EXECUTIVE SUMMARY

On April 13, 2002 Commissioner Bradley M. Campbell signed Administrative Order No. 2002-10 (the Order), which required, inter alia, that the Department revise, update and readopt the Statewide Solid Waste Management Plan (the Plan) by July 1, 2003. The Order further directs the Plan be updated not less than once every two (2) years as required by statute. Of significant importance, the Order directs, effective immediately, the review of all pending and future proposed county plan amendments to be conducted in accordance with the following hierarchy of practices:

1. Source reduction to reduce per capita generation of waste;

2. Source separation and recycling to reduce the amount of waste to be disposed of in the system;

3. Composting of source separated leaves, grass and food waste to reduce the volume of waste to be disposed of in the system;

4. Household hazardous waste and small quantity generator collection to remove toxic constituents from the waste stream;

5. Materials recovery systems to enhance source separation and recycling programs;

6. Solid waste composting to reduce the volume of mixed municipal solid waste to be disposed of in the system;

7. Landfilling at permitted, state-of-the-art facilities which utilize volume reduction systems, such as baling and shredding, to preserve limited landfill space; and regional incineration to reduce the volume of the remaining solid waste stream up to 90% and to produce energy.

The updating of the Plan occurs as we are embarking into a new millennium, with some trepidation about a host of environmental issues, concerns about depletion of our natural resources and the possible extinction of a large number of plants and animals. The proper management of our solid waste can impact many of these concerns; from the limiting of greenhouse gases to the reuse of our resources to the proper environmental ending for those materials that must be wasted. The proper management and recycling of our waste can have a profound impact on future generations of the people of New Jersey.

There has been significant change to the landscape of solid waste management in New Jersey since the last plan update in 1993. State waste flow rules and increases in the state's recycling rates are no longer. Self sufficiency is a term that a federal court ruled can no longer be a policy of the state. Once financially secure counties and county authorities are struggling to maintain systems burdened with significant "stranded" debt since the "Carbone" and "Atlantic Coast" decisions. A significant portion of the Plan update includes sections that specifically deal with

the aforementioned issues and legal decisions. A once vibrant, innovative solid waste management system has become a system struggling to maintain its environmental leadership. As a clear example, and important enough to be noted in the Order, the state's recycling rate has fallen from a high of 61% in 1996 to a level of 53% in the year 2000. Other notable changes that have occurred since 1993 include the partial deregulation of the solid waste utility industry and the adoption of the federal hazardous waste program. Also the state has lost a variety of funding sources since the sun setting of several taxes, including the recycling tax and the resource recovery investment tax. As a result the state, the counties and the municipalities do not have the resources once available to them to properly plan and implement for environmentally protective solid waste management. Where once all the counties, and the NJMC, had plans that directed waste to specific facilities, there are now county plans that allow for the "free market" movement of waste. It should be noted that since "Atlantic Coast" and the end of state regulatory flow control, a number of counties have undertaken constitutional re-procurement of their disposal needs in a manner that allows them to control the flow of waste and therefor their management of it. In addition, there are several counties that have instituted intra-state flow control plans. Those plans allow for the free movement of waste out-of-state, however, it the waste stays in state, it is directs to a facility in that county.

What follows here is a synopsis of the various sections of the plan that are contained herein. The legal history is simply that. To understand where we are today we thought it would be helpful to start with a brief legal history of the significant court cases that have guided us in our policy-making decisions. The majority of these cases center around our ability to control the outcome of our waste generation practices. While we have been successful with some legislation and/or regulatory controls, such as our Mandatory Recycling Act, other efforts, such as our early attempt to stem the flow of waste into New Jersey, or more recently to control the flow of waste in New Jersey have not been successful. The legal history goes through those cases and discusses the resultant impact.

