a consistent regional or national approach. Still, important waste reduction progress has been made from individual state efforts.

**Comment 10:** We support product stewardship, but it will require national and international changes and will take time, and we should not abandon existing or future solid waste management facilities while these changes take place.

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**Response:** While national or international action would be preferable, product stewardship has been successfully pursued at the state level. While the Plan contemplates product stewardship as a promising means of reducing and recycling waste materials, it is clear that existing solid waste management facilities, many of which represent a significant investment, will continue to play a critical role well into the future.

**Comment 11:** We are worried about the process for determining existing and new products for product stewardship.

**Response:** The Plan recommends that DEC seek legislative authority to implement product stewardship programs. While the Plan recommends key targets, the decision on which products or packaging to target is made by the legislature. The legislature will consider DEC's recommendations, which have been informed by stakeholders, but other interested parties will help direct legislators to make the appropriate decisions as well.

**Comment 12:** Product and packaging stewardship could lead to regulatory excess and be costly to the state's economy. Covered products or packages that cannot comply could be banned from sale in the state.

**Response:** Other states that have implemented product stewardship programs have not reported negative economic consequences, nor has the more extensive European experience with product stewardship created detrimental economic consequences. For more details, see Comment 26.

**Comment 13:** Consumers are more likely to use their curbside collection programs rather than returning e-wastes to other locations.

**Response:** A key tenet of product stewardship is that manufacturers are responsible for financing and arranging for collection programs. Some product stewardship programs use curbside collection, while others use specific collection points such as retailers or other drop-off facilities. The collection method used ultimately depends on which one manufacturers propose as the most cost effective, taking into account the goals they must meet. In any such determination, DEC will work to ensure that the programs are convenient and available to all state residents.

**Comment 14:** Product stewardship programs unfairly impact small manufacturers, importers and distributors.

**Response:** DEC is not aware of any evidence that product stewardship program unfairly impact small companies. Companies can comply in a number of ways, including partnering with others, changing their components, and changing their designs to

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reduce environmental concerns. In a product stewardship program, decisions on how best to comply are left to the manufacturers.

**Comment 15:** We support the whole idea of product stewardship with greater authority for DEC to oversee these programs.

**Response:** Comment noted.

**Comment 16:** The public policy debate about Extended Producer Responsibility (EPR), sometimes referred to as product stewardship, should continue. When adopted elsewhere, producers of products and packaging have reduced waste or helped to improve material diversion and recovery. EPR efforts should focus first on difficult to manage items like medical sharps stewardship, pharmaceuticals and light bulbs.

**Response:** The Plan recommends targeting pharmaceuticals (see Section 5.2.2) and fluorescent light bulbs (see Section 5.2.3) for product stewardship programs. DEC expects a robust policy debate to continue in the coming legislative sessions.

**Comment 17:** We take issue with the statement that the Bottle Bill does not represent “true product stewardship” because “collection and recycling is incentivized through deposits on beverage containers with no formal obligation for the manufacturer to manage the empties or opportunity to internalize end-of-life costs. (A recent amendment provides for the collection of unclaimed deposits by the state, though the recycling will still be done through local planning units.)”

**Response:** DEC concurs that certain aspects of this statement should be clarified and has changed the Plan to reflect this. While DEC concurs that the Bottle Bill contains some of the core principles of a product stewardship program, there are many differences that prevent DEC from referring to it as a true product stewardship program. One key difference is that, under the Bottle Bill, obligations are formally placed on the “deposit initiator” for the management of empty containers. However, the deposit initiator is not necessarily the manufacturer or bottler. Therefore, the primary responsibilities for the proper management of the product often do not lie with the producer making design and marketing decisions. Additionally, the Bottle Bill has not noticeably affected the redesign of beverage containers to be more recyclable, nor is there any requirement for reporting on the final disposition of the containers.

**Comment 18:** Page 53 – The statement “Collection in Product Stewardship Programs must be free” is misleading. The shifting of the materials management expenses to the manufacturer will in reality be shifting these expenses to the consumer who purchases the manufacturer’s product.

**Response:** For further clarification the sentence has been modified to say: “The collection cost of product stewardship programs must be free and convenient to the consumer at the time of collection to encourage participation. Collection and

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processing costs can be fully internalized by the manufacturer or passed along as part of the cost of the product.”

**Comment 19:** Page 54 (5) – The Plan states, “A similar deposit-based system for lead-acid batteries followed suit, and subsequent product-specific programs, such as the waste tire abatement program, have assessed fees on product sales to address remedial issues.” Tire fees have not wholly gone toward the remediation programs, but have been used by the state in other areas. This practice is of concern to local governments where locally generated fees will be taken by the state and only partially made available to localities for its intended purpose.

**Response:** The Waste Tire Management and Recycling Act is summarized in Appendix K. The vast majority of fees collected, nearly \$100 million, has been used for waste tire abatement and market development efforts since the inception of the program in 2003. As a component of the 2010-11 Enacted Transportation, Economic Development & Environmental Conservation Budget Bill (Chapter 55, Section 01, of the Laws of 2010), the Waste Tire Management and Recycling Account was renamed the Waste Management and Cleanup Account. Bills were passed to broaden the scope of use for fees under this account, and the December 31, 2010 sunset date was extended to December 31, 2013.

**Comment 20:** Pages 55 – 69 (NY Product Stewardship Council [NYPSC], Section 5) – Fourteen pages of this document are devoted to a newly developed program that has less than one year of existence. To base a substantial portion of the Plan on this concept as the “cure all” is quite ambitious and probably unrealistic. Landfills and WTE have been around for decades and yet have hardly been mentioned in the Plan as a viable management tool. Page 66 – product stewardship, framework legislation, etc. – NYPSC is a new organization which has been in existence just over a year. Relying on this “young” organization to bear the brunt of the state’s Plan is ill advised. While we do support product stewardship we support it as one of many solid waste management tools. Product Stewardship takes legislation that has proven to be time consuming and difficult and may not always have the desired result.

**Response:** Product stewardship is one of many recommended strategies in the Plan. Product stewardship has proven to be an effective strategy to reduce waste and increase recycling in 30 states, the European Union, Canada and much of Asia. While New York is new to stewardship, the fact that the legislature enacted two product stewardship programs in 2010, for electronic waste and batteries, indicates that that body is open to embracing stewardship policy. While the Plan looks for significant reductions in waste and increases in recycling to reduce the amount of waste destined for disposal, the state’s landfills and combustors represent a significant and important investment in solid waste management and will play a key role well into the future.

**Comment 21:** Extended producer responsibility should be required for all products. Resources must be considered or evaluated in the production of all goods.

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**Response:** Comment noted.

**Comment 22:** NYSAR3 supports product stewardship.

**Response:** Comment noted.

**Comment 23:** Extended producer responsibility-product stewardship (EPR/PS) is identified as central to achieving the ends of the Plan. It is not clear that it can do so. EPR/PS is the most progressive and aggressive waste management policy in *Beyond Waste*, and, potentially, could cause radical change in the way our world is currently structured. However, it is not clear that the “problems” EPR/PS intends to address need to be fixed – that EPR/PS is needed, or should be implemented. While some published research supports the conclusion that product stewardship reduces waste and improves materials management, not all researchers have reached that conclusion.

**Response:** There is clear evidence that product stewardship is a valuable tool for affecting the design of products and packaging and improving recovery infrastructure. Thus, it addresses a critical problem—the disconnect between the design of products and packages and their end-of-life disposition.

**Comment 24:** If a national extended producer responsibility program is adopted for a product or packaging component that has already been adopted by New York State, implementation and coordination may be difficult.

**Response:** Through the Product Stewardship Institute, EPA, and the Association of State and Territorial Solid Waste Management Officials, DEC participates in many multi-state and national efforts to ensure that common approaches are developed and the state’s interests are considered. There are numerous program and policy areas in which the state has adopted requirements or legislation before national plans were adopted. Transition from state to national programs is generally anticipated in the provisions of federal laws, including minimum requirements, provisions for exclusive jurisdictions where appropriate, and timeframes for changes to state laws.

**Comment 25:** The German “Green Dot” program for packaging seems to be similar to what DEC is looking to adopt under product stewardship.

**Response:** The German “Green Dot” program is one example of a packaging stewardship program, and could be a model considered by the Legislature in enacting such a program in the state.

**Comment 26:** Product stewardship would require New York State-specific products or packaging, reducing consumer choices and increasing costs.

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**Response:** DEC favors product stewardship programs in which the manufacturer internalizes the cost of end-of-life management, rather than assigning visible fees to the consumer. There is no evidence that cost internalization yields a direct increase in product price. For example, the states of Minnesota, Washington and Oregon all have electronics product stewardship programs that foster cost-internalization and none have experienced an increase in the cost of electronics as a result. Most product stewardship legislation, like the Electronic Equipment Recycling and Reuse Act, regulates manufacturers of products *sold* in the state, not solely those *manufactured* here. Since New York is a market of substantial size, it is unlikely that manufacturers would cease distribution of their products here. Economic analyses of product stewardship programs have documented positive economic impacts, such as job creation, local government cost savings, and reduced demand for tax dollars. There have been no reports of product stewardship leading to companies relocating, business retracting, or other negative economic consequences.

**Comment 27:** Under product stewardship, who would be responsible for the disposal of the product, the final assembler or the manufacturer of each component?

**Response:** The responsible party would be specified in legislation. Most product stewardship programs hold the “producer” or “brand owner” of the product responsible, meaning that the consumer product company that sells the product under its name bears responsibility for managing the product. It is also important to note that most product stewardship programs require that the collected materials be recycled, not disposed.

**Comment 28:** Product stewardship programs for durable goods will be difficult to administer since monies collected may not be available at the end of their useful life.

**Response:** DEC favors product stewardship programs administered by manufacturers, or their agents, where costs are internalized, and not those that rely on fees at the point of purchase to fund collection programs. Therefore, manufacturers must determine how to finance collection when developing and implementing a product stewardship program.

**Comment 29:** Any fees included by manufacturers under product stewardship programs should not go to the state for other uses.

**Response:** DEC favors product stewardship programs administered by manufacturers, or their agents, and not by the state. DEC also favors programs that internalize costs, and not those that rely on fees at the point of purchase to fund collection programs.

**Comment 30:** Product stewardship programs appear to be more complicated than the Bottle Bill.

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**Response:** The level of complexity of a product stewardship program depends on the details of the enabling legislation. In most cases, such as the Electronic Equipment Reuse and Recycling Act, the program is simpler than the Bottle Bill because manufacturers are given a goal to achieve, but have flexibility in designing and implementing collection programs. Like the Bottle Bill, consumers are responsible for returning the product to a convenient location for recycling in product stewardship programs.

**Comment 31:** We support extended producer responsibility and urge DEC to work with the Legislature to adopt such programs where there exists an infrastructure to plan, pay for and execute the proper collection and recycling/disposal of the targeted product.

**Response:** While it may make sense to implement product stewardship programs where infrastructure already exists, the product stewardship program can also be the vehicle for creating such infrastructure where it does not already exist. Generally speaking, manufacturers will provide for local collection and create infrastructure where it does not currently exist.

**Comment 32:** The state should serve as a leader in product stewardship and push for federal packaging stewardship programs. This will help make sure that the state does not become an even more expensive place to live and work, and a network of different programs are not adopted by individual states.

**Response:** DEC concurs and actively works with other states and EPA to pursue national collaboration on product stewardship (see Section 5.4). However, DEC will continue to pursue state-level product stewardship efforts. DEC is not aware of any evidence that product stewardship has had negative economic consequences in the more than 30 states that have implemented such programs.

**Comment 33:** Through executive order, the state should increase environmental procurement, reduce product toxicity, increase reuse and recyclability, product take back, bulk product purchasing, high post-consumer content, to name a few.

**Response:** Discussions of these are found in Section 10.3.1 and the related Executive Order #4 in Appendix B.

**Comment 34:** Page 57 – The Plan needs to address “orphan” materials. It has been our experience that when the consumer does not have a convenient system for the management of these materials at their end of useful life, they become an illegal dumping problem (i.e. tires, appliances). These costs will then be borne by the local municipalities or state to clean up.

**Response:** While not specifically mentioned in the Plan, the management of orphan products is normally included under the consideration and development of product stewardship programs. The Plan has been revised to address this issue.



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**Comment 35:** Page 57 – Product packaging serves several different purposes, including product labeling, content shipping protection, loss prevention and tamper resistance. How will the Packaging Stewardship policy implementation ensure that manufacturers are still able to achieve all of these competing requirements to protect our residents, the ultimate consumers?

**Response:** DEC would not support a packaging stewardship system that restricted a manufacturer's ability to meet requirements such as those mentioned. Experience in Europe, Canada and Asia indicates that packaging stewardship adds end-of-life management issues to this list of considerations, but does not replace them.

**Comment 36:** For the commercial sector we believe product stewardship is a key element for waste reduction.

**Response:** Comment noted.

**Comment 37:** I agree that extended product responsibility and stewardship should be included in the Plan. The state needs to take a decisive role to move away from unfunded mandates for localities for solid waste management, to businesses to deal with their product's environmental consequences through product stewardship programs.

**Response:** This is the position taken in the Plan.

**Comment 38:** If there is a sound product stewardship system, banning is not necessary—they (products) will not enter the waste system in the first place. Banning of any item is not a sound management technique.

**Response:** Product stewardship systems should be sufficiently convenient that all target products will be returned through such efforts. However, in order to provide further incentive, most product stewardship programs include disposal bans. DEC acknowledges that banning disposal is not effective if convenient alternatives to disposal do not exist. However, product stewardship programs would create that convenient alternative.

**Comment 39:** The Plan notes that consumer participation is critical in successful product stewardship programs, as it has been in other recycling programs. It notes that "it should not be difficult to persuade them (consumers) to participate." If only it were that easy! This is an oversimplified statement.

**Response:** Experience in other states indicates that when product stewardship programs are available and convenient, participation has been strong.

**Comment 40:** We are concerned regarding the incineration of the large amount of plastic containers that are used for collecting drugs at household pharmaceutical collection events and the smaller plastic prescription bottles contained within. Furthermore, we are concerned with the

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adequacy of ordinary incinerators to handle large quantities of very dangerous drugs which require excellent pollution controls and destruction efficiency.

**Response:** The ten DEC-permitted solid waste combustion facilities in the state, which can be used for destruction of pharmaceuticals from household pharmaceutical collection events are designed and operated with pollution controls and destruction efficiencies which are adequate for handling household pharmaceuticals. These combustion facilities are designed and operated to also adequately handle the combustion of the amount of plastic found in the collected pharmaceuticals in an environmentally safe manner.

**Comment 41:** What is the proper destruction method for pharmaceutical waste? DEC currently recommends combustion (5-48 & 5-59).

**Response:** Homeowners are encouraged to bring their unused pharmaceuticals, including over-the-counter and prescription drugs, to a local household pharmaceutical collection event for proper disposal. If the pharmaceuticals collected at these events will be disposed in New York State, DEC requires the pharmaceuticals to be destroyed via combustion at any of the state's ten permitted solid waste combustors through a DEC approval process. If collection is not available, DEC recommends disguising pharmaceuticals and disposing of them in the trash. Flushing of drugs down the drain or toilet is strongly discouraged (see [www.dontflushyourdrugs.net](http://www.dontflushyourdrugs.net)).

**Comment 42:** We recommend that DEC move very cautiously in developing a feasible system of product take back for pharmaceuticals.

**Response:** DEC has joined with the Product Stewardship Institute's pharmaceuticals initiative and is working with other states and stakeholders to develop a viable system for the return of unwanted drugs.

**Comment 43:** Research data reveals that much of the contamination is coming from pharmaceutical manufacturers themselves in their water discharges. Product stewardship efforts that use manufacturers as the take back point could worsen the problem.

**Response:** In a 2004-2009 study, USGS scientists found that pharmaceutical manufacturing facilities (PMFs) can be a significant source of pharmaceuticals to the environment. The PMFs investigated were pharmaceutical formulation facilities, where ingredients are combined to form final drug products and products are packaged for distribution. However, manufacturer take-back of drugs would not involve the actual acceptance at the manufacturing facilities themselves. If a product stewardship effort occurs, manufacturers would take on the responsibility for ensuring that their drugs are properly disposed of consistent with DEC rules and regulations. In practice, this means that manufacturers would make

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arrangements for the collection and disposal; they would not likely accept the returns at their facilities.

**Comment 44:** E -Wastes have been effectively managed in most of the local recycling operations for many years. The issue that remains is what happens to these materials once they leave the control of the local recycling program and go into the recycling/reuse/de-manufacturing process. How will DEC make sure that the materials are managed safely and in an environmentally sound manner?

**Response:** The Electronic Equipment Recycling and Reuse Act sets basic operating standards for collectors, consolidators and recyclers of electronic waste (see [www.dec.ny.gov/chemical/65583.html](http://www.dec.ny.gov/chemical/65583.html)). In addition, DEC is working to promulgate regulations to address proper e-waste management in greater detail. The proposed rulemaking will amend DEC's regulations to streamline the management of used electronic equipment, whether regulated as hazardous waste or solid waste, so that collection and recycling will become more efficient and safer, and manufacturer take-back programs will not be discouraged by regulatory impediments. The main issues to be addressed in the proposed rulemaking include: adopting provisions of the Federal Cathode Ray Tube (CRT) Rule, adopting management standards for collectors, dismantlers, and recyclers of used electronic equipment, adopting provisions of the New York State Wireless Telephone Recycling Act, and amending the requirements of New York's current Generator "c7" Notification.

**Comment 45:** While carpet is readily recyclable, it is currently difficult to recycle due to the excessive transportation costs. A similar situation exists for used mattresses.

**Response:** Comment noted.

**Comment 46:** The Plan should add tires as a potential product stewardship item.

**Response:** The Waste Tire Management and Recycling Act of 2003 requires consumers to pay a per tire fee on new tires to help establish markets for the use of waste tires and to help clean up existing waste tire sites. This year, the NYS Legislature passed an amendment to continue this program through 2013. While this has proven to be a successful program, the text has been revised to identify tires as a potential candidate for a future product stewardship program.

**Comment 47:** The statement that "...all New Yorkers have access to free and convenient recycling for a broad range of electronics," is vague, especially if you consider the Bottle Bill to be convenient.

**Response:** The Electronic Equipment Recycling and Reuse Act requires that collection, handling and recycling be free and convenient to consumers. To meet the act's requirements, manufacturers have to make a collection option available in each

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county of the state and each municipality with a population greater than 10,000. Please see [www.dec.ny.gov/chemical/65583.html](http://www.dec.ny.gov/chemical/65583.html) for the latest information on implementation of this law.

**Comment 48:** The Plan notes that most packaging and printed products stewardship programs involve some fees. How would the fees be determined? They will be passed on to the consumer in the form of higher costs for products purchased.

**Response:** Whether or not fees are allowed in a product stewardship program depends on the enabling legislation. In some instances, fees are established in the legislation; in others, a third-party organization is created to manage the program and that organization establishes rates and collects fees; in yet others, manufacturers determine how to finance the collection systems. DEC supports cost-internalization, whereby the costs of end-of-life management are the responsibility of the manufacturers and may be incorporated in the cost of the product. It is appropriate for the manufacturer of a product or package (or the consumer if a manufacturer chooses to pass on the cost in the product pricing) to pay the cost of end-of-life management of the product, as opposed to those costs being paid by taxpayers who may or may not consume and use products that are expensive to manage at end-of-life. It is worth noting that in systems that include a third-party producer responsibility organization, such as Ontario's program for packaging and printed products, the cost per package for most materials is negligible.

**Comment 49:** Electronic waste legislation was a huge victory this year. We look forward to the roll out of regulations implementing this law and hope that DEC will integrate standards into electronics recycling that include independent certification of facilities and provisions for worker safety and health, as well as ensuring that the "end use of materials" does not involve dumping of e-waste materials in developing countries.

**Response:** The Electronic Equipment Recycling and Reuse Act sets basic operating standards for collectors, consolidators and recyclers of electronic waste (see [www.dec.ny.gov/chemical/65583.html](http://www.dec.ny.gov/chemical/65583.html)). In addition, DEC is working to promulgate regulations to address proper and safe e-waste management. Proposed rulemaking will amend DEC's regulations to streamline the management of used electronic equipment, whether regulated as hazardous waste or solid waste, so that collection and recycling will become more efficient and safer, and manufacturer take-back programs will not be discouraged by regulatory impediments.

**Comment 50:** Sections on electronic waste need to be updated to reflect the state legislation that was adopted in May 2010, after the draft plan was released for public review.

**Response:** This information has been updated.

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**Comment 51:** We support the calls for extended producer responsibility, especially for electronic waste.

**Response:** Comment noted.

**Comment 52:** DEC is currently developing regulations to set operating standards and requirements for electronics recyclers. Who will enforce the regulations, once promulgated?

**Response:** DEC is the primary enforcement agency for its regulations. DEC will enforce the provisions of the legislation and any resulting regulations to the extent possible with available staff and resources.

**Comment 53:** There are multiple rules and regulations for managing pharmaceutical waste (by DEA, EPA and FDA); this is confusing for long-term care facilities, where most unused pharmaceuticals are generated. DEC should consider measures to reduce the number of unused doses of pharmaceuticals as a pharmaceutical waste reduction approach. One such measure is the use of automatic dispensing equipment.

**Response:** DEC supports efforts to reduce the amount of pharmaceutical waste generated by reducing over-prescribing and using automatic dispensing equipment.

**Comment 54:** DEC should notify planning units before it changes the items collected in household hazardous waste (HHW) programs that are eligible for reimbursement (e.g., discontinuation of funding for latex paint, alkaline batteries, electronics, etc.), not after they have submitted reimbursement requests. Also, if grants are no longer assured, this will impact future municipal programs.

**Response:** DEC periodically reviews items collected through HHW collection programs for eligibility for funding. A current list of eligible and ineligible items is maintained as part of the HHW State Assistance Application Package which can be found at [www.dec.ny.gov/chemical/8778.html](http://www.dec.ny.gov/chemical/8778.html). DEC continues to receive applications for the HHW State Assistance program, promote the program, and request funding for HHW collection through the Environmental Protection Fund (EPF).

**Comment 55:** The Plan notes that “To increase recycling and reduce dependence on disposal, manufacturers must embrace materials efficiency and design for recyclability concepts, and recycling programs must capture more of the material targeted and include additional materials.” Finances and viable markets oftentimes dictate addition of materials to the recycling program. There seems to be an overriding disconnect in this Plan between increasing recycling and the financial implications.

**Response:** The Plan recognizes the connection between increased diversion and financial implications for taxpayers and municipalities in its promotion of product stewardship as a means of shifting the cost burden from taxpayers and municipalities to consumers and manufacturers. In a packaging stewardship

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program, accessing and developing markets is the responsibility of the manufacturer or brand owner.

**Comment 56:** The Plan notes that “Few programs have added other packaging materials such as rigid plastic packaging to the core list.” Communities have little or no influence over what is recyclable or not, so adding packaging to the list of collected recyclables serves no purpose without a market for the material.

**Response:** Some communities have accessed markets for rigid plastic packaging and have added those materials to programs, while others have not. One of the advantages to a product stewardship approach for packaging is that manufacturers are required to manage the packaging materials they have chosen to use at the end of their useful life. This creates an additional incentive for the manufacturer to consider the packages recyclability in the design process.

**Comment 57:** We fully support product stewardship and the idea of adopting framework legislation that would enable DEC to recommend product targets annually, with input from the public. What the Plan has not clarified is the relationship between DEC and the new Product Stewardship Council set up by the New York State Association for Solid Waste Management (NYSASWM). Is there a formal agreement between DEC and NYASWM regarding how you work together? There needs to be greater openness about the council, and DEC’s role in advancing product stewardship, as a state agency outside of its work with the council, as well as with the council. Public participation is very important to advancing product stewardship.

**Response:** There is no formal agreement between DEC and the New York Product Stewardship Council. DEC does have a representative on the NYPSC and provide information and assistance as any other member of the NYPSC does. Product stewardship will be advanced through the legislative process. DEC encourages all stakeholders to engage in that process as legislation is advanced.

**Comment 58:** We were very surprised not to see any plastics listed as a target. Plastics are fossil-fuel based and occupy an increasing percentage of the waste stream, have proliferated as single use disposables, and producers are not really doing their part to use recycled content in new production.

**Response:** Plastics are included in many categories recommended for stewardship in the Plan, including packaging, carpets, electronics and automobiles. Additional plastic products can be considered in the future as product and packaging stewardship programs take hold.

**Comment 59:** The amount of mercury in thermostats is equivalent to between 800 and 2,900 compact fluorescent bulbs, depending on the mercury content of the bulb. Section 5.2.6 should be revised to reflect this. By noting the variations in mercury content, it is suggestive that consumers can make a choice on which mercury containing CFLs to buy.

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**Response:** This change has been made.

**Comment 60:** Cell phones should be targeted for product stewardship.

**Response:** Cell phones are included in a mandated take back program in the state, however, it is not a true product stewardship program because manufacturers are not required to fund the program or participate. The cell phone take back program is required to be provided and managed by wireless telephone service suppliers engaged in the retail sale of wireless telephones. More information can be found at: [www.dec.ny.gov/chemical/8818.html](http://www.dec.ny.gov/chemical/8818.html)

**Comment 61:** Remanufacturing should be further encouraged and supported.

**Response:** DEC concurs. Remanufacturing is discussed in Section 8.2 (Reuse) and included within the recommendations of that section.

**Comment 62:** As product stewardship programs are put in place, they should be evaluated to determine if they are appropriate and to determine if this tool is appropriate for solid waste management.

**Response:** DEC concurs. Product stewardship programs often include evaluation metrics used to track a program's value and effectiveness. DEC will continue to partner with organizations to foster a robust and useful product stewardship program.

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**Comment 1:** Imposing a tip fee surcharge should be done with care and should address the following issues: existing fees for monitors should be eliminated or factored into the surcharge rate; existing host fees should be factored in or credited; the surcharge should be on all waste generated in the state to avoid creating an incentive for export; fees should stay within solid waste programs, not be placed in the general fund; and a transition plan should be developed to accommodate the reduction in fees expected when the state meets the goals of the Plan.

**Response:** DEC agrees that a tip fee surcharge must be carefully designed with due consideration of its impact on all stakeholders. DEC supports placing the fee on all materials generated and disposed of in the state, including imported waste and waste destined for export. DEC recognizes that the revenues generated through tip-fee surcharge would be reduced as the Plan's goals are realized. A tip fee surcharge would generate the greatest revenues in the short term when it is most needed for new infrastructure and programs. Once the infrastructure for enhanced recycling and composting is in place, and materials are being diverted from disposal to this infrastructure, the amount of resources generated would be reduced as would the need for those resources.

**Comment 2:** The Plan does not include an economic impact analysis. It should set forth anticipated revenue sources, spending priorities, expenses per program and draft budgets. It is not economically feasible at this time. No one expects the state to follow through with actual funding commitments.

**Response:** A full economic analysis is outside the scope of this Plan. Because the costs and conditions vary from one community to the next, sometimes significantly, it is important that the comparative costs of program options be evaluated as a part of the local planning process. The Plan includes a host of recommendations—some that require additional resources and some that can be accomplished by focusing existing state, local and private sector resources on the Plan's goals and recommendations. It is expected that local planning units will perform economic evaluations, as has always been the case, to determine the most appropriate steps to take in their circumstances. It is also important to note that it is a ten-year plan. While it is important to take into account current resource constraints, it is also critical to be prepared for the time when the state's economic condition improves.

**Comment 3:** The Plan does not reflect the reality of the financial condition of the state and local governments. State and local workforces are likely to shrink, not grow. The Plan should not create unfunded mandates for local governments.

**Response:** The Plan is intended to guide staff at DEC and local planning units in their materials management planning and decision-making. The Plan itself does not impose any mandates. Any new requirements proposed would be subject to regulatory or legislative processes and associated public review and involvement. To the extent the Plan makes recommendations for statutory and regulatory changes, these must be realistic and in the context of available funding. As DEC



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engages the legislature, it will also encourage stakeholder participation as new policy initiatives take shape.

**Comment 4:** The Plan and the GEIS note that DEC intends to leverage solid waste management facility permits to establish organics recycling facilities. If the state wants these types of facilities built, it has to pay for them. The state must fund its priorities.

**Response:** DEC will seek funding and other resources to advance the Plan's priorities. For example, DEC is working with other agencies (NYSERDA, Ag. and Markets, ESD, EFC) to coordinate investments in organics recycling to ensure the most efficient use of state funds. DEC does not expect that the entire financial burden of implementing the Plan's vision would fall on the public sector, but rather that the Plan would also guide private market investments in materials management.

**Comment 5:** It would be beneficial for all if the DEC funding of material and education programs could be teamed with ESD, ESU, NYPA and NYSERDA funding to target regionally located market industries that will be key to ongoing waste diversion efforts.

**Response:** Various state agencies and authorities remain in contact with one another in implementing multiple funding and state assistance programs and in working through those instances in which eligibility requirements and program limitations of the various programs, often imposed by law, do not coincide. DEC and other state agencies and authorities will continue to strive to coordinate funding opportunities.

**Comment 6:** DEC should have dedicated staff and funding for waste prevention and reuse to ensure that they get proper attention because funding and staff for materials management programs almost always focuses resources on recycling, composting, municipal waste combustion and landfilling.

**Response:** DEC will take this into consideration as staff and resources are added to the materials management program.

**Comment 7:** DEC should have adequate funding for staff to develop guidance to assist local governments in implementing education, incentive and reuse programs and infrastructure.

**Response:** DEC acknowledges the importance of this kind of support and will continue to pursue resources to bolster its outreach efforts.

**Comment 8:** Any funds raised to implement the plan should go toward: reuse, recycling and composting by state and local government agencies; grants for food-composting equipment; and on-farm composting.

**Response:** DEC will take this into consideration when additional resources are available.

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**Comment 9:** DEC needs additional funding to monitor construction and demolition debris recycling at waste transfer stations.

**Response:** DEC will take this into consideration when additional resources are available.

**Comment 10:** The first-in, first-out priority wait list system for the recycling grants program was an important system to ensure funding was distributed fairly. If this procedure is changed to some other methodology, those remaining on the list should be fully reimbursed first, before any new process is implemented, for the honor of the state. Any new process should be open and fair to all communities. It should be designed so that all know how applicants qualify for funds and that there is no room for favoritism or cronyism in the system. Any state grants should be competitive and foster the goals of the draft plan in a fair and equitable way.

**Response:** It is DEC's intent to structure any potential new funding programs to embody these principles and to ensure a proper transition from the current program (and waiting list) to a new program.

**Comment 11:** DEC should oversee the execution of prevention and reuse programs in local plans.

**Response:** DEC works closely with planning units as their local solid waste management plans are developed, and DEC monitors implementation through review of compliance reports and ongoing technical assistance.

**Comment 12:** Presently, four-year waiting periods between grant applications and reimbursement are being experienced. It will take more than a ten-year planning period to make a turnaround in this area. This is when planning units must provide funds up front while they wait for reimbursement.

**Response:** DEC understands the frustration with the current funding program, and that is one of the reasons additional funding programs and sources are being proposed and considered as identified in Section 6.5.3 and discussed in Section 6.3.1.

**Comment 13:** NYSAR3 supports consistent annual state funding to planning units to implement waste prevention, reuse, recycling and organics recovery programs, and delivery of state funding in a timely manner.

**Response:** Comment noted.

**Comment 14:** All too often, special funds and dedicated revenues are raided for other purposes or never distributed so the state may sweep the interest for other uses. Accordingly, the draft Plan should identify dedicated and secure funding sources for achievement of the goals set out in the Plan. The proposed Plan currently identifies only potential funding sources. Before finalization, it is imperative that the Plan realistically evaluate and identify funding sources that will be available for implementation of its goals.

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**Response:** Any government funding is subject to the legislature’s annual budgeting process. Therefore, it is not possible to identify sources that will definitively be available for the purpose of implementing the Plan.

**Comment 15:** There need to be dedicated and secure funding sources to support local planning units who will be required to implement new programs and/or construct new facilities to meet the Plan’s ambitious goals for recycling and management of organic materials.

**Response:** As discussed in Section 6.3, DEC’s goal is to maximize funding to the planning units for program implementation through any new funding mechanisms adopted. Although planning units will not be required to construct any specific new facilities to meet the Plan’s goals—those determinations will be made by the planning units as part of their LSWMP process—any government funding is subject to the legislature’s annual budgeting process. Therefore, it is not possible to identify sources that will definitively be available for the purpose of implementing the Plan. However, the goal of DEC through any new funding mechanisms is to maximize funding to the planning units for program implementation.

**Comment 16:** We support increased state funding for any proposed program enhancements/expansions placed on local planning units.

**Response:** Comment noted.

**Comment 17:** In general, solid waste programming has been underfunded for years, and, where funding was available, it went to closing non-complaint facilities, not building ideal systems. This must be corrected under new legislation so that funding supports needed programming. Local governments are suffering under this economy and are faced with undertaking solid waste planning and implementing local programs. Many of the state’s planning units have no solid waste plan or are out of compliance with their existing plan.

**Response:** Solid waste management has and will continue to be the responsibility of local government. DEC’s funding of landfill closure, landfill gas management and municipal waste combustion projects contributed to those programs so that other local funds could be used to advance waste reduction and recycling initiatives. Nonetheless, DEC is acutely aware of the financial constraints of local government, and that is one of the reasons for the Plan’s emphasis on the importance of establishing additional funding mechanisms to support planning units. DEC’s goal in recommending a new funding mechanism is to maximize funding to the planning units for program implementation.

**Comment 18:** The Plan presents the results of Empire State Development’s 20-year Environmental Investment Program (previously known as the Recycling Investment Program) but notes that no projects were reviewed and/or followed up on after completion. Has the state

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verified that the recycling tonnages, jobs, and environmental benefits are still in place today? Has there been any analysis to determine why businesses that were funded are no longer continuing with the practice?

**Response:** Empire State Development has long recognized the importance of periodically verifying whether environmental and economic improvements realized as a result of past EIP investments remain in place and whether the companies where investments were made remain viable. Unfortunately, low staff and funding levels preclude such verification. EIP awards are made on a competitive basis. Projects with a strong likelihood of creating substantial results in a timely fashion receive more favorable review. In addition, as part of the EIP review process, ESD staff analyze the long-term financial viability of the company or organization where EIP investment may be made. ESD is interested in investing only with companies that exhibit strong indications of long-term financial viability.

**Comment 19:** The Plan calls for more staffing at Empire State Development's Environmental Services Unit. The same condition exists in local planning units.

**Response:** The Plan recognizes in several sections that additional staff and resources are required at the local level. Chapter 6 lists multiple potential funding sources. The discussion has been clarified to note DEC's intent to direct most proceeds from any newly enacted funding source to local programs.

**Comment 20:** The Plan includes a number of proposals to raise taxes and fees. It should not result in new taxes. Requiring people to pay more for garbage services will increase illegal dumping or backyard burning. Has DEC considered the environmental impact of mandating PAYT in this arena?

**Response:** Implementing the Plan will require additional resources, and, therefore, the Plan recommends many options for potential funding sources. While some of those might be perceived as taxes, they are either avoidable costs or, on an individual basis, very small. For example, the average New Yorker generates less than one ton of waste per year. If the state assessed a \$5/ton tip fee surcharge, the actual cost per person would be less than \$5/year. Those funds would be invested in ways that would allow access to greater recycling and composting and so could reduce costs on an individual basis. With regard to illegal dumping, according to EPA, more often than not illegal dumping and inappropriate diversion are more a perceived barrier than an actual problem when volume-based pricing programs are established. (See <http://www.epa.gov/waste/conserve/tools/payt/top8.htm>.) A study performed by Duke University found that 48 percent of the PAYT/SMART communities surveyed saw no change in illegal dumping with program implementation, while 6 percent felt illegal dumping declined. Only 19 percent felt it had increased. Those that did see increases noted that the problem was temporary. A recommended best practice is to have a strong enforcement

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initiative when PAYT/SMART is introduced. DEC will develop additional tools and information on this and other topics related to PAYT/SMART.

**Comment 21:** The state should support a tax on carbon fuel to generate revenues to support emerging technologies for conversion of waste to energy. It is a tax that the public would stand for. It would spur innovation and provide multiple environmental and economic benefits.

**Response:** A carbon tax was not considered as a funding option because of the broad implications which are outside the scope of the Plan.

**Comment 22:** The Plan assumes that resources will be available to implement it. If those resources are not available, local planning units should not be required to implement the programs called for in the Plan. The Plan should explicitly indicate that the state will not require local planning units to develop infrastructure that is deemed to be uneconomical or unfeasible.

**Response:** The following language has been added to the Plan's executive summary to clarify its role in relationship to local planning and responsibilities: *This Plan recognizes the diversity of the communities in the state, including variability in financial capacity, and presents a menu of options available to planning units and others engaged in waste reduction efforts. To be consistent with this Plan, local solid waste management plans should evaluate and then propose methods to reduce waste and increase reuse, recycling and composting within the planning unit. Planning units will be afforded flexibility in determining how to best implement their programs. They will not be ordered to establish specific facilities or programs, or be held to firm or mandatory goals. Rather, they will be asked to work as aggressively as possible to reduce the amount of waste destined for disposal.*

**Comment 23:** State agencies should implement and pay for infrastructure called for by the Plan. The state should partner with local planning units to seek better economies of scale.

**Response:** DEC will work to connect planning units to appropriate agencies to facilitate better intergovernmental collaboration on infrastructure.

**Comment 24:** PAYT is a valuable tool to increase recycling and reduce waste in certain conditions. PAYT should not be mandated; it should be a local decision. The Plan will need to lay out how DEC will provide financial and technical assistance to jurisdictions who choose to transition to PAYT systems.

**Response:** The Plan's recommendation on PAYT/SMART has been revised to focus on a series of programmatic and planning activities instead of a mandate. These activities include DEC providing additional resources, tools and information to local governments and planning units evaluating and implementing PAYT if locally appropriate and feasible. DEC will evaluate the need for additional

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measures (i.e., mandate) in biennial Plan updates. Section 6.5.3 includes a recommendation to create a new grant program that is intended to fund programmatic activities, like the transition to PAYT.

**Comment 25:** The state should provide full funding for household hazardous waste (HHW) collection programs, including pharmaceutical collection programs.

**Response:** The Plan identifies HHW and pharmaceuticals as two product categories to target for product stewardship programs whereby manufacturers would ultimately assume the costs of these programs. In the meantime, DEC plans to continue funding 50 percent of the cost of HHW programs.

**Comment 26:** Imposing a tip fee surcharge should be done with care and should address the following issues: existing fees for monitors should be eliminated or factored in to the surcharge rate; existing host fees should be factored in or credited; the surcharge should be on all waste generated in the state to avoid creating an incentive for export; fees should stay within the solid waste programs, not be placed in the general fund; and a transition plan should be developed to accommodate the reduction in fees expected when the state meets the goals of the Plan.

**Response:** DEC concurs that a tip fee surcharge must be carefully designed. If it is pursued, the details of a tip fee surcharge proposal would be developed by the legislature with input from DEC and other stakeholders. DEC supports placing the fee on all materials generated and disposed of in the state, including imported waste and waste destined for export. DEC recognizes that revenues generated through a tip fee surcharge would be reduced as the Plan's goals are realized but would generate the greatest revenues in the short term when it is most needed for new infrastructure and programs. Once the infrastructure for enhanced recycling and composting is in place and paid for and materials are being diverted from disposal to this infrastructure, the amount of resources generated would be reduced, along with the need for those resources.

**Comment 27:** The state should establish a secure funding stream to fund more sustainable solid waste programs over the long term and achieve job benefits and needed greenhouse gas emission reductions. Licensing fees, facility permit fees, inspection fees and surcharges on disposal should all be used to provide dedicated funding. A surcharge of at least \$20 per ton of MSW generated could provide \$5 per ton to the state for solid waste activities and \$15 to local planning units to support needed recycling and composting facilities as well as educational programs.

**Response:** Section 6 provides several options for a long-term, secure funding stream. Any source pursued would require statutory authorization and would, therefore, be enacted by the legislature with input from DEC and other interested parties. DEC encourages all stakeholders to participate in a discussion as funding initiatives are proposed.

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**Comment 28:** Developing a unit-based pricing system (PAYT/SMART) requires initial resources and ongoing staff support. A consultant that provides PAYT implementation services reports that the initial cost is a minimum of \$150,000. Those costs would be paid by a municipality or planning unit.

**Response:** While DEC cannot verify the cost estimate provided, it is important to note that there are many approaches to implementing unit-based pricing and that the costs vary widely depending on the approach chosen. Costs can be included in the rate structure and, therefore, covered by the system's users.

**Comment 29:** The Plan proposes a tip fee surcharge as a potential funding source without providing a formula for fund distribution. Our program (including waste reduction, recycling and HHW collection) is funded through integrated system tip fees. We oppose any new fees. If new fees are assessed, integrated systems should be exempt.

**Response:** The Plan presents a menu of options for the legislature's consideration in establishing a new revenue mechanism. Details regarding how the funds will be allocated will be discussed and debated in the legislative process. In evaluating options, the legislature could exempt certain facilities from the fee or could ensure that some proportion of the fee remains in the community from which it was generated.

**Comment 30:** The Plan should identify sources that WILL be available, not potential sources. Many planning units do not have the resources available to implement new programs and infrastructure, and the state sometimes diverts funds allocated to specific sources to relieve pressure on the general fund.

**Response:** Any government funding is subject to the legislature's annual budgeting process; therefore, it is not possible to identify sources that will definitively be available for the purpose of implementing the Plan.

**Comment 31:** Typical curbside collection contracts last 10 years or more. As we implement the Plan, the amount of garbage collected could go down, and we would be unable to adjust collection strategies or fees. As a result, taxpayers will pay for services they don't need.

**Response:** DEC will aid planning units in evaluating contract structures to ensure that those contracts support implementation of planning goals. For example, contracts can include clauses that allow for periodic evaluation of service levels and fees. In the meantime, planning units should seek to renegotiate contracts where possible or work to implement programs to the greatest extent feasible within existing contractual obligations.

**Comment 32:** The Plan estimates job creation that could result from its implementation. Do these estimates take into account additional expenses to the private sector that could harm the

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economy? Are these jobs self-sustaining or public jobs needed to implement the Plan's mandates?