While the ability to be self-sufficient was limited by legal decisions, the Solid Waste Management Act and the planning requirement under it is still a vital tool for how we handle solid waste in this state. In the planning section we give an overview of the planning requirement along with some basic information concerning the state of solid waste generation, recycling and disposal. We also provide summaries of the various county planning efforts, which currently show that 8 counties have approved flow control plans in place, with two of those entities exercising solely intra-state control, and 13 counties having free market systems. Currently 12 districts/ counties have solid waste landfills, of which one is privately owned, and 5 counties have resource recovery facilities. In the counties with resource recovery facilities, 3 also have landfills to receive non-processible waste. Statistics concerning the generation of waste show the trend is that our generation rate has been steadily increasing, so while the amount of material being recycled has recently remained static, the overall recycling rate has gone down. The numbers show that in 2000 we generated 17.7 million tons of solid waste in this state. We recycled 9.4 million tons or 53% and 8.3 million tons were sent for disposal. Of the 8.3 million tons, 1.6 million or 9% of total generation was disposed at resource recovery facilities, 4.0 million or 23% was disposed at landfills located in New Jersey and 2.7 million or 15% was sent for out-of-state disposal.

This plan will require that all counties will adopt and submit new solid waste plans within 180 days of formal adoption of this Solid Waste Management Plan that incorporate the goals of the plan. These plans will need to show the basic solid waste plan for the county, whether free market or other, and will have to address how the county will achieve the recycling goals stated in this plan. As part of this, each county shall be directed to address the composting of food waste and other organics outside of the yard waste stream. In addition, all future plan amendments for new or expanded solid waste facilities shall be in conformance with the Governor's "smart growth" initiative regarding land use development.

As stated above, the solid waste hierarchy is being emphasized in this plan and number one on the hierarchy is source reduction. Source reduction is an important concept to continue to support and promote since the best waste management solution is not to generate the waste to begin with. These are trying times for source reduction advocacy with packaging increasing for security/tampering reasons and consumer purchasing relying more and more on individual serving selections and a throw away mentality on many items that a generation ago were never discarded. It is especially difficult due to the breadth of our control, which in this case is very limited. Notwithstanding these issues we will continue to advocate a strong source reduction program and make the following recommendations:

1. We will continue to support the USEPA's Waste Wi$e program.

2. The state will update its procurement practices to incorporate source reduction goals.

3. The state should provide limited grants to counties and municipalities to support home composting programs.

4. The state should enact mercury legislation along the model proposed by the Northeast Waste Management Officials Association.

5. The state should provide limited grants to municipalities to defray the up front administrative costs associated with instituting "pay-as-you-throw" residential disposal programs.

After source reduction, recycling is our next step on the hierarchy and therefor follows in the plan. Despite the recent decline in our state's recycling rates New Jersey is still a nationally recognized leader in recycling. The overall recycling rate went from a peak of 61% in 1997 to 53% in 2000 and the municipal rate went from 45% in 1995 to 38% in 2000. The New Jersey Statewide Mandatory Source Separation and Recycling Act is still a vital component as we move forward in the field of solid waste management. One of the recent developments that has hurt the recycling arena is the loss of the recycling tax which sunset in 1996. This dedicated source of funding provided over $10 million a year that was utilized to provide municipal and county recycling tonnage grants, low interest loans to recycling businesses, public information and education, county recycling program grants and the state recycling program planning. The recent signing of the "Clean Communities and Recycling Grant Act" by Governor James E. McGreevey provides up to $4 million a year for the municipal and county tonnage grant program. However, more needs to be done in this area to provide for a long-term and stable funding source for the

remainder of the recycling program needs. The additional recommendations in the recycling area are:

1. The state will continue to fund the Cook College "Recycling Coordinator Certification" series of courses

2. The state will continue to provide statewide education and promotion of recycling and other responsible solid waste management

3. The DEP will seek legislative approval for a targeted business tax credit to promote investment in expanded recycling markets

4. The state will establish a heightened "Environmentally Preferred Procurement" program to expand government purchases of recycled-content and other products

Composting will continue to be an integral component of our solid waste system as composting organic material is considered to be the preferred waste management option. The organic waste stream is estimated to account for approximately 15% of the total solid waste stream so success in this area significantly reduces the dependency on disposal techniques and can lengthen the life of existing facilities. A lot has been done to date in the way of regulation changes to promote composting of organic material and we will continue to explore means, such as reducing the buffer zone requirements where appropriate, to further this promotion.