**Response:** Job creation estimates are based on published studies of the number of jobs created per 1,000 tons of materials recycled. They include jobs in collection and sorting but predominantly represent private sector jobs in the recycling of materials and the manufacture of products from those recycled materials.

**Comment 33:** The structure of this Plan is similar to the Stormwater Phase 2 Program—in short, another unfunded mandate to municipalities.

**Response:** The Plan itself does not impose any mandates. Any new requirements proposed would be subject to regulatory or legislative processes and their associated public review and involvement procedures. As DEC engages the legislature, it will also encourage stakeholder participation as new policy initiatives take shape.

**Comment 34:** The state should assess a surcharge on haulers that mix recyclables with solid waste.

**Response:** Surcharges of this nature would normally be applied at the transfer station or disposal facility, but hauler surcharges could be considered by the legislature in the development of funding mechanisms. The Plan's proposed amendments to the Solid Waste Management Act already include prohibitions on haulers comingling waste and recyclables which, once in place, would be subject to fines and other enforcement measures.

**Comment 35:** The key to this Plan is job creation and economic development. There are many more jobs in reuse, reduction and deconstruction than at landfills. DEC should partner with the Small Business Association to provide grants and loans for reuse and recycling.

**Response:** DEC will work closely with Empire State Development's Environmental Investment Program to foster jobs and economic development throughout the Plan's implementation.

**Comment 36:** In the absence of consistent and reliable funding, the goals of the Plan are in jeopardy. New legislation must establish a consistent revenue stream to fund state and local program implementation.

**Response:** The Plan recommends that the legislature establish a new, dedicated revenue stream to fund implementation.

**Comment 37:** DEC's solid waste programs have been particularly hard hit with budget cuts; there is little or no oversight or enforcement on solid waste facilities. Having permittees fund dedicated monitors at their facilities is ripe for corruption. We would prefer having facilities pay an inspection fee that would fund a team of monitors.



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**Response:** DEC works within existing budget constraints to ensure that solid waste management facilities are operated safely and within regulatory guidelines. Through the On-site Environmental Monitor (OEM) program, 122 facilities in the state are assigned monitors to provide more direct and consistent oversight. Though funded by the facilities, OEMs are DEC staff and, therefore, responsible to the public, not to the permittee.

**Comment 38:** Generating funding through disposal tip fee surcharges while trying to reduce the amount of waste going to disposal will yield to a shortfall in revenue. What is the proposal for funding once the tip fee surcharge revenues are reduced because more materials are diverted?

**Response:** The Plan includes a menu of new sources of revenue for the legislature's consideration. Some sources, such as the tip fee surcharge, plastic bag tax and unclaimed bottle deposits, would yield reduced revenues as the programs become more successful. Others, such as an environmental bond act, would only provide initial funding. A tip fee surcharge would generate the greatest revenues in the short term when they are most needed for new infrastructure and programs. These revenues would supplement the existing program and operating expenses already in place. Once the infrastructure for enhanced recycling and composting is in place, and materials are being diverted from disposal to this infrastructure, the amount of resources generated would be reduced, as would the need for those resources.

**Comment 39:** The Plan includes proposed fees and other requirements that will inhibit our ability to maintain our collection systems at an affordable cost to residents and businesses that are already facing higher taxes and fees in other sectors.

**Response:** Comment noted.

**Comment 40:** The Plan identifies a number of resource needs (facilities, programs, etc.) and a number of possible funding mechanisms but does not select one mechanism that will meet these needs. The cost estimate could be in the billions, and the mechanisms identified appear impractical in the current economic climate.

**Response:** A full economic analysis is outside the scope of this Plan. The Plan presents a menu of options for the legislature's consideration in funding implementation. Which options proceed depend on the deliberations of the legislature and what options appear to be practical at the time legislation is considered.

**Comment 41:** Local governments are resistant to a disposal tip fee surcharge for several reasons: first, local governments with integrated systems already have difficulty competing with private facilities that do not support integrated systems; second, funds collected for a dedicated purpose can be "swept" to the general fund; and third, some funds would be retained by the state, and,

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therefore, they would not entirely be returned to local governments. There needs to be another approach to generate revenue.

**Response:** DEC is aware of local government concerns with the tip fee surcharge. It is one of many funding options presented for the legislature's consideration. Details of the collection and distribution of funds would be further refined if enacting legislation proceeds.

**Comment 42:** The Plan grossly oversimplifies the extent and complexity of the need for resources; it is so beyond reach that it is totally unrealistic. It calls for billions of dollars of investment in a system that is not broken. The Plan should refocus on what is currently possible with limited expenditures and then look far into the future to begin to restructure the waste management system.

**Response:** While there is no looming crisis, the current system of materials and waste management has significant environmental and economic impacts that this Plan seeks to address. As a long-term planning document, the Plan should chart a course that looks beyond the constraints of current circumstances. The aggressive implementation of the Plan's quantitative goals has been scaled back to allow for more time to generate revenue, allocate resources, and develop infrastructure and programs. In the meantime, significant investments that have been made in existing infrastructure will continue to provide safe and reliable service to the public for many years to come.

**Comment 43:** Disposal surcharges and other taxes and fees will not help achieve the goals in the Plan because they will not significantly change household behavior, and they can be diverted away from waste programs to other purposes. Convenience and incentives are better drivers for consumer participation. PAYT is an important financial driver to change behavior.

**Response:** The disposal surcharge is proposed primarily as a revenue-raising mechanism, not as a means of changing consumer behavior. If the legislature chooses to implement a surcharge and dedicate the funds to implement the Plan, those funds would be used to finance programs and infrastructure that will provide the public education, convenience and incentives that could lead to changes in household behavior.

**Comment 44:** DEC ignores or dismisses evidence that its regulations can have significant negative economic impacts on the state and its residents and businesses; bankrupting the state will not help achieve lofty environmental goals.

**Response:** No evidence has been presented to DEC to support the notion that implementing the Plan will have negative economic impacts on the state, its residents or businesses.

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**Comment 45:** The Plan notes that costs to taxpayers will be alleviated by passing those costs to manufacturers and consumers. Manufacturers will pass along costs to consumers, who are ultimately taxpayers. Additional costs to manufacturers may result in reduced choice to consumers as manufacturers may prefer to avoid the state market instead of bearing the cost of compliance.

**Response:** DEC favors product stewardship programs that internalize the cost of end-of-life management into the cost of the products, rather than assign visible fees to the consumer. DEC contends that it is appropriate for the user of a product to share the cost of managing the product at end-of-life with the manufacturer, rather than having the public at large fund programs when individual taxpayers may or may not use or dispose of a problematic product. Most product stewardship legislation, like the state's new Electronic Equipment Recycling and Reuse Act, regulates manufacturers of products sold in the state, not solely those that are manufactured here. Because New York State is a market of substantial size, it is unlikely that manufacturers would cease distribution of their products here. Economic analyses of product stewardship programs have documented positive economic impacts, such as job creation, local government cost savings, and reduced demand for tax dollars. There have been no reports of product stewardship leading to companies relocating, business retracting, lack of product availability, or other negative economic consequences.

**Comment 46:** The Plan notes that approximately two-thirds of the state funds dedicated to materials management have been used toward disposal. Too few resources have gone to waste reduction, reuse, recycling, composting and local planning. DEC should consider a checkoff on tax forms, similar to "Return a Gift to Wildlife," as a potential funding source. We recommend that state funds and incentives not be used toward municipal waste combustion, landfilling or other forms of disposal.

**Response:** The Plan does not propose that additional resources be allocated to disposal facilities. A tax form checkoff did not meet DEC's initial criteria because it would be an inconsistent source of funds. However, it may be evaluated in biennial Plan updates if appropriate.

**Comment 47:** The Plan notes that private sector disposal facilities' prices are lower than municipal facilities' prices because municipal facilities offer a broader array of recycling and reduction programs. Private sector facilities can also offer economic advantages because of efficiency and economies of scale.

**Response:** The text in Section 6.3.2(c) has been revised to reflect this.

**Comment 48:** The Plan proposes five major funding sources, each of which is problematic.

**Response:** The Plan provides options for legislative consideration. DEC expects that problems associated with each approach will be debated by the legislature and

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encourages all stakeholders to participate in the discussions as funding initiatives are proposed.

**Comment 49:** The Plan needs to recognize that much of the waste generated in the state is managed by the private sector. The private sector will also need resources to develop programs and infrastructure. Taxing the private sector to pay for public sector programs may not yield gains in materials recovery.

**Response:** DEC recommends that any new funding source be flexible enough to fund private sector initiatives as well as public projects (see Section 3.13.3).

**Comment 50:** DEC should provide funding for the beverage container assistance projects stipulated in the new law.

**Response:** Programs are available to address beverage container assistance projects; however, these projects are subject to the waiting list provisions of the existing state assistance program and yearly appropriations to the EPF.

**Comment 51:** The state should provide capital funding to support the testing of a border fraud prevention system for container deposits.

**Response:** Details regarding how any new revenue will be allocated will be discussed and debated in the legislative process.

**Comment 52:** Regardless of how New York State chooses to fund solid waste regulatory programs, we request an exemption from solid waste funding fees for public works transportation projects.

**Response:** The details of any funding mechanisms will be determined through the legislative process.

**Comment 53:** With funding being continually “swept” from the EPF, how does the Plan expect to shorten the wait time for grant funding to allow funds to flow to municipalities?

**Response:** DEC recommends revising the current state assistance programs by creating a new grant program with a new funding source to provide consistent annual funding to planning units as identified in Section 6.5.3. DEC also recommends targeting EPF funds in a new program designed to complement the new planning unit funding program as described in Section 6.5.2.

**Comment 54:** The Plan notes that product stewardship programs often require manufacturers to pay registration fees to the state. Those fees should be passed on to the local governments who implement the plans/programs.

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**Response:** In most cases, local governments do not have programmatic responsibilities in product stewardship programs; that responsibility is placed instead on manufacturers. State government oversees the program and enforces it as necessary. If local governments choose to operate programs on behalf of manufacturers, they can make appropriate contractual and financial arrangements with manufacturers.

**Comment 55:** It would be beneficial to the reader to provide the financial data for the three bond acts to identify where the money went, when the grants were issued and when funds were actually distributed. There has been a significant impact upon the development of various solid waste projects based upon the length of time between project grant application and actually receiving project reimbursement payments.

**Response:** Much of that information is provided in Appendix G of the Plan. The current remaining funding source for waste reduction and recycling projects is the EPF. DEC understands the frustration with the current funding program, and that is one of the reasons additional funding programs and sources are being proposed and considered as identified in Section 6.5.3 and discussed in Section 6.3.1.

**Comment 56:** If a tip fee surcharge is assessed, the revenue should be directed to the planning unit where the waste was generated.

**Response:** As discussed in Section 6.3, DEC's goal is to maximize funding to the planning units for program implementation through any new funding mechanisms.

**Comment 57:** We support the Plan's recommendations to transition to a system that will maximize diversion of reusable and recyclable materials and appreciate that the Plan notes that new infrastructure is needed to achieve the goals.

**Response:** Comment noted.

**Comment 58:** Charging a tip fee surcharge on materials recovery facilities is not the correct approach.

**Response:** The Plan does not propose to place a surcharge on material recovery facilities but on waste disposal facilities such as municipal waste combustion facilities, landfills, and transfer stations, including those that export waste for disposal.

**Comment 59:** The Plan notes that \$100 million could be generated from a tip fee surcharge, yet if a \$5/ton charge were assessed to the estimated 14.5 million tons of MSW, it would yield \$73 million, not \$100 million.

**Response:** The revenue estimate presumes that the surcharge would be assessed on disposal of all waste streams, including construction and demolition debris, industrial

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waste, biosolids and imported waste, as well as MSW. The total amount of waste disposal in the state in 2008 was projected to be 25 million tons (See Table 9.1).

**Comment 60:** Tipping fees should be much higher. Fees should be assessed as high as possible to provide an incentive for diversion and a disincentive for disposal. Surcharges should be related to the distance traveled to foster local self-sufficiency. Did the Plan consider a stepped disposal fee based upon the effectiveness of the waste diversion, waste reduction and recycling programs?

**Response:** The Plan approaches tip fees in fairly broad outline. There are many possible approaches to a tip fee, with much room for debate on such issues as size variation of fees, exemptions, allocations, and administrative mechanisms. DEC encourages a continuing debate on the part of all stakeholders as legislative initiatives are discussed.

**Comment 61:** Tip fee surcharges are the most effective way of raising revenue and providing financial incentives for waste reduction and recycling.

**Response:** Comment noted.

**Comment 62:** Tip fee surcharges should not be assessed by the state. Local governments should be able to evaluate if they are a valuable tool locally and, if so, implement them locally.

**Response:** This is not an option addressed in the Plan. The Plan presents a statewide perspective. As such, it addresses the dire need for new resources statewide. There is nothing in the Plan to discourage local governments from adopting their own revenue measures. Potential local revenue sources are presented in Section 6.3.2.

**Comment 63:** A tip fee surcharge could drive waste to lower cost disposal in other states.

**Response:** DEC supports assessing a surcharge at waste transfer stations, including those that export for disposal. As such, a surcharge would be applied equally to waste destined to in-state and out-of-state disposal facilities.

**Comment 64:** The Plan proposes permit fees as a potential revenue source. This is nothing more than another burden to municipalities, and it should be removed from the Plan.

**Response:** The permit fee is one of many funding options. If the legislature pursues such a fee, it could consider exempting municipal facilities.

**Comment 65:** DEC should set a minimum daily throughput for facilities where a monitor is required. We recommend 2,000 tons per day.

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**Response:** DEC maintains flexibility in determining where monitors may be a valuable compliance tool. While it may be reasonable to require monitors at large facilities, there also may be situations at smaller facilities which warrant monitors, as where a facility has a poor compliance history or is in proximity to residences or otherwise poses a compliance challenge.

**Comment 66:** DEC should consider refocusing the Bottle Bill to cover all single-serve containers because those containers are most often used away from home and are, therefore, more challenging to recycle.

**Response:** The Plan proposes a packaging stewardship program to improve the recycling of all packaging. Sections 8.3.14 (c) and 10.1 have been updated to recommend an expansion of the Bottle Bill to include all beverage containers (including all non-carbonated beverages).

**Comment 67:** Capturing unclaimed bottle deposits to fund recycling makes sense. The Plan should include a legislative recommendation along these lines.

**Response:** The Plan includes revenue options for the legislature's consideration; one of these is to capture unclaimed bottle deposits. In Section 10.1.3, the Plan recommends increasing state funds dedicated to reduction, reuse and recycling. One of the state sources discussed is unclaimed bottle deposits.

**Comment 68:** Funding waste reduction by capturing revenue from recyclables that are thrown away seems counterintuitive. Why does the state rely on funding from unclaimed bottle deposits when those bottles are targeted for recycling?

**Response:** Bottle deposits can remain unclaimed if they are recycled in curbside programs or if they are disposed of as waste. In either instance, bottles that are not redeemed are managed by local governments. Therefore, it is logical to redirect the unclaimed deposits to finance municipal waste reduction and recycling programs. If unclaimed deposits diminish over time because redeeming rates increase, there would be less cost to local governments in managing unredeemed bottles and less revenue from the program.

**Comment 69:** The Plan should include a recommendation to expand the Bottle Bill to all non-carbonated beverages, direct the unclaimed deposits to the Environmental Protection Fund, and increase the deposit to \$0.10.

**Response:** The Plan has been amended to add a recommendation to expand the Bottle Bill to include all beverage containers. With regard to unclaimed deposits, the Plan lists options for the legislature's consideration rather than developing a preferred approach. And, while increasing the deposit to \$0.10 would likely increase the redemption rate, it could also increase fraud and over-redeeming. Lacking

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resources and tools for fraud prevention, DEC does not recommend increasing the deposit at this time.

**Comment 70:** Please provide the documentation for the statement, “Most municipalities in New York State fund their solid waste and recycling programs using general revenues derived from property taxes.”

**Response:** Based on DEC staff experience, most of the state's population centers, including New York City, Albany, Long Island and the downstate counties, fund recycling and solid waste collection activities using general fund/property tax revenues. Of the 64 planning units in the state, DEC is aware of only a handful that use integrated system tip fees to finance their recycling and solid waste programs. This statement is further supported by information on the EPA's website at: [www.epa.gov/osw/conserve/tools/payt](http://www.epa.gov/osw/conserve/tools/payt).

**Comment 71:** We support the use of a tip fee surcharge to expand three R programs and DEC enforcement.

**Response:** Comment noted.

**Comment 72:** Planning units cannot dictate to member municipalities how to cover the fees charged by the planning unit. Will the state take the lead in convincing local municipalities to convert to PAYT/SMART?

**Response:** DEC will provide tools and resources to promote the expanded use of PAYT/SMART programs to increase recycling and reduce waste. Planning units seeking to establish unit-wide PAYT/SMART systems can establish such programs by local law or ordinance, as was done in Tompkins County. DEC will provide a model ordinance as well as other supporting information.

**Comment 73:** We encourage the state to support flow control to foster self-sufficiency at the planning unit level.

**Response:** DEC recognizes flow control as a valuable financial and planning tool, which can help to ensure oversight of the activities of private waste management services. (See Section 3.4 and Appendix D.)

**Comment 74:** More than 6 million New Yorkers live in multi-family homes of more than five units. The Plan’s discussion of PAYT/SMART does not address the challenges of implementing those programs in multi-family housing.

**Response:** DEC will be developing additional tools and resources to aid communities in implementing PAYT/SMART programs and will address implementation in multi-family housing in that context.



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**Comment 75:** DEC needs to provide detailed justification for its estimate that PAYT can eliminate 15 percent of the state's waste given the large proportion of residents living in multi-family buildings, the broad availability of recycling and yard waste programs, the number of existing PAYT programs in the state, and the fact that most commercial and institutional waste generators already pay by volume.

**Response:** The estimate is intended to be illustrative of the benefits of implementing PAYT, not as a firm target. DEC used the EPA's on-line calculator, available at <http://www.epa.gov/wastes/conserve/tools/payt/tools/smart-bet/index.htm> to develop the estimate.

**Comment 76:** If the state mandates PAYT for municipalities, it must also be mandated for private haulers and facilities. If not, there will be an unlevel playing field.

**Response:** DEC supports requiring private companies to implement PAYT. The Plan's recommendation on PAYT has been revised to remove the mandate and replace it with additional technical assistance and evaluation.

**Comment 77:** The ultimate disposal goal is unachievable. More realistic goals, if funding assistance were available, would be 3.5 lbs./person/day by 2015 and 2.5 lbs./person/day by 2020. These figures would still be aggressive and challenging to achieve.

**Response:** The Plan has been revised to phase in the goals during a 20-year period.

**Comment 78:** The EPA PAYT report appended to the plan is a guide to implementation, not a reference document to help evaluate PAYT/SMART.

**Response:** The PAYT appendix has been removed and replaced with a web link to EPA's information.

**Comment 79:** Taxes and fees can be charged at four points: at disposal (tip fee surcharge), at the collection point (franchise tax), at the generator (PAYT), and at the point of production (advanced disposal fees). Of these, only PAYT pricing will change generator behavior while raising revenues to fund materials and organics recovery.

**Response:** Comment noted.

**Comment 80:** The Plan should pragmatically articulate how it will support fully integrated systems with funding, in legislative proposals, in permits and in all state procurements and actions.

**Response:** There are many recommendations in the Plan that support integrated systems. Section 6.5.3 recommends a new grant program to provide consistent annual funding to planning units. Section 10.1.1 recommends new revenue sources, DEC support for enforcement, and additional requirements for waste transporters and

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private waste facilities. Section 10.1.2 recommends product and packaging stewardship programs to relieve local governments of the responsibility for problematic waste stream elements.

**Comment 81:** Section 6.3.2 (e) discusses Delaware County financing its facility through sales taxes. What is the tonnage of the Delaware County Compost Facility? What is the cost to produce this material? The \$22 million investment plus O&M must be presented, along with how much material has been reused and sold.

**Response:** Delaware County's financing mechanism is provided as resource information for local governments seeking alternative means of financing materials management programs. According to an article in *BioCycle Magazine*, the Delaware County facility was designed to process approximately 35,000 tons per year of MSW and 6,700 tons per year of biosolids at an integrated system cost of \$50 per ton. The county markets 15,000 cubic yards of finished compost per year.

**Comment 82:** The Plan notes that contracted collection, as opposed to private subscription service, can reduce truck traffic and yield cost savings. How did DEC arrive at this assumption?

**Response:** Contracting collection for an area, district or municipality results in one collection entity servicing the area. This allows for more efficient collection routes and fewer trucks on the road, when compared to private subscription service systems whereby many collection entities can service the same area, driving the same roads.

**Comment 83:** It is difficult to access carbon offset credits for methane reduction. Expanding this to recycling and composting is optimistic. This is a volatile market

**Response:** The discussion of carbon credits (Section 6.3.3(a)) notes that the market is variable and volatile.

**Comment 84:** The Plan should recommend tax incentives for composting equipment for businesses that generate food waste.

**Response:** Tax incentives are discussed in Section 6.3.3 (c).

**Comment 85:** The findings and recommendations on financing are philosophically desirable, but the Plan should outline more specifics on how this will happen given the state's current economy.

**Response:** There is no clear path to a reliable funding solution, particularly in light of the current economy. While DEC believes that tip fee surcharges may be the most promising source of funding, the Plan takes a broad view of options for consideration by the New York State delegation and for discussion and

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refinement by the various stakeholders. The state will work as aggressively as possible, within financial constraints, to implement the recommendations.

**Comment 86:** The draft Plan further proposes funding for MRF upgrades. We fully support this proposal and believe the funding should be prioritized and should be retroactive for progressive planning units which have already invested in upgrades and MRFs.

**Response:** Details of any future programs will be vetted through legislative and/or regulatory processes; however, costs incurred for capital projects such as the construction of an MRF after April 1, 1993 are potentially eligible for reimbursement under DEC's current MWR&R State Assistance Program.

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**Comment 1:** In the late 1980s, a large waste collection company undertook an assessment of the location of the generation of waste materials and the location of the existing waste materials management capacity. It then undertook a projection of the waste/materials generation changes over a twenty year time frame to determine the likely areas of excess or limited waste/materials management capacity and/or conversely where the location and type of solid waste/materials management capacity will be needed. Has the state undertaken this type of planning assessment? Shouldn't this type of a study be done for NYS as a part of the state Plan?

**Response:** This information is included in the Plan in Chapters 7 and 9.

**Comment 2:** It is widely recognized that the EPA data sets are flawed. They are based on a model by Franklin Associates that uses economic flows to predict wastes coupled with obvious needs for field work on wastes that do not seem to belong to commerce, such as yard wastes and the generation of food wastes from food sales. The model is intended to be a conceptual depiction of what wastes in the U.S. might be like; it is not intended to be accurate for actual waste streams at any time or place, and trouble always ensues when this is forgotten. Still, deviations from the model need to be well justified. DEC describes a waste stream for New York State that is different in meaningful ways for some materials. The methodology behind the waste composition analysis in the Plan is not shared. The references in Section 7 have no utility.

**Response:** This information has been added as a component of new Appendix H.

**Comment 3:** Figures 7.4, 7.5, 7.6 and 8.1 should show the units of measurement.

**Response:** Figures 7.4, 7.5 and 7.6 have been revised to show units of measurement. Figure 8.1 indicates the units of measurement.

**Comment 4:** This analysis uses only favorable data to get its point across. This is another example of making the numbers fit the Plan's goals.

**Response:** The analyses in the Plan are based on the best data available to DEC. The composition analyses used were selected based on their applicability to New York State demographics and conditions, not to fit any particular goal.

**Comment 5:** Section 7.1.1, Figure 7.1 provides a percentage breakdown of municipal solid waste (MSW). The figure should state whether the values are net or gross recycling.

**Response:** Figure 7.1 depicts the estimated composition of the MSW stream generated in the state, including recyclables.

**Comment 6:** With respect to the materials discard estimates in the Plan, figures are often obtained from multiple sources possessing little cause to provide accurate numbers.

**Response:** The analyses in the Plan are based on the best data available to DEC. The methodology and sources are provided in the new Appendix H.

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**Comment 7:** The materials discard estimates in the Plan disregard individuals removing recyclables from the solid waste stream for personal profit. Babylon estimates that in 2010, close to half of the calls for special pickups of recyclable materials from residents are removed prior to town pick-up. These materials are recycled but are impossible to account for in Babylon's recycling figures.

**Response:** The materials discard estimates are based on the waste composition analyses of a number of municipalities and states as described in Section 7.1.1. Materials recovered as recyclables, regardless of the collection mechanism, are not included in the discard estimates.

**Comment 8:** The methods of recycling data collection are not uniform; therefore, ensuing numbers between communities are not comparable. This may explain dramatic disparity throughout the state.

**Response:** DEC relied on facility data for the recycling and disposal estimates in the Plan, as discussed in Section 8.3.1. Planning unit data are provided in Figure 8.1.

**Comment 9:** Accurate data should be a prerequisite for development of the Plan, not a component of the Plan.

**Response:** The best available data was used in the development of the Plan. Improvements in data collection are always an important component of any planning process, whether for the state Plan or a LSWMP and are appropriately included in the recommendations of this Plan.

**Comment 10:** Section 7.1.4 titled "Materials Composition in Rural, Suburban, and Urban Areas" attributes differences in per capita waste generation to differences in population density. The text should also note that the differences in composition are influenced by the differences in commercial activity in rural, suburban, and urban areas.

**Response:** Section 7.1.5, entitled "Materials Composition in the Residential vs. the Commercial/Institutional Sectors," addresses these differences.

**Comment 11:** Section 7.1.5 titled "Materials Composition in the Residential vs. the Commercial/Institutional Sectors" should note that commercial waste composition differs by business sector.

**Response:** Section 7.1.5 will be revised to address this comment.

**Comment 12:** Section 7.2 titled "Municipal Solid Waste Materials Characterization" in subsection 7.2.9 "Other," should discuss the presence of composite materials and the difficulties they pose for recycling. The subsection should also recognize that "technically" recyclable materials often lack practical markets.

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**Response:** The text of Section 7.2.9 will be revised to address this comment.

**Comment 13:** What does the vertical axis represent in Tables 7.4 and 7.5? It appears that the number for “disposed” (Table 7.5) is greater than the number “generated” (Table 7.4)

**Response:** The vertical axis in these tables represents percentage of the waste stream. These figures have been adjusted to identify units.

**Comment 14:** The Food Scraps Figure 7.7 should be made consistent with the rest of the document by changing “incineration” to “municipal waste combustors,” and placing it above “landfill” in the diagram.

**Response:** Figure 7.7 is the EPA’s Food Recovery Hierarchy (see <http://www.epa.gov/epawaste/conserve/materials/organics/food/fd-gener.htm#food-hier>). Since it is EPA’s hierarchy, DEC cannot alter it. DEC will add language to the text to explain the source for the hierarchy and what each of the segments in the hierarchy are intended by EPA to represent.

**Comment 15:** On page 96 in Section 7.2.4, it is stated that “*According to NERC there are 20 plastic reclaimers in NYS.*” Please provide the information on these 20 reclaimers. Are they just brokers or processing facilities? Are they actually still in business? Do these reclaimers charge a fee or provide a payment for materials?

**Response:** The NERC report defines plastics reclaimers as companies that “take post-industrial and post-consumer plastics and process them to prepare them for end-use in a manufacturing facility.” (See page 19). The companies reported were in operation as of the report’s completion in 2009. The specific facilities were not identified in the report, nor were details on how the reclaimers arranged for their supply.

**Comment 16:** The Plan states the largest plastic component in the waste stream is film plastic. The logistical and marketing challenges, including collection and baling, for film plastics should be addressed, as well as the state’s specific plan to aid municipalities’ efforts to recycle more of this difficult-to-manage material.

**Response:** The plastic bag recycling law, enacted in 2008, was identified in Section 7.2.4. This section has been enhanced to address the challenges in managing film plastic.

**Comment 17:** The Plan lists furniture as a wood recyclable item, yet under the state’s own clean wood acceptable list, municipalities can’t take plywood or any painted/stained lumber. Therefore, how can furniture be acceptable for recycling?

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**Response:** Section 7.2.5 identifies furniture as a category of wood in the MSW stream; it does not speak to the recyclability of wood furniture. The section notes that most communities do not have programs in place to recycle wood.

**Comment 18:** On page 96, it states “Many textiles are readily technically recyclable.” What does this mean and why is there no technology assessment provided for the various means of textile recycling?

**Response:** The statement (Section 7.2.6) will be clarified to note that many communities and organizations have accessed markets for used textiles and a technical barrier to increasing their recovery does not exist. DEC does not see the need for a technology assessment, since markets exist. Rather, DEC will share information on textile collection programs, such as the recently initiated program in NYC, for planning units interested in implementing textile recycling programs.

**Comment 19:** Section 7.2.8 describes that most communities in the state collect glass containers. The Plan should recognize that there are very poor markets for this material and specifically describe what the state will do to support market development for recycled glass recovery.

**Response:** These issues are addressed in Section 8.3.8 of the Plan.

**Comment 20:** The data in Section 7.3.1(d) shows an animal population of 700,000, but reports only 14,000 carcasses. How other animals are managed should be discussed (do the rest all go off to the butcher?). Also, that paragraph notes 100 lbs of manure produced by each cow each day. Personal experience on a dairy farm convinces me that cows produce copious amounts of manure, but 100 lbs? Every day? Horses produce 15-30 lbs of manure a day (Morris, 2002), for instance.

**Response:** There are numerous types of animal mortalities produced in the state. These include both domestic animals (cows, chickens, etc.) and wildlife (road kills, etc.). It is estimated that 40,000 road killed animals must be managed on the state's highways each year. The example in the Plan is intended to show that animal wastes are not an insignificant issue, but listing other animals in this brief summary would not add substantially to the content. The manure production rate for cows is an average (100 lbs/day) that is supported by the Natural Resources Conservation Service and a number of other sources readily available on the internet.

**Comment 21:** Bioreactor landfills are never mentioned in the Plan. Basically these are a composting operation within the environmental controls of landfill design that also have effective, efficient gas collection systems that reduce GHG and the demand on fuels by producing electricity. Wouldn't this be a positive discussion to add to the Plan, since it is a technology that would support landfilling?

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**Response:** The Plan has been revised to include a statement in Section 9.4 to provide a brief explanation of bioreactor landfills as one alternative to typical landfill design and operation and to describe DEC's position on this method of landfill operation.

Bioreactor landfill operations help to reduce the long-term pollution potential of interred wastes and significantly increase landfill gas generation, which, along with a sufficiently developed collection and control system, could result in enhanced energy generation. DEC supports bioreactor operation as a disposal technology and recommends continued and enhanced gas collection at landfills (see Section 4.4). However, DEC also supports the hierarchy for organics which emphasizes composting and organics recycling to achieve the overall goals of reducing disposal of this significant portion of the waste stream, diverting them to more sustainable uses where their embedded energy and resources can be captured. This conserves natural resources and captures the rich nutrients in organic waste to rebuild the state's soil structures. With that said, the volumes of interred organic wastes in our existing double-lined landfills still will make bioreactor concepts attractive from both a regulatory and industry perspective for future operations at these existing sites across NYS.

**Comment 22:** The state's approval of land-applied septage has raised a lot of environmental concerns. The same contaminants can be found in septic systems as in sewer systems. Chemicals, pesticides and pharmaceuticals may be in these systems, which are now being land applied. This should be addressed in the Plan.

**Response:** The land application of septage is governed by the regulations found in Subpart 4 of 6 NYCRR Part 360. The regulations governing this practice were last updated in 2003. As a result of that rulemaking, the criteria for septage land application were substantially increased (lime addition requirements, soil, monitoring, etc.). Although septage and sewage can have pollutants in common, there are industrial discharges to the sewer system which can add heavy metals and other pollutants not typically present in septage. DEC is currently revising the Part 360 regulations, which will provide an opportunity to revisit the septage land application criteria.

**Comment 23:** The report freely compares NYS recycling rates and other parameters of solid waste management statistics with other states in order to illustrate "poor and stagnant" recycling rates. However a significant amount of metal is recycled and left out of the equation for the recycling rates in the state. Numbers on food scrap and yard waste are freely used for compiling "data" for the purposes of the Plan. Where the same "methods" are used by planning units to provide the numbers for scrap metal (estimates and assumptions), these numbers are discounted. This is another example of the Plan's using only the data that supports its conclusions, rather than being consistent.

**Response:** The recycling rate comparisons in the Plan are related to MSW. DEC recognizes and acknowledges in the Plan that a portion of MSW metal is likely not included



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in the recovery rate calculation as it may not be included in the current reporting structure. It is not, however, considered to significantly alter the overall recovery rates since much of the metal processed outside of the current data collection system is not from the MSW stream. The methodology for calculating the recycling levels reported in the Plan is provided in Section 8.3.1 and further described in the new Appendix A. Planning units are welcome to adopt DEC's methodology as appropriate for their circumstances.

**Comment 24:** What will the state be doing to obtain statistics from scrap metal dealers?

**Response:** Reporting requirements for automobile dismantling facilities have been enhanced as part of Article 27, Title 23: Vehicle Dismantling Facilities, which is discussed in Appendix J of the Plan. Reporting requirements for scrap metal processors will be enhanced as part of revisions to Part 360.

**Comment 25:** The Plan should identify the dollar figures from the \$2.50 surcharge from the 2003 Tire Recycling Act and detail how much has actually gone to tire clean ups. This would be a great point to illustrate municipal concerns about the collection and use of solid waste related fees/funds.

**Response:** The state's efforts and expenditures from the Waste Tire Management and Recycling Act are included in Appendix K.

**Comment 26:** Section 7.3.4 (a) on Construction and Demolition (C&D) Debris volumes contains confusing statistics (fifty-five (55) percent reused; fifty (50) percent landfilled).

**Response:** Comment noted. The text in Section 7.4 (a) has been corrected to clarify the disposition of several components of the C&D debris waste stream.

**Comment 27:** The Plan does not address the problem of allowing C&D to be used as alternative daily cover(ADC) in landfills. This exempts landfills from counting the material against the permitted capacity of the landfill and provides rock bottom disposal rates that are conflicting with incentives for recycling of C&D debris. Why is this aspect of C&D disposal ignored?

**Response:** DEC reviews and approves all materials beneficially used as alternative daily cover. Such material is generally not counted toward a landfill's annual permit limit because it reduces the use of native soil as cover material. However, some limits on this may be considered during the process to update the Part 360 regulations. DEC does not and cannot dictate the tip fee for ADC as opposed to waste. However, the Plan outlines an aggressive move away from reliance on disposal toward higher uses and strategies of waste reduction, reuse, recycling, and composting and recognizes that competition with inexpensive disposal options can hinder progress. Additional policies with regard to disposal will be evaluated in biennial Plan updates.

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**Comment 28:** Section 7.3.2 concerning C&D debris does not distinguish the differences between upstate and downstate (this shortcoming applies for most of the Plan). Downstate may have processing facilities and upstate does not. This is due to local circumstances, which the Plan chooses to ignore. Downstate generates C&D mostly from construction while upstate generates C&D mostly from demolition. The Plan needs to address these differences.

**Response:** Discussion of differences between the New York City region and other parts of the state are discussed in several portions of Section 7.3.4. The concentration of C&D processing downstate is discussed in Section 9.1 and depicted in Figure 9.2.

**Comment 29:** It is hard to believe the numbers in Figure 7.8 concerning C&D debris generation are accurately being reported, as highway departments and DOT etc. do not report these numbers as disposal items since oftentimes the grinding and reuse of this material is for road base. Once again, this seems to be an estimate by the state.

**Response:** The methodology for these waste composition estimates are discussed in Section 7.2.4. As described, DEC developed these estimates of materials present in the C&D waste stream using data inputs that include field-based waste composition studies and research-based evaluations performed both within New York State and within other states and cities that have demographic characteristics similar to some of New York State's regions. The combined concrete/asphalt/rock/brick and soil/gravel components total 62 percent of the estimated C&D debris generated in New York State.

**Comment 30:** In Section 7.3.4 concerning asbestos, the Plan mentions better guidance for the homeowner, yet the Department of Labor (DOL) and DEC have very distinct differences in the way they allow handling of asbestos. DOL requires all kinds of rules, training, notification and handling procedures and fees, while DEC has been known to give out exemption letters for asbestos products that once in a container are considered simply C & D. How would this be handled in the recycling world? Isn't the safest disposal a landfill?

**Response:** DOL and DEC regulate different aspects of asbestos. DOL regulates the removal of asbestos from buildings and the packaging of that removed asbestos. DEC regulates the transfer and disposal of asbestos. In general, non-friable asbestos-containing material (ACM) is considered to be construction and demolition (C&D) debris under the Part 360 regulations. Such non-friable asbestos may be received and handled at a facility that is authorized under Part 360 to receive C&D as long as it is not processed in any way that pulverizes or reduces the material to powder. This will be clarified in the next Part 360 regulatory revision. Ultimately, the asbestos-containing material, whether friable or non-friable, must be disposed of in a MSW or C&D landfill, as there is no current process to adequately recycle ACM.

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**Comment 31:** We agree with the Plan that care is warranted in the management of historic fill, but the management strategy for historic fill must balance *both* protection of public health and the environment *and* the public benefit of development projects that are both cost- and safety-engineered. In this context and others, we look forward to reviewing proposed changes to Part 360 regulations as mentioned throughout the Plan.

**Response:** Management of historic fill will be addressed in proposed revisions to the Part 360 regulations. In view of the prevalence of historic fill and the interest of the public in development as well as environmental protection, the new proposed rules will seek to ensure that these issues are properly addressed.

**Comment 32:** We applaud the Plan for addressing historic fill, but the Plan does not give many details on how historic fill should be managed. Contaminated soil and historic fill impact large numbers of people in urban areas. Urban soil and historic fill are moved and reused without regard to contaminants that may be present. Importation of contaminated soil and historic fill to Superfund and brownfield sites may negate the cleanup of sites. We urge DEC to address both historic fill sites and the movement of historic fill. Testing and documentation can address this problem.

**Response:** DEC concurs that unregulated movement of historic fill can spread contaminated materials into uncontaminated areas. Details of a management strategy for historic fill are outside the scope of the Plan but will be addressed through revisions to the Part 360 regulations. Importation of contaminated or historic fill to Superfund and brownfield sites is currently tightly controlled by provisions of 6 NYCRR 375-6.7, which require documentation of sources and chemical analysis for most soils imported to a cleanup site. Materials accepted for backfill or cover at a cleanup site must meet criteria DEC has determined to be protective at that site based on the selected remedy and the site's future use. DEC agrees that, for off-site movement of contaminated soil and historic fill, documentation of sources and, where necessary, chemical analysis will be effective in preventing the misuse of urban contaminated soil and historic fill at locations not controlled by provisions of 6 NYCRR 375-6.7.

**Comment 33:** We would like to see roadway milling operations addressed in the amendments to Part 360 so that the material is deemed to be clearly eligible for use as exempt fill or beneficial use.

**Response:** DEC concurs that pre-determined beneficial use determinations (BUDs) and regulations governing exempt fill should be modified to clarify, and in some cases expand, the use of recycled asphalt pavements (RAP) in highway construction. This will be addressed in the Part 360 revisions.

**Comment 34:** We ask that any regulatory changes regarding management of historic fill be reasonable and feasible. Excavation, removal and disposal of historic fill as industrial solid waste affects many maintenance and improvement projects, as these corridors tend to be in zones of

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historic fill. It would be more cost-effective if DOT were not compelled to replace excavated historic fill with clean soil, or always encapsulate historic fill under pavement.

**Response:** The need for construction and maintenance of transportation and utility corridors will be considered in the Part 360 regulatory revisions to address management of historic fill.

**Comment 35:** In Section 7.3.4, a list of composition analyses from which the Plan's composition was determined is provided. How is the list intended to be used? When were these data generated? What specifically did each one say?

**Response:** Additional information on the studies used and their scope has been added as a component of new Appendix H.

**Comment 36:** The Plan devotes two sentences to the "industrial waste" category. According to the Plan, this section generates 3.5 million tons of waste. What is the DEC proposing in order to accomplish a 90 percent reduction of this waste? Page 41 states: "*for every ton of MSW disposed, 71 tons of industrial discards are produced.*" Table A in the appendix provides for 18.3 million tons of MSW generated; at 71 tons of industrial waste produced for every ton of MSW, there should be approximately 1.3 trillion tons of industrial waste to deal with. Why the discrepancy? DEC needs to provide a clear explanation on how it arrived at the 71:1 ratio since this number is not provided in any of the reference material.

**Response:** The quantitative goals in the Plan are to achieve a progressive reduction in the amount of municipal solid waste disposed of in the state. The goal applies to MSW, not construction and demolition debris, industrial waste or biosolids. The cited ratio of 71 tons of industrial discards per ton of MSW disposed is based on gross national data and therefore is not useful in determining the amount of industrial waste generated within the state. To avoid confusion, the reference to 71 tons of industrial waste per ton of MSW disposed has been removed.

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**Comment 1:** DEC should remove the handling fee that is paid to redemption centers and retailers from the legislative process. Tie the fee to the consumer price index or some other measure that accurately reflects our cost increases for wages, fuel, taxes and insurance. If this is not done, we will soon be in the same boat we were in before the last increase helped to make our businesses viable.

**Response:** DEC has always supported fair handling fees and would support tying them to some type of index or measure that could adjust them without requiring a legislative change. This would require action by the legislature

**Comment 2:** We need to start looking at waste differently if we are going to truly change waste products into items and products that have value. When you take this view, you realize the significance of what recycling can do and envision what new and innovative technologies can fit in and have a place in a cleaner, greener environmental future.

**Response:** The Plan's recommendations are consistent with this comment.

**Comment 3:** DEC should recognize the economic burden of implementing certain aspects of the plan, and should instead focus on ensuring enhanced procurement of recycled materials by both government institutions and private manufacturers.

**Response:** Certain elements of the Plan's implementation will require additional resources, and the Plan recommends several sources for potential new revenue streams. Executive Order 4 (EO 4), signed by Governor Paterson in April 2008, established a State Green Procurement and Agency Sustainability Program. The Order, available at [http://www.ny.gov/governor/executive\\_orders/exeorders/eo\\_4.html](http://www.ny.gov/governor/executive_orders/exeorders/eo_4.html), makes it the policy of the state to incorporate sustainability into all aspects of agency and authority operations. It created an Interagency Committee on Sustainability and Environmental Stewardship ("Interagency Committee" or "Committee") co-chaired by the Commissioners of OGS and DEC, and charged it with several specific tasks, including the annual development of green procurement specifications, the development of reduction goals for solid waste and paper consumption, and the preparation of this annual report on progress toward the Order's goals. Pursuant to EO4, recycled content requirements have been incorporated in several green product specifications.

**Comment 4:** New York State's current waste management systems, a combination of municipally and privately owned facilities and equipment, manage the state's waste without service interruption or environmental problems and at reasonable costs. Rather than mandating new, separate waste streams for such materials as organics and food wastes, we urge DEC to consider implementing a 'demonstration project' to evaluate the total environmental and logistical impacts of a separate organics stream.

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**Response:** The current management systems for waste and materials in the state represent a significant investment and will continue to play an important role well into the future. Consistent with the state solid waste management policy, DEC will continue to work toward maximization of waste reduction and recycling to the extent technically and economically feasible. As outlined in the Plan, there are significant environmental and economic benefits associated with increasing organics recycling and reducing our reliance on disposal facilities. There are costs associated with implementing the recommendations in the Plan, but it proposes a number of potential funding sources to help alleviate this burden (see Section 6). Pilot and demonstration projects are valuable in evaluating organics recycling. There are municipal programs and large scale facilities in this and other states and countries that will be used as models for assessing impacts and costs.

**Comment 5:** Expanding the portfolio of recycled materials to include all recyclable plastics and expanding the municipal programs to include food and yard waste composting will demand significant investment of resources by local planning units.

**Response:** The Plan recognizes that additional resources are needed at the local level to assist in implementing new programs and activities.

**Comment 6:** DEC should nurture businesses that utilize recycled content in their products, i.e Empire Zones or Development Park?

**Response:** NYS supports recycled content manufacturing through two primary initiatives. Empire State Development's (ESD) Environmental Investment Program (EIP) offers financial assistance to both manufacturers who process recycled materials as industrial feed stocks, and to manufacturers who incorporate recycled feed stocks in their products. EIP investments focus on developing stable, value-added markets for recycled materials so that they can compete effectively with virgin materials on price and quality. OGS manages state procurement contracts that feature products with recycled content and other sustainable attributes. State agencies are directed to purchase sustainably produced goods whenever feasible, thereby creating a large in-state market for recycled content products. DEC furthers the expansion of recycled content manufacturing by providing Beneficial Use Determinations for new applications of recycled materials. And New York State Association for Reduction, Reuse and Recycling (NYSAR3) sponsors the Buy Recycled Alliance of New York (BRANY) as a voluntary alliance to promote corporate procurement of recycled content products.

**Comment 7:** The state should provide incentives for Washington County to join efforts to reduce, reuse, recycle and compost.

**Response:** The Plan outlines various incentives for communities to improve their waste reduction, reuse, recycling and composting programs. These incentives are described in Section 8.3.5. DEC will work with Washington County through the

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local solid waste management planning process to reduce waste and increase recycling and composting.

**Comment 8:** The Plan should recognize that planning units with fully integrated solid waste management systems have been consistently more effective in waste minimization and recycling, and it should do more to support a fully integrated system approach to solid waste management.

**Response:** DEC supports the fully integrated system approach to solid waste management and has highlighted and promoted such an approach in the Plan.

**Comment 9:** I like the language in the Plan which says that we should be looking at materials recovery as a way to generate jobs in the state. We have high unemployment in the state, and many of the unemployed with limited educational skills could get good jobs in reuse, recycling or composting.

**Response:** The Plan recognizes recycling to be an economic development tool as well as an environmental tool.

**Comment 10:** NYSAR3 supports requirements that local plans be written with annual commitments with clearly delineated local policy, programs, and legislative incentives to promote waste prevention, reuse and recycling, composting technologies, and education and enforcement. DEC should oversee and ensure that local plans adhere to their commitments.

**Response:** DEC will continue to evaluate and provide oversight of local solid waste management plans to the extent possible with its current staff and resources.

**Comment 11:** I support waste reduction, reuse, recycling and composting and PAYT.

**Response:** Comment noted.

**Comment 12:** Material recovery facilities, centers for hard-to-recycle materials, composters, and bioreactors should comprise the core of our materials management system. What cannot be reduced, reused, repaired, rebuilt, refurbished, refinished, resold, recycled, or reclaimed (composted) should be restricted, redesigned or removed from production.

**Response:** DEC supports systems that maximize waste reduction, reuse, recycling and composting. The Plan supports product stewardship as a main driver in moving manufacturers to design greener products and packaging, which would include reduction of toxicity, reduced materials use, ease for recycling, etc.

**Comment 13:** The state implemented waste prevention, reuse and recycling in 1991, yet they just started complying with their own regulations in the last year. Will local governments have the same 18 years to respond?

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**Response:** Executive Order 142, *Establishing New Waste Reduction and Recycling Initiatives For State Agencies*, was signed in 1991, directing all state agencies and encouraging public authorities to institute a number of waste reduction, recycling and recycled product purchasing practices. Though many agencies and public authorities complied with EO142, Executive Order 4 (EO 4), *Establishing a State Green Procurement and Agency Sustainability Program*, signed by Governor Paterson in April 2008 represents a recognition that the state can and should do more to promote sound materials management within government operations. The first annual report details compliance with EO4 (see, <http://www.ogs.state.ny.us/EO/4/Docs/FirstAnnualProgressReport.pdf> ). Local governments are expected to work as aggressively as possible to increase reuse, recycling and composting and to minimize waste. The Plan does not require particular actions.

**Comment 14:** DEC must develop a program to advance waste prevention through researching other states' programs, identifying waste prevention targets, publishing factsheets, identifying resources for waste audits at private and public institutions, and publicizing success stories. A waste prevention team at DEC would be ideal to jump-start these efforts.

**Response:** While there is no specific waste prevention team, DEC staff are involved in waste reduction program activities. A waste audit manual and many other educational tools are available on DEC's website at <http://www.dec.ny.gov/chemical/8801.html>

**Comment 15:** DEC should oversee the execution of prevention and reuse programs stated in local plans. The current staffing levels at DEC of one person out of 30 to address waste prevention does not match the level of commitment evident in the Plan and the need to reduce waste generation and increase reuse statewide.

**Response:** DEC will continue to evaluate and provide oversight of local solid waste management plans to the extent possible within current staff and resource constraints. The Division of Materials Management, formerly the Division of Solid and Hazardous Materials, has been recently reorganized to focus on Plan implementation and local assistance.

**Comment 16:** Cayuga County supports the following from the Plan: statewide waste reduction and reuse promotion following a list of minimum mandated recyclables.

**Response:** Comment noted.

**Comment 17:** We must reduce wastes first. We can't mandate a reduction in our 'American consumerism' mentality, unfortunately, but we can enforce proper disposal.

**Response:** Waste reduction is preferred, as outlined in the state solid waste management policy which established the solid waste management hierarchy. DEC will



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continue to monitor and enforce requirements on disposal facilities. The Plan offers a number of legislative and regulatory recommendations to improve oversight and enforcement of waste disposal practices.

**Comment 18:** I agree with the Plan’s assessment that substantially more remains to be done to minimize disposal through waste prevention, reuse and materials recovery. Legislation has been introduced to reduce waste disposal, including mandating recycling of construction and demolition debris, reducing the use of plastic bags, promoting reusable and compostable bags, and increasing recycling in state parks, historic sites, and recreational facilities.

**Response:** Comment noted.

**Comment 19:** In Section 8.1.1, the Plan uses EPA numbers and DEC numbers to identify how much waste may be generated and how much may be reduced in this section. It is once again not an accurate picture of what the target is for this Plan. The continued use of different numbers to try and justify the Plan’s goals is confusing and not realistic.

**Response:** The information used in the Plan is the most accurate available to DEC and is appropriate for use in the Plan. The presentation of both EPA numbers to reflect a nationwide condition and DEC numbers to reflect the statewide condition is intended to provide comparative data for New York State versus the nation as a whole. The presentation is intended to be informational, and sources are clearly identified to provide transparency.

**Comment 20:** The emphasis in the Plan on reduction is the way to go, and I think a lot of it will come down to how the state shows leadership in making reduction a priority. Executive Order 4 is a great example of a step forward in leadership.

**Response:** Comment noted.

**Comment 21:** Non-recyclable waste products, relatively speaking, may not be reduced as much as materials that already have stable recycling markets; it may erroneously appear that recycling is decreasing while in fact recycling on a unit basis may increase while the total weight impact decreases. The Plan should note that much waste reduction (thin-walling, reduced newspaper size and circulation, etc.) is occurring with recyclable materials, and perhaps not as much with other “trash.”

**Response:** DEC recognizes the dynamic raised in the comment, and the Plan discusses the relationship of lightweighting of recyclables and its effect on recycling rates in the text box “Measuring Success” in Section 8.3.2. This is one of the factors that DEC evaluated when developing the new metric which calls for measuring program progress based on a reduction in per capita waste disposal, rather than on a recycling rate.

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**Comment 22:** We support other waste prevention measures that can be implemented at the local level by planning units, such as backyard composting containers, brochures to help people plan zero waste events, encouraging flea markets, yard sales and other reuse events. Waste audits are extremely important for state and local government facilities, institutions and commercial businesses. Waste audits capture a comprehensive understanding of ways to reduce waste exiting a facility, but, more importantly, can identify significant savings through better, smarter purchasing practices. State agencies cannot really gain the available benefits and be able to share them without proceeding with waste audits, even if you have to call them something different. The state should use the Pollution Prevention Institute (P2I) and its manufacturing extension partners to provide this assistance to industrial and commercial entities.

**Response:** DEC supports community efforts to prevent waste and increase reuse (see Sections 8.1 and 8.2.). The Plan recognizes the importance of waste composition information, gathered through a waste auditing process. Recommendations include making funding available for local composition analyses (Section 10.2.1), providing guidance to planning units for developing such analyses (10.3.2), and conducting a statewide composition analysis (10.3.3). DEC intends to work with the P2I to implement portions of the Plan, as discussed in Sections 8.1.4 and 8.2.5 (a).

**Comment 23:** Would the state use a multi-state approach for the implementation of the *Beyond Waste* Plan initiatives?

**Response:** DEC works toward the Plan's goals through many multi-state and national organizations, including the Northeast Recycling Council, the Northeast Waste Management Officials Association, the Product Stewardship Institute and the Association of State and Territorial Solid Waste Management Officials. In its collaboration with regional and national partners, DEC will ensure that their approaches are consistent with state and local program efforts.

**Comment 24:** The state must ensure that businesses dealing with toxic or hazardous waste work with pollution prevention units to employ treatment methods or replace such materials in their manufacturing process.

**Response:** DEC continues to provide assistance to businesses to reduce toxicity and volume. DEC also works through the P2I and its manufacturing extension partners to provide pollution prevention assistance. DEC will also continue to work with regional and national organizations to further reduce toxic and hazardous materials in products and packaging.

**Comment 25:** One section of the Plan that must be more expansive is Chapter 8's discussion of 'Reducing Toxicity.' While the state's initiatives on mercury-added products and toxics in packaging are very important, the Plan should also take note of the new law banning bisphenol A (BPA) in childcare products and the ban on the aesthetic use of toxic pesticides in school or daycare settings. There are numerous other opportunities to reduce toxic components in products,

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such as reducing pesticides in schools, hospitals, etc; expanding green procurement in schools and hospitals; reducing pesticides use in state and municipal parks; regulating toxic chemicals in children's products; evaluating the use of americium-241 in smoke detectors; and banning BPA on cash registers and ATM receipts.

**Response:** Chemicals policy and pesticide application issues are outside the scope of the Plan. Nonetheless, DEC will continue to support legislation to reduce the use of toxic materials and chemicals and to implement the laws enacted by the legislature.

**Comment 26:** How can the state claim they are doing an excellent job promoting waste prevention and recycling, when the goals are not being met?

**Response:** DEC has done its best to promote waste prevention and recycling within the agency's staffing and resource constraints. However, primary responsibility for recycling is at the local level. While DEC does not have the resources to undertake direct public education at the local level, over \$30 million has been provided during the last decade to municipalities across the state for recycling education, including funding recycling coordinator salaries, under the municipal waste reduction and recycling grants program, as identified in Table 6.1. DEC does not currently have the statutory authority to enforce local recycling requirements. The Plan recommends that the state initiate a broad public education campaign (see Section 8.3.12 (a)) and that an updated solid waste management act provide DEC with authority to enforce recycling requirements.

**Comment 27:** Waste prevention often gets lost as a priority when resources are diverted to recycling. We recommend that there be separate and distinct funding for waste prevention.

**Response:** DEC staff will continue to conduct the Plan's waste prevention work under general funding allocations through the usual budgeting process, which generally does not create separate funding streams. However, the Plan suggests a number of new funding sources, some of which may direct funds for specific purposes. This type of approach merits further discussion in the context of the legislative process.

**Comment 28:** Will the state institute educational programs at all levels of our school system?

**Response:** General Municipal Law requires all municipalities to have a source separation law in place requiring all generators [residential, commercial, institutional (including schools) and industrial generators] to source separate recyclables. DEC will continue to work with schools to develop waste reduction, reuse, recycling and composting programs consistent with their local laws. DEC promotes school recycling through our Green School webpages (<http://www.dec.ny.gov/chemical/8803.html>), workshops, presentations, one-on-one meetings, Environmental Excellence Awards, the Green School Challenge, NY Recycles Day, and other initiatives.

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**Comment 29:** DEC should prioritize helping local jurisdictions to study the effectiveness of their outreach programs and develop and disseminate guidance to help target effective new approaches to those populations that do not participate.

**Response:** DEC assists local communities in enhancing their recycling programs through several means, including; outreach sessions for local municipalities at annual recycling conferences, educational materials that can be used and modified by local communities, funding for local recycling coordinators and educational materials, and other initiatives.

**Comment 30:** We support a statewide public education campaign focusing on recycling and waste reduction that directly involves the recycling professionals from local solid waste planning units in the development of the plans. A statewide campaign, however, should not come at the expense of funding local education efforts.

**Response:** DEC recognizes that local community programs are very effective in promoting waste reduction, reuse, recycling, composting and buying recycled products and packaging. These programs are critical to the overall success of any waste reduction, reuse and recycling program. Currently, the NY Recycles campaign promotes waste reduction, reuse, recycling, composting and buying recycled products and packaging. DEC also provides grants to local communities for public education. The Plan recommends a statewide waste reduction and recycling promotional campaign that would include the development of tools and resources that could be used by local governments. DEC intends to seek new funding for such a campaign, rather than diverting funding dedicated to local recycling educational efforts.

**Comment 31:** Environmental education for communities is key to getting everyone on the same page. Most people want to do the right thing, but they're at a loss for leadership. Once a community realizes that these will be the guidelines for solid waste, they will be willing to get on board and do their part. They need clear instructions and explanations to feel that they are part of the solution.

**Response:** The Plan recognizes the importance of education in the overall materials management program. Also, a list of designated recyclables will provide continuity and reduce confusion.

**Comment 32:** We need incentives for doing the right thing.

**Response:** Incentives for enhanced materials management are discussed in Section 8.3.5.

**Comment 33:** Pay As You Throw has been proven effective; the Plan should address why many communities are unwilling to implement PAYT and provide solutions.

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**Response:** The Plan's discussions of PAYT (Sections 6.3.2 (b) and 8.1.1) have been revised to discuss the barriers to PAYT implementation, such as the perception of creating an additional tax burden.

**Comment 34:** The Plan calls for requiring planning units to implement waste prevention programs. The plan needs to identify the potential costs of such unfunded mandates and explain how the costs will justify the benefits.

**Response:** The Plan itself does not impose any mandates. DEC will require that planning units that are preparing local solid waste management plans perform a full evaluation of waste reduction options, including costs, and implement those that are feasible in the local context.

**Comment 35:** Besides extended producer responsibility, what is the state going to do to influence product production and packaging reduction?

**Response:** DEC believes extended producer responsibility is a critical component of the Plan and the progress of the state's waste reduction and recycling efforts. The importance of success in this area cannot be understated in the Plan. However, in addition to this significant and important effort, the state continues to provide assistance to businesses to reduce waste toxicity and volume. DEC will utilize the P2I and its manufacturing extension partners to provide this assistance.

**Comment 36:** How will the State of New York be addressing packaging EPR, and if the state does not take legislative action, how will the local solid waste agencies be able to accomplish the goals of the plan?

**Response:** The Plan recommends that packaging stewardship, also known as extended producer responsibility (EPR), be considered by the legislature. If enacted, the state will experience significant gains in waste reduction which will make Plan goals more attainable. With or without such legislation, progress can be made, particularly if the state develops new revenue streams to generate resources for local governments to dedicate to improved materials management programs.

**Comment 37:** Why are the plan recommendations aimed at the planning units in this regard and not at state action?

**Response:** The Plan includes recommendations for the legislature's consideration, as well as state regulatory and programmatic actions. Since local government bears the primary responsibility for solid waste management, many recommendations call on DEC to require, encourage or incentivize local actions. The state will continue to provide tools, resources and support for the development and implementation of progressive materials management programs.

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**Comment 38:** Legislative Recommendation 8.1.7 (b) seeks to require communities in New York State to implement PAYT/SMART programs unless they can demonstrate other methods to achieve the state's waste reduction and recycling goals. We are strongly opposed to any such regulatory requirement.

**Response:** The Plan has been modified to remove the recommendation for mandatory PAYT/SMART programs. Instead, it recommends that DEC develop tools and resources for the programs; that planning units evaluate PAYT/SMART programs and implement if locally appropriate and feasible; and that the need for additional policy (i.e., mandates) be evaluated in biennial Plan updates.

**Comment 39:** The Plan hinges on more resources being available to the state and local governments. That will be challenging in the current economic context. Will there be funding to implement the goals of the Plan?

**Response:** The Plan recommends that new sources of revenue be created to fund its implementation. Whether that recommendation will be acted upon is dependent on the legislature. It is important to note that the Plan includes a host of recommendations, some of which require additional resources, and some of which can be accomplished by focusing existing state, local and private sector resources toward the Plan's goals and recommendations. It is also important to note that it is a ten-year plan. While current resource constraints are an obvious concern, it is also critical to plan for the time when the state's economic condition improves.

**Comment 40:** The state had previously been evaluating a number of simulation computer programs to model the effect of a number of program changes. Has the state undertaken modeling of the changes proposed in the Plan on the urban, suburban, rural areas or on discrete or unique areas of the state; i.e. Adirondacks, Long Island, Southern Tier, NYC?

**Response:** While DEC had hoped to move forward with computer modeling assistance in the development of the Plan, financial circumstances prevent this effort at this time. Additional evaluation tools will be considered in biennial Plan updates.

**Comment 41:** The potential reuse stream should be measured, so work can be done to design and expand repair and refurbishing infrastructure.

**Response:** DEC will encourage planning units that undertake waste composition studies to consider this approach, and will also consider tracking reusables if a statewide waste composition analysis is undertaken.

**Comment 42:** The Plan notes that there are 296 jobs created for the 10,000 tons of used electronics reused. Has DEC analyzed the carbon footprint associated with those employees driving to work, as opposed to one landfill operator, or the transportation of the used electronics?

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**Response:** DEC has not specifically analyzed this circumstance, and it would be difficult to do an accurate analysis of greenhouse gas impact without more precise information. However, the data available to DEC indicates that the net carbon reduction related to computer reuse is far greater than the impacts related to transportation of the worker or the material. According to EPA, reducing or reusing one ton of personal computers would yield a greenhouse gas reduction of 55.78 metric tons of CO<sub>2</sub> equivalent, the greatest greenhouse gas (GHG) benefit of any waste management option for any material (see [http://www.epa.gov/climatechange/wycd/waste/calculators/Warm\\_home.html](http://www.epa.gov/climatechange/wycd/waste/calculators/Warm_home.html)). Also according to EPA, the average passenger car emits 5.5 metric tons of CO<sub>2</sub> equivalents (MTCO<sub>2</sub>E) per year (see <http://www.epa.gov/OMS/climate/420f05004.htm>). Therefore, reusing 10,000 tons of computers would be equivalent to taking more than 100,000 passenger cars off the road.

**Comment 43:** We believe that instituting re-use incentives could be a valuable initiative that would encourage civil engineering applications of difficult to dispose of wastes such as glass and tires. Despite examples of successful programs, local planning units still await uniform official guidance, incentives, and state coordination. A state task force to deal with these issues should be created.

**Response:** The Plan encourages local use of processed mixed glass, chipped tires and other appropriate recycled materials in engineering applications. EO4 is developing specifications for the use of these materials in state-funded applications.

**Comment 44:** Expand Waste Match, Materials for the Arts, Build it Green, and similar programs.

**Response:** DEC supports these programs and provides funding through the municipal waste reduction and recycling grants program as appropriate and available.

**Comment 45:** We encourage DEC to require/encourage and fund reuse and swap centers and events throughout the state and publicity via web.

**Response:** Local materials exchanges are publicized on DEC's webpage: <http://www.dec.ny.gov/chemical/50126.html>

**Comment 46:** The Plan must address the dwindling number of repair professionals by supporting municipal vocational repair training programs.

**Response:** The Plan recognizes that economic development related to reuse, recycling and composting includes job creation. While training is certainly a part of bringing new workers into evolving jobs, vocational training is outside of the scope of this Plan.

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**Comment 47:** The state and federal governments must address the continuing reduction in available spare and replacement parts over time.

**Response:** Comment noted.

**Comment 48:** The reuse/refurbish assumption is flawed. Many used electronics are discarded due to obsolescence. For example, few are interested in accepting obsolete computers that cannot accommodate new operating systems or software. The economic analysis associated with refurbishing used electronics is also suspect.

**Response:** While many used electronics are not suitable for reuse, certain users (e.g., large corporations) replace computers that may still be useful for users with different needs (e.g., schools). According to the North East Recycling Council's 2009 Recycling Economic Information Study, there are 10 computer reuse and refurbishing establishments within New York State, and a total of 27 in the region (including PA, MA, DE, and ME.) (See <http://www.nerc.org/documents/index.html#REIS>). In addition, the Plan encourages manufacturers to design for reuse and improve dissassembly (see Section 8.2.5).

**Comment 49:** State agencies should put high priority on purchasing remanufactured goods. This would increase the market for such goods. The state should establish a task force to target remanufactured goods.

**Response:** Remanufacturing is also part of programmatic recommendations in Section 8.5.2. The state promotes the purchase of remanufactured items through Executive Order 4.

**Comment 50:** The social benefits of reuse have not been covered in the Plan. Reuse offers real value to non-profit organizations, those on low or fixed incomes, and others. The state can and should promote reuse by dedicating staff to reuse programs, providing grants and low-interest loans for reuse programs, strengthening green building practices, encouraging local planning units to establish reuse-friendly programs, etc.

**Response:** The Plan discusses the social value of reuse in Section 8.2. DEC will consider these and other reuse-friendly concepts as it moves forward with the Plan's implementation.

**Comment 51:** A benefit of reuse programs is that they build communities as people come together to exchange their products and people get to know their neighbors. I don't think that incinerators or landfills do much to build communities.

**Response:** Comment noted.



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**Comment 52:** We support the provisions of the Plan to characterize and quantify the reuse sector, and to implement measures to increase reuse infrastructure and education to accommodate repairable and reusable products generated in the state.

**Response:** Comment noted.

**Comment 53:** The focus on construction and demolition debris should be on new construction waste as opposed to demolition waste. Architects and engineers should design reduction into their plans, and contractors should keep materials separate to enhance their recycling value. Lead paint contamination and dust control are other areas of concern.

**Response:** Both new construction and demolition and remodeling of existing buildings present opportunities for the recovery of valuable materials, and DEC will continue to promote and encourage waste reduction and recycling in both these areas. Existing statutes and regulations require dust control and proper handling of asbestos and lead-based paint.

**Comment 54:** Many high quality items such as cabinets, lumber, doors, plumbing fixtures, flooring, windows, and others go to waste every day. Section 8.2 of the Plan does an excellent job of specifying the need to promote reuse centers and educate the public on which reusable items to donate. DEC should encourage the formation of reuse centers through increased funding and promotion through the Environmental Services Unit of Empire State Development Fund.

**Response:** Increasing the capacity for building materials reuse and deconstruction will continue to be priorities for ESD's Environmental Services Unit. ESD staff provide technical support to help grow this important sector. ESD has supported eight building materials reuse and/or deconstruction projects via the Environmental Investment Program (EIP) and will continue to do so. Non-building related reuse projects supported by EIP focus on materials that are generated and reused by commercial/industrial business sectors and on initiatives to address gaps in the exchange infrastructure for high value reuse materials.

**Comment 55:** The state should regulate the state building codes to require reuse and recycling of construction and demolition wastes.

**Response:** The Plan recommends the formation of a C&D debris recycling institute to analyze the market and propose policy alternatives to stimulate greater levels of material recycling. Requirements in the building codes and other mandates and incentives will be explored by the institute.

**Comment 56:** The state should institute requirements that buildings be deconstructed rather than demolished and/or provide incentives to ensure deconstruction

**Response:** DEC will encourage building deconstruction to the extent possible under current authority. NYS supports the growth of the building materials reuse and

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deconstruction industries through ESD's Environmental Investment Program (EIP). EIP offers financial assistance to companies and not-for-profit organizations that provide deconstruction and building materials reuse cost effectively as an alternative to demolition and landfilling. EIP assisted in the start-up of Buffalo Reuse, a deconstruction and building materials reuse organization in Buffalo, NY, and is currently supporting the start-up of Build It Green!—NYC's deconstruction program. ESD also works to bring together members of NYS's growing building material reuse and deconstruction sectors so that they can network, address issues of common concern and access the national community of their peers.

**Comment 57:** The state needs to have comprehensive policies to encourage the use of deconstruction contractors and maximize the recovery of C& D debris. Policies should start with C&D recovery for all state facility construction or renovation.

**Response:** The Plan recommends the formation of a C&D recycling institute to analyze the market and propose policy alternatives to stimulate greater levels of material recycling. In the meantime, this is supported through Executive Order 4 and is included in the LEEDs standards.

**Comment 58:** DEC should modify its lead paint and asbestos requirements to allow for greater reuse of C&D material

**Response:** DEC does not support a change in the regulatory approach to lead paint and asbestos removal handling. Lead-based painted lumber and asbestos must be properly managed before any reuse can be considered.

**Comment 59:** The use of food wastes for animal feed is being restricted due to concerns about disease transmission.

**Response:** The use of animal mortalities and parts in animal feeds has been restricted due to the concern about transmission of mad cow disease. Food wastes can be used as animal feed, but its quantity and quality must fit effectively in the animal diet. With the increasing number of large farms in the state, there may be opportunities to tailor food scraps from larger generators to meet some of the animal nutritional needs of these farms.

**Comment 60:** Food waste donation and animal feed are listed as preferred management options in the Plan, but they seem unlikely to decrease food disposal in a meaningful way. “Mad cow” and other variant diseases have made the public (and regulators) uneasy regarding the use of human food products to produce animal feeds.

**Response:** The donation of edible food is clearly the highest use of unused food, from a social, economic and environmental perspective. It should be encouraged and incentivized regardless of the comparison to the total food waste generation

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stream. While such activities may not affect a community's food generation in a significant way, cafeterias, restaurants and other food service establishments can significantly reduce their waste streams through better tracking of food ordered and scraps generated as well as other management tools. While reuse of food scraps for animal feed is somewhat limited by the specific dietary needs and restrictions of certain animal populations, animal feed represents a high-value end-use for food scraps. DEC is not aware of the relationship between human foods scraps used for animal feed and 'mad cow' or other similar diseases.

**Comment 61:** Will the state advocate for the elimination of federal natural resource subsidies or enact a state fee or tax to balance the playing field between natural resources and recycled/reused resources?

**Response:** At this time, there is no plan for such a fee or tax at the state or federal level.

**Comment 62:** The state should conduct a survey of jobs associated with recycling programs.

**Response:** The Plan utilizes such information from national and regional recycling organizations. In 2009, the Northeast Recycling Council published a report on the economic impact of recycling in a number of states including New York. The study reports that the reuse, recycling, and recycling-reliant industries directly support more than 32,000 jobs in the state. (See <http://www.nerc.org/documents/index.html#REIS>.)

**Comment 63:** The state should do the following: mandate recycling, mandate electronics recycling, try street-by-street coordination of electronics pick-up, possibly require clear bags for garbage, require that garbage filled with recyclables not be picked up.

**Response:** State law requires that local governments pass recycling ordinances that require source separation of recyclables. The Plan includes a recommendation to establish a designated list of recyclable materials, which is discussed in Section 8.3.14 (c) and 10.1.1 (6). Beyond these state mandates, local government has the responsibility to design its own program, which could include a requirement for clear bags and an enforcement program to ensure that recyclables are not comingled with waste. The Electronics Recycling and Reuse Act requires manufacturers to establish collection programs for a broad range of electronic equipment; the law allows flexibility in design of their collection programs, but requires that at least one collection method (mail-back, event, or site) be available in each county and each community with a population of greater than 10,000. The law also prohibits the disposal of electronics, thereby mandating recycling.

**Comment 64:** Determining the proper goal for recycling is inherently a matter for the locality. Aspirational goals in the state Plan should not substitute for considered goals that have been set through a deliberative multi-year technical and political process by local government.

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**Response:** DEC concurs. Each planning unit, through the development and modification of its LSWMP, establishes planning-unit specific goals. The Plan's goals are intended to provide a common direction for the state and planning units. Taken together, the collaborative efforts of the state and the individual planning units can accomplish the Plan's goals.

**Comment 65:** DEC should take over public education for recycling, since most communities are recycling the same materials. Remove this burden from local recycling programs.

**Response:** The Plan recommends that the state initiate an aggressive public education campaign to promote recycling. (See Section 8.3.14 (a)) In addition, establishing a minimum designated list of recyclables requiring recycling, as recommended in Section 10.1.1 (6), will make statewide recycling education simpler and more effective. Though these activities will help to raise the profile of the issue in the public mind, they do not take the place of effective local public education—a key component of any materials management program.

**Comment 66:** The City of New York Department of Sanitation (DSNY) would appreciate seeing the derivation of DEC's annual per capita MSW recycling statistic presented in Figure 8.1, which is based on 2009 data and appears to undercount New York City's recycling activity.

**Response:** Figure 8.1 is based on information provided in planning units' reports for 2008 broken down by key recyclable material categories—containers and paper, scrap metal, and yard debris. The numbers in Figure 8.1 for New York City and statewide are 404 pounds per capita and 465 pounds per capita respectively. DSNY reported that 128,117 tons of metal, glass and plastic containers, 755,341 tons of paper, 678,194 tons of scrap metal, 5,338 tons of food scraps and 22,197 tons of yard debris were diverted in 2008. .

**Comment 67:** DSNY generally supports the concept of per capita data for waste disposal and recycling, but for reasons of practicality does not embrace the draft Plan's specific goal of no more than 0.6 pounds of waste disposed per capita per day.

**Response:** Comment noted.

**Comment 68:** The NYC recycling per capita statistic does not reflect New York City's current population of 8.4 million, based on recent census estimates. It is unclear whether the figure takes into account MSW and other waste from New York City that is generated by the private sector, commuters and visitors from out of the city, and tourists. It does not take into consideration energy and metal recovered from the 23 percent of the refuse collected by DSNY that went to an energy from waste (EfW) municipal waste combustor (MWC) resource recovery facilities.

**Response:** As noted in Figure 8.1, the population used for New York City was 8,363,710. As noted in Section 8.3.2 related to use of a per capita metric, DEC recognizes that use of this metric may not support comparisons from one community to the next

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if, for example, one community enjoys a sizable seasonal population (as is the case with several Long Island communities) or has large commuter or tourist populations such as New York City.

**Comment 69:** The New York City recycling per capita figure presented in Figure 8.1 also fails to account for waste that is scavenged unlawfully from the metal, plastic and paper set out by residents. Recyclables scavenging, which results in sales to recyclers, reduces DSNY's recycling tonnages and the value of the recyclables stream processed by the city's vendors. The per capita figure does not account for backyard composting, nor the reuse of items such as dry cleaner/commercial laundry hangers. Of particular significance in New York City, it does not account for recyclables that are transported out of state directly from New York City locations. A significant percentage of the private carters who are licensed to operate in New York City are based in New Jersey; recycling tonnages from New Jersey processors do not appear to be included in the New York City per capita estimate presented here. Likewise, the large office buildings in New York City generate significant quantities of paper, but the annual recycling figures reported to DEC lack data on the large proportion of paper that is collected from such commercial locations for recycling.

**Response:** Figure 8.1 is presented for illustrative purposes and is based on recycling information provided to DEC by the planning units to provide a comparison of reported numbers for general recyclable categories for each of the planning units. The issues raised are part of the reason that the Plan proposes a performance metric based on per capita disposal. Using this metric will ensure that the examples of reduction, reuse and recycling activities are in fact included in the measurement. Additional clarification of the data source for Figure 8.1 will be provided.

**Comment 70:** Was the German report, "Evaluation of system costs for the use of plastics with regards to disposal costs," reviewed by DEC?

**Response:** Yes, DEC staff reviewed the report.

**Comment 71:** We need to require mandatory recycling on the part of waste haulers as well as business, industry, localities, and institutions.

**Response:** The Plan recommends that the Solid Waste Management Act be updated to clarify that all sectors are required to recycle (including businesses, schools, institutions, etc.) and that transporters are required to provide recycling services or ensure that their clients are otherwise arranging for materials to be recycled. (See Section 10.1.1 (5) and 10.1.1 (13).

**Comment 72:** We support the plan to increase the infrastructure of recycling processing.

**Response:** Comment noted.

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**Comment 73:** We support the renewed emphasis on waste reduction, reuse, recycling and composting to divert waste from our landfills.

**Response:** Comment noted.

**Comment 74:** Where is the data to justify the statement, “Industries that replace virgin feedstocks with recycled materials pay less for the raw materials?”

**Response:** The statement says that industries that replace virgin feedstocks with recycled materials pay less for raw materials and energy. Manufacturing with recycled materials tends to be less energy-intensive than using raw materials. In addition, savings are achieved by avoiding mining, transporting, and chemically and physically refining raw materials for use in production when using recycled materials. The following examples demonstrate the price advantage of recycled plastic and tire crumb. During Sept. 2010, *Plastics News* reported that recycled PET, clear post-consumer pellets were selling for \$.65-.69/lb while virgin bottle resin cost \$.77-.79/lb. The 2010 edition of the *Scrap Tire & Rubber Users Directory* quotes 2009 data for 40 mesh ground rubber as ranging from \$.134 to \$.26/ lb, while virgin granular EPDM, the primary alternative used in artificial turf infill applications, was selling for closer to \$1/lb.

**Comment 75:** On page 128 in Section 8.3.1, it is stated “Given this effort, DEC now believes that the actual facility-reported data is the best available.... It is important to note that some recyclables are sent directly out of state, and many recycling facilities (e.g., scrap metal yards, recycled paper manufacturers, etc.) are not required to report to DEC, so the recycling figures may be understated. However, much of this material is likely to be reported by either transfer stations or recycling facilities.” Please verify the likelihood of such reporting since DEC does not require this material to be reported.

**Response:** The text will be clarified to note that regulated transfer stations and recycling facilities report what DEC believes to be the majority of the materials recycled in the state. However, it is expected that some materials go unreported because they are sent directly to entities that are exempt from reporting or out of state.

**Comment 76:** California provides a good example of how a state can keep accurate records, with its Solid Waste Information System (SWIS), which is accessible to the general public through its CalRecycle website. New York State cannot move forward with the enforcement of a definitive solid waste plan without accurate knowledge and without a way of informing the public of changes to SWMP.

**Response:** The Plan recommends establishing an electronic reporting system that would be accessible to many parties, as well as improving the information on the DEC’s website.

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**Comment 77:** On p. 128 of *Beyond Waste*, it is mentioned that using the EPA definition of waste composition changes the state recycling rate. Does this mean the rates presented there are just constructs, and have little or no relation to actual programs?

**Response:** The rate presented is based on the most accurate data available. The statement is intended to illustrate that comparison of the state's calculated recovery rate to a national average rate based on EPA's waste composition and individual material recovery rate projections can be misleading. Using the estimated statewide MSW composition developed by DEC instead of EPA's estimated waste composition and applying EPA's individual material recovery rate projections methodology used for their nationwide recycling rate calculation, the state's recycling rate would appear 6 percent greater than that calculated in the Plan.

**Comment 78:** On page 126, the Massena aluminum smelter is said to recover 127,000 tonnes (~140,000 tons) a year, but the statewide separation rate is only 116,000 tons according to Table A.

**Response:** This information represents MSW generated in the state; the facility in Massena handles a wider array of materials than just the MSW stream. In addition, it handles materials that are generated out-of-state.

**Comment 79:** We recommend that DEC conduct audits and monitor recycling rates for C&D materials for waste transfer stations. The recycling rate for waste transfer stations should be posted publicly on the internet and at the waste transfer stations. This information is currently not readily available.

**Response:** DEC routinely inspects solid waste management facilities. These facilities are required to submit annual reports to DEC, which include the quantities of waste received, transferred and recovered for recycling. These annual reports are available to the public electronically at <ftp://ftp.dec.state.ny.us/dshw> or [www.dec.ny.gov/chemical/8495.html](http://www.dec.ny.gov/chemical/8495.html). Individual facility recycling rates are not calculated by DEC, however, the annual report data is compiled for statewide tracking and disposal diversion.

**Comment 80:** DEC requires better data collection to measure progress. DEC is highly dependent on local government for recycling numbers. This data was needed prior to the development of the plan. Erroneous, inaccurate or missing data may have impacted the development of the plan.

**Response:** The Plan utilizes predominately facility reported data. This data is the most comprehensive and accurate available to DEC and is appropriate for use in the development of this Plan. DEC recognizes the need to improve data collection, and therefore, the Plan recommends an on-line reporting system. (See Section 3.13.1)

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**Comment 81:** One basic assumption that drives the Plan is that we are on a recycling plateau with no real progress made in a decade. The data is inadequate to reach a reasonable conclusion. The past decade has seen very significant changes in the general fields of deconstruction and reprocessing of construction and demolition materials. Those activities have been almost entirely private sector-driven, and the reason that DEC doesn't have the data is that there is no requirement that it be reported.

**Response:** The Plan's conclusion that recycling rates have reached a plateau is supported by the data available to DEC and is shared by the EPA and many other states. However, the recycling plateau is related to the MSW stream, not necessarily construction and demolition or industrial wastes. While some C&D recovery is reported to DEC, much is not. The challenges of data collection are discussed in Sections 8.3.1 and 8.3.2. DEC is moving to a disposal based metric as a measuring tool in order to better capture the effects of reduction, reuse and recovery that currently exists outside the current reporting structure.

**Comment 82:** Using the waste disposal metric is the key to measuring progress and a really good concept.

**Response:** Comment noted.

**Comment 83:** I find it difficult to believe the state recycling rate is 13 percent below the national average. I strongly believe that the people of New York State, who are highly motivated with a sincere level of concern for the environment, attained a recycling rate greater than the national average.

**Response:** The calculations presented in the Plan are based on the most accurate data available to the DEC. That data indicates that, while some regions of the state achieve levels of recycling well above the national average, others have very low reported rates. As described in Section 8.3.1, there are significant challenges with data collection and consistency.

**Comment 84:** Several key data sets were requested on multiple occasions during the comment period, and not supplied. The derivation of waste statistics for the state, for instance, are said to show "ever-increasing rates" (p. 16), but no such data are presented or documented.

**Response:** There have been several data and presentation enhancements in the final Plan. Much of the data referred to can be found in new Appendix H.

**Comment 85:** The state could issue an RFP for a waste management software system and mandate that both public and private solid waste management facilities purchase this package off NYS Contract, or better yet, provide it free to all SWMFs. This would allow for the standardization of what each waste material is called and how it is counted for consistency of record keeping and reporting.



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**Response:** The Plan recommends the development of an on-line reporting system that would create a standard reporting structure and foster consistency in reporting by companies and municipalities. (See Section 3.13.1)

**Comment 86:** Even with competing priorities and limited resources, most municipalities have been more supportive of funding or expanding waste diversion and recycling programs than the private sector, whose focus has historically been limited to profitable waste diversion or recycling efforts. With so much of our solid waste management systems controlled by the private sector, municipalities can only have so much influence on what happens to these materials.

**Response:** The Plan recommends methods for municipalities to exercise oversight of privately operated waste management companies (Section 3.4).

**Comment 87:** Municipalities should require in their contracts that waste haulers provide educational materials to their customers.

**Response:** DEC encourages municipalities to include in their waste hauling contracts a requirement that educational materials are provided to residents, commercial and industrial clients at frequent intervals.

**Comment 88:** In Figure 8.1, a graphic summarizing per capita recycling throughout the state does not appear to include Ontario County. Is this an oversight, an exclusion because of our practices, or have we simply been remiss in our data input.

**Response:** Figure 8.1 presents information provided by planning units in the state. Ontario County was a member of the Western Finger Lakes SWMA but withdrew as a participating member and never became either an independent planning unit or a member of another planning unit. Accordingly, since Ontario County was not affiliated with a recognized planning unit, it is not included in Figure 8.1.

**Comment 89:** Since the Plan seeks to aggressively reduce the amount waste that New Yorkers generate per capita, primarily through a product stewardship approach, it is curious that the Plan does not include a recommendation to increase New York's minimum refundable deposit to 10 cents.

**Response:** DEC does not support a 10-cent deposit at this time due to concern that an increase to 10 cents will increase fraudulent redemption. All of the deposit states bordering New York currently have a 5-cent deposit (New Jersey and Pennsylvania are non-deposit states).

**Comment 90:** Please expand the "New & Better Bottle Bill" to include all beverages including wine bottles.

**Response:** A recommendation to expand the Bottle Bill to all beverage containers has been added to the Plan (See Section 8.3.15(c)).

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**Comment 91:** What is the dollar value of the returns and how is this money used in the state since it is not going for recycling programs or grants?

**Response:** Reporting and collection of unclaimed deposits is done by the Department of Taxation and Finance and then credited to the State Comptroller for deposit into the state's General Fund. DEC does not have access to information on the dollar value of unclaimed deposits.