Scrap tire management can be divided into two main areas of concern. First, what is happening to the approximately 8 million scrap tires generated every year in New Jersey, and second, what is being done to remediate the significant number of tires in piles located throughout the state. The disposal of scrap tires is a concern since most landfills do want to accept whole tires due to the handling problems they cause. Other methods of handling tires have been developed with the majority of tires being utilized for energy recovery. National figures estimate this end use being over 65%. The recycling of scrap tires and the success thereof is dependent upon finding a reliable end us of the recycled material. The department is currently working to encourage a variety of civil engineering uses of chipped tires such as a leachate collection protective cover in a landfill and as a substitute for gravel in the trenches of septic systems. A recent survey of the illegal scrap tire piles in this state by the Department showed that there were approximately 7-8 million tires in 23 major piles. For the past two years the Department has awarded grants of approximately $2.4 million per year for the removal of the tires out of the environment. The funding source for these grants has been depleted. However, there will still remain approximately 5 million tires in these stockpiles upon completion of the work funded through these grants.

The solid waste disposal section starts with a discussion and statistics about capacity of facilities in this state. The maximum capacity of the resource recovery facilities totals approximately 2.4 million tons and in 2001 89% to 97% of available capacity was utilized. Transfer station capacity is approximately 10 million tons and collectively operated at approximately 70%. Landfill capacity generally is given over the life of the landfill, however, it can be safely stated that should the landfills in the state operate at the levels they did in 2001 the life of the landfills will

be shorter than originally anticipated. This is due to a higher level of waste acceptance and therefore, volume used, than was originally anticipated. Partially as a result of this fact, and the fact that new landfills will always be difficult to site, and expansions of existing facilities are limited, this plan promotes a relatively new concept that has its own section and is known as "sustainable landfills". There are a number of mechanisms used to sustain landfills, such as leachate recirculation, use of alternative covers, landfill mining and others. The basic premise is that you try to get the most out of the volume of landfill you have to work with in terms of assuring that volume is used to the maximum extent possible for the disposal of waste. It is given that environmental protection safeguards have to be maintained to accomplish this. The last piece of the landfill puzzle is the continued effort to insure that all landfills that have operated in this state have been closed properly. The following are the list of strategies employed to insure this:

1. Completely identify the universe and status of each landfill.

2. Put landfills of the Comprehensive Site List.

3. Use Public Funds where immediate environmental concerns warrant.

4. Promote Brownfields Redevelopment.

5. Implement joint enforcement strategy.

6. Simplify financial assurance requirements for municipal landfills.

7. Explore the possibility of alternatives to impervious caps on the smaller landfills in the Pinelands.

The section on cross media issues basically deals with air impacts from solid waste facilities and solid waste transport vehicles. While encouraging recycling is important, it is also paramount that facilities that conduct recycling activities conduct them in an environmentally acceptable manner. There are a number of measures that the Department anticipates implementing at Class B Recycling facilities either through regulation development or through permit conditions. These measures include:

1. Dust management plans
2. Pile covers
3. Enclosure of soil processing operations
4. Water sprays where appropriate to control fugitive emissions
5. Covering of conveyors
6. Control of fugitive emissions from truck traffic
7. Operational plans that deal with inclement weather conditions
8. Requirement for Air Pollution Control Permits

To minimize the impacts at solid waste transfer stations a number of similar measures will be incorporated:

1. Odor and dust management plan
2. Control of fugitive emission from truck traffic
3. Requirement for Air Pollution Control Permits

One of the principal contaminants of concern from resource recovery facilities and medical waste incinerators is mercury. While significant strides have taken place over the last decade and mercury emissions from these facilities have been greatly reduced, there is a need to do more. The Department is developing regulations that will further control mercury emissions by increasing the efficiency of mercury collection from the current standard of 80% to higher than 80%.