**Comment 92:** DEC should prepare a semi-annual progress report that provides the redemption rates, recycling rates for beverage containers, number of redemption points, compliance issues and system funding analysis. Many stakeholders are invested in this program—a regular report would provide some sense of the program's progress and areas that require improvement.

**Response:** DEC issues an annual report on Bottle Bill recycling and management data. This report can be found on DEC's website at: <http://www.dec.ny.gov/chemical/8500.html>. More in-depth information (program and technology effectiveness, suggested improvements, etc.) will be provided in the biennial updates to the Plan.

**Comment 93:** We have seen a significant reduction in the ability of educators to include materials management/waste reduction/recycling/disposal/composting in their class curriculum due to lack of resources and available time. Also, the loss of waste staff dedicated to education and information services has severely restricted what local programs can do to educate and advocate.

**Response:** DEC will share available curriculum and resources to the greatest extent possible.

**Comment 94:** Until large private landfills are required to implement and enforce recycling programs, and landfill bans are actually enforced at private landfills, all our municipal efforts will be nearly useless exercises in frustration.

**Response:** The Plan recommends that DEC evaluate and implement strategies to promote the establishment of recycling facilities at other solid waste management facilities including landfills. (See Section 8.3.14 (a)) It also recommends restrictions for the disposal of source separated recyclables at solid waste management facilities. (See Section 8.3.14(b))

**Comment 95:** Convenience should be recognized as a key incentive to increase recycling.

**Response:** Additional language is provided in Section 8.3.5.

**Comment 96:** Onondaga County Resource Recovery Agency's annual recycling analysis indicates that 80% of the community's recycling materials is generated by businesses and the

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institutional sector. Collecting recycling data from these myriad sources across the community is very difficult. A state law mandating recycling in these sectors is necessary.

**Response:** Pursuant to the Solid Waste Management Act of 1988, the sectors should be included in local recycling laws. If they are not, the local recycling laws need to be modified to clearly identify that these sectors are included. Reporting can also be included under these laws. The Plan recommends that the Solid Waste Management Act be updated to more clearly require recycling in all sectors (Section 10.1.1(5)) and that an electronic reporting system be developed for the state (Section 3.13.1(a)) to enable better data collection.

**Comment 97:** DEC should work collaboratively with municipalities on aggressive and effective public education campaign, perhaps focusing on reasons to recycle and minimize waste.

**Response:** Recommendations on public education campaigns are included in Section 8.3.14.

**Comment 98:** I think the Recycle Bank idea can send the wrong message, because reduction and reuse are not incentivized.

**Response:** Comment noted.

**Comment 99:** Brochures are not the best way to increase participation and capture rates. Varied approaches, blitzes, removal of obstacles to participation, and incentives help reach more people and raise participation rates.

**Response:** Recommendations related to education, incentives and enforcement are presented in Section 8.3.14.

**Comment 100:** PAYT, recycling prices, franchise collection districts, etc. require local legal support, and some local legal staff have questioned their legality. The state attorney general should develop guidance or model legislation that could assist local government officials in this effort.

**Response:** DEC staff is working to develop additional tools and resources, including model local ordinances or laws, to help implement these initiatives. The Plan notes that franchising materials management is not currently authorized under state law and recommends that such authorization be included in an update of the Solid Waste Management Act (Section 10.1.1(12))

**Comment 101:** Expansion of recycling markets is best done through state action rather than community action. The Plan should describe how this will be accomplished by the state.

**Response:** The Plan acknowledges that expansion of recycling markets is best accomplished by the state and the text of the Plan has been revised to clarify that point. The state's Department of Economic Development (dba Empire State Development)

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was designated as New York's lead agent for promoting the creation and expansion of recycling markets in 1988 and continues to serve in this role. The ESD Environmental Services Unit (ESU) includes professionals with significant expertise in recycling, and has limited financial resources to help expand the recycling marketplace as well as ensure that New York-based manufacturers can access recycled feed stocks. Support for this *Secondary Materials Markets Program* comes directly from the State Environmental Protection Fund and remains a priority.

**Comment 102:** Instead of punishing the people of the state, why not reward them for recycling like is done in southern NJ. There they have hired a company that picks up and weighs the material and sends a check to the homeowner. Everyone makes money that way.

**Response:** The Plan supports incentive programs that reward residents for recycling at high levels, such as Recycle Bank, and that reward waste reduction through cost savings, like PAYT. These incentives are discussed in Section 8.3.5.

**Comment 103:** Communities that have dedicated resources for outreach and education experience greater recycling success. The public must be continually reminded of both the reasons for and the details of the community's recycling program, and must be reassured that recyclable materials are actually recycled. It is not possible to overstate the importance of employing dedicated recycling coordinators for these efforts.

**Response:** DEC supports continued funding of recycling coordinators through municipal recycling grants as outlined in Section 8.3.14(c).

**Comment 104:** Where enforcement is undertaken, better recycling rates are achieved. If it is to be a Plan goal to better enforce recycling mandates, then this needs to be addressed and funded at the state level.

**Response:** Enforcement is an important tool in improving recycling programs. Section 8.3.14(a) discussed local enforcement, and Section 8.3.14 (c) recommends increased DEC enforcement through an update of the Solid Waste Management Act.

**Comment 105:** According to the Plan, DEC advises communities that recycling collection service must be at the same level as trash collection. A more definitive statement should be made stating that recycling participation is greater through curbside collection rather than drop-off programs.

**Response:** The impact on recycling participation of curbside collection versus drop-off programs will vary based on the specific planning unit conditions. Planning units will investigate potential options and choose the program that meshes best with their particular situation.

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**Comment 106:** The Plan states that dual stream collection programs produce quality materials using simple processing technologies. There are many dual stream facilities in the state that produce quality materials, however, the Plan should recognize that this is a function of efficiency of the operation and not due to the facility type. If a dual stream facility is not well operated, it will not generate quality materials.

**Response:** The Plan notes that municipalities and companies must make the investments necessary to ensure that any collection or processing system generates high quality materials.

**Comment 107:** We do not support post-collection separation. Ironically NYC, the area of the state where post-collection separation has been allowed, is also the same area having the least modern recycling processing facilities and where some recycling facilities were allowed to shut down to facilitate export.

**Response:** Post-collection separation of recyclables is not allowed in the state in lieu of source separation. Any post-collection separation must be as a supplement to source separation efforts and programs.

**Comment 108:** A planning unit must have the infrastructure for recycling processing, a decent collection system with regular pick-ups, an education program and an enforcement program. Given that NYC was a large metropolis with millions of people, the investment the City was making in recycling per capita could have been a measure of the adequacy of the program. We recommend that DEC develop some minimal requirements and other metrics that it can use to evaluate the adequacy of the programs of different planning units. We also think planning units must demonstrate a real commitment to zero waste programs in order to receive state assistance. Over time NYC showed very poor overall commitment to recycling with regular budget cutbacks to programs, yet NYC received large grants from available state funds.

**Response:** A planning unit's LSWMP addresses the items in the comment as components of a healthy recycling program. DEC already has both regulations and metrics to evaluate the adequacy of planning units' programs. A requirement of DEC's state assistance program for waste reduction and recycling includes compliance with the regulations. New York City has complied with all requirements necessary to receive state assistance and has, over the years, made considerable financial commitments to their waste prevention, reduction, reuse and recycling programs.

**Comment 109:** We support further funding for MRF upgrades. Funding should be prioritized and retroactive for progressive planning units that have already invested in MRF facilities.

**Response:** DEC supports further funding for MRFs and their upgrades. Prioritization of facility funding is not authorized under the current "first-in, first-out" wait list system, but will be considered during the upcoming revision of the Part 360 regulations.

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**Comment 110:** I oppose the current move towards single stream recycling, so I applaud your recommendation to ensure source separated recyclables in areas served by private haulers. Though recent research from the Container Recycling Institute found greater participation with single stream, those results were inadequate because they did not address contamination.

**Response:** The benefits and drawbacks of single stream recycling are discussed in Section 8.3.6(b). Like many recycling systems, single stream can be an effective recycling methodology when a facility is managed carefully and efficiently. Any conversion of existing dual stream facilities must be carefully planned and designed to maximize benefits.

**Comment 111:** The Plan references OCRRA's efforts to establish a commercial/institutional food waste composting facility. There are significant financial and logistical hurdles that must be addressed before OCRRA can move forward with the expansion of the current facility. The state must have a firm plan to fund these activities.

**Response:** DEC recognizes OCRRA's effort to lead the state in aerated static pile composting of food and yard waste and its desire to expand the current operation to include more commercial and institutional sources. DEC will continue to work with the Authority to try to secure funding in support of these efforts.

**Comment 112:** There are several references that are unclear or incomplete (see p. 137, 138, 143, 149, 153). Is there a reference for the increase in Ontario recycling associated with packaging stewardship (p. 144)?

**Response:** The references in the Plan, including those cited in this comment, have been reviewed and clarified. The increase in the recycling rate in Ontario was reported in the proceedings of the Product Stewardship Policy Summit sponsored by the New York Association for Solid Waste Management and DEC in November 2008.

**Comment 113:** On page 142, it is said that electronic wastes in landfills can release lead into the environment. In New York State? What is the authority for that statement? Are site monitors and others at DEC responsible for the operation of landfills aware of this problem?

**Response:** The text has been revised to refer to potential impacts from improper disposal of electronic waste rather than disposal in landfills. The modern double composite liner systems required in municipal solid waste (MSW) landfills in NYS have proven to be effective containment systems. Their leachate collection and removal systems direct leachate to appropriate treatment. Monitoring has shown that there have been no impacts to groundwater quality attributed to releases from the engineered barrier systems at any MSW landfill meeting DEC's liner requirements. In addition, the Electronic Equipment Reuse and Recycling Act (ECL Article 27, Title 26) passed by Governor Paterson on May 28, 2010, will require manufacturers of covered electronic equipment to implement and maintain acceptance programs for discarded electronic equipment by April 1, 2011. The

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new bill will provide free and convenient recycling of electronic waste to consumers and certain businesses in New York State. It establishes a phased-in disposal ban starting on April 1, 2010, which will help divert most of this waste for reuse and recycling.

**Comment 114:** The Plan contradicts itself by attributing both low and high residue rates to single stream recycling. Which is correct?

**Response:** Residue rates vary from one facility to the next based on a host of issues, including quality of incoming supply, effectiveness of sorting equipment, and efficiency of the operation. State-of-the-art facilities in the state report low residue rates and high participation.

**Comment 115:** Converting to semi-auto collection is very expensive to initiate and many local government programs are too small for this capital investment.

**Response:** When evaluating program options, local governments must consider costs as well as other factors. DEC expects cost to be a factor in a local planning unit's decision regarding implementing or converting a solid waste management system.

**Comment 116:** Is the data noted as Reference 53 based on factual information or a roundtable discussion? Please clarify and correct if necessary.

**Response:** The information in the Plan associated with this reference states that automated collection vehicles can reduce the number of collection workers required and reduce worker injuries. The reference cited is a summary of a workshop convened to look at ways to reduce the costs of waste management in New York City. The facts are also supported by the National Safety Council, which states, "The safest way to remove trash is one that uses a completely automated design, where an arm attached to the truck picks up a standard size container and empties its contents into the back of the truck." The number of workers would be reduced as well, since automated systems do not necessarily require two workers per vehicle.

**Comment 117:** The issue of residue has been raised in the Plan with no reasonable definition provided, no quantity specified and no specific composition discussed. DEC failed to indicate in the Plan whether residue constitutes the 80% of municipal waste currently not recycled or whether we are likely to get to residue at some point in the future and will then need to find the best management method. DEC should explain why it chose incineration as the best management method for handling so-called 'residue.' To deal with residue, we recommend that each local planning unit conduct a waste composition analysis of remaining materials in the waste stream.

**Response:** The Plan uses the term "residual" to describe the waste that remains for disposal after waste reduction, reuse, recycling and composting are implemented. The projected composition of that residual in 2008 is estimated in Appendix A.

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DEC supports additional composition analyses at the local level to determine which materials to target for enhanced diversion programs. The analysis presented in the Plan supports the existing solid waste management hierarchy, which places a preference on municipal waste combustion with energy recovery over landfilling, particularly from a greenhouse gas and energy perspective. For more details see Section 4.1.4 and 9.3.

**Comment 118:** DEC should consider an immediate ban on new construction wallboard from going into a landfill or waste to energy facility. Technology has developed to the point where the paper and gypsum from this wallboard can be put back into the economic supply chain as a commercial recycling operation and eliminate a potential source of hydrogen sulfide gas from landfills.

**Response:** DEC concurs that waste disposal bans can play an important role in increasing gypsum recycling when coupled with the necessary infrastructure. While the technology is now developed, it is not readily available to many municipalities and contractors. Still, management of wall board can be specifically addressed in the context of local planning, particularly where alternatives to disposal exist.

**Comment 119:** Construction and demolition debris recycling should address what proportion of C&D is not recyclable.

**Response:** The composition of construction and demolition debris is discussed in Section 7.3.4. As Table 7.1 shows, about 55 percent of C&D debris generated in the state in 2008 was recycled. However, the proportion that is recyclable depends on the markets available to the generator, and as the Plan suggests, enhanced source separation and processing improvements to segregate uncontaminated materials for recycling.

**Comment 120:** The discussion of product and packaging stewardship in Section 8.3.12 does not provide substantiation for the projected waste reduction and recycling improvements of these programs. Since this is an essential element of the Plan, details on existing programs should be provided.

**Response:** Chapter 5 provides greater detail on product and packaging stewardship, including the data available to DEC on program performance. It should be noted that since product stewardship is new to the U.S., and packaging stewardship is not in place in the U.S. as of yet, more experience with these programs is needed to accumulate data and fully assess actual and potential performance.

**Comment 121:** We need policy and legislation requiring higher recycling and reuse rates to create the demand for recycling and reuse infrastructure and a change in construction industry practice. Many skilled and unskilled labor positions can be created by increasing C&D recycling, reuse, and deconstruction and by creating building materials reuse centers.



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**Response:** The Plan recommends the creation of a construction and demolition debris recycling institute to determine the best policy and legislative drivers for increased reuse and recycling of those materials. DEC will continue to promote and encourage recycling and reuse and will evaluate the establishment of mandates for such recycling and reuse as appropriate and feasible.

**Comment 122:** DEC needs additional funding to monitor private carters and transfer stations to ensure more recycling and reuse.

**Response:** Comment noted.

**Comment 123:** The state should lead by example by requiring deconstruction with a minimum 50% recycling or reuse for all state funded construction projects and implement the use of recycled aggregate for roadway and foundation base?

**Response:** Pursuant to Executive Order 4, DEC works with OGS and other state agencies to develop green specifications. Specifications under consideration include those for recycled materials in roadway applications. Regulations regarding construction materials management will be issued pursuant to the Green Buildings Construction Act. The Plan encourages local use of processed mixed glass, chipped tires and other appropriate recycled materials in engineering applications. DEC also encourages LEED construction. As an example of measures the state is taking to promote C&D recycling and reuse, the Dormitory and Housing Authority has required LEED certification for their construction projects. DEC will continue to encourage recycling and reuse of C&D debris as suggested in the comment.

**Comment 124:** New York State should work with neighboring states to develop parallel recycling regulations and waste transfer monitoring in order to develop regional C&D waste transfer station framework.

**Response:** DEC collaborates with neighboring states through the Northeast Waste Management Officials Association's Construction and Demolition Debris Workgroup and other national and regional associations to provide consistent regulatory approaches where possible. As DEC develops new regulations or modifies existing regulations, it evaluates other states' regulations.

**Comment 125:** We strongly support the proposed NYS Center for C&D debris.

**Response:** Comment noted.

**Comment 126:** The state should fund programs for waste recycling and deconstruction, and should require recycling for all construction and demolition waste.

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**Response:** DEC supports waste prevention and reuse in construction and encourages recycling as much as possible from this stream. The Plan notes that not all components of this waste stream can be cost-effectively recycled at this time and recommends market development efforts be targeted in this area.

**Comment 127:** San Jose and Los Angeles, California both require deposits with all demolition permits. Once you have indicated you'll recycle a certain amount, you get a certain amount of deposit back. That's the sort of model we'd like to see throughout the state.

**Response:** Comment noted.

**Comment 128:** Are there actually viable markets for the various components of C&D? If so, what are they? Where are they located and what are some of the commodity prices? Has DEC considered classifying C&D as a solid waste or eliminating the BUD for ADC in order to create a financial incentive for the recycling of C&D?

**Response:** Markets for components of the C&D debris waste stream vary based on geographic location and component type (including whether the material is generated from new construction or demolition/renovation). Markets are fairly well-established throughout the state for cardboard, metal, clean wood, asphalt, bricks, concrete and, to some extent, plastic. Markets for items such as gypsum wallboard and asphalt roofing shingles are in earlier stages of development. ESD staff provide direct technical support to overcome barriers to the expansion of C&D debris recycling in the state. ESD supports the growth and expansion of end-use markets for C&D debris via the Environmental Investment Program. ESD maintains a recycling market information database that is searchable by material type and geographic location at <http://appcenter.nylovesbiz.com/esdrecycling/>. C&D debris which has been discarded is classified as a solid waste by DEC unless a BUD or an exemption applies to it. DEC is not currently planning to eliminate the use of appropriate components of C&D debris for ADC since this produces an environmental benefit by using a waste material in place of clean soil. However the revision of Part 360 will propose restrictions on the amount of ADC that can be used by landfills to ensure that only the necessary amount is used.

**Comment 129:** Section 8.3.9 of the Plan states that over half of the C&D generated in the state is recovered. What data supports this conclusion? The Plan needs to address the problems that exist with C&D recycling, such as lumber reclassification for certifying structural building requirements, and contamination from paints, stains, asbestos, lead, etc.

**Response** C&D debris recycling rates are based on data provided by C&D processing facilities and beneficial use reports. The Plan acknowledges some of the challenges in managing certain C&D debris such as asbestos contaminated material and suggests that source separation and processing improvements are needed to enhance recycling.

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**Comment 130:** We support market development.

**Response:** Comment noted.

**Comment 131:** The Plan does not acknowledge that landfills and municipal waste combustion facilities compete for materials with recycling and composting programs, more capacity makes this worse. To address this, the Plan should prohibit waste transporters from sending recyclable materials to disposal facilities, require organics collection programs and infrastructure, ban yard waste from disposal now, and ban food scraps from disposal by 2013.

**Response:** The Plan does not propose any new disposal capacity. It does recommend: 1) restricting transporters from mixing recyclables with waste and delivering recyclables to disposal facilities [see 10.1.1 (13)]; 2) restricting the disposal of yard waste [see 8.4.6 (b)]; and 3) restricting disposal of food waste and other recyclables where alternative infrastructure exists [8.4.6(c) and 8.3.14(b)]. In addition, DEC will require all planning units to evaluate organics collection programs and infrastructure and implement them where possible.

**Comment 132:** DEC must be more honest regarding the recycling rate in the planning unit that hosts the Onondaga Resource Recovery facility. The Planning Unit's rate tracks an assortment of recycling streams, including commercial, without adjusting its denominator to include those waste streams.

**Response:** DEC has reported the data for the Onondaga County Resource Recovery Authority (OCRRA) accurately. The data reported in Figure 8.1 is MSW as reported by planning units. MSW does include commercial waste. As noted in the text, the metal numbers in this figure may include some non-MSW metal and has been subdivided into the conventional MSW streams—containers, paper, yard debris and scrap metal—on a pounds per capita basis in Figure 8.1 to allow for easy material comparison between planning units. The information related to OCRRA's recycling rate in Section 9.3.2 has been calculated from OCRRA data and adjusted for the MSW stream.

**Comment 133:** Guidelines must be established for increased use of recyclables in both existing and potential businesses. This would help create jobs in the state.

**Response:** DEC considered many policy options when developing the recommendations in the Plan. Additional policies, such as mandating minimum recycled content in certain products, will be considered in biennial Plan updates.

**Comment 134:** The state's first priority should be to secure the funding necessary to implement the Plan, and the recommendation to create a mandatory list of recyclables should be abandoned. If it goes forward, communities will be forced to collect unmarketable materials.

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**Response:** Developing new revenue streams is a key recommendation of the Plan and a high priority for DEC. The proposed adjustment to the “economic markets clause” and inclusion of a designated list of base recyclables is not intended to leave communities holding unmarketable recyclables, but rather to acknowledge that communities in the state have consistently recycled a suite of materials for the last 20 years. Experience over the last 20 years has demonstrated that market downturns tend to be short-term, and communities are more likely to ride out the markets than to adjust their programs and face the costs of educating and re-educated the public to do so. By creating a core list of recyclable materials, the state can better educate the public, enforce requirements and otherwise support local efforts. The Plan proposes that a waiver process be put in place to allow communities to vary from the designated list in the case of economic hardship.

**Comment 135:** The Plan should articulate specifically what the state intends to do to develop markets for additional materials. Market development is beyond municipal capacity for most of the planning units in our state.

**Response:** The Environmental Services Unit within the Department of Economic Development was created within the state’s economic development agency because investments in recycling help create new businesses and improve competitiveness for existing companies, create and retain jobs, and add value to materials. The ESD Environmental Services Unit invests funds and staff expertise to expand value-adding recycling markets. ESU efforts are guided by an annual assessment of recycling market needs, identified by private and public sector recyclers, manufacturers and trade organizations.

**Comment 136:** DEC needs to address the lagging glass markets, particularly on Long Island. Many towns have turned to stockpiling glass on their property waiting for a vendor to recycle it. We are hopeful that DEC will aggressively work to establish a permanent glass recycling plant in the Long Island area.

**Response:** The issues related to glass recycling and markets are presented in Section 8.3.8 and 8.3.10. Market development is the responsibility of ESD’s ESU. ESD has dedicated staff working to develop and expand glass markets; they are aware of the barriers to community recycling and have targeted efforts toward alternative applications that do not require costly sorting or cleaning. Over the past decade, EIP investments have lead to the development of innovative markets that use glass as a blast media, decorative mulch, drainage or filtration media, a raw material in the manufacture of countertops, partitions and other decorative products, as a substitute for a portion of cement used in concrete products, and as bead for reflective coatings. Recent investments in processing technologies have improved the cost-effectiveness of preparing recovered glass for use in making containers, insulation and other applications. As a result of these efforts, New York is starting to see an increase in value-added glass recycling and new products incorporating recovered glass.

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**Comment 137:** What does the Plan propose happens to separated materials when there are no markets? How long is it realistic to expect a municipality to store wastes that are currently unmarketable? Will the state provide long term storage?

**Response:** The Plan does not make a general recommendation on how to handle materials that are source separated, but unmarketable. In general, DEC recommends collecting materials for which a community has access to markets. If those markets are unavailable, the community should contact DEC and ESD to discuss alternatives.

**Comment 138:** Section 8.3.10 discusses the volatility of markets and recommends “responsible government budgeting.” What is the definition of “responsible budgeting”?

**Response:** The statement referenced is intended to convey that long-term contracts can provide stability to government programs that are required to project expenses and revenues as a part of their annual budgeting.

**Comment 139:** The Plan suggests 10- to 20-year contracts for processing/selling of recyclables. Please provide examples of contracts for recyclables of that duration that include a floor price. Are there any processors in NYS that have been able to stay in business for that long? How will companies survive when their cost exceeds the floor price of *any* contract, for an extended period of time? There are problems with long-term markets. They limit a planning unit’s ability to obtain the best prices when markets fluctuate by being tied down to a long term agreement. It is a fallacy that long term markets will guarantee floor prices during an economic downturn. A contract can be broken by either party if the market swings are creating financial hardship. Often times when markets fall, the supplier simply discontinues providing service (pick up). This Plan does not take into account the distance to markets, in that a planning unit cannot travel to a distant market economically.

**Response:** The Plan acknowledges that long-term agreements are a trade off—trading the highest potential return during times of high market value for some security during times of low market value. It reports, based on the information provided to DEC by stakeholders and the Plan advisory group, that communities like New York City and OCRRA that had long-term contracts in place when the market dropped in 2008, fared the best economically. Long-term contracts have been a part of the recycling business for decades, particularly for the more established industries (e.g., paper and metals). The contracts have clauses that ensure that the risk of down markets is shared, while the reward of high market values is also shared. The purchasers benefit from a secure supply that ensures no disruption in their production processes. They are sometimes willing to sacrifice the floor price to avoid extremely high costs during material supply shortages. DEC recognizes that such contracts may not be feasible for all communities. Section 8.2.10 also discusses other valuable strategies like maintaining access to more than one

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market and remaining flexible in terms of sorting, processing and storage capacity.

**Comment 140:** DEC must recognize that the state's recycling mandate is a direct cost to the local governments. Recycling is a valid goal, but it is a cost to local governments and it's time that this was acknowledged. Local governments need state funding and often have to wait years for promised grants.

**Response:** DEC does recognize that there is a cost to recycling, just as there is a cost to waste management, sewage treatment and other traditional municipal responsibilities. The demand for the Municipal Recycling Grants in the Environmental Protection Fund far exceeds the funds allotted by the legislature. For this reason, the Plan recommends new revenue sources to fund its implementation.

**Comment 141:** In order to recycle some of the materials that do not currently have markets, the Plan is suggesting that markets will be developed. How, by whom, and when? Without markets and without a timetable for development of markets, how are local municipalities going to develop plans for the recycling of these materials?

**Response:** Markets for most post-consumer materials do exist, but may not be accessible or economical for every generator. Professionals from Empire State Development's Environmental Services Unit continue to address market needs, providing technical marketing assistance and limited financial resources. Environmental Investment Program projects are used to help expand the recycling marketplace as well as ensure that New York-based manufacturers can access recycled feed stocks. Staff experts assist the private sector to develop capacity to reclaim materials. DEC and ESD will help the generators of supply (communities) to connect with material purchasers as new markets are developed.

**Comment 142:** How will the state assure the development of alternative materials handling facilities for all of the materials being diverted from the landfills within all of the regions of the state before the materials are required to be diverted? Will the State promote the acceptance of separated recyclable/waste materials in a WTE facility or landfill if it is determined to be more environmentally sound than trucking them long distance to recycling/reuse facilities?

**Response:** The Plan recommends that the state require materials be diverted from disposal facilities where alternative infrastructure exists. Thus, the diversion requirement would not take effect until the markets are in place. DEC does not promote the handling of source separated recyclable materials at disposal facilities.

**Comment 143:** Will local governments be required to fund collection and recovery programs for product stewardship items? Is it the intent to burden local government with the cost of these as yet undefined programs, many of which do not have markets?

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**Response:** The Plan does not suggest that local governments fund product stewardship programs. Product stewardship programs are designed to shift the financial burden for recycling and disposal from local government and taxpayers to manufacturers and consumers. Local government would be released from the obligation to manage materials that are included in product stewardship programs.

**Comment 144:** We support the Plan’s efforts to develop markets for materials before their diversion is mandated.

**Response:** Comment noted.

**Comment 145:** The state should mandate that local government, state government, DOT and the Thruway Authority use 10% rubber or glass amended asphalt (with a set minimum percent content rubber or glass) annually by 2012, 15% by 2015 and 25% by 2020 to provide stable and consistent rubber and glass markets for difficult to manage materials.

**Response:** The Plan encourages local use of processed mixed glass, chipped tires and other appropriate recycled materials in engineering applications. Pursuant to EO4, DEC is working with OGS, DOT and other state agencies to develop specifications for the use of these materials in state-funded applications.

**Comment 146:** The Plan includes the recommendation that DEC “require planning units to implement effective incentive, education, and enforcement programs” and “encourage public space, event, institutional and commercial recycling programs” to promote waste prevention, reuse, composting and recycling, and that DEC use approval of LSWMPs and LSWMP modifications to “put such programs into action where possible”. We agree with these objectives, but believe that the allocation of resources to recycling implementation should be left to the discretion of local authorities.

**Response:** DEC is aware of the programs undertaken by NYC. While DEC intends to ensure that incentive, education and enforcement programs are adequately evaluated and considered as part of LSWMP and LSWMP modification development, final decisions on programs, including those related to funding allocation, will remain with the planning unit.

**Comment 147:** DSNY fully supports the proposed DEC measures that would eliminate market barriers to more recycling, such as lack of information and market opportunities.

**Response:** Comment noted.

**Comment 148:** We support enforcement against transfer stations and transporters that deliberately and knowingly commingle refuse with source-separated recyclables; however we do not favor the apparent broader proposed regulatory recommendation in 8.3.14 (b) to restrict the disposal of source separated recyclables in solid waste management facilities, and to prohibit the collection of source separated recyclables and waste in collection vehicles. It appears this would

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target refuse and recyclables that have been left commingled by the individual generator and wind up in collection trucks and transfer stations. If so, the effect of such measures would be the issuance of DEC notices of violation against potentially every waste carting vehicle and against all private transfer stations. Recycling enforcement belongs at the generator level, and would not be appropriate at the MSW carter and transfer station level.

**Response:** The recommendation specifies that the disposal of “source separated” recyclables would be restricted from disposal. Refuse and recyclables that are left commingled by the generator are not source separated, and therefore not subject to the restrictions proposed. This enforcement tool is intended to supplement and not replace enforcement at the generator level.

**Comment 149:** Recommendations in Section 8.3.14 of the Plan include: creation and expansion of markets; development of regional processing facilities; state funding of recycling programs etc. Can municipalities make their local Plans contingent on the state succeeding in these efforts?

**Response:** DEC views the development and implementation of LSWMPs as a partnership between the state and local planning units. As part of that partnership, the state will work to implement the state Plan, provide technical assistance to planning units during LSWMP development and implementation and, as discussed in Section 6, will strive to maximize financial assistance to planning units to assist with implementation. The state expects planning units to move forward with the activities and programs outlined in their LSWMPs. Adjustments may be made as necessary to address actions at the state level and changes in local markets and conditions through compliance reporting and local plan modifications.

**Comment 150:** The Plan recommends restrictions on disposal for source separated materials. Would there be criteria for allowing source separated materials to be disposed of when markets collapse? Materials can build up beyond the capacity to store very quickly; there must be a mechanism to provide relief in such a situation.

**Response:** The Plan recommends establishing a list of designated recyclables that must be recycled, along with a mechanism for an exemption from such requirements. Additional restrictions on the disposal of source separated recyclable materials would be established by regulation or special permit conditions. Any regulatory changes or additions will need to be addressed through the public review process; special permit conditions are the subject of negotiations between applicants and DEC. A mechanism for providing a variance on disposal restrictions can be addressed in the regulatory or permitting process.

**Comment 151:** The legislative recommendation to revise the solid waste management act must include funding by the state of those mandates. Have any cost estimate been developed to accompany the funding requirements for these types of legislative action?



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**Response:** The Plan's legislative recommendations include developing new revenue streams (see Section 10.1.3). A full cost analysis is beyond the scope of the Plan.

**Comment 152:** The remark on p. 146 of the Plan that recycling facilities are to have reduced environmental review seems inappropriate in this context. Similarly, p. 151 seems to invite the use of smaller sites specifically because they would be out of the regulatory program.

**Response:** No statement on p. 146 or elsewhere in the Plan states that recycling facilities will have reduced environmental review; there is a recommendation to evaluate how to utilize the environmental review process for other solid waste management facilities (e.g., landfills) to establish needed recycling infrastructure. DEC's regulation of solid waste management facilities is determined by the environmental concerns raised by the operations of such facilities. DEC does not intend to create incentives for small facilities, but rather the regulations acknowledge that small composting facilities are unlikely to create significant environmental concern and are therefore exempt from regulation.

**Comment 153:** Composting should be mandated.

**Response:** Although mandating composting would increase organic recycling, such a far reaching mandate would impose a financial burden that DEC has determined is not reasonable at this time.

**Comment 154:** The Plan recommends that planning units be required to implement incentive, education and enforcement programs. It is essential for this requirement to be enacted since these programs are key to the Plan's success.

**Response:** Comment noted.

**Comment 155:** We support the Plan's legislative recommendations to: increase appropriations for municipal recycling, planning and education; create product and packaging stewardship programs; update the SWMA; move to a per-capita waste disposal metric and goal; increase DEC's enforcement authority; update state procurement requirements; require PAYT/SMART; and mandate a basic list of materials to be recycled and where recycling must be available. The Plan should also include the following elements: a prediction of the waste stream impact of these actions; a requirement for the involvement of private solid waste management companies; incentives for disposal companies to assist in attaining the goals; a limit on permitting of major additional landfill capacity; and a schedule for disposal reductions and actions to be taken if the goals are not met. If the goals of the current Plan are not met on schedule, the Plan should acknowledge the need for municipal waste combustion to achieve the landfill diversion goals.

**Response:** The implementation schedule in Chapter 11 predicts the impact of implementing recommended actions where possible. The legislative recommendations included in Sections 10.1.1 (8) and 10.1.1 (13) are aimed at involving the private sector and creating incentives for disposal companies to engage in activities to help

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achieve the Plan's goals. DEC will evaluate the progress toward the Plan's goals in biennial updates and will recommend additional actions, such as restricting landfill capacity, if they are necessary or warranted to achieve the Plan's goals.

**Comment 156:** It is strange to describe composting as recycling since it isn't put into a product. There are few nutrients in compost. Composting is actually a disposal technology.

**Response:** Composting may not be put into products in the traditional sense of bottles and cans but it does transform waste into a useful soil amendment product. Compost does not contain nutrients at the levels normally found in commercial fertilizers, but the true benefits from compost are contained in the organic matter that retains water and nutrients, reduces erosion, and improves the structure of the soil. Composting is not considered a disposal technology in this state, and we are not aware of any other state that places the technology in that category.

**Comment 157:** The Plan presents different depictions of landfill degradation rates. On p. 149, wastes degrade quickly; on p. 204, not so quickly. Which version does the state prefer?

**Response:** The discussion on page 149 is specific to food waste, while the general discussion of methane generation in a landfill on page 204 covers the entire mass in the landfill. The readily degradable components of the waste stream, such as many components of the food waste stream, will be the first to degrade in a landfill, first in an aerobic environment and then will transition to anaerobic degradation as oxygen present is depleted. The placement of food waste in the landfill mass, compacted, and covered will promote the rapid formation of anaerobic conditions leading to methane generation. It will take time for the overall landfill mass and the more carbon rich food waste to transition to an anaerobic state and produce methane in a manner outlined in the diagram shown on page 204. Of course, degradation timing and methane generation quantities in a landfill are dependent on many factors including waste types, climate, compaction, etc.

**Comment 158:** Landfill bans on organics do not consider that the cost of organic recycling can be significantly higher than landfilling.

**Response:** The Plan does not propose a blanket ban on the landfilling of organics, but does envision the possibility of including restrictions in landfill permits as available organic recycling capacity increases. This parallels what has occurred with yard waste in the state. There is no statewide ban of yard waste from landfills in the state, but conditions in landfill permits banning the acceptance of yard waste have been added over the years as yard waste composting capacity has come on-line. The cost of recycling organics can be higher than the current cost of landfilling, which is at historic lows.

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**Comment 159:** Instead of regulatory bans on organics going to landfills, DEC should encourage the current efforts going on.

**Response:** DEC is supportive of the current organic recycling efforts in the state, but there are significant organic waste sources that are being wasted. As mentioned earlier, restrictions on organics going to landfills will be site specific and will occur when capacity is available.

**Comment 160:** It is not clear if there are any states proposing to ban all organic waste from landfills or waste-to-energy facilities.

**Response:** DEC is not aware of other states that have proposed banning organic waste from disposal. The Plan does not propose a blanket ban of all organic waste from landfills and waste-to-energy facilities. The Plan proposes ways to fund increased organics recycling and emphasizes that organics must be addressed to make significant strides in reducing the amount of waste disposed of in the state. Disposal restrictions may be considered where alternative infrastructure exists.

**Comment 161:** Infrastructure for organic recycling, including collection, is more complex and costly than is anticipated in the Plan.

**Response:** The infrastructure and collection costs for organic material recycling will vary substantially depending on the waste stream and the location. There are existing operations in Ohio, California, and Washington that can help serve as good sources of information on the various aspects of organics recycling, including collection.

**Comment 162:** The costs for organic processing facilities listed in the Plan represent small, low-tech facilities. The actual cost may be \$90 per ton or greater.

**Response:** The cost could be \$90 or greater in urban areas, depending on the technology, land costs, and what costs are included in the number (hauling, etc.). For Peninsula Compost, the newest and largest compost facility on the east coast that accepts food waste, the tipping fee is \$40-\$50 per ton, without transportation costs.

**Comment 163:** It is very difficult to find large amounts of food waste that are not contaminated with plastics and other contaminants.

**Response:** The contamination of food scraps with plastics and other non-organics is a serious problem for composting facilities. However, it can be effectively managed through a two-pronged approach. First, the food waste generators must be continually educated about what is and is not acceptable in the food scrap container. Second, the compost facility must provide feedback to the generators about the contaminants level in their waste. As most yard waste composting

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facilities have discovered, screening is a necessary part of a composting facility if a consistent size and quality product will be produced.

**Comment 164:** Due to odor issues, all but the smallest organic processing systems will need biofilters or other controls that add to the cost of the facility.

**Response:** The need for enclosure and/or air emission treatment will depend on the location, size, and type of material handled by the facility. Biofilters or other emission treatment do add to the cost of facilities but are not typically a significant cost when compared to the structure and equipment, and they play an important role in the success of the facility.

**Comment 165:** Large scale food waste composting requires wood. Wood is also being promoted by the State Energy Plan as a biomass source. This conflict makes wood harder to obtain and more expensive for composting programs.

**Response:** Carbon (wood) sources can be difficult or costly to find in certain regions of the state due to competing needs, such as biomass, or a lack of availability. More needs to be done to link sources with needs, and to encourage municipalities to use waste wood from storm clean ups and routine maintenance to produce woodchips. DEC will explore means to help compost facilities find woodchip sources.

**Comment 166:** Recent air monitoring data from California indicates that volatile air pollutants may be emitted from composting facilities, which is an issue, especially in nonattainment areas.

**Response:** The California study does indicate that volatile pollutants can be emitted, primarily early in the process, for open windrow systems. The study also indicates that implementing changes to the process can reduce emissions by 85%. Also, enclosure or other practices could negate these concerns.

**Comment 167:** What is the cost per ton for processing solid waste at the Delaware County MSW composting facility?

**Response:** Delaware County concluded that it would be desirable and cost effective to build a composting facility to handle all solid waste streams in the county instead of expanding its landfill. The county operates a fully integrated system, including recyclables collection and marketing, composting, landfilling, and other components. The entire system is funded, in part, by a sales tax instituted in the county. The county has stated that the operating cost is about \$50 per ton.

**Comment 168:** What are the types and sizes of facilities mentioned in Table 8.1?

**Response:** Each of these facilities has a different mixture of materials and characteristics. A web search on any of the names will provide additional information.

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**Comment 169:** The Toronto composting experience is not as good as depicted.

**Response:** It is true that Toronto has experienced difficulties, primarily with private entities composting the solids components. It does appear likely these difficulties will be resolved.

**Comment 170:** The Plan fails to discuss the failed composting operations in New York State.

**Response:** The Plan does not discuss any compost facilities in detail, whether successful or not. The state has hundreds of composting facilities, and only a few have had to close due to odor.

**Comment 171:** There is increasing evidence that yard waste composting offers less GHG benefits than landfilling or waste combustion.

**Response:** The latest GHG factors published by EPA in August 2010 show that yard waste, and all its individual components, have a GHG advantage over combustion. For landfilling, the GHG benefit versus composting depends on the type of yard waste (leaves or grass). The landfilling of leaves is given credit for carbon sequestration since they degrade so slowly, so it may appear to be the better alternative. However, the usefulness of compost for soil improvement, to reduce erosion, hold moisture, and retain nutrients is difficult to quantify but is an important consideration. It is also important to note that GHG reduction is not the only consideration in evaluating methods to reduce waste disposal. Further, it is impractical to separate the yard debris materials that have a clear GHG benefit (e.g., grass) from those that do not (leaves).

**Comment 172:** There is some evidence that carbon capture in soils amended with compost may not be as long lived as advertised, limiting the benefit of these materials.

**Response:** The benefits from compost addition to soils has been well documented. Due to the beneficial properties of compost, use is increasing in soil erosion protection and other areas.

**Comment 173:** The Plan mentions methane generation of compost within days. How is this being captured in a compost facility?

**Response:** In a composting facility, methane is avoided, not captured. There are two basic methods for the biological degradation of organic waste; one is aerobic and the other is anaerobic. Anaerobic digestion occurs where oxygen is not present or is very limited, such as in a modern landfill, and results in the generation of methane. Composting, when done properly, is an aerobic process, meaning that oxygen is plentiful in the process. Aerobic processes do not produce methane.

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**Comment 174:** Are there any calculations showing how the processing with compost equipment and transporting is considered in the GHG claims?

**Response:** Appendix A describes the basis for the GHG calculations and gives references where additional details can be found on the GHG calculator.

**Comment 175:** DEC needs to provide the calculations to support the greenhouse gas reduction for food waste composting.

**Response:** Please see Appendix A for an explanation for the derivation of the GHG values.

**Comment 176:** GHG reductions greater than 100% are not possible.

**Response:** It may seem odd, but a reduction from a positive to a negative GHG emission factor will result in greater than 100% reduction.

**Comment 177:** The statements about mileage transported and GHG emissions needs better explanation.

**Response:** Additional text has been added to clarify.

**Comment 178:** We need an expanded state effort that brings together relevant agencies and interested parties to increase organics diversion, similar to the New Jersey effort.

**Response:** DEC held a series of workshops across New York State in 2009-2010 to discuss food scraps recovery. These workshops brought together generators and other interested parties. The ideas gathered from these workshops will be used to develop strategies to promote food scrap recovery and recycling. In addition, DEC has convened an inter-agency work group on organics recycling with partners at ESD, EFC, NYSERDA and Ag & Markets.

**Comment 179:** The Plan relies too heavily upon unrealistic increases in organic recovery.

**Response:** The Plan is aggressive. Since organics represent a significant part of the waste stream, organics recovery must be an important part of the Plan. It will take a coordinated approach with funding, technical assistance, and other drivers to move organics to recycling as desired.

**Comment 180:** The Plan underestimates the practical difficulties and costs associated with composting organics.

**Response:** The Plan recognizes these difficulties but believes these issues can be overcome, with assistance, as outlined in the Plan.

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**Comment 181:** We need to loosen up the regulations to incentivize and, in fact, allow food waste composting at all scales of composting. We need to establish rules that incorporate best practices for the operation of all composting facilities. DEC regulations must provide an appropriate level of environmental protection without unduly increasing the cost of organic recycling facilities. DEC must apply regulations evenly, regardless of region.

**Response:** DEC's regulatory approach must strike a balance of providing environmental protection while not unduly adding to the cost of designing and operating recycling facilities. DEC has three levels of regulation (exempt, registered, permitted) in the current regulations governing organics recycling facilities that recognize the potential environmental harm from these facilities and the appropriate level of regulation. DEC is currently revising the solid waste regulation, which is an opportunity to again assess the appropriate level of regulation for all facilities.

**Comment 182:** The concern with co-composting is not whether the process works or not, it is how to site them close to source of the waste and how to reduce the cost of the operation to be competitive.

**Response:** Technology exists to effectively co-compost organic waste. The feasibility will be determined by site-specific factors such as funding availability, equipment cost, and the cost of competing technologies such as landfills.

**Comment 183:** There should be a statewide actions plan to divert food waste to existing composting facilities.

**Response:** Utilizing existing composting facilities that have excess capacity to accept additional waste is an effective way to increase recycling with limited cost. DEC has begun looking at the existing facilities in the state and their ability to handle more and different types of materials (food scraps to a yard waste facilities, etc.). It will not work for all facilities, but will be explored in more depth in the next few years.

**Comment 184:** There is information available to help yard waste compost facilities incorporate food waste. DEC should fund municipal compost coordinators, similar to recycling coordinators, or private composting companies to provide guidance to others.

**Response:** DEC can provide up to 50 percent of the costs associated with the modification of a municipal yard waste composting facility to accept food waste. In many cases, the recycling coordinator can provide composting information as well. DEC is not able to directly fund private companies with current sources.

**Comment 185:** The state should consider combining the resources of DEC, Empire State Development, and NYSERDA to encourage investment in organic recycling operations.

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**Response:** There are a number of state agencies and authorities that have funding available for various types of organic recycling. These include DEC; Empire State Development; Energy, Research and Development Authority; Environmental Facilities Corporation; and the Department of Agriculture and Markets. Each of these funding sources has its own statutory and other restrictions. In order to better understand all the funding mechanisms and determine where combined funding may be advantageous, DEC has brought together all those state entities to discuss all the funding sources available. This group will develop guidance on the various sources and may provide recommendations on how different funding sources can work together.

**Comment 186:** The state and New York City should work closely together on planning efforts since New York City is such a large food waste generator.

**Response:** The nature of solid waste management in New York City is different, and in many ways more challenging, from any other location in the state. DEC plays an active role in the review and advisement of the city's solid waste planning efforts and recognizes that activities in the city have a significant effect on recycling achieved in the state as a whole.

**Comment 187:** There will be a dramatic movement in organics diversion and management with or without DEC efforts. It is critical that DEC remove all hindrances or barriers to increasing composting, And enforce yard waste bans; create a network of interested parties and needed capacity; include a date certain for food scrap disposal bans (we recommend 2013); ease permitting with standard, simplified procedures; develop standardized inspection forms; develop incentives and grants; and develop technical guidance for small on-site operations.

**Response:** Many of the recommendations in Section 8.4.6 address the issues raised. Other recommendations will be considered in biennial Plan updates.

**Comment 188:** Organics recycling does not need a technological assessment – the information is already available from credible sources.

**Response:** There is a wealth of information available from Cornell University, BioCycle, and a myriad of other sources. To help sort through these sources, DEC will update its composting webpage to include additional links and relevant information and will compile relevant research into a technical guidance document to help municipalities in the state move forward with organics recycling.

**Comment 189:** Adding food waste and FOG (fats, oil, and grease) to existing digesters at sewage treatment plants drastically increases the gas production and should be pursued.

**Response:** Sewage treatment plants (STPs) have for many years very effectively implemented digestion, both aerobic and anaerobic, for biosolids treatment. Gas production from anaerobic digesters at sewage treatment plants would increase



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with the addition of food waste and FOG, as has been successfully demonstrated in California. DEC has begun to look at the possibility of this option in this state. It is very important that the STP has the capacity in the digester, readily available food/FOG sources, the ability to feed in the additional waste sources, and the ability to handle the extra gas in a useful manner. It will take a detailed technical review of our STPs to determine which ones meet these criteria.

**Comment 190:** We are in favor of composting programs. We want help to know how to do it.

**Response:** DEC, Cornell University, and others in the state provide ongoing technical assistance for composting methods. Please contact DEC for information and contacts.

**Comment 191:** The cost for an organic recycling facility will be much higher in densely populated areas due to the cost of land.

**Response:** As with any solid waste facility, the cost of land is a part of the overall cost for an organic recycling facility and is higher in an urban area. Urban areas have the advantage of greater quantities of food waste in close proximity but do have the disadvantage of difficulty in siting. In many cases this will drive urban organic recycling facilities to the higher complexity, and more expensive, in-vessel technologies. The economy of scale is in the favor of urban areas but it will not always overcome the other additional costs.

**Comment 192:** In general the Plan is not rolling out an ambitious program for organic material diversion. Given DEC's limited staff, we don't believe enforcement of any ban will be adequate.

**Response:** The Plan attempts to roll out an ambitious program, recognizing that there will be costs associated with the program that must be addressed. DEC staffing levels are a legitimate concern but cannot be an overriding factor in moving the state forward in increasing waste reduction and recovery.

**Comment 193:** Aerobic and anaerobic digestion are extremely slow and require significant space. They are also extremely expensive. The compost produced can be contaminated. Gasification offers a preferable option, due to energy generated and limited land needed.

**Response:** All organic recycling technologies have both advantages and disadvantages. Each entity, public or private, that will pursue a recycling facility must evaluate and determine which technology is appropriate for their particular waste stream, land availability, etc.

**Comment 194:** We think it is especially important to separate direct land application from the use of compost. Direct land application can impact waterways.

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**Response:** Direct land application and compost use are both considered beneficial use methods for organics but they are treated differently in Part 360. Direct land application is regulated under Subpart 360-4, and compost facilities/compost use is regulated under Subpart 360-5. For direct land application facilities, all the agricultural fields are included as part of the permit. To protect waterways and other environmental resources, land application sites must meet a number of criteria (soil type, maximum slope, buffers to water sources, etc.), and the waste must be applied at a rate equal to or less than the nutrient needs of the crop that will be grown on the field.

**Comment 195:** Can you identify a large scale, economically reliable anaerobic digestion technology applicable to New York State?

**Response:** Anaerobic digestion has worked for decades at a large scale in wastewater treatment and is increasing being implemented at the largest farms in the state. The details of the equipment and the cost of the equipment depend on the vendor chosen and the waste stream that will be managed. Additional information will be provided in a technical guidance document on organics recycling.

**Comment 196:** Who will find sites for large scale organic recycling facilities?

**Response:** Obtaining sites for organic recycling facilities is the responsibility of the entity that will be developing the facility, whether a local government, a private company, or a partnership between the two. Siting can be a very difficult process. For private facilities, finding a community that is supportive of the facility and working cooperatively with that community can aid in obtaining an appropriate site.

**Comment 197:** Will the product of organic recycling really be good for athletic fields and playgrounds? If the products of composting and organics recycling are placed on agricultural land, we need to make sure that these products are not contaminating the soil.

**Response:** It is critical that any waste-derived soil product, such as compost, is safe to use. Compost must be safe for both the environment (soil, plant, air, and water) and humans that may come into contact with the compost. The quality of compost used in the state is governed by the regulations found in Part 360-5. The regulatory criteria are dependent on the type of waste processed, because the origin of the waste is a good indicator of the potential pollutants that may be present. Part 360 can require pathogen reduction, vector attraction reduction, and pollutant analyses for the waste and the resultant compost. Composts that meet the required standards outlined in Part 360 will not contaminate agricultural soils, playgrounds, or athletic fields.

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**Comment 198:** The Plan states that pathogens, heavy metals, and pesticide/herbicide residuals are formed in compost facilities, yet many do not have the environmental controls that both landfills and waste-to-energy facilities include.

**Response:** The regulations governing composting facilities, found in Subpart 360-5, do contain criteria for pathogen reduction and pollutant analysis of both product and incoming waste, where needed.

**Comment 199:** Compost facilities are being exempted from many rules and regulations without a clear determination on the impact on ground water, air quality, etc. Many compost facilities are unlined and leachate could be allowed to be discharged.

**Response:** As part of the rulemaking process, DEC proposes a given level of regulation and regulatory criteria for the various types of composting facilities. That determination is based on DEC's best professional judgment concerning groundwater protection, public exposure to the product, and other related factors. DEC is currently revising the solid waste regulations, which will provide a new forum to discuss the appropriate level of regulation for facilities.

**Comment 200:** The recommendation regarding the use of in-sink garbage disposers does not adequately express our concerns. Each community must evaluate the adequacy of existing wastewater treatment capacity and the costs and problems associated with this pollutant load.

**Response:** Although the Plan mentions that the sewage treatment plant must have the capacity to handle the increased organic load from garbage disposers, we will add text to the Plan to further highlight this concern.

**Comment 201:** MSW composting is a struggling industry in the United States. All larger plants have closed due to operational problems and/or poor quality compost products.

**Response:** MSW composting (taking the mixed solid waste stream from the curb) has had a poor history in the United States, most often due to problems associated with odors and poor quality products. It is difficult to sufficiently remove contaminants from the compost to make a marketable product. One very notable exception to this situation is the facility in Delaware County, New York, where the facility is able to produce an MSW compost that is desirable in higher end markets. Despite Delaware County's success, and in recognition of the difficulties involved in dealing with MSW generally, the Plan (and many other states and localities) are focusing on food scraps as a separate stream for composting.

**Comment 202:** Anaerobic digestion of MSW is not a well defined technology. Most MSW anaerobic digestion facilities in Europe actually take select feedstocks.

**Response:** The Plan does not propose anaerobic digestion of mixed solid waste (MSW). Digestion is a biological system and works best when the feedstocks consistently

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fall within an accepted range of pH, solids content, and other parameters. Digesters can handle a number of waste types (manure and food processing waste as an example), but the operator must add them appropriately. There is information available concerning what waste streams digest well, but research and expertise on waste characteristics and optimum digestion parameters is ongoing.

**Comment 203:** Benefits associated with composting, especially those associated with GHG benefits, are less certain than portrayed in the Plan.

**Response:** The GHG benefits listed in the Plan for composting come directly from a calculator developed by EPA. There is a level of uncertainty in any similar calculation but the EPA calculator is based on the best available information and is recognized as a valid measure of GHG impacts.

**Comment 204:** Anaerobic digestion for select materials seems to be a robust technology, but the economics in the United States are not well defined.

**Response:** Anaerobic digestion is a very common technology in wastewater treatment and has been for decades. It is also becoming common for manure treatment at larger farms, many of which are now beginning to take organics from outside sources. There are more than a dozen farm digesters in the state. Although common in Europe, digestion of food waste and other organic waste streams is not common in the United States, but there are significant interest and developments in that area. The economics will be better defined as the number of systems in operation increases, as we expect will occur in the next few years.

**Comment 205:** DEC should work with municipalities to establish backyard composting programs because it reduces the burden on local government. In order to obtain the food composting goal as stated in the Plan, a statewide educational initiative to encourage home composting of food wastes should be undertaken. Participation in home composting alongside encouragement toward personal stewardship of waste can massively reduce the food waste component in MSW tonnages.

**Response:** Home composting is the most effective way to manage organics generated by residents. By composting at home, transportation of food scraps and yard materials is eliminated, thereby saving energy and reducing air pollution. In addition, the resulting compost can be used at home for mulch or soil amendment. DEC promotes home composting through outreach and education efforts including website content and brochures which are also available at <http://www.dec.ny.gov/chemical/8801.html>) In addition, through the Municipal Waste Reduction and Recycling (MWR&R) State Assistance Program, municipalities may apply for reimbursement of up to 50% of the eligible costs of waste reduction and recycling projects including outreach and education for home composting, and purchasing of compost bins. DEC plans to do more outreach and education to further encourage home composting.

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**Comment 206:** We applaud the fact that the Plan includes a section for enhancing composting of organic materials and food scraps.

**Response:** Comment noted.

**Comment 207:** DEC has not provided an adequate foundation of the environmental, financial, and operating information to deal with the diversity and unique nature of organics. The state should do a detailed look at the feasibility of widespread large scale food waste composting. A full environmental and economic analysis related to organic diversion needs to be included in the Plan.

**Response:** Such detailed analyses are beyond the scope and the intent of the Plan. The Plan sets forth a direction for the state based on the collective knowledge in DEC and in the Advisory Committee that included members of private and public entities from across the state. These entities considered and debated economic and environmental issues related to the Plan. DEC then set a direction for the Plan that is achievable and prudent.

**Comment 208:** Anaerobic digestion is a major solution for solid waste but is barely mentioned in the Plan. There should be more discussion of this technology as a key to improving solid waste management.

**Response:** Anaerobic digestion is discussed in Section 8.4.1(b). DEC will provide additional information on this technology in the forthcoming assessment of organic material recycling technologies.

**Comment 209:** DEC should reopen the public hearing for the Plan to more adequately provide information on anaerobic digestion into the Plan.

**Response:** DEC will provide additional information on anaerobic digestion in the forthcoming assessment of organic material recycling technologies but will not reopen the public hearing process.

**Comment 210:** Open air composting may be viewed in the near future the same way that today we view landfills without liners – practical, operable, and unsound.

**Response:** Composting has the advantage that it works at a variety of sizes and degrees of sophistication, from a backyard pile to a 100+ ton per day enclosed vessel with mechanical controls. Open air composting is popular for yard waste composting and has been very successful. It is not the best technology for all locations or all waste types, and in some cases a higher level of technology will be required. DEC does not see a time in the near future when open air composting will be deemed unacceptable in all cases.

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**Comment 211:** If enclosed composting is needed, technologies to recover energy might be a better route.

**Response:** Anyone contemplating a large organic recycling facility should complete an analysis of the type of process (composting, anaerobic digestion, or a combination of both) that provides the best option for the quantity and type of waste stream that will be managed. Each process, and the equipment used for the given process, has its advantages and disadvantages when considering cost, potential income from energy (if any), and product sales. This analysis should lead to the right choice for a particular scenario.

**Comment 212:** Food waste recycling is problematic due to odors, glass and plastic contaminants, and greater required regulatory controls.

**Response:** Food waste composting can be problematic due to contaminants (primarily plastics) and odors. To address these issues, composting facilities that manage food waste implement a number of actions including education and rejection criteria for the generators in relation to plastics in their waste, tipping the waste on a bed of absorbent material, incorporating the food waste quickly into the compost pile, and screening the compost product to remove contaminants.

The regulatory controls on food waste composting are set forth in Part 360. Small-scale food scrap composting is allowed under a registration, and larger scale food waste composting requires a permit and a pad (larger facilities only). DEC is currently in the process of reviewing the current rules for solid waste facilities, which will be an opportunity to assess the level of regulation for food waste composting facilities.

**Comment 213:** Vectors can be a problem with food waste composting.

**Response:** Experience at existing food waste composting facilities has shown that vector infestation is not a significant problem at well-run facilities with good housekeeping. The food waste is typically discharged onto a base of ground wood or other absorbent material and is then incorporated into a windrow or vessel, usually on the day it arrives at the facility. This helps to minimize vectors in the incoming area of the facility. Once in the composting mass, the waste heats up quickly, and it is no longer attractive to vectors.

**Comment 214:** Will DEC lead in the identification of new technologies? Will DEC consider building and operating regional facilities?

**Response:** Through DEC's responsibilities related to technical assistance and outreach, staff keep abreast of new technologies and provide information on those technologies. Relevant information will be compiled in a technical guidance document on

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organics recycling. DEC has never built and operated regional solid waste facilities, and such is not contemplated in the Plan.

**Comment 215:** Isn't biogas or methane a GHG and should this not be listed as a disadvantage of anaerobic digestion?

**Response:** Methane is a greenhouse gas and is a product of anaerobic digestion. It is not considered a disadvantage for anaerobic digestion because an anaerobic digester is a closed vessel, so the methane can be captured and directed to a device to convert the methane to energy. In a contained system, the methane will not reach the atmosphere where it would contribute to climate change.

**Comment 216:** Anaerobic digestion cannot compete with the cost of landfilling in New York State.

**Response:** Disposal prices paid by the state's communities vary depending on a number of factors, such as the type of disposal (landfill or municipal waste combustor) and the transportation cost related to the distance traveled to the disposal facility. The current cost of landfilling in the state is low but there are no guarantees that this will be the case in the future. Anaerobic digestion has grown substantially on farms in the state, partially due to both funding assistance and increased experience and comfort level with the technology. It is likely that a similar path will be followed with digestion of food waste; as the technology becomes more common, the development costs will decrease.

**Comment 217:** Section 8.4.1(a) states that food scrap collection can be avoided through backyard or on-site composting systems. Experience has shown that backyard composting has a minimal effect on quantity disposed.

**Response:** Backyard composting systems are one way to reduce the amount of food scraps that will be collected, but it is accurate to point out that the impact from these units will be limited since not all residential generators have the ability and/or desire to use these systems. Larger impacts will likely be seen in the institutional sectors as colleges and other similar generators manage their food scraps with on-site composting systems.

**Comment 218:** Section 8.4.1(b) describes the benefits of anaerobic digestion technology. It should be noted that the benefits listed also apply to waste-to-energy.

**Response:** Combustion does have some benefits in common with anaerobic digestion. The benefits of combustion are described in Section 9.3.

**Comment 219:** Section 8.4.2 states that DEC will facilitate greater diversion of food scraps through education, networking, and assistance. These are secondary actions that will not lead to widespread organics recycling without mandatory separation laws.

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**Response:** In order to achieve greater organics diversion, multiple actions will be required as outlined in the Plan. These include funding opportunities, regulatory imperatives, planning reviews, and outreach. Outreach alone will not achieve the desired recycling gains, but it has an important role to play.

**Comment 220:** Section 8.4.3 that discusses collection should also note that collection systems will adjust to accommodate new materials and find ways to manage costs, similar to the changes that occurred with the implementation of recycling.

**Response:** Comment noted.

**Comment 221:** The goal to increase the recovery of organics makes sense, however the cost and track record of organic recovery facilities must be carefully considered.

**Response:** Siting and operation have a key role in the success of an organic recycling facility. Any entity proposing to construct and operate an organics recycling facility must carefully consider the technology selected and the cost of construction and operation.

**Comment 222:** The statement that DEC will use the regulatory process to require organic processing facilities is an unfunded mandate and should not be used to further DEC's agenda.

**Response:** The Plan tasks DEC with evaluating, and implementing where possible, strategies to promote the establishment of organics recycling facilities in the environmental quality or regulatory review process for other solid waste management facilities. This is not a mandate, but rather a consideration in those processes. SEQRA requires that alternatives be evaluated throughout the review process. Such alternatives would include recycling and composting facilities.

**Comment 223:** The organic waste in our planning unit is currently sent to a waste-to-energy facility. Recycling this waste would cost significantly more than the current processing cost.

**Response:** In the near term, the cost may be higher to recycle food scraps if infrastructure must be developed. However, the Plan proposes a number of methods to provide financial resources for communities to build this infrastructure.

**Comment 224:** I would like to see an increased commitment to food waste composting. Composting is not nearly as expensive as trying to collect gas once it is already in the landfill.

**Response:** The Plan outlines an increased commitment to keep food scraps out of landfills. It will take a combination of technical and financial resources to make this happen, and the Plan presents some ideas that should help this happen.

**Comment 225:** We support the development of composting infrastructure.



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**Response:** Comment noted.

**Comment 226:** We support composting programs and encourage DEC to ensure that composting operations are fully staffed with adequate equipment to ensure a successful operation.

**Response:** If the composting operation is subject to a permit from DEC, the facility must outline the equipment and staff that will be used, and DEC must approve the plan. The facility must operate in accordance with that plan. If the facility is not subject to a permit, DEC does not approve an operations plan but can provide assistance to the operators to help them understand the importance of sufficient staff and/or equipment to ensure the facility operates in an environmentally sound manner.

**Comment 227:** Municipalities should eliminate residential pick-up of grass clippings. Homeowners should be encouraged to leave grass clipping on their lawn.

**Response:** Mulching grass clippings into the lawn is the most effective way to manage this material. It provides nutrients and moisture to the grass. DEC supports this practice through education and outreach including distributing brochures at educational opportunities and through our website.

**Comment 228:** It will cost New Yorkers more than \$2 billion to build the facilities necessary to achieve the separate management of organic waste called for in the Plan, not including added collection costs for these facilities.

**Response:** The figure cited does not recognize the private investment that is likely to occur in organic recycling facilities, the ability of existing composting facilities to expand to accept food scraps, and the proliferation of on-site systems at colleges and other organic waste generator locations. As outlined in the Plan, DEC will attempt to secure funding sources to assist in the development of organic recycling facilities, amongst other initiatives. The Plan also recognizes that organics recycling facilities will not be built overnight, and that this investment will occur over the next two decades.

**Comment 229:** Community opposition may prohibit siting a compost facility.

**Response:** It can be difficult to site a compost facility. In some cases, the first site chosen may not be the best choice. Successful projects involve the community early in the planning process.

**Comment 230:** We need an ambitious program to expand composting infrastructure, especially for food waste. We need a mix of centralized facilities and on-site composting facilities.

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**Response:** To significantly increase the quantity of materials recycled, the infrastructure for food waste recycling will need to increase substantially. DEC recognizes that this will require the expenditure of funds—both public and private. The program must move forward at a pace that is aggressive but economically reasonable. It is likely that the composting infrastructure will continue to be a mixture of small scale on-site systems, small facilities, and more regional facilities. All play a role in advancing this recycling activity.

**Comment 231:** Section 8.4.3 states that organic collection is effective and cost competitive, yet there is no standard method for collection and the only reference is a single article in BioCycle. This technology needs to be addressed and included in the Plan.

**Response:** In many ways, organic waste collection is in the position that recyclables collection was 20 years ago. The collection methods are in their infancy, and the best methods will evolve over the ensuing years. It is really not a question of whether organics can be collected, but rather what the most effective means of collection will be. There is existing equipment for collection and transport of organic waste, but it is the determination of which equipment is most appropriate and cost effective for residential, commercial, and institution sources that will drive the decision making. The existing collections systems outlined in BioCycle provide a good place to start, but each situation will need a determination as to what method is the best.

**Comment 232:** There needs to be a closer look at greenhouse gas emissions from food waste composting versus landfilling with 90-95% gas capture.

**Response:** The update to EPA's WARM model, released in August 2010, compares the GHG impacts of various disposal techniques, including composting and landfilling with gas capture. The updated WARM model more accurately reflects gas collection efficiency at a landfill, which varies over time. For the typical landfill, WARM assumes 0% for years 0-2, 50% for year 3, 75% for years 4-7, and 95% for years 8-100. Using the new WARM model, the landfilling (with gas recovery) of one ton of food scraps generates 0.28 metric tons of CO<sub>2</sub> equivalence and composting of that same ton of food scraps yields a reduction in GHG emissions of 0.2 MTCO<sub>2</sub>E. While an increased capture rate may reduce the GHG impact of landfilling slightly, it is not likely to make landfilling more attractive than composting from a GHG perspective.

**Comment 233:** If the state decides to ban disposal of food waste, the ability to divert food wastes to on-farm anaerobic digesters should be eased.

**Response:** DEC is currently in the process of revising the solid waste regulations. Part of that revision will be an assessment of the appropriate level of regulation for anaerobic digesters in farms. In many cases, the digesters and use of their contents are subject to CAFO regulations and additional regulation under the solid waste

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regulations is not warranted. The rulemaking process will include a discussion of this issue.

**Comment 234:** Aggregation and transportation of food waste is a roadblock to food waste diversion.

**Response:** For a food scrap recycling facility to be successful, collection and transportation issues must be addressed. Such issues are already being addressed in California, Washington, and other locations that have already begun food scrap recycling. There are a variety of collection methods (e.g., with yard waste, in separate containers, in biodegradable bags) and vehicles that have been used successfully.

**Comment 235:** Residential collection of food waste will be severely hampered by homeowners concerns about odor and cleanliness of the collection containers.

**Response:** There are a variety of collection methods and containers in use in the many communities that collect residential food waste (e.g., with yard waste, in separate containers, in biodegradable bags). Those programs have not identified homeowner concerns about cleanliness as an implementation barrier. As with any project, education will be critical and ongoing.

**Comment 236:** Section 8.4.4 is unclear. On one hand, it states that wood chips are in high demand for renewal energy, but these materials are needed for composting. Don't we need trees to help reduce the carbon footprint?

**Response:** Trees and the resultant wood serve many competing interests including construction, energy, and landscaping (through composting and other means). For composting, wood use is derived from tree limbs and storm debris clean up as well as other sources. The DEC will work with localities to increase the amount of wood chips that are available from this debris instead of using virgin wood sources.

**Comment 237:** The finding that organics comprise 30 percent of the MSW stream in New York State should not be used because it is an average and the number varies significantly depending on the planning unit.

**Response:** DEC concurs that state averages may not be applicable to a specific local planning unit. The average statewide number is useful for DEC as direction and policy is developed, but it is not applicable to plans developed by each planning unit. Local planning units may use the statewide average as a starting point if they have no other information on their waste stream, but local data is always better, and obtaining such data is part of the planning process.

**Comment 238:** We support the objective of diverting organics from landfills but do not favor making it mandatory.

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**Response:** There is no proposal in the Plan for a widespread ban on organics from landfills. It is mentioned that restrictions could occur once sufficient infrastructure exists to handle the organics.

**Comment 239:** It is premature to mandate food waste recycling.

**Response:** The Plan does not contain an immediate food waste recycling mandate or a blanket ban on the landfilling of organics. It envisions the possibility of including restriction in landfill permits related to organic streams, as organic recycling capacity increases. This parallels what has occurred with yard waste in New York State. There is no statewide ban of yard waste from landfills in the state, but conditions in landfill permits banning the acceptance of yard waste have been added over the years as yard waste composting capacity has come on line.

**Comment 240:** The Plan should recognize the difficulties in siting large-scale composting facilities in urban areas.

**Response:** Additional text will be added to discuss the difficulty in siting facilities, especially in urban areas.

**Comment 241:** Collection of food waste poses serious logistical, cost, and other impediments in New York City.

**Response:** DEC concurs that food scrap collection presents some unique challenges in New York City. The city has committed to pilot studies to look at this issue and how to most effectively move forward. In addition to the residential waste stream, the city has a large commercial waste stream with food scraps that may be more amenable to collection efforts.

**Comment 242:** It is inconsistent for the compost regulations to require one set of analyses for the generator who distributes to Home Depot, etc., but then a large consumer, such as a public utility, requires a whole new set of tests. Commercial topsoil manufacturers should be required to keep QA/QC documentation on all their products.

**Response:** Currently, DEC requires compost to be analyzed for environmental pollutants (heavy metals, etc.) because it is DEC's responsibility to protect human health and the environment when using these products. Individual large users may have additional parameters (organic matter, etc.) that they have determined are important for their specific soil markets. Since each user can require whatever additional analyses they deem fit, it would be impossible for DEC to ensure these analyses are included in our regulations. As large regulatory entities that have soil standards, such as DOT, address compost use, the situation should get better.

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**Comment 243:** We support the recommendation in Section 8.4.6 in the Plan that emphasized the need to develop composting programs and infrastructure.

**Response:** Comment noted.

**Comment 244:** Requiring planning units to evaluate the organic portion of their waste stream in LSWMPs will cost money that they do not have. The state should complete these analyses.

**Response:** Each LSWMP is somewhat unique because the amount of information available varies and the types of facilities that may work for the given area will vary. DEC will work with planning units as they develop their local solid waste management plans to provide whatever information may be available and help each planning unit develop a plan for steadily increasing recycling by methods that make sense for that planning unit.

**Comment 245:** DEC needs to consider lifting the ban on yard waste going to waste-to-energy facilities since there is a 15% GHG benefit when combusting yard waste.

**Response:** The August 2010 update to EPA's WARM model indicates a GHG reduction benefit for composting yard debris, as opposed to municipal waste combustion.

**Comment 246:** The Plan states that DEC may impose food waste recycling when sufficient infrastructure is available. That is very arbitrary.

**Response:** DEC's decision to add a permit condition limiting organic waste from disposal is subject to the UPA and all the procedural notices and opportunity to be heard. In short, the permittee has an opportunity to challenge any permit condition on the record. As stated in the Plan, however, this decision will be based on the ability of the organic waste to be diverted to a recycling facility. This has worked effectively with yard waste in New York State. Yard waste bans have been added to landfill permits as composting facilities have been established for this waste stream.

**Comment 247:** The organic recycling legislative recommendations (Section 8.4.6(c)) include designating food scraps and residuals as mandatory recyclables. This is a necessary step for food scrap composting to become widespread.

**Response:** Comment noted.

**Comment 248:** Will DEC ensure funding is available for any organic waste requirement?

**Response:** Materials and waste management remain municipal responsibilities. DEC will work with municipalities in their recycling efforts and will seek funding to augment these efforts.

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**Comment 249:** DEC must set and define criteria by which beneficial use determinations, or special waste designations, are made.

**Response:** DEC reviews solid wastes for beneficial use under criteria stated in Part 360-1.15(d). These criteria are broad in some instances to allow for review of a wide variety of materials in many possible use applications. However, the objectives of review are clearly stated in the regulation: that the essential nature of the proposed use of material must constitute a reuse and not disposal; that the use must not adversely affect human health and safety, the environment or natural resources; that the material must be an effective substitute for a conventional material as a product or as an ingredient in a process to make a product; and that its use must be consistent with the state solid waste management hierarchy.

**Comment 250:** State funding for projects that use BUD materials (like those of the Dormitory Authority) should be restricted to BUDs that represent waste reduction and reuse and not disposal-related BUDs, such as waste-to-energy or landfill cover.

**Response:** The contracting activities of other agencies are outside the scope of this Plan. Through the implementation of Executive Order 4, Green Procurement and Agency Sustainability, DEC is working to establish specifications for the use of reused and recycled materials in building products that would encourage valuable uses for BUD materials.

**Comment 251:** Coal is an energy source that harms human health and should be replaced by renewable sources like solar and wind power. It should be regulated, contained and eventually eliminated.

**Response:** The role of coal as an energy source is outside the scope of the Plan, but other programs at DEC are examining coal and other fossil fuel combustion in view of mitigating climate change, providing a more sustainable energy supply for the state, and increasing the proportion of energy from renewable sources.

**Comment 252:** The statement that the BUD program started in 1993 is incorrect; there were BUDs prior to 1993.

**Response:** This is an error in the Plan and has been corrected to show the year 1988 for the inception of the BUD program with promulgation of new Part 360 regulations in December of that year.

**Comment 253:** We have concerns regarding the beneficial use determination No. 122-0-34, originally granted in 1992 for various uses of coal combustion bottom ash.

**Response:** The Plan is not intended to address specific DEC decisions, permits or determinations. However, the concerns expressed about this particular BUD (the basis for its approval, basis for conditions on use, and how recordkeeping is

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conducted) do reflect general concerns about BUDs and coal combustion residuals (CCRs) that are addressed in further responses.

**Comment 254:** Why are BUDs not addressed in the solid waste management hierarchy?

**Response:** BUDs were not directly named in the Solid Waste Management Act that defined the hierarchy. Certain BUD applications, where the materials are used to displace virgin materials in a product, are considered recycling, while BUDs for fuel related uses would be considered equivalent to municipal waste combustion, and BUDs for landfill cover are considered equivalent to land disposal. Therefore, BUDs can fall into many rungs of the hierarchy depending on the end use.

**Comment 255:** Why are BUDs not subject to SEQR or SAPA? What is the impact of this exclusion? We perceive deficiencies in the BUD program stemming from lack of oversight through SEQR and SAPA.

**Response:** A BUD is a decision within DEC's jurisdiction to regulate a material as a solid waste and is not the equivalent of a permit. Once a BUD is granted for a solid waste, the material is no longer subject to Part 360 regulations for management of solid waste, including any SEQR or UPA requirements triggered therein. Processing of solid wastes for beneficial use, and related facilities may be subject to DEC permitting and SEQR.

**Comment 256:** Who evaluates and enforces the BUD criteria regarding materials being effective substitutes for raw materials, or whether the use constitutes disposal? Who evaluates whether beneficial use of material adversely affects human health, safety, the environment and natural resources – what proof do you have that it does or doesn't? It should be scientifically evaluated, not guessed at, whether constituents will be released from BUD materials in harmful amounts. What scientific guidelines does DEC follow?

**Response:** DEC regional and Central Office technical staff, including engineers, geologists, scientists, and other specialists as appropriate, evaluate data provided by the petitioner for a BUD. 360-1.15(d) lists some types of documentation that can be submitted to demonstrate that a solid waste is an effective manufacturing ingredient or substitute for a conventional product. These staff also evaluate chemical and physical characterization of materials as to whether they could have adverse effects. Chemical analysis results may be considered, as well as the potential for odor, safety hazards or other impacts. The tests and criteria vary depending on the solid waste being reviewed and its proposed beneficial use application; therefore rigid criteria are not stated in the regulation for evaluation of adverse effects. Other state agencies, including the Departments of Health, Labor (asbestos regulation), Transportation, and Agriculture and Markets are consulted by DEC when needed to evaluate effective substitution and potential for adverse effects. DEC's concurrence that the petitioner has demonstrated no adverse effect is based on comparison of chemical concentrations to scientific

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benchmarks for protection of human health or the environment, and also whether effective controls are in place that will prevent dispersion of materials prior to use, or incorporation in a manufactured product.

**Comment 257:** Has DEC read and considered the report Coal’s Assault on Human Health by the Physicians for Social Responsibility as a reference for the Plan?

**Response:** DEC did not use the above report as a reference for the Plan, but has and will review literature regarding the environmental impact of CCRs in development of the Part 360 current and proposed regulations.

**Comment 258:** BUDs and related records should be subject to ongoing public review, at least annually. They could be provided through local municipalities, especially those whose citizens are potentially affected.

**Response:** BUDs are not subject to public comment, but BUDs and many related documents are public records that can be obtained through FOIL. DEC has added a recommendation to Section 8.5.13, to make more BUD records directly accessible through its website.

**Comment 259:** Producers or users of coal combustion byproducts should be responsible for management, storage and chemical analysis of CCRs for both case-specific and pre-determined BUDs.

**Response:** Case-specific BUDs, when there is need, specify storage and chemical analysis requirements for CCRs in a particular beneficial use application. For pre-determined BUDs, the CCRs are no longer a solid waste at the point stated in each pre-determined BUD (when placed in commerce or at the point of use), and are not subject to Department regulation after that point.

**Comment 260:** We have a general concern with the way BUDs are granted in NYS, and exposure of the public to hazardous substances in some materials. This is most problematic area for BUDs, where the material receiving a BUD contains toxic constituents. The state’s BUD program needs to be examined and overhauled, and materials containing any toxic substances should be eliminated from consideration or eligibility for a BUD.

**Response:** DEC concurs that the BUD program should be evaluated periodically and modified where needed to ensure ongoing protection of human health and the environment, and to continue to allow genuinely beneficial uses of wastes and byproducts. The Plan provides some goals and proposed changes to the BUD program. As for toxic substances, DEC’s position regarding toxics along for the ride (TARs) is discussed in Section 8.5.4. The potential for harm from a substance “along for the ride” in a reused material is based on the amount of the substance present and the mode of reuse of the material. If materials containing minute amounts of hazardous substances could not be reused, little materials reuse would



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take place, even commonly accepted reuses of materials such as scrap metal, concrete and asphalt pavement.

**Comment 261:** Materials used beneficially as daily cover at landfills should be disclosed to the public, not kept as proprietary information by private landfill operators. People living near these landfills are concerned about health impacts from use of these materials.

**Response:** Materials used as alternate daily cover by public or private landfills must be specifically approved by DEC, as stated in 360-1.15(b)(10). These approvals are public records subject to FOIL.

**Comment 262:** It is DEC's and EPA's duty to classify coal ash as a hazardous waste in order to protect people and the environment. Coal ash must be disposed of in secure landfills for hazardous waste.

**Response:** EPA's proposed rule to reclassify coal combustion residuals (CCRs) is outside the scope of the Plan, but is also being reviewed by DEC. The outcome of EPA's rulemaking and DEC's adoption of any changes to federal CCR regulations will affect implementation of the recommendations in the Plan for CCRs.

**Comment 263:** CCRs contain toxic heavy metals and must not be used in construction, in highway maintenance, and especially not in consumer products.

**Response:** DEC's review of beneficial use of CCRs considers safe concentrations of heavy metals in consumer and commercial products, including metals found in natural minerals currently used in these products. DEC also considers the benefit gained to the manufactured product through the use of the solid waste or byproduct.

**Comment 264:** The Plan is commendable for its focus on waste reduction, reuse and recycling – which makes it all the more inappropriate that coal ash is included as material to be reused.

**Response:** The Plan is intended to cover as broad a range of materials as possible for reduction and reuse. The large volume of coal combustion byproducts makes it important to consider any appropriate reuse of this material, as DEC would any other waste stream. In fact, coal ash has been reused in various ways for several decades up to the present.

**Comment 265:** Some BUDs before 1993 required periodic testing of coal ash. Clarify if this requirement is still in effect for any beneficial uses of coal ash.

**Response:** Where BUDs granted before October 9, 1993 were incorporated into pre-determined BUDs, the requirements in the 360-1.15(b) regulations (pre-determined BUDs) superseded the requirements under the identical previous BUDs. If a beneficial use approved before October 9, 1993 did not fit into any of

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the new pre-determined BUDs, any requirements for that use stated in the pre-1993 BUD remained in force.

**Comment 266:** Users of coal ash should not be allowed to pick it up at a coal ash landfill, but rather at the site of ash generation, to better track quantities.

**Response:** DEC will consider this comment as well as other conditions that will improve tracking of quantities of coal ash used under pre-determined BUDs.

**Comment 267:** Assurances must be in place that coal ash meets beneficial use standards.

**Response:** In case-specific BUDs, any standards specific to the project are included and annual reporting to DEC is required to show those standards are being met on an ongoing basis.

**Comment 268:** Monitor agricultural use of ash more closely. For materials used as liming agents and soil additives, limits are needed on heavy metals to prevent accumulation in soil from repeated applications. Require periodic chemical analysis of food for coal waste contaminants.

**Response:** Agricultural use of coal ash is only approved on a case-by-case basis and both concentrations and cumulative loading of metals are limited to prevent excessive concentrations in soils. Other conditions such as restriction from crops for human consumption may be imposed. DEC does not perform chemical analysis of food for coal waste contaminants as results are not conclusive or helpful to assess safety of use.

**Comment 269:** Remove all pre-determined BUDs related to coal combustion waste.

**Response:** As stated in Section 8.5.13, DEC will consider all current pre-determined BUDs, removing some for materials which should have stricter conditions of reuse in some applications. However, DEC has evaluated, and has been able to observe, coal ash in many of the pre-determined uses and has found they are not being conducted in a manner that causes harm to human health or the environment. There continues to be no reason many of the pre-determined uses should be subject to case-specific determinations.

**Comment 270:** The current BUD program is cumbersome and results in the wasting of resources.

**Response:** DEC has offered several recommendations in the Plan (Section 8.5.13) for improvement of the BUD review process. Some examples include a clear policy for use of Part 375 soil cleanup objectives, Part 360-4 landspreading criteria and other contaminant concentration limits in the review of soils and soil-like materials for BUDs. Additional pre-determined BUDs and MOUs between state and local agencies for use of materials would also help to streamline review.

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**Comment 271:** Unreasonable, infeasible requirements hinder reuse of excavated soils. One of these is the requirement that soils meet the same concentrations of contaminants at the receiving site as at the generating site. If relevant soil cleanup objectives are met for the site use, soil should be able to be used. Why are non-hazardous waste sites required to meet soil standards for hazardous waste sites? In addition, reasonable cover standards should be allowed for materials used on the same site. Because of unreasonable requirements, excavated soils are sent out of state for disposal.

**Response:** Reuse of soils that do not exceed contaminant concentrations at the receiving site is considered by DEC on a case-by-case basis to minimize environmental degradation of the receiving site. DEC uses Division of Environmental Remediation (DER) soil cleanup objectives (in Part 375 or DER guidance documents) as a tool to determine appropriate concentrations for fill or cover at the receiving site. Cover materials, in particular, should be chosen with both land use and potential contact by the public or biota in mind. In addition, highly-contaminated soils must not be used as fill on public works projects which would otherwise require disposal in a permitted landfill; this is not reuse, but disposal.

**Comment 272:** Allowing more reuse of historic fill and contaminated soil is consistent with the zero waste goal of the Plan. Less land is needed for disposal and less virgin material must be mined.

**Response:** DEC recognizes these benefits of soil and historic fill reuse, where appropriate, but the primary concern must be protection of human health and the environment. “Reuse” of soil that amounts to landfilling in contravention of Part 360 cannot be approved.

**Comment 273:** We support civil engineering application use for materials that are difficult to recycle back into their original form, such as glass and tires. Our experience has been positive with such use of these materials.

**Response:** Feedback on actual beneficial use of materials that have become difficult to recycle helps DEC to improve guidelines and conditions for these applications.

**Comment 274:** Why are predetermined BUDs even necessary for clean materials?

**Response:** Predetermined BUDs provide important clarification of conditions under which materials can be reused without DEC review; for example, stating that *uncontaminated* concrete, rock, brick or glass can be used as aggregate. In another example, yard trimmings and food scraps are beneficially used as distribution and marketing products *after* composting in accordance with DEC regulations. Predetermined BUDs also clarify the point when the material is no longer considered a solid waste.

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**Comment 275:** 8-256 Coal ash needs regular testing and reporting to DEC. Why doesn't annual reporting required for coal ash pre-BUDs include chemical analysis and storage requirements, as stated in 1.15(d)?

**Response:** Pre-determined BUDs are designated as such because DEC has evaluated these use applications and believes that, when performed in accordance with these regulations and in normal commercial practices, they will not cause harm to human health or the environment. Specialized analysis and storage of these materials is not necessary and, therefore, does not need to be reported to DEC. DEC has proposed one of the coal ash pre-determined BUDs for removal, specifically the BUD for use of coal ash as a raw feed for manufacture of cement (see Section 8.5.1). DEC will review the other coal ash pre-determined BUDs as part of the overall revisions to Part 360.