The last part of controlling air emissions deals with controlling fine particle emissions from solid waste vehicles. The basic thrust of this program would require legislation to have solid waste fleet owners upgrade their vehicles by retrofitting necessary controls and developing a differential fee system that insures a level playing field. While new engine standards for on-road diesel powered vehicles have been developed nationally, effective 2007, it will be some time before new vehicles fully replace existing in-use ones, thus the need for an interim program.

Solid waste debt is a significant issue in this state since a number of public facilities were financed assuming waste flow was the law of the land, which would allow for tipping fees to be sufficient to make necessary debt payment. Since the "Atlantic Coast" decision and the loss of waste flow regulations the tipping fees have been greatly reduced so facilities remain competitive. Tipping fees that were once over $100 are now more commonly in the $50 to $60 range. As a result, the state has had to provide debt relief to the counties that have been unable to make all of their required debt service payments. There still exists approximately $1 billion of outstanding debt. To date, close to $200 million has been utilized to provide debt service relief, and over $100 million of loans have been forgiven. The state will continue to provide relief on a piecemeal basis, when debt service funds are needed, and when state funds are available.

Commercial solid waste entities (collector/haulers and facilities) are regulated as utilities in this state similar to how energy and phone service providers are regulated. The basic tenet of that regulation is the control of rates that solid waste utilities charge. The Solid Waste Collection Regulatory Reform Act was enacted in 1992 which essentially phased out rate regulation for solid waste collectors, however, maintained such regulation for solid waste facilities. That reform act required the Department to assure that effective competition was maintained in the marketplace. That requirement exists today, and due to the consolidation that has occurred in the industry, i.e, the top four solid waste companies control 57% of the solid waste business, that diligence remains the cornerstone of our activities. Since the "Atlantic Coast" decision, facility rate regulation has undergone regulatory changes that allow facilities to be flexible with the rates they charge as long as they remain under their peak rate. These rates were approved on November 10, 1997, with a few facilities receiving rate increases thereafter.

Over the last eight years the Department's solid waste enforcement element has shifted a significant percentage of its routine inspection resources from solid waste disposal facilities to recycling centers and this increased presence at recycling centers will continue. This was and is being continued for the following reasons:

1. To keep pace with the increasing numbers of recycling centers being approved to engage in the processing of recyclable materials.

2. To accommodate the formal promulgation of recycling center rules and operating standards issued in 1995.

3. To address deficient compliance rates determined to exist at a number of these centers.

4. To accommodate the deregulation of waste oil from a hazardous waste to a Class D recyclable.

On March 6, 1989 the New Jersey Comprehensive Regulated Medical Waste Management Act was signed into law. This Department in conjunction with the Department of Health developed a plan which was issued in 1993 and required, among other things, the gathering of data and the registering of medical waste generators. In 1993 there were 16,000 generators of regulated medical waste, and in 2002 there are approximately 18,000 such generators.

The 1978 amendments to the New Jersey Solid Waste Management Act (N.J.S.A. 13:1E-46) require that the Statewide Solid Waste Management Plan contain a sewage sludge management strategy. This Statewide Sludge Management Plan (SSMP) fulfills the statutory mandate and replaces the 1987 SSMP. Key components of this SSMP include the following:

· A historical perspective of sludge management in New Jersey;
· A policy that promotes beneficial use, but also recognizes the need for diversification;
· New Jersey's regulatory approach to sludge including a description of permitted and prohibited practices;
· An overview of existing management including production, quality and management statistics; and
· A description of ongoing and emerging issues including phosphorus limitations in land application, odors, mercury, radionuclides, dioxins, and the most recent recommendations of the National Academy of Sciences.

The implementation of the Water Pollution Control Act has resulted in greater levels of treatment of and pollutant removal from wastewater before discharge to surface or ground waters, and the generation of larger quantities of all residuals (that is sewage sludge, domestic septage, potable water treatment plant sludge, food processing sludge, and other nonhazardous industrial sludge) as a by-product of this treatment. In New Jersey, domestic treatment works generated about 217,000 dry metric tons of sewage sludge in 2001. Under 5 percent was disposed out-of-state, under 25 percent was incinerated, and over 70 percent was beneficially used either in-state or out-of-state.