**Comment 276:** All case-specific BUDs must continue to test materials over time – one time sampling is not adequate for BUD approval. Materials can be heterogeneous or change in composition over time.

**Response:** This requirement is incorporated in Part 360-1.15(d) regulations for case-specific BUDs, for *“procedures for periodic testing of the solid waste under review and the proposed product to ensure that the proposed product’s composition has not changed significantly”*.

**Comment 277:** Wood chips pose special concern due to mixing of adulterated and unadulterated wood and should be analyzed regularly.

**Response:** It is true that some facilities have been found in local and DEC law enforcement investigation to be using adulterated wood in wood mulch products. In some situations chemical analysis may be necessary, but documentation and control of sources may be equally effective.

**Comment 278:** Section 8.5.13 Regulatory Recommendations includes authorizing DEC to issue or rescind pre-determined BUDs without requiring an amendment to Part 360. This is intended to transition case-specific BUDs to pre-determined BUDs. Does DEC mean to use this authorization to create more coal combustion ash pre-determined BUDs? There should be a movement toward fewer, not more pre-determined BUDs for coal combustion ash, particularly as pre-determined BUDs typically do not require chemical testing of ash or other wastes, or tracking as to where and how ash is beneficially used, and other follow-up to ensure environmental safety. These types of controls and active oversight are found in case-specific BUDs, under which coal combustion ash should be regulated – not under pre-determined BUDs.

**Response:** DEC will review all pre-determined BUDs as to whether more controls are needed on specific pre-determined beneficial uses of coal ash and other wastes, and whether any of these wastes or use applications should be reviewed, and BUDs granted, on a case-by-case basis. No specific intention is implied to add

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pre-determined BUDs for coal combustion ash, but DEC seeks flexibility to add pre-determined BUDs for other waste streams which are demonstrated not to require regulation in certain uses or which are regulated by other laws or agencies.

**Comment 279:** Please clarify whether pre-BUD (b)(10) includes bottom ash as LF daily cover – now? - in the future?

**Response:** Bottom ash has been and will be a candidate material for alternate daily cover at landfills, subject to written DEC approval at a specific landfill, when it meets daily cover criteria in Part 360-2.17(c).

**Comment 280:** We support additional pre-determined BUDs, including for cooking oil, foundry sand and dredged materials.

**Response:** These waste streams will be considered for new pre-determined BUDs as stated in the Plan.

**Comment 281:** Because historic fill covers so much of NYC (20%), increased requirements to manage historic fill will impose severe costs for construction and for remediation of brownfields. Remediation of brownfields is part of City’s PlanNYC, which is hindered by stricter management of historic fill. Added requirements will include analysis and other measures. Has DEC shown benefit is commensurate with the costs of stricter historic fill management?

**Response:** Management of historic fill will be addressed in proposed revisions to 6 NYCRR Part 360. In view of the prevalence of historic fill and the interest of the public in development as well as environmental protection, the new proposed rules will seek to ensure that both of these issues are properly addressed.

**Comment 282:** Please include a general BUD or an exemption for DOT and public authority construction projects to allow disposal of inert C&D at night, when construction is more frequently performed under current practice to minimize impact to public.

**Response:** DEC will consider inclusion of this provision as an exemption or a pre-determined BUD in revisions to 6 NYCRR Part 360.

**Comment 283:** Please expand the generic beneficial uses for recycled asphalt pavement (RAP) from those in the current 1.15(b)(11) as aggregate.

**Response:** DEC concurs that pre-determined BUDs in Part 360-1.15(b) should be modified to clarify, and in some cases expand, the use of RAP in highway construction. DEC believes the best use of RAP is in the remanufacture of asphalt pavement, but controlled placement of this material as backfill, for example in utility cuts through pavement, is a beneficial use as well. DEC does have concern that RAP, when mixed with soil, is unrecognizable and may be misused as fill in inappropriate settings, such as for residential topsoil. New pre-determined BUDs

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would help prevent this misuse and also allow for expanded use of RAP, where appropriate, without the need for case-specific BUDs.

**Comment 284:** DEC should ban the use of cement kiln dust from being used as a lime agent for biosolids. Biosolids should be carefully tested on some regular basis for toxins. Cement kiln dust has the potential to add additional toxins.

**Response:** If cement kiln dust is to be used as an alkaline additive for biosolids, it cannot emanate from a kiln that burns hazardous waste and it must be analyzed routinely to meet the pollutant standards found in Part 360. Biosolids destined for beneficial use must also be analyzed on a continuous basis for pollutants designated by DEC.

**Comment 285:** Ban use of cement kiln dust (CKD) as a stabilizer in biosolids for land application. CKD adds toxins to the biosolids, especially if hazardous waste is burned in the kiln.

**Response:** Any use of CKD as a substitute for lime in the stabilization of biosolids is subject to case-specific, source-specific beneficial use review and determination. The determination would consider the proposed use of the biosolids for land application and the consequence of any added loading of metals or other hazardous substances. If hazardous waste is burned in the cement kiln producing the CKD, DEC would also take this in account in review of any request to beneficially use the CKD. No cement kiln in NYS is permitted to accept hazardous waste, though CKD imported from other states may originate from kilns which do.

**Comment 286:** The Plan should explore in more depth the beneficial use of municipal waste combustor (MWC) ash.

**Response:** While a detailed discussion of potential beneficial use of MWC ash is outside the scope of the Plan, MWC has been and will likely continue to be considered by DEC for case-specific beneficial use. In particular, DEC will likely continue to review possible use of MWC bottom ash as an aggregate for production of asphalt pavement and concrete block.

**Comment 287:** BUDs for materials placed on the land need more than annual monitoring; this does not take into account different seasons and contact with water.

**Response:** Case-specific BUDs are not limited to annual monitoring; more frequent monitoring can be required where warranted for particular materials and placement situations.

**Comment 288:** Specific triggers for corrective action for land placement BUDs are needed, and financial assurance for particularly dangerous materials.

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**Response:** Where beneficial use of materials as fill has been proposed, and materials (due to their characteristics, volume, or both) have caused DEC to want authority to follow up with inspections, monitoring, and closure or corrective action assurance, DEC has denied a BUD and indicated an appropriate Part 360 permit must be obtained.

**Comment 289:** The NYS BUD program needs a regulatory overhaul.

**Response:** As stated in the Plan, the BUD program will undergo review, evaluation and modification through revision to the Part 360 regulations.

**Comment 290:** BUD program should clarify to applicants that economics are not the main benefit to be achieved through beneficial use. Currently, applicants base their petitions on their material being costly to handle as a solid waste, and are not required to show any environmental or social benefit. DEC should clearly state, in a BUD, what benefit is conferred and to whom.

**Response:** DEC concurs that the “beneficial use” intended in 6 NYCRR 360-1.15 is not cost relief for the waste generator. Petitioners do request BUDs for this reason, and are free to state so in their submittal, but if benefits beyond this reason are not demonstrated (e.g., that the material is an effective substitute for a product or can be used effectively in the manufacture of the product), then the petition is denied. These criteria for petitions are stated in Part 360-1.15(d)(1). DEC’s correspondence granting the BUD states our rationale for doing so, and the specific way the solid waste is being reused as an effective substitute or ingredient.

**Comment 291:** The Plan does not offer any improvement upon the current review standards for BUDs in 1.15(d).

**Response:** As stated in the Plan, DEC will review and revise the BUD regulations to clarify and improve review criteria where needed.

**Comment 292:** We do not see where BUD petitioners are consistently required to provide a solid waste control plan or to regularly perform physical and chemical characterization.

**Response:** BUD petitions and approvals vary greatly in complexity depending on the solid waste and the beneficial use proposed. Detailed plans or analysis are not always necessary.

**Comment 293:** What action authorized the supersedence of case-specific BUDs by pre-determined BUDs?

**Response:** The promulgation of revisions to Part 360 on October 9, 1993, authorized many of the current pre-determined BUDs. DEC staff undertook to inform all holders

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of identical, pre-existing case-specific BUDs of the applicability of the new pre-determined BUDs.

**Comment 294:** I think recent developments in leach testing [rather than total analysis and the toxicity characteristic leaching procedure (TCLP)] should become the standard in New York, as well as nationally, for coal ash and other wastes evaluated for disposal and beneficial use.

**Response:** DEC uses TCLP only to determine whether a solid waste is hazardous by toxicity characteristic, in accordance with Part 371.3(e). TCLP is not generally used to evaluate materials for beneficial use unless the petitioner can show TCLP reasonably models leaching of the material in the beneficial use setting. Total analysis of materials with comparison to groundwater partitioning modeling (as used to develop groundwater protection-based soil cleanup objectives in Part 375) has proven a conservative measure of potential impact of land placement of materials for beneficial use. Nonetheless, DEC is taking note of EPA's December 2009 report, *Characterization of Coal Combustion Residues from Electric Utilities – Leaching and Characterization Data* (Kosson, et.al., EPA-600/R-09/151) and will consider these findings in future BUD determinations and in the revision of Part 360.

**Comment 295:** Coal ash is increasingly hazardous as air pollution controls get better, and stricter regulation of CCRs could have a consequence of more disposal disguised as “beneficial use.”

**Response:** It is true that concentrations of some pollutants in coal ash have been observed to be on the rise with the implementation of more effective air emission controls at power plants, especially mercury in coal fly ash (bottom ash is relatively unaffected). Section 8.5.1 describes DEC's initiative to eliminate the pre-determined BUD for use of coal fly ash as a feedstock for cement kilns, in part for this reason. The possibility of an increased number of beneficial use proposals, particularly on land, that may resemble disposal more than reuse, is a point well made. EPA appears to be aware of this possibility with its statement that large fills of coal ash, for example, do not constitute beneficial use. DEC will seek to clarify this understanding in revisions to Part 360 beneficial use regulations as well.

**Comment 296:** If a material is identical to a material ordinarily used in a production process, DEC can handle this through ordinary permitting processes, exemptions, variances, etc. But there should be no reason to add it to a BUD list, giving it a “beneficial” designation and opening up the possibility of additional applicants for similar materials and a reduction of oversight over significant toxic constituents that may be present.

**Response:** BUDs were created to address materials reuse without unnecessary permitting or variance review. A BUD clarifies for both the waste generator and DEC that a specific waste, whether identical or not to a conventional material, is not a solid



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waste when used in a specific manner. Unless a pre-determined BUD is applicable, this review, including a review of chemical characterization, is performed every time a similar material is proposed from a new company; there is no reduction in review for subsequent similar materials.

**Comment 297:** The disaster on 9/11 released toxic materials used in construction. Let's phase out these materials to protect not only the public but construction workers doing regular repairs and renovations.

**Response:** The life cycle impacts of materials used in construction is a significant concern shared by DEC. Reducing hazardous constituents in products and construction materials is beneficial, not only in view of these contingencies, but simply to make reuse and recycling of components more feasible at the end of the building's life.

**Comment 298:** Unless improved, the BUD program may need to be abandoned.

**Response:** DEC will evaluate options for improving the BUD program in the upcoming revision of the Part 360 regulations. The BUD program has been effective to prevent sham recycling of industrial byproducts and will therefore not be abandoned by DEC.

**Comment 299:** What are the goals for a safety plan as required in a petition for a case-specific BUD? How do these affect beneficial use of CCRs? The oil spill disaster in the Gulf of Mexico points up the need for stringent safety plans.

**Response:** Part 360-1.15(d) requires a petition for a case-specific BUD to include a "contingency plan" prepared in accordance with 360-1.9(h), which requires a written plan for solid waste management facilities including contact people, response actions, and equipment to address a broad range of safety or environmental emergencies, depending what hazards may be present for a particular facility and the materials it handles. This contingency plan may be simple or elaborate depending on the facility, activity, and solid wastes. A case-specific BUD for CCRs would carry this same requirement. Pre-determined BUDs for CCRs do not require a contingency plan (unless stated), since the CCRs cease to be a solid waste at the point identified in the regulation.

**Comment 300:** Does DEC believe its BUD requirements avoid "sham recycling" as discussed by EPA in its December 2008 Definition of Solid Waste rule (40 CFR Parts 260, 261, and 270)?

**Response:** The review criteria in Part 360-1.15(d) for wastes to be effective substitutes, pose no adverse effects, and constitute reuse not disposal, lead to legitimate versus sham recycling of byproducts, consistent with EPA's most recent rule.

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**Comment 301:** CROP-PLUS has scientific data showing release of contamination from coal combustion bottom ash stockpiled for beneficial use. These data include CCR contaminants detected in a creek, and in wells. We request a meeting with DEC staff to review these data and discuss our concerns.

**Response:** Addressing concerns regarding any specific facility is outside the scope of the Plan, but CROP-PLUS is encouraged to send DEC data for review as DEC prepares to comment on the proposed EPA coal ash rule and also to revise Part 360.

**Comment 302:** We would like to review the Part 375 Soil Cleanup Objectives, which the Plan states can be used as benchmarks in the review of BUDs.

**Response:** The Part 375 Soil Cleanup Objectives are available at <http://www.dec.ny.gov/regs/15507.html>. As stated in Section 8.5.13, DEC recommends a clear policy be developed for the use of Part 375 SCOs, and other criteria, in the review of BUDs for soil and soil-like materials and applications. Comments from interested stakeholders would be considered in development of this policy.

**Comment 303:** What proof does DEC have for the safety of new proposed pre-determined BUDs, as the Plan recommends should be developed for some waste streams?

**Response:** As DEC did for past pre-determined BUDs, it will develop these BUDs only for materials with a consistent record over several years documenting no harm to human health or the environment when used in a certain application, and which do not need follow-up from DEC.

**Comment 304:** When will Part 360 be revised as recommended in the Plan?

**Response:** DEC hopes to submit a proposed revision of Part 360 to the Governor's Office of Regulatory Reform in 2011 (see Section 11), but cannot yet offer a date for public comment on proposed terms revisions.

**Comment 305:** DEC should require testing of fill material in NYC because it is often contaminated with toxins from historic uses. Use of contaminated fill affects communities through transfer stations as well as through fill sites.

**Response:** DEC concurs that fill material from sources with a history of use or spills should be analyzed for appropriate chemical contaminants. DEC also concurs that contaminated, excavated soil should not be processed through transfer stations authorized to manage uncontaminated inert materials intended for aggregate or fill, pursuant to predetermined BUD 360-1.15(b)(11). For these reasons, DEC reviews case-specific BUD petitions on a frequent basis for reuse of fill from

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urban sites. These petitions must include chemical analysis of soils and a specific location where the soils are proposed to be placed.

**Comment 306:** For reuse of excavated soils, why are the Part 375 soil cleanup standards stricter than the proposed site use required? Why are analysis parameters required that are not in Part 375?

**Response:** Soil cleanup objectives (SCOs) developed for Part 375 were not developed for beneficial use of materials, but for the cleanup of Brownfield and Superfund sites. They are intended as goals to be “*cleaned up to*”, not standards allowing importation of, for example, materials meeting industrial land-use SCOs to a clean site merely because the developer states the site will be used for industrial purposes. Any of the Part 375 SCOs less stringent than residential land use and groundwater protection, if approved under DER’s cleanup programs, require DEC to establish an environmental easement (see Part 375-1.8(h)), deed restrictions, and monitoring programs. DEC has no statutory authority to impose these institutional controls outside of Brownfield and Superfund projects. Therefore, when SCOs are used as criteria for BUDs, they generally are as stringent as the residential land-use or groundwater protection-based SCOs.

As for parameters, only a limited list of parameters of potential concern for beneficial use are included in Subpart 375-6. The parameters for which SCOs were developed for Part 375 were prioritized by those appearing most often and of most concern at Brownfield and Superfund sites. DER is developing and adding additional SCOs for cleanup projects; see the draft Commissioner Policy on Soil Cleanup (November 4, 2009). In the beneficial use program, any contaminants which may be of concern must be evaluated; DEC BUD staff consult sources other than Part 375 for appropriate criteria for these parameters.

**Comment 307:** Beneficial use of coal ash must not result in large ash dumps; environmental problems linked to the Chesapeake, Virginia, golf course constructed with fly ash are illustrative.

**Response:** DEC concurs with EPA that large-scale fills of coal ash do not constitute a legitimate beneficial use, and will include terms in the new solid waste regulations to ensure that such proposals are subject to full land disposal facility permit review.

**Comment 308:** Given the newly expanded Bottle Bill, there may be opportunities to construct recycling centers or to engage supermarkets in adding machines to crush clear glass, which has high recycling value. Also, a pilot project for refillable bottles might be something supermarkets and key industries might be interested in.

**Response:** Both of the two larger reverse vending machine companies, TOMRA and Envipco, have the ability to separate clear glass. Both companies are sorting the glass from grocery stores and redemption centers based on the best markets values

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available to them. DEC fully supports the use of refillable bottles. DEC has had discussions with one manufacturer using refillables and there is interest by others. However, using refillable containers can be more expensive for manufacturers, depending on their business model. The requirement in the 2009 amendments that deposit initiators remit 80 percent of the unclaimed deposits makes it more difficult for companies to justify the added costs.

**Comment 309:** DEC should encourage use of waste cooking oil and grease to generate biodiesel especially in urban areas. Where appropriate, pre-determined BUDs should be developed for use of these materials as fuels.

**Response:** DEC is considering regulatory and policy measures, as discussed in Section 8.5.8, to remove roadblocks from and ensure safe and environmentally responsible reuse of waste cooking oil and grease in fuel production.

**Comment 310:** We appreciate that DEC is not willing to exempt, or grant a BUD for, pyrolysis, gasification or plasma-arc facilities, and will regulate these as Municipal Waste Combustors.

**Response:** The appropriate final regulations for these facilities will be evaluated during the rulemaking process.

**Comment 311:** Coal ash and CKD can contain organic chemical contaminants such as PAHs and dioxins, which should be monitored (DEC typically only tests for metals).

**Response:** Where warranted to determine the potential for adverse effects from beneficial use of coal ash or CKD, parameters beyond metals may be analyzed. Due to high temperatures in the formation of these materials (especially CKD), PAHs are often at very low concentrations and are difficult to detect with reliable laboratory methods. Dioxins similarly have been low enough not to pose a concern in many beneficial use applications.

**Comment 312:** If paper mill sludge is from chlorinated bleaching processes, it should not be used for animal bedding; dioxins that may be present are bioaccumulative.

**Response:** DEC has placed limits on allowable chlorinated dioxins and furans in BUDs for paper mill sludges as animal bedding, unless sources are limited to mills producing “brown paper” or using non-chlorine processes.

**Comment 313:** What research supports limits on heavy metals in materials beneficially used in agricultural applications? Has DEC done research? Has the food chain been considered? What testing does DEC require, and what are the limits?

**Response:** A considerable body of research exists to support EPA’s 40 CFR Part 503 rule, which along with its revisions, is the basis for DEC’s Subpart 360-4 regulations for landspreading of biosolids. EPA’s research has considered bioaccumulation

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and biomagnification in the food chain. DEC requires analysis of heavy metals as listed in 360-4 and in EPA's Part 503, with comparison to concentration and cumulative loading limits stated in these regulations. The lowest limits are applied and caution is used since the matrix of ash is different than that of biosolids on which risk assessments were conducted. In addition, for a proposed liming agent, DEC will require that the byproduct meet Department of Agriculture and Markets' criteria for minimum liming potency.

**Comment 314:** County Waste has recently implemented a single stream recycling concept where I live. My neighbors and I like the concept as it is much more convenient for us. I did not read about this process in the draft plan as it may have been instituted after the draft was finalized. If this system works as the carter reports, then the system should be added to the mix of options available for consideration in helping increase the states recycling rate.

**Response:** A discussion of single stream recycling is included in Section 8.3.6 (b) of the Plan.

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**Comment 1:** The state's reliance on waste export is expensive –almost half of a billion dollars a year. With implementation of available and innovative technologies, that waste could become a fuel source that creates jobs and tax revenues to improve New York's economy.

**Response:** The Plan notes the risks and costs associated with export (see Section 9.5).

**Comment 2:** DEC should consider adopting regulations requiring only recycled products to be used for landfill closure projects.

**Response:** The current Part 360 regulations provide for the use of recycled products in landfill closure projects. This suggested mandate will be evaluated when the Part 360 regulations are amended.

**Comment 3:** The DEC environmental monitoring program no longer works or serves the best interests of all New Yorkers and requires revision. It also places an unfair economic disadvantage on those facility owners that are required to pay into the environmental monitor account. More unfairly, the facility's environmental monitor is not permitted to stop and inspect other facilities. The monitored facilities are being micro-managed by environmental monitors.

**Response:** All solid waste management facilities are subject to DEC inspection by solid waste program staff, including monitors assigned to another facility. Each Part 360 permit must ensure that the permitted activity will pose no significant adverse impact on public health, safety and the environment, and that the activity will comply with permit requirements. In some cases, DEC includes the imposition of a full or partial on-site environmental monitors as a permit condition in order to provide such assurance.

**Comment 4:** All facilities requiring Part 360 permits should be subject to some degree of environmental monitoring.

**Response:** All Part 360 permitted facilities are inspected. Where warranted to ensure permit compliance, DEC imposes full or partial on-site environmental monitors as a permit condition. Monitors are assigned to large facilities, as well as smaller facilities that pose specific compliance challenges, such as if a facility has a poor compliance history or is in close proximity to residences.

**Comment 5:** The Department could post an annual solid waste report online, which could provide a basis for evaluating changes in waste generation, recycling and disposal. The annual report could highlight effective programs and new technologies, suggest areas for improvement, and act as a tool for local solid waste management planning.

**Response:** DEC will issue an annual report on recycling and disposal data. More in depth information (program and technology effectiveness, suggested improvements, etc.) will be provided in the biennial updates to the Plan.

**Comment 6:** The state must acknowledge that there will always be a vital role to be played by landfills and waste-to-energy facilities. Even if recyclable levels increase dramatically, the remainder must still be disposed of in an environmentally sound manner. These facilities should be treated as necessary pieces of infrastructure no different than a recycling center or compost facility.

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**Response:** The Plan acknowledges that some residual waste will still require disposal even after the strategies outlined in the Plan are implemented. It is also true that full implementation will take many years, assuming that the important and substantial investments in existing landfills and combustors will play an essential role in materials management well into the future.

**Comment 7:** Existing recycling programs and methods should be improved before adding new programs or waste streams to recycle.

**Response:** The Plan recommends both improving existing programs and adding new ones. The Plan's implementation is expected to begin with maximizing the diversion of materials that are currently targeted for recycling and then expanded to add additional materials and programs (see Section 11 and Appendix A). The pace at which municipalities adjust their programs and infrastructure will be articulated in their local solid waste management plans.

**Comment 8:** Garbage is not a renewable resource and building municipal waste combustors (MWCs) and mega-landfills promotes export of waste.

**Response:** The Plan does not identify waste as a renewable resource. The Plan sets forth a vision for moving beyond a system where waste is generated and, to a large degree, simply disposed, to a system where every resident, business, and municipality plays a vital role in both reducing waste and managing our resources more effectively.

**Comment 9:** The Plan still leaves the door open for disposal facilities, capacity increases, and export, which hinders efforts to expand waste reduction, reuse, recycling and composting, and will result in significant and adverse environmental impacts.

**Response:** The Plan outlines an aggressive move away from reliance on disposal toward higher value uses and strategies of waste reduction, reuse, recycling and composting, and recognizes that competition with inexpensive disposal options can hinder progress. However, it is important to maintain flexibility in decision making with regard to disposal capacity. As the Plan is implemented, reliance on disposal should diminish substantially over time. Additional policies with regard to expanding waste reduction, reuse, recycling and composting, and preserving available disposal capacity will be evaluated in biennial Plan updates.

**Comment 10:** The Plan should be direct and supportive of flow control as a primary, proven and legally sound means of implementing a comprehensive, integrated public system.

**Response:** DEC is supportive of planning units that choose to use flow control. Flow control of waste is discussed in both Section 3.4 and Appendix D. The feasibility of using flow control is expected to be evaluated by planning units in the development of local solid waste management plans.

**Comment 11:** If one community is burdened by one or more sources of waste disposal, a health risk assessment should be conducted for cumulative impacts from all facilities.

**Response:** The Commissioner Policy on Environmental Justice and Permitting (CP-29) addresses burden issues at solid waste management facilities. Under this policy, a work group is to be established in conjunction with the New York State Department of Health to identify reliable sources of

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human health data and recommend means to incorporate such data into the environmental review process.

**Comment 12:** The state should expand the use of environmental monitors to groups of smaller facilities, each of which are not large enough to warrant an individual monitor.

**Response:** DEC already uses part time monitors at several facilities throughout the state, particularly in NYC, Long Island, and the lower Hudson Valley, and can expand the program to additional facilities where warranted, subject to staffing constraints.

**Comment 13:** The public needs to be educated about the dangers of open burning.

**Response:** The DEC's "Don't Trash Our Air" webpage ([www.dec.ny.gov/chemical/32060.html](http://www.dec.ny.gov/chemical/32060.html)) contains a considerable amount of information about the dangers of open burning.

**Comment 14:** The section on landfill expansions seems to attempt to justify the owners' preference for expansions rather than siting new facilities that could increase competition in the marketplace.

**Response:** The Plan presents the current state of the marketplace; it does not intend to justify it, but to report on it. Current market realities, which are driving not only landfills but many other solid waste and recycling facilities toward expansion, as opposed to new site development, result in and reflect highly competitive local and regional markets.

**Comment 15:** Please consider providing "findings" and "recommendations" for Chapter 9 and address the impacts of exporting and importing waste from one region of the state to another and from one state to another, plus the relative value and drawbacks of each of the four landfill service area models.

**Response:** The highlights of Chapter 9 will be summarized in a new findings and recommendations sections and a summary of some of the implications of the four service area models will be added to their descriptions.

**Comment 16:** All waste generating sectors must manage waste appropriately and all entities that manage waste should be subject to regulation, including waste transporters.

**Response:** The Plan outlines the roles and responsibilities that all waste generating sectors have in moving beyond disposal to more efficient and effective waste reduction, reuse, recycling and composting processes and programs. The Plan also recommends expansion of the waste transporter program to place specific requirements on solid waste transporters [See Section 10.1.1(13)].

**Comment 17:** We recommend that the state support efforts to separate PVC waste from the rest of the solid waste stream, and from combustion in particular to reduce and prevent dioxin emissions. Until that is accomplished, we recommend that PVC only be disposed of in secure hazardous waste landfills.

**Response:** Waste containing polyvinyl chloride (or PVC) is not currently classified as a hazardous waste and is not required to be disposed of in a hazardous waste landfill. A properly designed and operated MWC minimizes the formation of dioxin emissions. DEC will evaluate this recommendation during the process to update the Part 360 regulations.



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**Comment 18:** The per capita disposal metric is a good idea.

**Response:** Comment noted.

**Comment 19:** There is ample research to indicate that reduction, reuse and recycling strategies are superior to both landfilling and combustion disposal options, in terms of cost and environmental effectiveness.

**Response:** The Plan reinforces the state's existing solid waste management hierarchy and promotes reduction, reuse and recycling strategies, where technologically and economically feasible.

**Comment 20:** Facilities handling C&D debris should require Part 360 permits, with requirements for enclosure and stormwater management plans.

**Response:** DEC believes that it would be an undue burden to require a Part 360 permit for all construction and demolition (C&D) debris facilities. DEC's revisions to the Part 360 regulations will require an evaluation on a facility specific basis. Storm water management at most solid waste facilities is subject to DEC's storm water management requirements separate and apart from 360 permitting.

**Comment 21:** Open-air C&D debris facilities should be held to tougher standards and regulations, and require full enclosure.

**Response:** This recommendation will be evaluated in the context of DEC's revisions to the Part 360 regulations.

**Comment 22:** The process for contracting, planning and permitting of long hauling waste by rail should include consideration of the environmental impacts on communities through which the waste is proposed to be transported. Transportation of waste by rail also creates odor, noise and vector nuisances as well as spill conditions at rail yards.

**Response:** Transportation by rail carriers, including the transportation of waste, is regulated by the Surface Transportation Board as authorized under the Interstate Commerce Commission Termination Act of 1995. The Clean Railroads Act of 2008 expands the authority of states to regulate certain aspects of solid waste rail transfer facilities. However, states are still precluded from regulating transportation activities at rail yards or locations at which rail cars stop en route to their destination.

**Comment 23:** DEC should explore ways to encourage communities to partner with waste hauling companies to collect and divert from landfills specific, individual waste materials such as tires or batteries.

**Response:** Practices such as these can be explored in the development of local solid waste management plans. As mentioned in Section 3.4, these types of arrangements can be accomplished by local governments using tools such as flow control, hauler licensing, and franchising or other contractual arrangements.

**Comment 24:** The movement toward regarding waste as a resource is a good step toward alleviating the burden placed on communities which host waste transfer stations and creating local economic development opportunities. The state should invest in the establishment of green, waste-as-resource manufacturing facilities

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in these communities so the raw material would be in close proximity to the production line, thereby creating local jobs and reducing the environmental impacts of long distance transportation. For example, construction and demolition waste has tremendous potential to be recycled into new materials and products. The state should require a greater percentage of construction and demolition waste diversion from landfills through increased building deconstruction and material reuse.

**Response:** DEC supports local economic development through recycling and would support the allocation of resources to this effort, should they become available. The Plan recommends the creation of a center for C&D debris recycling to help increase reuse and recycling of this material in the state [see Section 8.3.14(a)].

**Comment 25:** The state should prohibit the clustering of transfer stations in dense urban areas. DEC should determine whether a community in which a facility is proposed is already overburdened with facilities. Proposed facilities should also be consistent with comprehensive municipal plans that identify the general need for the facilities. The state needs to develop stronger policies to ensure that activities related to waste transportation and disposal do not disproportionately impact low-income communities. The Plan should require that state and local governments take a fair share approach to solid waste management planning by:

- Evaluating the ways in which current burdens are distributed within the relevant planning units;
- Prioritizing policies and practices that will reduce impacts in currently overburdened communities;
- Ensuring that any additional impacts, such as those created by new infrastructure, are located in a manner that doesn't exacerbate existing inequities or create new ones.

**Response:** The Commissioner Policy on Environmental Justice and Permitting (CP-29) addresses some of these issues for solid waste management facilities. Land use is a local issue and DEC's Part 360 regulations do not affect or supersede local zoning requirements. DEC's siting restrictions primarily focus on environmental concerns and operational requirements rather than proximity to residences, although the restrictions are intended to protect of public health. Significant environmental impacts, including siting issues, are addressed in the State Environmental Quality Review (SEQR) process. DEC's Environmental Justice policy and enforcement efforts also play a role in avoiding environmental and public health impacts of facility clusters.

Permit applications for all solid waste management facilities proposed by or on behalf of a municipality must be consistent with that municipality's local plan, and cannot be considered complete until a local solid waste management plan is in effect for the planning unit in which the facility is proposed. Applications for facilities not by or on behalf of a municipality must include an assessment of the facility's impact on the local solid waste management plans of the planning unit in which they are located and the planning units in their service area.

**Comment 26:** The state should include enforcement provisions in Part 360 so that citizens can be engaged.

**Response:** Citizen enforcement provisions would require state legislation. However, citizens can be engaged in the development of the revisions to the Part 360 regulations and are encouraged to report suspected violations to DEC regional offices.

**Comment 27:** The state should strengthen its Part 360 regulations and improve their enforcement in order to better protect communities from localized impacts of solid waste management facilities.

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**Response:** DEC's revisions to the Part 360 regulations are intended to strengthen the regulatory program.

**Comment 28:** DEC should regulate solid waste generated by all sectors—residential, commercial, institutional and industrial. Pay-As-You-Throw (PAYT) incentive programs must be applied to businesses and institutions so that recycling and composting are encouraged. Waste haulers and transporters should be brought under the jurisdiction of the DEC through licensing, requiring reporting of all waste and recyclables collection and disposal. That will help ensure accurate measurements of diversion, waste quantities and progress toward goals. The state should plan to reassess goals and progress and adjust programs under a revised 2020 statewide plan.

**Response:** DEC intends for the Plan to address all waste generators equally. At the local level, all sectors must be included and addressed in local solid waste management planning. DEC promotes PAYT for all sectors. The Plan recommends that DEC's regulatory authority be expanded to waste transporters in order to require compliance with recycling requirements and reporting [see 10.1.1(13)]. DEC intends to evaluate progress toward this Plan's goals in biennial Plan updates and will issue a new plan in 2020.

**Comment 29:** Use of processed construction and demolition (C&D) debris as alternative daily cover (ADC) at landfills should not be counted as recycling, particularly for green building project credit. The recycling rates for C&D debris processing facilities, not counting material sent for use as ADC, should be published.

**Response:** DEC acknowledges that landfills, through construction, operation and closure, can consume vast amounts of natural resources. DEC considers ADC a beneficial use of waste materials that reduces and conserves the use of native soil as cover material during a landfill's operation. However, DEC does not consider use of ADC as recycling and does not count ADC in any recycling rate calculations. Although DEC has not published recycling rates for individual facilities, all of their annual reports are available from DEC, or can be viewed online at <ftp://ftp.dec.state.ny.us/dshm>. The annual reports for C&D processing facilities should contain sufficient information to determine individual facility recycling rates, and production of materials used for ADC.

**Comment 30:** DEC should require transfer stations that cannot conform to revisions to the Part 360 regulations to phase out operations and close.

**Response:** The Part 360 regulation revisions will include transition rules that will address timeframes for compliance with any new requirements.

**Comment 31:** DEC's Part 360 regulations should specify minimum land area, equipment and environmental protections. Facilities that do not meet these standards should be upgraded or closed. Many of the C&D debris processing facilities in NYC operate in the open air, on small sites, with no buffering, which impacts the host communities and which does not achieve high levels of recycling. There are no recommendations in the Plan regarding what DEC will do about this.

**Response:** The recommendations in this comment will be evaluated through DEC revision of the Part 360 regulations. One of the qualitative goals of the Plan is that solid waste management facilities continue to be designed and operated in an environmentally sound manner. The Plan includes recommendations to expand C&D debris processing, recycling infrastructure, and markets to achieve higher levels of recycling.

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**Comment 32:** Transfer stations should require BACT and measures, processes, methods, systems or techniques to contain the emission of odors, dust and other air pollutants.

**Response:** DEC will evaluate this recommendation in the context of the update to the Part 360 regulations.

**Comment 33:** Municipal solid waste haulers should be regulated, they should be required to report on their operations, and their operations should be audited.

**Response:** The Plan recommends expansion of the waste transporter program to place specific requirements on solid waste transporters [see Section 10.1.1(13), including reporting.

**Comment 34:** Do not expand the waste transporter program to municipal solid waste, recyclables, or C&D debris because that will affect the ability of small hauling companies to provide affordable collection services to their customers.

**Response:** The Plan recommends expansion of the waste transporter program to apply to solid waste transporters in order to ensure more complete implementation and enforcement of source separation requirements among all waste generating sectors and to provide better tracking and reporting of waste generation and destinations.

**Comment 35:** Disposal should be discouraged through substantially higher fees and no further expansion of capacity.

**Response:** The Plan seeks to incentivize waste reduction, reuse, recycling and composting and discourage disposal through a variety of mechanisms, including local evaluation of PAYT/SMART pricing systems in which generator disposal costs increase with disposal quantities. Additional policies with regard to disposal capacity will be evaluated in biennial Plan updates.

**Comment 36:** For Table 9.2, the permitted capacity of the Oswego County facility is 72,000 tons per year.

**Response:** Table 9.2 has been corrected. The Part 360 permit indicates that the permitted capacity is 73,000 tons per year.

**Comment 37:** New York should set a goal of waste self-sufficiency. New York therefore needs new waste processing and disposal capacity. The only responsible policy is to build new facilities that rely on proven, environmentally and economically sound technology.

**Response:** DEC supports self sufficiency. However, waste is a commodity; its movement is driven by economics and not restricted by political borders. In any event, the state's ability to become more self-sufficient in terms of waste management and disposal in particular will improve as waste is reduced and the waste that is generated is diverted to strategies higher in the waste management hierarchy. If the recommended strategies are implemented more slowly than the Plan suggests, or if waste is transported out of state and more disposal capacity is needed to serve a particular planning unit or area of the state, that need will be addressed through the local solid waste management planning process as well as the permitting process. As has been true in the past, new or enhanced disposal facilities will be constructed with proven, environmentally sound technology. Additional policies with regard to disposal capacity will be evaluated in biennial Plan updates.

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**Comment 38:** The Plan relies too much on disposal and export business as usual practices. Landfill capacity should be replaced with processing capacity for organic waste and recyclables. There should be a moratorium on MWC expansions. Communities that rely on export should transition to greater diversion practices.

**Response:** The Plan outlines an aggressive move away from reliance on disposal toward higher uses and strategies of waste reduction, reuse, recycling and composting and recognizes that competition with less expensive disposal options can hinder progress. However, it is important to maintain flexibility in decision making with regard to disposal capacity. As the Plan is implemented, reliance on disposal should diminish substantially. Additional policies with regard to preserving disposal capacity and incentivizing reduction, reuse, recycling and composting will be evaluated in biennial Plan updates.

**Comment 39:** MWC is a disincentive to waste reduction, reuse and recycling programs.

**Response:** As discussed in Section 9.3.2, DEC influences the proper sizing of MWCs to ensure that MWCs can coexist with reduction and recycling programs. Furthermore, the Part 360 regulations require that an MWC facility only receive waste from a community which has implemented an approved recycling program.

**Comment 40:** The plan should be clearer in its articulation of MWC as preferable to landfilling.

**Response:** The Plan endorses the state's existing hierarchy which places a preference on MWC over landfilling. The Plan states that municipal waste combustion is preferable to landfilling both from a greenhouse gas perspective (see Section 4.1.4), and generally (see Section 9.3).

**Comment 41:** The state should issue a moratorium on new MWC capacity, ban or phase out of existing facilities, or place MWC last in the hierarchy.

**Response:** A properly designed, constructed and operated MWC facility is an environmentally sound method for that portion of the waste stream that cannot be economically or technically recycled. As the state achieves the goals of the Plan, minimal additional MWC or landfill disposal capacity would be needed. Additional policies with regard to preserving disposal capacity will be evaluated in biennial Plan updates.

**Comment 42:** The statement "Contracts that commit communities to deliver a certain amount of waste to a facility, known as "put or pay" contracts, have created a disincentive for communities to reduce the amount of waste going to disposal," is not accurate.

**Response:** The statement was not intended to imply that all "put or pay" contracts are detrimental to a community's recycling program; the phrase "in some instances" has been added to clarify DEC's intent. DEC is aware of many instances where a commitment to deliver waste to disposal has hindered recycling. For example, when the City of Amsterdam cancelled its recycling program one of the reasons they cited for the program being uneconomical was the commitment they had to deliver waste to the transfer station operated by the Montgomery Otsego Schoharie Solid Waste Authority (MOSA). The section of the Plan that includes this statement (Section 9.3.2) concludes that properly structured disposal contracts and permits can ensure that the proper incentives for diversion are created.

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**Comment 43:** The Plan failed to consider the costs of various waste methods and thus eases the adoption of MWC as a feasible option.

**Response:** A full economic analysis is outside of the scope of this Plan. Planning units are expected to evaluate the technical and economic viability of various strategies to reduce waste and propose methods that will be workable within their local context.

**Comment 44:** If the Plan is successful in lowering the amount of waste, there would not be enough waste to meet contractual obligations and satisfy the existing capacity at MWC facilities. Municipal jurisdictions with MWC commitments will face a significant financial burden.

**Response:** The Plan's MSW diversion goals have been adjusted to phase in over a 20 year period. This should allow municipalities and waste disposal facilities sufficient time to adapt their business models, contractual agreements, and service areas to ensure that sufficient waste is available to continue operations.

**Comment 45:** DEC has chosen to rely on very questionable information presented in Table 9.4 that contains the information from a 2007 EPA memorandum.

**Response:** Based on DEC's experience, the EPA memorandum accurately presents the progress that has been made in controlling air emissions at MWCs.

**Comment 46:** The state's waste diversion goal should target waste diversion from landfills, not from municipal waste combustion or waste conversion technologies.

**Response:** The state's waste diversion goal is focused on the top two priorities of the solid waste management hierarchy: 1) waste reduction, and 2) reuse and recycling. Municipal waste combustion and waste conversion technologies are treatment methods that, while generally preferable to landfilling, fall within the third priority of the hierarchy and are not included in the diversion goal.

**Comment 47:** The state should take a precautionary approach to emerging technologies.

**Response:** The Plan does take this approach in its discussion of emerging technologies in Section 9.6.

**Comment 48:** There is no discussion of energy markets in the Plan nor any mention of the utility of more WTE capacity to divert waste destined for export to in-state power production.

**Response:** Energy markets and the need for in-state power production are beyond the scope of this Plan. They are addressed in the State Energy Plan, are expected to be addressed in the Climate Action Plan, and may be considered in future biennial Plan updates as appropriate.

**Comment 49:** The state should address landfill gas emissions by instituting organics diversion programs such as composting and anaerobic digestion.

**Response:** The Plan recommends organics diversion strategies in Section 4 and Section 8.4.

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**Comment 50:** The Plan should state a preference for landfills with gas-to-electric facilities and bioreactor-type landfills over traditional landfills.

**Response:** Wherever it is technically and economically feasible, landfill operators are evaluating and implementing landfill gas-to-energy projects. DEC encourages such development, when funding is available, through its landfill gas management grant program. The existing Part 360 landfill regulations allow for an operator to pursue a bioreactor-type landfill operation, provided safeguards for leachate collection and landfill gas collection are addressed. Landfill bioreactor operations are a positive area for development because they can minimize the long-term pollution potential of interred waste and help to optimize existing disposal capacity, minimizing demand for new disposal facilities.

**Comment 51:** DEC should classify energy produced through WTE as recycled material and designate WTE as a beneficial use.

**Response:** The Plan endorses the existing solid waste management hierarchy. Designating municipal waste combustion as a beneficial use is not consistent with the hierarchy.

**Comment 52:** The Plan should include in its legislative recommendations a designation of energy from waste in the state's renewable energy portfolio.