Residuals have been land applied and researched for about as long as man has worked to protect the quality of the waters of the state. The regulation of land application statewide began with the application of federal guidelines developed in the 1970's. The Department adopted its first comprehensive standards in the 1987 SSMP. Federal standards were promulgated in 1993 by the

USEPA and New Jersey followed with similar, but more restrictive, regulations in 1997. During the majority of this timeframe, general administration of the SSMP and the overall programmatic responsibility for regulation of residuals management has fallen within the jurisdiction of the wastewater management program (which is currently the Division of Water Quality).

The legal requirement for every domestic treatment works to plan and provide for management of its sewage sludge production is part of every New Jersey Pollutant Discharge Elimination System operating permit. Upgrades, as well as expansions and construction of new facilities, have served as the leading mechanism for requiring domestic treatment works to address changing sewage sludge management needs.

It is the Department's policy that generators utilize beneficial use (such as the conversion of sewage sludge into products to be used as a fertilizer or soil conditioner) wherever possible. However, further increases in in-state beneficial use will be difficult due to the pressures on available land on which to apply sewage sludge products. New Jersey is a densely populated state with minimal land area available for generators to find and develop new markets for their products. Therefore, although it is the Department's policy to encourage beneficial use alternatives, it must be recognized, due to these pressures, that a policy that also encourages diversity in management alternatives is necessary.

The Department is committed to maintaining a program that is protective of the citizens, and the resources of New Jersey. Therefore, the Department continues to refine its program by supporting and reviewing ongoing research, by staying at the forefront on emerging issues, and by continuing a long-standing collaboration with colleagues from academia, agricultural agencies, and other environmental agencies.

Additionally, the process for adoption of this Plan is recognized by the Department as an opportunity to examine, from a holistic standpoint, the overall effectiveness and efficiency of the solid waste management system in the state. Collectively, this system is intended to provide an environmentally sound and economically efficient way of managing all of the non-hazardous waste generated in the state. It is important that we continually seek greater efficiencies in the way this system operates, and the services that are provided to the citizens of New Jersey by the Department of Environmental Protection, and the regulated community of solid waste collectors/transporters and solid waste disposal facility and recycling center operators.

Some examples of regulatory and state program operational changes implemented through policy, regulatory and statutory changes to seek greater efficiencies include:

The shifting of certain Clean Communities Program efforts from the Department to the non-profit Clean Communities Council, Inc;

The promotion of electronic transfer of required reporting by municipalities (for recycling tonnage grants) and other regulated entities;

The incorporation by reference of certain Federal regulations related to hazardous waste, and attendant reassignment of personnel to other critical department areas;

The expansion of activities that are exempt from the requirements to obtain Class B, C and D recycling center General Approvals;

The change from annual registration of solid waste collection vehicles and containers to a biennial registration system; and

Regulatory reform that now allows solid waste disposal facilities to fluctuate their fees below their regulated peak rates without Departmental oversight.

The Department will be using the opportunity of the development and adoption of this revision to the Statewide Solid Waste and Sludge Management Plans to further internal and external dialogue, and actively elicit suggestions on additional opportunities to streamline all aspects of the solid waste management system in the state. Bearing in mind that the Department's overriding mission is to protect the environment of the state and the health of its residents, the public is encouraged to recommend policy, regulatory and even statutory changes that will serve this mission while reducing the regulatory burden over those providing recycling and solid waste services to the state, reduce the times necessary for permitting decisions, or otherwise streamline the operations of the Department in executing its mission.

Finally, it must be noted that this document is a "work in progress", and over the next several months one can expect to see changes that reflect updates to data (generally 2000 and 2001calendar year data is included at this time), analysis of data currently under review, or other developments that necessitate changes to the text, conclusions or recommendations. We urge the reader to check the document regularly for changes.