**Response:** The Renewable Portfolio Standard is outside of DEC's jurisdiction. The RPS and resultant renewable energy credits are regulated by the Public Service Commission. The New York State Energy Research and Development Authority (NYSERDA) is responsible for administering the RPS and procuring renewable energy resources.

**Comment 53:** It would be preferable to process the state's exported waste in WTE facilities in the state than it is to export that waste to landfills in other states.

**Response:** The state does not have the authority to direct the flow of waste or the power to restrict exports. To the extent that the state can incentivize management of waste, it will do so in support of the hierarchy.

**Comment 54:** If waste-to-energy use of biosolids and other solid wastes were designated by DEC to be a beneficial use, this would save local municipalities a lot on costs. Our county has a large volume of biosolids that it must dispose of through a method recognized by DEC as a beneficial use, and if they could be used beneficially through combustion in a local waste-to-energy facility, they would not require costly shipment out of state.

**Response:** While some materials can receive a case-specific beneficial use determination (BUD) as an alternative fuel, biosolids would not meet typical criteria for an alternative fuel. Alternative fuels are materials with high energy content per unit weight, consistent composition, and low levels of air or residue contaminants.

**Comment 55:** Nano-particles from MWCs are totally unregulated.

**Response:** The regulation of nano-particles and materials is an area of emerging regulatory concern for both the state and federal governments. DEC has developed an internal work group to stay abreast of

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federal governance of nanotechnology and evaluate and research possible regulatory approaches for nano-particles and materials. CP-33/Assessing and Mitigating Impacts of Fine Particulate Matter Emissions ([http://www.dec.ny.gov/docs/air\\_pdf/cp33.pdf](http://www.dec.ny.gov/docs/air_pdf/cp33.pdf)) describes DEC's interpretation of its mandates, provides guidance on the project-specific assessment of fine particulate matter impacts, and details when mitigation of such impacts may be necessary.

**Comment 56:** The Plan fails to state that recent research also demonstrates that an integral solid waste management system with waste-to-energy is a net GHG reducer, and a system without waste-to-energy is a net contributor to GHG.

**Response:** This is noted in Section 4.1.4 of the Plan.

**Comment 57:** Since the permitting process for the Onondaga County Resource Recovery Authority (OCRRA) was successful in leading to one of the strongest recycling programs in the state, doesn't that show that waste-to-energy ought to be promoted for residual wastes.

**Response:** The state solid waste management hierarchy guided both the permitting process for OCRRA and the development of this Plan. The Plan endorses the existing hierarchy, which places a preference on MWC over landfilling, and also debunks the notion that strong recycling and municipal waste combustion are incompatible.

**Comment 58:** In Section 9.3.2, titled "Compatibility with Recycling" in the third paragraph, the first sentence is missing the word "than."

**Response:** The correction has been made.

**Comment 59:** DEC needs to evaluate the benefits, both financially and environmentally, of implementing comprehensive organic recycling programs when a community already operates a WTE facility or a landfill with gas collection and utilization.

**Response:** A full economic analysis is outside of the scope of this Plan. Since the costs and conditions vary from one community to the next, sometimes significantly, it is important that the comparative costs of program options be evaluated as a part of the local planning process.

**Comment 60:** In Section 9.3.1, DEC draws comparisons with energy generation/conservation between recycling, landfilling and MWC, but does not include anaerobic digestion in these comparisons.

**Response:** The intent of this section was to compare energy generation of waste disposal methods. As stated in Section 9.6, DEC considers anaerobic digestion as a biological organics recovery system and a form of recycling. A comparison which includes anaerobic digestion is provided in Section 8.4.1(b) and notes that, according to a study produced for the State of Massachusetts, the energy generation potential of anaerobic digestion is 250 kWh per ton, as opposed to 105 kWh per ton in landfills, and 585 kWh per ton in MWC.

**Comment 61:** Technical and economic considerations favor burning plastics for energy recovery.

**Response:** The data available to DEC does not support this conclusion. While some plastics lack recycling markets, increasingly, communities in the state are accessing recycling markets for an expanding



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list of plastics. More energy is conserved through recycling plastics than is generated through energy recovery systems because recycling avoids the extraction, processing and manufacture of plastics from raw materials. For example, according to the National Association for PET Container Recovery (NAPCOR), for every pound of recycled PET flake that is used, energy use is reduced by 84 percent.

**Comment 62:** Landfills have a place in plans for future waste management. We should be planning to minimize disposing of materials that can be recycled for better purposes and higher value uses with today's and tomorrow's technology. As recycling amounts increase and landfill disposal amounts decrease, tipping fees on a per ton basis are going to increase. The Plan should also address the problem of having no economic alternatives to manage the waste that can no longer go to an increasing number of landfills that have reached capacity and are under orders to close.

**Response:** The Plan acknowledges that some residual waste will continue to be landfilled in the future. However, as the Plan is implemented, reliance on disposal should diminish substantially. The resulting tipping fees will depend on this and many other factors. Waste that was formerly disposed in local, municipal landfills, now primarily goes to larger regional facilities which provide sufficient capacity for the foreseeable future under current disposal conditions.

**Comment 63:** State of the art landfills should be utilized for non-organic solid waste materials only.

**Response:** As the Plan is implemented and wastes are managed using higher value strategies, and as new organic waste infrastructure is developed, landfills will primarily receive only non-organic materials.

**Comment 64:** Reducing, reusing and recycling cannot eliminate all of our solid waste. There will continue to be some residual requiring disposal in landfills.

**Response:** DEC concurs. The Plan recognizes that as its recommendations are implemented and wastes are managed using strategies higher in the hierarchy, residual requiring disposal in landfills will diminish but will not completely disappear ensuring that the investment represented in New York's well-designed landfills will continue to provide value well into the future.

**Comment 65:** There should not be a ban on the disposal of organic wastes. The infrastructure to collect and to process these waste does not exist today.

**Response:** The Plan does not recommend a statewide disposal ban for organic materials. It suggests that such bans may be considered when readily available alternative infrastructure exists.

**Comment 66:** The Plan should address leachate treatment and the long-term environmental impacts of landfills.

**Response:** Appendix M, which addresses the design, operation, monitoring and post-closure care of landfills, has been expanded to include a description of the regulatory requirements in 6 NYCRR 360-2.3 regarding leachate treatment.

**Comment 67:** It is expected that a lot of waste will still be going to landfills over the next eight years given the long-term export to landfill arrangements in place for New York City and Long Island communities.

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**Response:** The time frame for achieving the waste diversion goals of the Plan has been extended to 2030. Nevertheless, the Plan recognizes that as its recommendations are implemented and wastes are managed using strategies higher in the hierarchy, residuals requiring disposal will diminish but will not disappear.

**Comment 68:** Disposal of solid waste on or in the lands of New York State should be prohibited except for placement of municipal solid waste in licensed and regulated New York State government operated facilities.

**Response:** The Solid Waste Management Act defines “a state-local partnership in which the basic responsibility for the planning and operation of solid waste management facilities remains with local governments and the state provides... guidance and assistance...” Thus, municipalities and planning units are obligated to determine the best means of managing the waste generated within their communities. Given the state’s vast regional diversity and the total amount of resources required for waste management, DEC does not envision or recommend that the state become the sole provider of disposal services.

**Comment 69:** The Plan should address the need to coordinate the siting of new landfills and the expansion of existing landfills with potential water quality impacts and water quality regulations.

**Response:** The siting and expansion of landfills, including waste quality impacts, is addressed in the current Part 360 regulations. Currently all MSW disposed of in NYS goes to double lined landfills. Nevertheless, DEC will evaluate its approach to mitigating water impacts during the process to update the Part 360 regulations.

**Comment 70:** The SEQR process should be amended to prevent local governments that have a contractual agreement with private firms to operate their waste management facilities or services from being designated as lead agencies and making SEQR findings in proceedings involving those facilities or services.

**Response:** Revisions to the SEQR process are beyond the scope of this Plan.

**Comment 71:** Landfill leachate should be adequately treated on-site prior to discharging it to surface water or sending it to off-site wastewater treatment plants.

**Response:** The current Part 360 regulations require landfills to have a leachate management plan which addresses on-site and off-site leachate treatment. Currently, landfill leachate is considered to be an industrial discharge and as such needs to be treated and, if necessary, pretreated prior to acceptance at a wastewater treatment plant. Nevertheless, DEC will also evaluate this process during the updates to the Part 360 regulations.

**Comment 72:** We need to emphasize diversion of organic waste from landfills and at the same time halt all increases in capacity at the state’s largest landfills.

**Response:** The Plan outlines an aggressive move away from reliance on disposal toward higher uses and strategies of waste reduction, reuse, recycling and composting; recommends a progressive expansion of organic waste diversion and processing capabilities; and recognizes that competition with inexpensive disposal options can hinder progress. However, it is important to maintain flexibility in decision-making with regard to disposal capacity. Requests for capacity increases are subject to permitting, must be justified, and will be reviewed and evaluated on a

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case-by-case basis. Additional policies with regard to disposal capacity will be evaluated in biennial Plan updates.

**Comment 73:** Mono-fills for coal combustion waste should be identified as coal combustion waste landfills, not industrial waste landfills. The public should have access to information about these landfills.

**Response:** DEC concurs that it is important to use words in the regulatory process that convey clear information to the public. Regulatory requirements for landfills vary according to waste categories. Coal ash results from industrial operations and is therefore categorized an industrial waste. Commercial/industrial waste mono-fills must comply with all of the same requirements as municipal solid waste landfills, unless otherwise approved by DEC. All landfill owners or operators are required to submit annual reports which contain the information requested. These reports are public records and currently available for public review at <ftp://ftp.dec.state.ny.us/dshm/SWMF/Landfill/>.

**Comment 74:** DEC should revise their regulations and the Plan to prohibit all land disposal of solid waste, except at regulated facilities. This includes prohibiting on-site burial at households and farms.

**Response:** DEC will evaluate on-site disposal during the process to revise the Part 360 regulations.

**Comment 75:** Many landfills have high acceptance rates to generate short-term financial returns. This should be controlled because high acceptance rates are a disincentive to many of the objectives of the Plan. Tip fee surcharges should be charged for waste imported to facilities from outside of the facility's planning unit.

**Response:** The Plan seeks to divert waste from disposal by providing incentives for and otherwise encouraging waste reduction, reuse and recycling. Tip fee surcharges are just one of many possible revenue generating mechanisms suggested in the Plan, but are not expected to be large enough to discourage transport or disposal. Additional policies with regard to disposal capacity will be evaluated in biennial Plan updates.

**Comment 76:** More specific guidelines are needed for managing methane emissions at landfills, at various stages of decomposition, and with site-specific measures.

**Response:** Guidelines for proper landfill gas management are beyond the scope of the Plan but will be developed in the context of the revision of the Part 360 regulations.

**Comment 77:** The state needs to ensure that their alternatives for landfilling are held to the same standards as stated. Why aren't the same controls being set for compost odor controls, for efficiency, groundwater monitoring with liner system and litter control, that landfills are held to? Local governments have made the capital investment for environmental safeguards, yet oftentimes the alternatives are either exempt, or little data is provided to show that they are on equal levels of environmental control.

**Response:** All solid waste management facilities, including compost facilities, are subject to regulation under 6 NYCRR Part 360. The criteria for compost facilities are found in Subpart 360-5. Like landfills, the level of regulatory control for composting facilities is dependent on the type and quantity of waste processed. For waste types that pose the greatest potential environmental concern, such as biosolids and mixed waste, the composting facility must include a pad with leachate collection, active odor control devices, possibly enclosure, and other design and

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operational standards. For small scale composting facilities dealing with relatively benign materials, such as a small leaf composting facility, the regulations provide exemptions. The level of regulation and the technical criteria are subject to reevaluation each time the regulations are revised, a process which is currently underway.

**Comment 78:** Landfills should have a special tax levied on them that would be used to fund enforcement of applicable laws and regulations.

**Response:** DEC on-site environmental monitors oversee operations either full-time or part-time at 122 solid waste management facilities in the state. The monitors are funded by the facility operators and are required by their permits. A tip-fee surcharge is discussed as a possible source of new revenue in Section 6.3.1(d).

**Comment 79:** The modern landfill essentially acts as a slow anaerobic digester. DEC should provide more flexibility in the permitting process for landfill bioreactors and other innovative ways to manage organic wastes.

**Response:** Bioreactor landfill operations are encouraged by the provisions of Part 360 and can even be permitted under the RD&D provisions of Part 360, which provides more flexibility than the permitting process for MSW landfills but also restricts their extent and operations as experience is gained in their operation.

**Comment 80:** New landfill creation should be discouraged, while existing landfills should be conserved so that they can be used to handle material that is difficult to reuse, recycle, or reclaim (compost). Such material then becomes the prime target for a product stewardship program that promotes redesign.

**Response:** Landfill siting has become an arduous task. Most modern landfill operators try to optimize existing disposal capacity and the Plan encourages reduction, reuse, recycling and composting, and promotes product stewardship programs to divert waste from disposal. Presumably, there will be a reduced demand for new landfill space as more material is diverted and existing disposal capacity is preserved.

**Comment 81:** Consider adding a fifth category to the landfill model classifications in Section 9.4.2. There is a publicly owned and privately operated merchant landfill that serves a large and diverse area, even beyond the state.

**Response:** The purpose of presenting the four generalized models of landfill ownership and operation in Section 9.4.2 was to provide a simple explanation of how landfills currently operate in the marketplace, and the basic niches they occupy. There are of course variations on each model. Rather than present additional, very similar models, the text for some of them will be modified to cover more possibilities, such as a publicly owned, privately operated merchant facility with a large service area.

**Comment 82:** DEC should coordinate with the State Historic Preservation Office to require a more stringent deconstruction and reuse program for demolition of historic resources.

**Response:** DEC concurs that it should work with other state agencies in the implementation of the Plan and will view NYSOPRHP as a resource and partner in advocating the practice of deconstruction. In the meantime, comments on policies and procedures relating to the

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decommissioning or demolition of historic structures should be directed to NYSOPRHP. With respect to building deconstruction and material reuse generally, DEC recognizes that these are important methods of reducing the C&D debris waste stream and will continue to pursue their development, as discussed in Section 8.3.13.

**Comment 83:** The Plan does not fully address C&D debris and the crisis in current disposal methods.

**Response:** Disposal of C&D debris is a regulated activity under the Part 360 regulations. It is recommended that comments on disposal methods for a particular waste stream be directed to DEC during the Part 360 regulatory revision process. It is acknowledged that unique challenges exist with both the management of the C&D debris waste stream, and with the development of reduction strategies. Section 8.3.9 and related recommendations in Section 8.3.14 address C&D debris recycling.

**Comment 84:** DEC should regularly inspect and monitor coal combustion waste landfills.

**Response:** Coal combustion waste mono-fills are subject to the requirements of 6 NYCRR 360-2 which address their design, construction, operation, closure, and post-closure care. Regulatory requirements include environmental monitoring and reporting, as well as DEC oversight.

**Comment 85:** As landfill GHG emissions are 4% of the state's inventory, and it has been widely reported that the landfill GHG emissions are the only segment of GHG sources that have shown a significant reduction over the past 10 years due to the industry's voluntary investment in improved collection and use programs, what would be the effect of the expansion of these incentives (REC's, Tax Credits, Carbon Credits, Green Energy Production Credits, etc.) for the landfill-gas (LFG) system versus the expense of the Plan's initiatives to reduce the quantity of organics going into landfills?

**Response:** Merely expanding incentives for landfill-gas collection will not achieve the overall goals of reducing waste disposal and conserving natural resources. While the Plan recommends pursuing landfill-gas collection incentives to improve the extent of landfill-gas collection, this would achieve no progress toward reducing the landfilling of this significant portion of the waste stream, or capturing the rich nutrients in organics waste to rebuild the state's soil structures. Nevertheless, the Plan recommends collection of as much landfill-gas as possible to minimize greenhouse gas impacts and potentially generate energy.

**Comment 86:** Reference 72 (Crawford and Smith, 1985) is 25 years old. In the past 25 years much has changed in the composition and management of solid waste. Therefore the data used in the report may no longer be accurate.

**Response:** Indeed, much has changed in the composition and management of solid waste in the past 25 years. However, the 1985 Crawford and Smith reference merely related to the 20 and 50 year time frames for gas production during the methanogenesis stage of landfill operation. That process and those estimated time frames have not changed. Nevertheless, Reference 72 has been changed to the September 2005 EPA document entitled, "Guidance for Evaluating Landfill Gas Emissions from Closed or Abandoned Facilities." Figure 9-19 and the Plan text have been modified slightly with information from the 2005 EPA document. Most of the information in that reference is identical to what was in the draft Plan and the original Crawford and Smith reference.

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**Comment 87:** Landfill gas recovery for energy use at municipal solid waste (MSW) landfills in New York State is growing while landfill gas emissions in the United States have decreased 15 percent since 1990. In New York, 99 percent of the waste stream flowing into landfills goes to a modern, secure facility where methane is captured for energy production. DEC should recognize these efficient systems and enhanced technologies at landfills that are providing an alternative energy source for New York residents.

**Response:** Landfill gas collection for energy production has indeed expanded dramatically in New York State in recent years. DEC estimates that about 80 percent of waste disposed at MSW landfills goes to landfills that actively collect gas for energy recovery, while another 13 percent goes to landfills performing only collection and flaring. DEC acknowledges and encourages the enhanced gas collection and utilization systems at modern landfills and the increasing gas recovery in recent years. Landfill gas issues are discussed in Section 9.4.7. The Plan recommends continued and enhanced gas collection at landfills (see Section 4.4). However, in the Plan, DEC envisions a more comprehensive materials management strategy in which many wastes currently disposed of are instead diverted to more sustainable uses—their embedded energy and resources are captured, fewer greenhouse gases are produced, and natural resources are preserved.

**Comment 88:** Gas production in landfills should be controlled and eliminated. Given the inefficiency of the gas collection systems within landfills and the corresponding effects of methane to the heat retention capacity of our atmosphere (over 100 times more potent than carbon dioxide), DEC should continue to follow the practice of keeping the cells as dry as possible; collecting and utilizing only the gas produced by the existing moisture content of the disposed waste. Landfill gas recovery systems should be constructed and operated in such a way as to not increase methane production. Such systems should certainly not be subsidized, but should be made part of the operating cost of the landfill. The over-arching strategy for reducing and ultimately eliminating methane production within landfills should be the elimination or diversion of the organic portion of the waste stream.

**Response:** The Plan's goals and recommendations focus on diverting organic materials as a key strategy to reduce methane emissions at landfills. The Part 360 and Part 218 regulations require that landfill gases be collected and controlled when landfill capacity or gas emissions exceed certain thresholds. Landfill internal environments are generally operated under anaerobic conditions. Moisture in landfills results from the moisture in disposed waste, precipitation, and in some cases, leachate recirculation. Moisture increases the amount of gas produced. In the most modern landfills, capture of gas has improved dramatically over the years. Still, even as landfill design has gone a long way toward efficient capture of gas and continues to improve, the Plan recommends the management of organics as recyclable materials outside the disposal realm.

**Comment 89:** Siting prohibitions for landfills have been established by EPA and DEC is supposed to be carrying out this delegated program. DEC should not be deciding that it is acceptable to have a landfill over an aquifer, or to site one in wetlands or to provide other variances for federal siting prohibitions and restrictions.

**Response:** DEC is authorized by EPA to implement its municipal solid waste disposal program in the state and to develop regulations in accordance with environmental conservation law (ECL). The 6 NYCRR Part 360 regulations include siting restrictions and variance provisions. DEC may issue a variance to any provision of Part 360 unless prohibited under ECL, and unless that variance would result in a condition that would be less stringent than the federal regulations, 40 CFR Part

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258. There are no federal siting prohibitions for landfills with respect to aquifers in 40 CFR Part 258, nor are there such prohibitions in ECL. Siting and construction of landfills within a state or federally regulated wetland must be authorized by a state or federal wetlands permit. DEC is prohibited from granting variances from provisions that fall under federal jurisdiction.

**Comment 90:** Landfill expansions have been approved in areas where there is no current solid waste plan and thus no adequate amount of public participation in deciding the preferred method of handling solid waste. Given the new direction in this solid waste Plan we believe landfills must have new requirements requiring more on site processing of recyclables and compostables to reduce overall disposal.

**Response:** The Part 360 regulations require all landfill expansions beyond the horizontal and vertical limits authorized by the existing permit, or resulting in an exceedance of the approved design capacity by 50 percent or more, be considered new applications under 6 NYCRR Part 621. In addition, DEC policy requires that all permitting actions for construction, expansion and acceptance rate increases be treated as major actions under 6 NYCRR Part 621, unless specifically designated as minor. Through the Part 621 process, the public can raise issues regarding the status of the local solid waste management plans in planning units where landfills are located. The Plan recommends that DEC evaluate, and implement where appropriate, strategies to promote the establishment of recycling and composting facilities in the context of regulatory and environmental review [see Sections 8.3.14(a) and 8.4.6(a)].

**Comment 91:** Has the state considered the environmental value of promoting reclamation of the recoverable materials that have historically been landfilled? If there was an incentive to exhume the old wastes and divert them for energy recovery and materials reuse (metals, soil) and then reclaim the landfill capacity for non-putrescible waste/ash disposal, this could effectively eliminate the long term landfill GHG emission issues.

**Response:** Landfill reclamation is allowed under current regulations. Landfill reclamation is eligible for state assistance under the Landfill Closure State Assistance Program. To the extent that there is a future demand for landfill capacity along with strong markets for recyclables, this may become an important area for consideration in updates to the Plan.

**Comment 92:** The waste reduction and recycling efforts of residents within the service areas of merchant solid waste facilities needs to be improved.

**Response:** Concerned residents should raise this issue during the development of local solid waste management plans and during the public participation process for a landfill's permit.

**Comment 93:** There should be additional requirements on waste haulers, including reporting on recyclables, waste, and their destinations.

**Response:** The Plan recommends expanding DEC's waste transporter program to address gaps in data availability and recycling service provision [see Section 10.1.1 (13)].

**Comment 94:** Self-sufficiency in highly urbanized areas is impossible. A surcharge on exported waste along with extended producer responsibility solutions can help fund local waste management programs.

**Response:** Managing materials and waste in a densely populated area is indeed challenging. Implementing the proposals in the Plan will help to achieve greater self-sufficiency and will ultimately lead to

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sufficient infrastructure and capabilities to manage projected in-state waste generation and diversion quantities. The Plan proposes extended producer responsibility (Section 4) and a tip fee surcharge, as well as other funding mechanisms (Section 6.3) as methods of addressing the goals of the Plan.

**Comment 95:** New York should establish a goal to manage the waste it creates. New York must be prepared to deal with waste import restrictions by other states. New capacity requires an enormous up-front investment and, conservatively, ten years to develop.

**Response:** While waste self-sufficiency is a laudable goal for the state, or any planning unit, municipality or other entity for that matter, reliance on out of state facilities to manage some of the waste generated in-state is not necessarily irresponsible. In fact, in some circumstances it may be more environmentally, fiscally or socially responsible to rely on closer, out-of-state facilities than more distant in-state facilities.

Implementing the proposals in the Plan will help to achieve greater self-sufficiency and would ultimately lead to sufficient infrastructure and capabilities to manage projected in-state waste generation and diversion quantities. The scenario described above provides further impetus to aggressively pursue the ‘diversion from disposal’ goals of the Plan. If the recommended strategies are implemented more slowly than the Plan suggests, and more disposal capacity is needed to serve a particular planning unit or area of the state, such a situation would be addressed through the local solid waste management plan development process, as well as the permitting process.

**Comment 96:** Exported waste should be redirected to new energy from waste facilities during implementation of this plan.

**Response:** Waste disposal market decisions are made by the generating entities, and the state does not have the authority to redirect waste to any specific facility. However, as the goals of the Plan are achieved and excess capacity becomes available at MWC facilities, formerly exported wastes would likely be redirected to use that excess capacity.

**Comment 97:** The state should aspire to be self sufficient for its long-term solid waste management programs. Develop policies and funding that will support long-term self sufficiency, and do the same to provide support for local integrated solid waste management systems and programs. This will help conserve energy and reduce GHG emissions.

**Response:** DEC supports self sufficiency. However, waste is a commodity; its movement is driven by economics and not restricted by political borders. The Plan directs the state toward self-sufficiency through enhanced waste reduction and diversion rather than increased disposal capacity. The state’s ability to become more self-sufficient in terms of waste management and disposal in particular, will improve as waste is reduced and the waste that is generated is diverted to strategies higher in the waste management hierarchy. If the recommended strategies are implemented more slowly than the Plan suggests, and more disposal capacity is needed to serve a particular planning unit or area of the state, then that will be addressed through the local solid waste management planning process as well as the permitting process. Additional policies with regard to disposal capacity will be evaluated in biennial Plan updates.



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**Comment 98:** DEC should require all local solid waste planning units and haulers sending garbage for disposal to demonstrate the presence of adequate programs of waste reduction, recycling and composting in the service area.

**Response:** Solid waste management facilities in the state are restricted from accepting waste from communities that do not have an approved comprehensive recycling analysis, which is the integral recycling components of a local solid waste management plan. The Plan recommends that all planning units be required to prepare local solid waste management plans. The adequacy of their programs will be evaluated throughout the planning process. A planning unit's compliance with plans and programs outlined in its local solid waste management plan are included as part of its biennial local solid waste management plan compliance reports.

**Comment 99:** Communities should plan for waste processing and transport that deals with waste at its source and doesn't unduly burden other communities.

**Response:** The state supports, but does not have the authority to require, local self-sufficiency as waste processing and transport decisions are made by the generating community. While the state currently has limited authority to regulate transportation of waste by rail carriers, waste transportation in general is subject to applicable state and local laws and regulations.

**Comment 100:** If the qualitative goal of minimizing the need for export of residual waste is retained in the Plan, this goal should be balanced with the goal of managing waste economically. As long as a planning unit provides for disposal capacity for the relevant period, it should not matter that disposal is not actually within the planning unit.

**Response:** DEC recognizes that planning units must weigh economic factors in developing their local solid waste management plans. The Plan has been revised to clarify that one of its qualitative goals is to "minimize the need for out-of-state export of residual waste." Another qualitative goal has been added to "reduce reliance on waste disposal."

**Comment 101:** The Plan should be modified to place the goals of self-sufficiency and of minimizing waste export in their proper context, with due deference to local conditions, economics and geography, and with recognition of the environmental advantages of rail transport over truck transport.

**Response:** The Plan has been modified to reflect that, if a planning unit decides to export its waste out of state, or out of planning unit for disposal, it must consider a number of relevant factors, including cost, relationship to waste prevention and recycling programs, and impacts of transportation.

**Comment 102:** Export should be explicitly phased out by a date-certain.

**Response:** DEC supports self sufficiency. However, waste is a commodity; its movement is driven by economics and not restricted by political borders. The state's ability to become more self-sufficient in terms of waste management and disposal in particular, will improve as waste is reduced and the waste that is generated is diverted to strategies higher in the waste management hierarchy. Additional policies with regard to disposal capacity will be evaluated in biennial Plan updates.

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**Comment 103:** The Plan (Section 9.5.1) preaches to the irresponsible practice of waste exports. All exported MSW is from the greater NYC/Long Island area. Increasing recycling, composting and organics digestion, to free up more capacity upstate will not make any difference to this statistic. The “potential” of the Plan is based on markets that do not currently exist, and in many cases, technology that has not been proven. “Beyond Waste” is a long-term Plan and it is incumbent on DEC to spell out what it expects from major waste exporters as a long-term strategy since just shipping waste to distant out of state landfills is unsustainable at best, and environmentally irresponsible at worst.

The “Plan” is silent on how it envisions major municipal centers to accomplish reduction/recycling of 5.4 million tons of MSW by 2018. These areas do not possess any permits for any disposal facility, nor are there plans to construct disposal facilities. How does DEC envision compliance with the Plan’s goals in these circumstances?

**Response:** The Plan does not endorse or support waste export, it simply reports on the extent to which such export occurs. The Plan’s recommendations apply equally to all regions in the state. DEC expects all planning units—whether their waste is exported or not—to work as aggressively as possible to reduce waste and increase reuse, recycling and composting. A planning unit’s consistency with the Plan’s goals will be based on an evaluation of its programs, activities and accomplishments with regard to reducing waste and increasing recycling, not based on whether it hosts its own disposal facilities. DEC believes that reliance on out-of-state facilities to manage some of the waste generated in-state is not necessarily irresponsible. In some circumstances it may be more environmentally, fiscally or socially responsible to rely on out-of-state facilities, which are sometimes closer than available in-state facilities.

**Comment 104:** The Plan classifies “emerging technologies” as “incineration in disguise.” DEC must come up with a new category and classification system to differentiate between those technologies that burn waste aerobically to produce steam and electricity versus those that transform biomass anaerobically into a different energy product. To define and lump all emerging technologies into one grouping as municipal waste combustion is truly false, misrepresentative, and creates scientific credibility concerns for the Plan.

**Response:** The Plan does not classify “emerging technologies” as “incineration in disguise.” DEC referenced the report "Incinerators in Disguise" in Section 9.6 because it contains background information on European experience with these technologies. DEC’s use of a reference does not constitute an endorsement of an organization. The appropriate regulatory scheme for the emerging aerobic and anaerobic technologies will be considered in the revision of the Part 360 regulations.

**Comment 105:** The Plan is missing accurate data and relies on assumptions and estimates, mixed with some “unreliable” reports. The first and foremost priority of the state must be to gather reliable and consistent data. Without proper data the Plan cannot be taken seriously and certainly cannot be applied to all planning units equally as is presumed by the statements in sections 3.8 and 3.9. Does DEC have a plan on implementing consistent data collection and administration of the information?

**Response:** DEC used the best data available in the preparation of the Plan; the references used are reliable sources of valuable information. Still, the Plan acknowledges the weakness in available data and promotes gathering reliable and consistent data as a high priority for the state. The Plan includes a number of recommendations to that end. The recommended expansion of the waste transporter program will help close data gaps and provide a means of verifying facility and planning unit data [see Section 10.1.1(13)]. An electronic reporting system is recommended to streamline the

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process of data collection and submittal [see Section 8.3.14(a)]. The challenges related to data collection and analysis are discussed in Section 8.3.1.

**Comment 106:** Communities with long term contracts for out-of-state or out-of-planning unit disposal should have to meet the same kinds of waste reduction and management goals as others.

**Response:** The Plan's recommendations apply equally to all planning units. DEC expects all planning units to work as aggressively as possible to reduce waste and increase reuse, recycling and composting.

**Comment 107:** DEC should look at the relative burden on communities that host landfills and, in particular, at western New York as the area of the state that carries the bulk of the burden of waste shipped into the state from Canada.

**Response:** The Plan shows that landfills in western New York receive the largest percentage of landfilled waste and have the largest percentage of remaining disposal capacity in the state (see Section 9.4). Facility siting and operational impacts on their neighboring communities are addressed during the permitting and SEQR processes. Planning units should also consider their waste and recycling infrastructure needs and potential impacts on their communities from facilities and related infrastructure as they develop and implement their local solid waste management plans. Moreover, the state cannot restrict the intrastate, interstate, or international transportation of waste. As long as facilities are operated in accordance with applicable regulatory and permit requirements, their service area cannot be restricted.

**Comment 108:** Private developers often seek government subsidies for emerging technologies (e.g. gasification, pyrolysis or plasma arc, etc.) and seek approvals from local governments and from state government for permitting. However, local governments may not possess the expertise to carefully evaluate new proposals. In general, the market should be the clearing ground for new technology, particularly where proposals may involve potential pollution issues and high costs.

**Response:** DEC staff can serve as a resource for local governments to aid in their evaluation of solid waste management facility proposals.

**Comment 109:** A complete and comprehensive technology assessment needs to be conducted for each of the Plan's proposed alternative waste processing technologies.

**Response:** The Plan includes an overview of recycling and disposal technologies (see Sections 8.3, 8.4, 8.5 and 9). Further technical information will be compiled in a technology assessment, as recommended in Section 8.4.6 (a). The assessment will initially include composting and organics recycling technologies, and will then be expanded to include emerging technologies discussed in Section 9.6, as well as other waste disposal techniques.

**Comment 110:** More information is needed for reference 76, South Coast Air Quality Management District.

**Response:** A complete list of references has been added to the Plan. The complete source for reference 76 is "Status Update by South Coast Air Quality Management District on IES Romoland's Permit," presented at the September 20, 2005 California Integrated Waste Management Board Meeting,

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September 20, 2005. Available at:

<http://www.ciwmb.ca.gov/agendas/mtgdocs/2005/09/00019545.ppt>

**Comment 111:** DEC should develop a framework to foster development of emerging technologies that incorporate defined environmental, economic and waste reduction targets, standardized regulations, etc.

**Response:** Given the uncertain operating history of emerging technologies it is premature to foster their development. DEC will continue to monitor and evaluate these technologies and will propose additional recommendations as appropriate in biennial Plan updates.

**Comment 112:** The current RPS guidelines, and their lack of transparency, favor existing, commercially available technologies and omit the sizable gains in efficiency, environmental responsibility, and energy production emerging technologies offer.

**Response:** The Renewable Portfolio Standard is outside of DEC's jurisdiction. The RPS and resultant renewable energy credits are regulated by the Public Service Commission. The New York State Energy Research and Development Authority (NYSERDA) is responsible for administering the RPS, and procuring renewable energy resources.

**Comment 113:** Gasification and other emerging waste treatment technologies create synthetic fuel that continues the state down a carbon-based fuel burning path.

**Response:** The role of synthetic fuel and other alternative fuel sources is discussed in the state's Climate Action Plan, but is beyond the scope of this Plan.

**Comment 114:** Reference to the NYCEDC study, *Focused Verification and Validation of Advanced Solid Waste Management Conversion Technologies* should be removed from the plan.

**Response:** The NYCEDC study presents valuable information for the Plan's cursory evaluation of emerging technologies. DEC will prepare a technology assessment on conversion technologies that will provide a more detailed analysis of the benefits and drawbacks of these systems as part of the implementation of the Plan.

**Comment 115:** MWC ash, unless it is treated in some way, can be in the form of fine dust, and when used as ADC at landfills, high winds and the use of heavy equipment can result in the ash being carried by the wind to nearby receptors.

**Response:** Pursuant to 6 NYCRR 360-1.15(b)(10), alternate daily cover materials, including MWC ash, must be approved by DEC on a facility-specific basis. In addition, alternate cover materials must meet requirements in 360-2.17(c) to "...adequately control vectors, fires, odors, blowing litter and scavenging without presenting a threat to human health and the environment...". If MWC ash is proposed by a landfill operator as a daily cover material, DEC reviews its use to meet these requirements.

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**Comment 1:** Section 10, titled “Agenda for Action,” proposes to set a goal of a 15 percent reduction per capita waste to disposal every two years. Progress toward that goal would be reviewed and updated every two years. We support the goal and the commitment to review progress toward attaining it. However, we should not ignore the fact that we can predict with some accuracy the impact of the proposals on waste reduction and recycling. These impacts should be projected in the Plan in order to make the tracking of progress more precise. Projecting the impacts of the proposals would also lessen the burden on planning units who would otherwise have estimated these impacts.

**Response:** The implementation schedule in Section 11 has been enhanced to provide greater detail on the impacts of proposed actions. The recovery/disposal projections in Appendix A have also been revised.

**Comment 2:** The goals in the plan are overly aggressive and optimistic. Program implementation is challenging, funding is not available, and staff is limited. The state needs to pursue legislative/regulatory action to provide assistance and to enforce recycling mandates beyond what currently exists.

**Response:** The goals of the Plan have been adjusted to phase in over a 20-year period to account for existing programmatic and financial constraints (See Table 2.1). In Section 10.1.1 (7), the Plan recommends increasing DEC’s statutory authority to enforce recycling requirements.

**Comment 3:** DEC should immediately adopt rules and regulations that ban recyclables from landfills and waste to energy facilities. This would immediately create new green jobs and businesses.

**Response:** Because of potential added burdens on municipalities if bans are put in place before there is sufficient capacity to manage the banned material (e.g., illegal dumping), the Plan recommends that waste disposal bans be implemented where alternative infrastructure exists.

**Comment 4:** I support developing uniform data collection methods for waste collectors and a statewide permit program. I support restricting landfill expansions until local solid waste management plan goals have been met.

**Response:** The Plan recommends expanding DEC’s waste transporter program to address gaps in data availability and recycling service provision [see Section 10.1.1 (13)]. Permit applications for solid waste management facilities require the applicant to review applicable local solid waste management plans for consistency (in the case of a facility operated by or on behalf of a municipality) or impact (in the case of a private facility). DEC uses this information in determining appropriate action, including potential permit conditions or plan modification requirements.

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**Comment 5:** The Plan recognizes that additional financial and human resources, and legislative and regulatory action, are needed at the state and local level to implement the Plan. However, we should recognize the financial constraint the state is under and not enact any legislative or regulatory framework that will be overly burdensome. If we make it too expensive to do business in New York State we will continue to drive business out.

**Response:** Comment noted.

**Comment 6:** It is good to say we want to reduce incineration and increase recycling, but that's not going to happen without a plan to get us from here to there. I'm not sure there's enough depth of analysis here to launch legislative discussion.

**Response:** Comment noted.

**Comment 7:** It will be very difficult to pass legislation, especially if it includes additional fees. If it does pass, it may be viewed as a source for the state's general fund.

**Response:** Comment noted.

**Comment 8:** Implementation of the Plan will depend almost wholly on the actions of local governments. The Plan should lay out what the state will do and specify how the state will fund and implement key policies. Regulatory leveraging will only cause polarization and lead to further disparities between integrated public systems and private landfills and lead to a breakdown between state and local governments.

**Response:** The Plan's programmatic and regulatory recommendations (Sections 10.2 and 10.3) lay out what the state will do. Lacking immediately available funding, the Plan articulates the need for funding, identifies potential sources, and outlines how funds will be used when available. DEC intends to reduce disparities between publically and privately operated facilities to move toward a more level playing field.

**Comment 9:** I am concerned that the goals of the plan will not gain the support of the Legislature or obtain the funding necessary. DEC has to forcefully move the legislation through the Legislature.

**Response:** Comment noted.

**Comment 10:** The Plan should include a recommendation to reduce disposable plastic bags. They pollute the environment and harm marine wildlife. The state should consider a plastic bag ban or a surcharge. Both policies have been shown to reduce the use of bags and increase the use of reusable bags.

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**Response:** A discussion of a plastic bag surcharge has been added as a potential revenue stream to Section 6.3.1. DEC supports the existing plastic bag recycling law, also discussed at <http://www.dec.ny.gov/chemical/50034.html>.

**Comment 11:** The Plan does not see crafting regulation or enacting legislation as points for discussion in the Plan, rather they are the mechanics by which the concepts that have already been agreed upon are to be made real.

**Response:** The Plan defines key areas where regulatory and legislative changes would aid in implementing its goals. The recommendations are broad in nature and will be refined through the public processes associated with enacting legislation or regulations.

**Comment 12:** The job creation potential of the legislative actions in the Plan is important, particularly given the state's financial condition. We recommend that the legislative package prepared to implement the plan connects to themes of sustainability.

**Response:** Comment noted.

**Comment 13:** We urge DEC to emphasize the importance of implementing the Plan to ensure that it does not languish.

**Response:** The Plan states the importance of its implementation. DEC intends to emphasize its importance as a key element of the agency's future programs. The agency's recent reorganization to create a Division of Materials Management organized around the priorities of the Plan is evidence of this.

**Comment 14:** The first crucial step is to enact state legislation to mandate recycling everywhere by everybody with a minimum list of recyclables. Without such legislation, we cannot imagine meeting the Plan's goals in the short-term.

**Response:** The Plan recommends an update to the Solid Waste Management Act that includes those elements (see Section 10.1.1).

**Comment 15:** The Plan designates a list of mandatory recyclables and proposes eliminating the "economic markets" test in General Municipal Law (GML) 120-aa. This will cause economic hardship for communities if/when markets are not available.

**Response:** The Plan has been revised to include a list of designated recyclables. However, the "economic markets" clause would stay in place for additional recyclable materials for which markets exist. This is not intended to divorce economic considerations from recycling, but rather to acknowledge that communities in New York have been consistently recycling a suite of materials. Experience over the last twenty years has demonstrated that market downturns tend to be short-term, and communities are more likely to ride them out than to adjust their

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programs and face the costs associated with re-educating the public. By creating a core list of designated recyclables, the state can better educate the public, enforce requirements, and otherwise support local efforts. The Plan proposes that a waiver process be put in place to allow communities to vary from the mandatory list in cases of economic hardship.

**Comment 16:** The state needs legislative mandates to facilitate recycling requirements for construction and demolition debris recycling. Models include having municipal governments require waste management plans for construction and demolition sites and meet diversion requirements, and having DEC develop a list of policies that municipalities can use to increase C&D recycling and reuse.

**Response:** This is one of the strategies DEC can evaluate in the forums it creates to address C&D debris management issues [see Section 8.3.14 (a)]

**Comment 17:** DEC should work with other states to deal with the volume of C&D debris that is sent out of state.

**Response:** Although not specifically noted in the Plan, DEC works with Northeast Waste Management Officials' Association (NEWMOA) and Association of State and Territorial Solid Waste Management Officials (ASTSWMO) on this and other C&D debris management issues.

**Comment 18:** The Plan recommends an update to the Solid Waste Management Act of 1988. The City of New York Department of Sanitation (DSNY) does not support this legislation. Waste management should remain primarily a local responsibility.

**Response:** Under the Plan, waste management continues to be primarily a local responsibility.

**Comment 19:** The Plan notes that the Returnable Container Act (Bottle Bill) is the most effective recycling program in the state. It is a serious oversight that there is no legislative recommendation to update the Bottle Bill. At a minimum, the Plan should recommend that the Bottle Bill be expanded to include all non-carbonated beverages. This will add 1.46 billion bottles and cans to the program.

**Response:** The Plan was amended to add a recommendation to expand the Bottle Bill to include all beverage containers.

**Comment 20:** A stated goal of the Plan is to update and clarify recycling and green purchasing requirements for state agencies and authorities. The Plan states that many state agencies have not complied with the 1988 Act. It would be instructive to analyze why they have not complied, and what actions are necessary in order to attain compliance in the future.



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**Response:** The Plan does not state that many agencies have not complied with the 1988 Act. The state has since adopted Executive Orders 142 and 4 to ensure that state agencies implement waste, reduction, reuse, recycling and green purchasing to go beyond the requirements of the 1988 Act.

**Comment 21:** The Plan should demonstrate that an integrated solid waste management system that includes waste-to-energy is as cost effective as a system that does not and relies on landfilling.

**Response:** Such a cost effectiveness analysis is outside of the scope of this Plan. Instead, the Plan is a resource that provides options for the state, local governments, and the private sector to consider in reducing disposal. The Plan recognizes the diversity of the state's planning units. As such, the selection of a particular integrated solid waste management system is a critical part of the local solid waste management planning process.

**Comment 22:** To achieve the Plan's goal of reinforcing recycling requirements for all generators, the Plan should propose mandatory enforcement programs, such as load checking at disposal facilities, and obligating haulers to notify customers of the law and provide complying programs.

**Response:** The Plan's recommendations for disposal restrictions (Sections 10.1.1 (9) and 10.2.1) would be implemented by requiring disposal facility operating plans to include recyclables and compostables in their incoming materials inspection protocols. The recommendation to expand the state's waste transporter program [Section 10.1.1 (13)] would explicitly require transporters to comply with local laws and provide recycling services.

**Comment 23:** We support the Plan's recommendation to replace the "economic markets" clause in existing law with a mandatory list of recyclables.

**Response:** Comment noted.

**Comment 24:** We support the recommendation to require transporters to provide recycling services to all customers.

**Response:** Comment noted.

**Comment 25:** The recommendation at Section 10.1.1 (13) to allow for transport of waste only to facilities authorized to accept the waste or material being handled needs to be clarified as to its intent.

**Response:** The intent of this recommendation, to ensure that waste transporters deliver specific wastes or materials only to a facility authorized by regulation to accept such waste or material, is to avoid mismanagement of materials such as untreated

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regulated medical waste, mercury-containing products, liquid wastes, hazardous waste, or other wastes that could cause a hazard to facility employees, the public, or the environment if improperly handled or disposed.

**Comment 26:** The Plan should recommend banning recyclables and compostables from disposal, and also ban waste haulers from transporting recyclable and compostable materials to landfills.

**Response:** Section 10.1.1 (13) recommends that an update to the Solid Waste Management Act include provisions to prohibit transporters from delivering source separated recyclables to a disposal facility.

**Comment 27:** Under Executive Order 4, all agencies are required to reduce waste and recycle. The Plan should cite this authority and propose a thorough review of other state agencies' compliance with the order's waste reduction and recycling requirements.

**Response:** Executive Order 4 is discussed in Section 8.1 and presented in Appendix B. DEC works with OGS to collect and analyze annual reports from the agencies and authorities subject to the order. The discussion in the Plan has been updated to reflect the results of the first year, as published in the first annual program report. The full report is available at <http://www.ogs.state.ny.us/EO/4/Docs/FirstAnnualProgressReport.pdf>.

**Comment 28:** The Plan recommends that communities be allowed to apply for a waiver from the proposed mandatory recycling requirements due to economic hardship. Such a role is outside of DEC's expertise and charter.

**Response:** Evaluating whether economic markets exist has been DEC's responsibility since the Solid Waste Management Act of 1988 established the "economic markets" clause in GML 120-aa. DEC's guidance for preparing an economic markets analysis is provided in Technical and Administrative Guidance Memorandum (TAGM) SW-92-06 available at <http://www.dec.ny.gov/regulations/8747.html>.

**Comment 29:** The proposed list of mandatory recyclables needs to be expanded to include magazines, mixed paper, glass and all plastic containers. In particular, omitting glass from the list ignores the fact that the public is well educated to separate glass for recycling, and most communities in the state collect it.

**Response:** DEC's recommended list of designated recyclables reflects the materials for which there have been consistent markets for the last two decades and which have been consistently collected by the preponderance of the state's communities. The list of recommended designated recyclables has been expanded to include paper, glass, metal, plastic, and yard trimmings. The list is intended to be a floor rather than a ceiling, and DEC recommends that communities be required to recycle

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additional materials where economic markets exist. Communities are encouraged to go beyond the core list of recyclables in their local laws and programs.

**Comment 30:** DEC's role in implementing this Plan would be akin to the storm water phase 2 program whereby the state dictates mandates, provides minimal guidance, and passes on implementation to localities. This is another unfunded mandate to municipalities.

**Response:** The Plan itself does not impose any mandates. Any new requirements proposed in the Plan are subject to the regulatory or legislative processes and their associated public review.

**Comment 31:** The Plan recommends expanding the waste transporter program to include MSW and C&D debris transporters. This is an unnecessary additional financial burden on municipalities and will limit competition, driving collection costs higher and possibly driving small enterprises out of business or leaving rural communities without service.

**Response:** The Plan does not recommend that fees be associated with the expanded transporter program, so there should be no additional financial burden. The recommendation is intended to level the playing field to ensure that companies that abide by recycling requirements, whether they be large or small, are not undermined by competition that can offer lower cost services by avoiding requirements to recycle, or otherwise violating legal requirements.

**Comment 32:** NYPIRG strongly supports the recommendation to expand requirements for waste transporters, particularly the requirement to ensure transporters provide recycling services to customers. That requirement could be improved by enabling customers to avoid contracting with their waste hauler for disposal if they demonstrate that they have made other arrangements to recycle.

**Response:** Comment noted.

**Comment 33:** The Plan recommends that DEC be granted authority to enforce local source separation laws. This has traditionally been a local responsibility. We oppose any increase in DEC's regulatory authority.

**Response:** This recommendation is not intended to usurp local authority. With this authority, DEC could assist local communities in instances where they cannot, or do not, enforce their own requirements due to a lack of resources or for other reasons.

**Comment 34:** The Plan's recommendations and policy initiatives rely on implementation of product and packaging stewardship or new revenue generating programs. Such programs will not create savings; new economies cannot be created by imposing new additional restrictions on business and industry.

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**Response:** The policies identified by the commenter are among a much larger list of recommendations. They are intended to engage the parties with the most influence on the design of products and packages—manufacturers—in the end-of-life management of the materials they place in the marketplace. These systems will likely be more efficient than municipally operated programs because the manufacturers will need to meet recycling goals and will be driven to maximize economic return.

**Comment 35:** The proposed revisions to the Solid Waste Management Act should establish a zero waste goal and zero waste systems.

**Response:** The Plan stops short of recommending a zero waste goal by recognizing that some waste is inevitable.

**Comment 36:** We are very pleased to see a proposed revision of the Solid Waste Management Act in the Plan’s recommendations. The NYC Waste Prevention Coalition has proposed revisions on our website.

**Response:** The proposed revisions described were considered in developing the recommendations in the Plan.

**Comment 37:** A revised Solid Waste Management Act should require all jurisdictions to have robust plans, including waste prevention, reuse, recycling and composting. Local plans should match or exceed the goals of the state Plan.

**Response:** The Plan recommends that local planning be made mandatory [see 10.1.1 (12)]. Local plans are required to address the issues raised by the commenter. While the state Plan is an important guidance tool, it is based on the premise that local jurisdictions should have the flexibility to develop plans that reflect their local conditions.

**Comment 38:** The Plan recommends setting new goals and defining new metrics. It is premature to set waste reduction goals when the new metrics are not yet well understood and new markets and technology are not yet proven.

**Response:** The Plan does not recommend mandatory or enforceable recycling goals, but rather suggests that a revised statute include goals to guide the state’s waste reduction efforts. The primary metric proposed, a per capita waste disposal rate, is based on information currently collected by facilities and municipalities. Facilities are required to report disposal data to DEC, including the waste’s planning unit of origin, so the source data for calculating per capita disposal rate already exists and is well understood.

**Comment 39:** DEC must include a funding mechanism to pay the difference between the market value of recyclables and the costs of collection and processing. DEC continues to ignore that

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since the plan calls for reductions in disposal, the current funding mechanism for recycling programs (tipping fees) will be eliminated.

**Response:** Section 6.3 includes a host of proposed funding mechanisms for implementing the Plan; Section 6.3.2 includes several options for local government financing of programs. Integrated system tip fees [described in Section 6.3.2(c)] is one option, but not the only approach to financing local programs.

**Comment 40:** DEC should not force recycling quotas through permit conditions. The Plan should lay out specific criteria that DEC will use to implement new initiatives and ensure financial and public support before mandating special permit conditions. Increasing DEC's enforcement authority should be sufficient.

**Response:** The Plan does not change or suggest changes to the manner in which conditions are developed through the permitting process.

**Comment 41:** Pay As You Throw (PAYT) is bad policy. Planning units that meet the state Plan's objectives should not have to use PAYT. Not all communities are alike; rural and urban (largely multi-family) areas are particularly challenging. PAYT will cause illegal dumping.

**Response:** PAYT is proven to be a powerful incentive for generators to reduce waste and increase recycling. The Plan's recommendation on PAYT/Save Money and Reduce Trash (SMART) has been revised to focus on a series of programmatic and planning activities, instead of a mandate. The activities include DEC providing additional resources, tools and information to local governments and planning units evaluating and implementing PAYT if locally appropriate and feasible. DEC will evaluate the need for additional measures (i.e., mandate) in biennial Plan updates.

According to EPA, illegal dumping and inappropriate diversion are often more a perceived barrier than an actual problem (see <http://www.epa.gov/waste/conservation/tools/payt/top8.htm>). A study performed by Duke University found that 48 percent of the PAYT/SMART communities surveyed saw no change in illegal dumping with program implementation, while 6 percent felt illegal dumping declined. Only 19 percent felt it had increased. A recommended best practice is to have a strong enforcement initiative when a PAYT/SMART is introduced. DEC will develop additional tools and information on this and other topics related to PAYT/SMART.

**Comment 42:** NYPIRG supports mandating PAYT programs

**Response:** The Plan's recommendation on PAYT/SMART has been revised to focus on a series of programmatic and planning activities, instead of a mandate. The activities include DEC providing additional resources, tools and information to local governments and planning units evaluating and implementing PAYT if

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locally appropriate and feasible. DEC will evaluate the need for additional measures (i.e., mandates) in biennial Plan updates.

**Comment 43:** The PAYT requirements should be applied to all sectors, including commercial and institutional generators; generators should be charged for waste, and recyclables should be collected at no additional charge.

**Response:** DEC supports the application of PAYT requirements to all sectors.

**Comment 44:** Revisions to the Solid Waste Management Act should require that planning units consistently implement programs and achieve consistent performance. The Plan does not effectively address export. We need a program to transition communities that rely on export to greater levels of recycling and composting. Disposal surcharges should apply to exports for disposal and imports.

**Response:** The Plan is based on the premise that local jurisdictions should have the flexibility to develop plans that reflect their local conditions and should not be held to mandatory performance targets. Export issues are discussed in Section 9.5. If a tip fee surcharge system is established by the legislature, DEC expects it will apply to all waste, including waste exported to other states and waste imported from other states.

**Comment 45:** The Plan should reinforce the hierarchy and the neglected municipal waste combustion portion. It is higher on the hierarchy than landfills, but the Plan lumps them together on the bottom rung.

**Response:** The Plan supports the hierarchy's preference for municipal waste combustion over land disposal; they are discussed separately in Sections 9.3 and 9.4.

**Comment 46:** The Plan should not recommend maintaining the waste management hierarchy. Including landfills and municipal waste combustors on the hierarchy could create an obstacle to achieving the Plan's vision by drawing attention and resources away from reduction, reuse, recycling and composting. Given the documented concerns about methane generation in landfills, composting and organics recycling should be on equal footing with reuse in the hierarchy, instead of equivalent to recycling.

**Response:** DEC's research and analysis supports maintaining the structure of the current solid waste management hierarchy, with the clarifications identified in Section 10.1.1 (3).

**Comment 47:** The plan should clarify its proposal for revisions to the materials and waste management hierarchy, including adding a diagram. Municipal waste combustion must be recognized as preferable to landfilling, not just lumped together as disposal, and waste minimization, reuse and recycling need to be at the top of the hierarchy.

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**Response:** A summary of the Plan's intent regarding the solid waste management hierarchy can be found in Executive Summary E.1.1(3), while a full description can be found in Chapter 8. The Plan supports the hierarchy's preference for municipal waste combustion over land disposal, as well as the maintenance of waste reduction, reuse, recycling, and composting at the top of the hierarchy.

**Comment 48:** A significant disposal surcharge will provide an incentive to transporters to deliver recyclables and compostables to recycling facilities; there would be less of a need for bans if this were the case. We favor substantial disposal surcharges to bans, since bans are hard to enforce.

**Response:** The Plan lists a disposal surcharge as a source of funding but not as an incentive. Unless the legislature establishes a very significant fee, it will not serve to substantially reduce waste.

**Comment 49:** We support disposal bans or taxes for the disposal of materials designated for recycling or composting.

**Response:** Section 10.1.1 (9) recommends a disposal restriction for designated recyclables.

**Comment 50:** The Plan should not enforce a ban on disposal of organic waste. The infrastructure to collect and process large quantities of organic waste is either not available or cost-prohibitive. If disposal bans are promoted, the state should ensure that feasible, environmentally sound and dependable facilities and infrastructure are in place to manage the materials before bans are imposed.

**Response:** The Plan does not recommend a statewide disposal ban for organic materials. It suggests that such bans may be considered when alternative infrastructure exists.

**Comment 51:** Mandates and bans will not move the state forward in recycling. We urge DEC to move away from punitive thinking toward the development of incentives for waste reduction and recycling.

**Response:** The Plan's recommendations include a balance of incentives and achievable mandatory actions which DEC expects will yield strong results.

**Comment 52:** Waste bans are unnecessary and can deter sound waste management practices. If alternative infrastructure exists, a waste ban is meaningless; if that infrastructure is unavailable and a disposal ban is in place the generator is left with no options. Bans increase illegal dumping and export.

**Response:** DEC's research indicates that waste bans can play an important role in raising awareness of recycling and diversion requirements when coupled with appropriate infrastructure, and can also aid in enforcement of separation requirements.

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**Comment 53:** We recommend banning the following construction and demolition debris materials from disposal: metal, asphalt pavement, brick, concrete, unpainted wood, paperboard products, and yard waste. Bans on disposal of the following materials should be phased in over 5 years: gypsum, carpet, ceiling tiles, and unpainted wood products (e.g., particleboard, oriented strand board, plywood). This policy supports the development of in-state processing businesses and preserves valuable disposal capacity.

**Response:** In Section 8.3.14(a), the Plan recommends creating a New York State Center for C&D Debris Recycling to analyze the status of C&D recycling and recommend policy initiatives, which may include disposal bans where alternatives exist. Many of the items listed in the comment’s immediate ban category qualify for beneficial use. Yard waste is not included the definition of C&D debris.

**Comment 54:** We support disposal bans. The Plan’s recommendations should be strengthened to restrict disposal of any recyclable materials or yard waste.

**Response:** DEC’s recommendation is focused on “recognizable quantities” of recyclables or yard waste to enhance enforceability.

**Comment 55:** The Plan suggests that disposal facilities should contribute to reduction, reuse and recycling. Most landfills have the land available to change the scope of their operations to include waste reduction activities, HHW collection areas, or reuse centers.

**Response:** Comment noted.

**Comment 56:** We urge DEC to establish a set of minimum requirements and criteria for approval of local plans and financial incentives to reduce the need for enforcement. We urge that the state allocate 75 percent of the funds collected through disposal surcharges to planning units, and give a greater percentage of funds to jurisdictions that have comprehensive 3R programs. We recommend that strong planning units not be exempt from disposal fees, but be accommodated through a different fee structure or other means.

**Response:** Environmental Conservation Law (ECL) 6 NYCRR Subpart 360-15, Comprehensive Solid Waste Management Planning, contains the requirements for local planning and criteria for approval. The Plan provides a menu of options for generating and distributing revenue for the programs recommended. DEC will work with the legislature in considering details, such as using the funds to incentivize strong local programs, and urges stakeholders to engage in the legislative process to produce a workable and forward looking program.

**Comment 57:** We support the concept of establishing new goals and metrics in an update to the Solid Waste Management Act, but we are unclear about what the new metric is that DEC is proposing.



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**Response:** The Plan proposes tracking progress based on per capita waste disposal, and per capita diversion of recyclable and compostable materials. The primary goal of the Plan is to reduce the per capita waste disposal rate statewide, and each community's program will be evaluated based on its ability to achieve progressive reductions in waste going to disposal (municipal waste combustion and landfill). Per capita recycling, tracked by material category (e.g., per capita recycling of metal, glass, plastic, and paper; per capita yard waste and food scrap composting, etc.), will help to evaluate a program's success at diverting waste through recycling and compare one community to the next.

**Comment 58:** The recommendation to ensure that permitted facilities maximize recycling and reuse [10.1.1 (8)] needs more teeth. NYPIRG supports a moratorium on all new landfills and municipal waste combustion facilities in order to maximize waste prevention, reuse, composting and recycling.

**Response:** DEC believes it is important to maintain flexibility in waste management decisions and, therefore, opposes strict moratoria on waste management facilities.

**Comment 59:** We oppose amending the ECL to allow for reuse or resale of post-consumer treated lumber in any setting. This would be difficult to enforce and would potentially result in unsafe human health exposures.

**Response:** The legislature's intent in enacting the creosote ban was to protect worker safety. The amount of creosote remaining in post consumer creosoted lumber is minimal and the limitation to non-residential settings minimizes exposure risk.

**Comment 60:** The Plan should recognize that the private sector manages the majority of the waste in the state. Concentrating on revenue for the public sector, while banning disposal of certain materials at private sector facilities, is not likely to achieve the Plan's goals.

**Response:** The role of the private sector is discussed in Section 3.2.3 where it is noted that the majority of the waste in the state is managed by private companies. While the private sector manages most of the waste disposal capacity, local governments bear the bulk of the burden for developing programs and providing education, incentives and enforcement, and need resources to do so.

**Comment 61:** We conditionally support the recommendations for development of product and packaging stewardship legislation and programs. However, in order for such legislation to gain support, DEC must demonstrate that it will have the benefits claimed in the Plan.

**Response:** DEC will continue to monitor the performance of these programs in other jurisdictions and to offer this data as part of the legislative process.

**Comment 62:** The list of items targeted for product stewardship should include plastics, particularly single use disposable plastics. Mercury containing products should be addressed

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comprehensively with reduction and recycling strategies. It is unclear why office furniture is included as a target for product stewardship given the high reuse potential of these items.

**Response:** Plastics are used in a wide variety of items, including many that are on the list for potential stewardship programs (e.g., packaging, carpets, automobiles, electronics, etc.). The Plan had listed mercury containing products as a category of HHW, but it has been amended to recommend that all mercury containing products be included in product stewardship programs as a stand-alone category (i.e., separate from HHW). Establishing product stewardship requirements for office furniture can facilitate reuse by requiring that manufacturers take back and redistribute office furniture.

**Comment 63:** Freon™ appliances should be added to the list of products targeted for product stewardship due to lax enforcement of the federal Freon™ rules. DEC and EPA should increase enforcement of the rule at scrap dealers and junkyards.

**Response:** The Plan has been modified to include appliances as a potential product to target for product stewardship. DEC has a program for inspecting transfer stations and vehicle dismantling facilities, some of which handle appliances.

**Comment 64:** The Plan should include a better defined and prioritized list of products to be covered by future product stewardship legislation. It should focus on hard to manage, toxic and radioactive materials.

**Response:** The Plan's inclusion of many potential targets for product stewardship is intended to provide a menu for the Legislature's discussion and debate. What stewardship proposals move forward will be determined based on the priorities of the Legislature and the Executive in a given year. Criteria include those noted by the commenter, as well as cost to government, stakeholder input, existing models, and ease of implementation.

**Comment 65:** The Plan should propose executive orders on green purchasing to ensure purchasing of durable products, incorporation of take back requirements, design for the environment, and recycled content. DEC should review legislation introduced in NYC to this end.

**Response:** Executive Order 4 addresses all of the issues outlined, and sets agency sustainability requirements. The Plan recommends aggressively implementing that order, and codifying it in an updated Solid Waste Management Act.

**Comment 66:** The Plan discusses revenue from unclaimed beverage container deposits as a potential funding source for state and local recycling and waste prevention efforts. It is unclear why it is not included in the revenue generating programs presented in Section 10.1.3.

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**Response:** Unclaimed deposits are currently directed to the general fund, therefore redirecting those funds to waste reduction and recycling uses is included in the recommendation to “increase state funds dedicated to reduction, reuse and recycling.” (See Section 10.1.3)

**Comment 67:** In order to provide a meaningful revenue generating proposal, DEC must estimate the cost of implementing the Plan. The Environmental Protection Fund (EPF) contribution to municipal recycling has not amounted to a significant contribution to program expenditures. Raising taxes through tipping or permit fees will only increase local taxes and should be opposed if all of these funds do not flow back to the planning units. How much funding does DEC envision for additional staff to implement the Plan?

**Response:** The Plan does not contemplate that the state should or will cover all waste management costs. Waste management has been and continues to be a local responsibility with the state providing targeted support. Still, it is understood that a more substantial and reliable funding source must be found to support municipalities in making significant progress in implementing the Plan, particularly at a time when local governments are struggling to meet their public service obligations.

**Comment 68:** We need enforceable requirements backed by penalties, and we need sufficient agency staff charged with compliance.

**Response:** Comment noted.

**Comment 69:** The Plan should consider recommending differential planning and regulatory requirements for different areas of the state to make a more practical approach to state planning.

**Response:** The local solid waste management planning and solid waste management facility regulations offer ample flexibility to ensure that local conditions are considered in planning and regulatory reviews, while ensuring environmental protection.

**Comment 70:** The playing field between municipal and private waste management operations must be leveled including requiring private landfills not to dispose of recyclables, and requiring private landfills and recyclers to report to planning units.

**Response:** Recommendations in Sections 10.1.1 (8) and 10.1.1 (9) are intended to help level the playing field. In addition, the online reporting system proposed in Section 10.3.4 is intended to include the private facilities described in the comment.

**Comment 71:** We are adamantly opposed to DEC being authorized to issue any predetermined beneficial use determinations (BUDs) without requiring an amendment to Part 360 or public review. Predetermined BUDs have no health or environmental monitoring!

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**Response:** Predetermined BUDs are granted for materials whose characterization and health and environmental impacts are well understood in certain modes of beneficial use, and where monitoring is not necessary or will be performed under other regulatory programs. Predetermined BUDs continue to be helpful in streamlining reuse of materials for which DEC's case-specific review is either not needed or may hinder reuse.

**Comment 72:** Why are BUDs not specifically identified in the solid waste management hierarchy? I think they should be.

**Response:** Certain BUD applications, where the materials are used to displace virgin materials in a product, are considered recycling, while BUDs for fuel related uses are considered equivalent to municipal waste combustion, and BUDs for landfill cover are considered equivalent to land disposal. Therefore, BUDs can fall into many rungs of the hierarchy depending on their end use.

**Comment 73:** It is unclear when predetermined BUDs apply to a material, for example, coal combustion bottom ash, which may have both case-specific BUDs, such as BUD No. 122-0-34, and supposedly also be allowed certain uses under predetermined BUDs. Which requirements apply?

**Response:** The Plan is not intended to address specific BUDs, but in general, when predetermined BUDs have been issued, as many were through the 1993 revision of 6 NYCRR Part 360, these superseded any previous case-specific BUDs for identical beneficial uses. Beneficial uses under the previous BUDs, which are not identical to the predetermined BUDs, continue, with requirements stated under the case-specific BUD [see 360-1.15(a)]. DEC does not believe this aspect of the BUD regulations is ambiguous or needs to change. However, DEC has clarified for various case-specific BUD holders (including the holder of BUD No. 122-0-34) which beneficial use applications are now subject to the predetermined BUDs.

**Comment 74:** The Plan includes as part of its action recommendations, "Remove certain predetermined BUDs". Please do this for coal ash predetermined BUDs! An EPA official indicated to CROP-PLUS that DEC would be removing coal ash predetermined BUDs that require no testing.

**Response:** DEC was not present at this meeting with EPA and cannot verify what was said. DEC has proposed one of the coal ash predetermined BUDs for removal, specifically, the BUD for use of coal ash as a raw feed for manufacture of cement (see Section 8.5.1). DEC will review the other coal ash predetermined BUDs as part of the overall revisions to Part 360, both for clarification and to ensure protection of human health and the environment. In this review, DEC will also be guided by EPA's rulemaking regarding coal ash.

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**Comment 75:** We encourage DEC to regulate the types of provisions that are acceptable in community benefit agreements for large solid waste facilities. Such agreements should include third-party inspections, provisions for local jobs, minority contractors, odor and traffic control hotlines and minimized diesel emissions in on-site equipment.

**Response:** The content of community benefit agreements is subject to negotiation between the facility and the community. DEC codifies any requirements for monitoring or operations through permit conditions.

**Comment 76:** DEC shouldn't promulgate regulations it is not going to enforce. The regulation restricting the development of landfills over principal aquifers was recently waived. Don't brag about how great the regulations are if you aren't going to enforce them.

**Response:** DEC intends to enforce all of its regulations. As noted, DEC's solid waste management facility regulations are among the most restrictive in the nation and are enforced through reporting, inspections and the use of on-site monitors. On occasion, conditions in a particular community argue for a variance from certain regulatory requirements as allowed under the law.

**Comment 77:** The plan notes that C&D facilities sometimes receive materials contaminated with asbestos. In NYC and other areas, such facilities operate without enclosure requirements, so there is limited control of emissions and dust migration. Part 360 should address these problems.

**Response:** DEC will consider this concern when determining how to update the requirements for these facilities to better protect human health and the environment as part of revision to the Part 360 regulations.

**Comment 78:** The Plan notes that requirements for solid waste facilities need to be updated to protect human health and the environment. Does DEC have any specific deficiencies in mind?

**Response:** DEC intends to update the Part 360 regulations to bring them up to date with current engineering and operating standards and practices, and to address legal or policy developments. The details of these changes will be presented through the regulatory process.

**Comment 79:** There is not enough emphasis on learning from demonstrated examples in other states. We need to loosen up the regulations, especially to facilitate organics recycling.

**Response:** As DEC proceeds with the revision of the Part 360 regulations staff will review regulations in other states for applicability in New York.

**Comment 80:** DEC should strengthen enforcement at transfer stations, particularly in communities where they are clustered. To do that, DEC can expand the environmental monitor program, include citizen enforcement provisions in its regulations, and require transfer stations to develop a process for responding to community complaints.

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**Response:** DEC agrees that expanding the monitor program would aid in enforcement, but, due to the state's fiscal constraints, DEC is unable to expand the monitor program at this time. DEC does not have the authority to authorize citizen enforcement. DEC considers complaint response protocols in the permit review process.

**Comment 81:** The Part 360 regulations need to be strengthened to improve enforcement and better protect communities.

**Response:** DEC concurs. This is one of the objectives of the revision to the Part 360 regulations.

**Comment 82:** We recommend revisions to the transfer station regulations so that transfer stations are built to reasonable engineering standards.

**Response:** The current transfer station regulations will be evaluated and updated, as needed, to reflect current engineering standards in the revision to the Part 360 regulations.

**Comment 83:** I encourage and support state funding for program enhancements and expansions.

**Response:** Comment noted.

**Comment 84:** DEC should enforce good planning at the municipal level. Local jurisdictions whose plans or implementation efforts are lacking should be denied permits, and other enforcement mechanisms should be developed. DEC should study California AB939's success in increasing recycling in that state, in part by making communities subject to a \$10,000 fine for not achieving the 50 percent diversion target.

**Response:** A Plan does not have the legal weight of a consent order or a permit and is not enforceable as such. The diversion goals developed as part of a planning unit's local solid waste management plan (LSWMP) are intended to guide anticipated performance and achievement based on implementation of the programs outlined in the LSWMP. DEC efforts will focus on encouraging implementation of the specified programs that will lead to the projected diversion rates, and making mid-course corrections where performance falls short. The planning and reassessment processes are valuable in themselves as they help reveal opportunities and useful analysis that compel action and public interest in pursuing specific goals.

**Comment 85:** The state should change the funding criteria for various agencies (ESD, DEC, NYSERDA, NYPA, etc.) to allow agencies to combine efforts and increase funding to progressive programs.

**Response:** The various state agencies and authorities remain in contact with one another in implementing the multiple funding and state assistance programs, and in working

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through those instances in which eligibility requirements and program limitations of the various programs, often imposed by law, do not coincide. DEC and the other state agencies and authorities will continue to strive to coordinate funding opportunities.

**Comment 86:** Efforts to develop recycling or composting infrastructure to serve state agency generators should include additional capacity for surrounding planning units.

**Response:** DEC has worked with the Department of Corrections to provide access to composting sites for generators outside of the prison system and will investigate other similar arrangements at other state facilities.

**Comment 87:** EO4 has failed to move forward with a waste audit program. We urge DEC and OGS to better implement waste audits at state agencies. Findings should be reported to the governor's office and agency heads.

**Response:** DEC and OGS recommended that all agencies perform waste audits to get baseline waste generation data and measure progress. DEC has held waste audit training sessions attended by many agencies and provided technical assistance directly to agency sustainability coordinators. As a result of this effort, the state has estimated the amount of waste generated by agencies. That estimate, and other helpful information, is provided in the first annual EO4 report. (see <http://www.ogs.state.ny.us/EO/4/Docs/FirstAnnualProgressReport.pdf>)

**Comment 88:** State agencies and facilities should be required to abide by local flow control laws and local solid waste management plans.

**Response:** Whether or not state agencies are subject to local flow control laws depends on whether the law was crafted to include those agencies. It is DEC's position that state agencies are subject to properly drafted local solid waste laws.

**Comment 89:** The Plan should document the failure of school recycling programs, including the involvement of the Department of Education, and why it took 18 years to resolve the issue of whether schools are required to recycle. State parks still don't consistently have recycling programs. Does the state really think that recycling is important?

**Response:** The state is committed to recycling in its operations and has worked actively through the implementation of Executive Order 4 to make recycling more consistent. For example, a new waste services specification requires that state agencies must not contract for waste services without recycling services, unless recycling services are otherwise contracted for. The EO4 annual report (see <http://www.ogs.state.ny.us/EO/4/Docs/FirstAnnualProgressReport.pdf>) documents the current recycling rate in state agencies. The various state agencies and authorities remain in contact with one another in

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implementing the multiple funding and state assistance programs, and in working through those instances in which eligibility requirements and program limitations of the various programs, often imposed by law, do not coincide. DEC and the other state agencies and authorities will continue to strive to coordinate funding opportunities.

**Comment 90:** Executive orders have limited impact unless agencies are motivated and audited. They are not enforceable. There should be audits to document compliance with recycling and purchasing requirements.

**Response:** The Office of the State Controller recently audited agency compliance with Executive Order 4. DEC's audit was published in <http://osc.state.ny.us/audits/allaudits/093010/08s142.pdf>. Other agency's audit reports can be found at <http://osc.state.ny.us/audits/auditAgencyList.htm>. Overall agency compliance with Executive Order 4 is reviewed in the first annual report which can be found at <http://www.ogs.state.ny.us/EO/4/Docs/FirstAnnualProgressReport.pdf>.

**Comment 91:** The Plan notes that the state's ability to achieve the goals of the plan will depend on the ability to increase staff and resources. That statement applies to planning units as well. The plan should include a financial analysis to identify the costs and revenue sources and it should be specific.

**Response:** Section 10.1.3 notes that planning units need financial support to implement the goals of the Plan. A full financial analysis is outside of the scope of this Plan.

**Comment 92:** We urge DEC to establish more requirements for public participation in planning units and in permitting.

**Response:** This recommendation will be considered during the process for revising the Part 360 regulations governing permitting and planning.

**Comment 93:** DEC bases the Plan on GHG control, a hot environmental topic today. To justify the Plan on a single issue will ensure that it falls short when public interest in climate change wanes. The Plan should be based on the science of what is best for the public and the environment in the context of all environmental or public health threats.

**Response:** While public interest in climate change may wane, the science is clear that it will be of local, state, national and international concern for decades to come, both in terms of reducing its impact and responding to its implications. In any event, combating climate change is one of many considerations that went into the deliberations in development of the Plan, which is based on science and data and recommends what is best for the environment and the people of New York—namely, a system that conserves resources and creates economic opportunity using materials that currently go to waste.



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**Comment 94:** The first priority to combating climate change should be diverting organics from landfills.

**Response:** The Plan recommends diverting organics from disposal.

**Comment 95:** The Plan should consider developing a refillable bottling plant in NYS. Tires should continue to be a market priority for reuse, recycling and remanufacturing so those tires can be redirected from energy uses.

**Response:** The Plan does not propose any specific infrastructure. Local planning units and private companies should have the flexibility to determine which investments will aid them in meeting their LSWMP's goals. Tires have been added to the list of items requiring market development attention.

**Comment 96:** We support the Plan's recommendation to characterize and quantify the reuse sector and implement measures to increase reuse.

**Response:** Comment noted.

**Comment 97:** The Plan asserts that the state's ability to implement initiatives and achieve goals will depend upon the ability to increase available staff and financial resources. We do not believe that an increase in staffing at state agencies is crucial for the success of the Plan. The planning units do not need more money allocated to support the Plan. The state simply needs to expend appropriated funds for solid waste management instead of diverting it to other uses.

**Response:** While much progress can be made by redirecting existing state and local government staff and resources toward the Plan's goals, adequate numbers of DEC staff dedicated to the programs identified in the Plan are critical to the successful delivery of its legislative, regulatory and programmatic recommendations. Furthermore, planning units have consistently expressed concerns about their ability to implement the Plan's recommendations without additional funding.

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**Comment 1:** The Plan, in its implementation schedule, is modest regarding the scope of potential food waste recycling. It calls for eight food scrap demonstration projects during the planning period (p. 239). However, the waste stream projections appear to ignore that modest schedule and show 90 percent food waste recovery rates by 2018.

**Response:** The demonstration projections are intended to spur the development of food waste recovery, not provide the entire capacity. However, the Plan has been revised to phase in the goal over a longer time period to allow for development of even more extensive programs and infrastructure.

**Comment 2:** On p. 235, the goal for the Plan is said to be reduction of disposal to 1.9 lbs/person/yr, whereas all other references indicate the goal is 0.6 lbs/person/yr.

**Response:** The reduction in waste disposal to 1.9 lbs/person/year is the projected outcome of updating the Solid Waste Management Act, not the goal of the Plan.

**Comment 3:** Page 235 – Given the length of time it takes to develop new materials management capacity, to re-educate the public regarding the need to change our current purchasing and waste/recycling/reduction practices, and for DEC to complete the major revisions required under the Plan, the implementation Plan will likely take 10-15 years longer than identified. While it is important to start implementing these changes now, the Plan needs to be more realistic in its time lines.

**Response:** The Plan has been revised to phase in the goal over a longer time period to allow for development of programs and infrastructure (see Table 2.1 and Appendix A).

**Comment 4:** Page 236 – The statement, “support the goal to reduce statewide waste disposal by 15 percent every two years,” is not supported by the data or discussion of alternatives presented in the Plan. Also, the statement is vague and open to misinterpretation. This could be read to mean that the Plan is advocating waste exportation to preserve our in-state waste disposal capacity. Also, the Plan could be interpreted to advocate the development of additional waste-to-energy (WTE) capacity to obtain the 75 percent weight and 90 percent volume reduction that WTE can provide.

**Response:** The statement is intended to summarize the general outcome of the regulatory recommendations. It does not supersede the other elements of the Plan, which identify the goals as related to the amount of waste destined for in-state or out-of-state disposal at either landfills or municipal waste combustors.

**Comment 5:** The timetable in Chapter 11 (Implementation Schedule and Projections) will need to be updated.

**Response:** DEC has updated the timetable in the implementation schedule.

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**Comment 6:** I support the Plan and suggest you move the implementation schedule up so that you can achieve the goals by 2013.

**Response:** DEC has updated the implementation schedule to allow for additional time to develop the programs and infrastructure necessary to implement the Plan.

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**Comment 1:** The calculations presented for 15 percent reduction of the waste stream every two years do not calculate correctly; there seems to be a typographical or mathematical error as presented.

**Response:** The goals for MSW reduction have been clarified and are presented in Table 2.1.

**Comment 2:** EPA's Waste Reduction Model (WARM) does not account for the value of electricity generated from landfill gas recovery and waste-to-energy facilities.

**Response:** This is one of several limitations of the NERC Environmental Benefits Calculator and WARM.

**Comment 3:** Please remove the NSYASWM logo from Appendix 5.1 and replace with the New York Product Stewardship Council logo.

**Response:** The requested change has been made.

**Comment 4:** Please include the new NYSASWM website ([www.nysaswm.org](http://www.nysaswm.org)) in Appendix 5.1.

**Response:** The requested change has been made.

**Comment 5:** Appendix 7.1 shows a manure composting site in Fulton County but one does not exist. It is probably Van Alstyne's in Montgomery County. Also, the website is inoperable.

**Response:** The map is maintained by Cornell University's Waste Management Institute. DEC will notify Cornell about the error. The web link was working when staff investigated this comment. However, it is periodically unavailable during updates.

**Comment 6:** Appendix 7.2 notes that 55 percent of the vehicle dismantling facilities in the state submitted annual reports. If the state can't get responses from these businesses how can local planning units?

**Response:** DEC recognizes it is not always possible to get complete and accurate data and asks that planning units make their best effort with the staff and resources available.

**Comment 7:** The appendix on tires notes that the reuse category is likely underestimated since the response from tire retreaders was low.

**Response:** This statement is correct.

**Comment 8:** The Planning Unit Profiles incorrectly identify the Onondaga County Resource Recovery Agency (OCRRA) as the planning unit for Onondaga County. Onondaga County is the planning unit. The county entered into an agreement with OCRRA to implement the local solid waste management plan (LSWMP) on behalf of the county.

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**Response:** The planning unit profile in Appendix C for Onondaga County has been revised to reflect this information.

**Comment 9:** Onondaga County produced a 20-year solid waste management plan (SWMP). The SWMP was approved by the state in November 1992. In Appendix 3.3 – Planning Unit Profiles, under Onondaga County, it lists the Onondaga County Comprehensive Solid Waste Management Plan as expiring on December 31, 2010. Since the 20-year SWMP was approved in 1992, the SWMP does not expire until 2012.

**Response:** While the Final LSWMP was approved in November 1992, the planning period in the approved Onondaga County LSWMP is from 1990-2010. The LSWMP development and review process leading to a final document encompassed the time from 1990 to final LSWMP approval. Accordingly, the LSWMP expires on December 31, 2010.

**Comment 10:** The appended ASTSWMO report (Appendix 5.2) highlights some conceptual issues related to product stewardship. Identifying the responsible producer can be challenging and can create significant compliance responsibilities for small companies. For example, the Ontario packaging program defines the producer as the manufacturer, the brand holder or the first importer. These issues often lead to the creation of producer responsibility organizations to manage the responsibility of producers collectively.

**Response:** Details of product and packaging stewardship programs, such as the definition of the responsible party, will be explored as part of the process of crafting and enacting legislation.

**Comment 11:** The waste composition presented by DEC in Table A of *Beyond Waste* has many interesting facets. Its construction is one; despite the availability on the web of data subsets of the waste stream (residential and commercial sectors by rural, suburban and urban sectors), no meaningful information on the construction of the data is made. This was requested from DEC in early June, and was never provided.

**Response:** Additional information on the sources and methods used to develop the composition analysis has been added as a component of new Appendix H.

**Comment 12:** Much is made of the *Beyond Waste* analysts' rejection of food waste composition used by USEPA, and I will focus my analysis here primarily on that one waste stream component (although it is emblematic of the overall difficulties with data throughout the Plan). *Beyond Waste* uses a value of 17.7 percent food waste in the total waste stream. Great emphasis seems to have been placed on the NYC residential waste sort, which reported ~18 percent food waste in its composition study (but only 0.4 lbs/person/day).

**Response:** As discussed in Section 7.1.1 of the Plan, DEC developed estimates of the municipal solid waste (MSW) waste stream composition using data inputs that

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include field-based waste composition studies performed within New York State (including NYC), in other major U.S. cities, and in other states that have similar demographic characteristics to some of New York's regions. Additional information on the sources and methods used to develop the composition analysis has been added as a component of new Appendix H.

**Comment 13:** Another intriguing data line is paper. Kaufman (2004) estimated paper recycling in New York City in 2003. He found total paper recycling collection in the city at 50.5 percent (much greater than the *Beyond Waste* estimate of 34 percent statewide in 2008). Kaufman also calculated the tonnage of paper recycling in New York City was 1,157,622 tons, about 58 percent of the statewide total for "recovery" used in *Beyond Waste* (which presumably includes waste avoidance and non-system management, such as mulching paper or composting soiled paper at home). New York City is ~42 percent of the state's population, which, if Kaufman's analysis is accurate to any degree, then the statewide paper recycling totals presented in Appendix A are serious underestimates.

**Response:** Comment noted.

**Comment 14:** It is interesting that the state defined waste generation in terms of population density. Most authorities link waste generation more to economics than to land use, but the population density approach may be easier to use across the state. Why were the particular divisions chosen? Five-thousand people/mile<sup>2</sup> certainly is an urban area, but is 4,000 people/mi<sup>2</sup> suburban? I think standard values for suburban population density, and for the rural-suburban break, tend to be lower. On the other hand, the Town of Hempstead qualifies as urban under the *Beyond Waste* classification, a label it would certainly reject.

**Response:** The divisions were selected in part to reflect the practical realities of the diverse demographics throughout the state. Certain areas of the state, such as many Long Island municipalities, are more densely populated than typical suburban communities nationally, but are still suburban settings from a planning and program implementation perspective.

**Comment 15:** The state, in its planning, cleverly expects to achieve 90 percent recovery for each and every material. All materials are to be equally recoverable, and to be recovered at exactly the same rate! How intriguing! This implies recovery is to be more of a mass-waste process (akin to WTE), where all wastes are treated in the same fashion. This is obviously just some paperwork quirk by the data analyst, instead of being a serious analysis of the effects of *Beyond Waste* on the state's wastes (see the Warnken Industrial and Social Ecology [2006] analysis, above, for what the data might look like if a serious effort had been made instead). Again, personal history with how NYSDEC has reviewed planning unit SWMPs suggests the state itself would never accept projections like these.

**Response:** Recovery rate projections have been revised in the final Plan. See Appendix A.