

The New York State Solid Waste

EXAMINER

News From Assemblymember Alan N. Maisel Chair, Legislative Commission on Solid Waste Management

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Dear Colleagues and Friends

In January 2010 Speaker Sheldon Silver appointed me Chair of the NYS Assembly Legislative Commission on Solid Waste Management. I find this new assignment both challenging and exciting. I am honored to follow in the footsteps of the chairs that have preceded me and set high standards for this Commission. I will continue to work with them on issues of mutual concern and interest.

Despite the great progress that we have made in New York State on solid waste issues, much remains to be accomplished. This newsletter outlines and discusses some of the issues that the Commission has already undertaken or will be working on in the future. These issues include: producer responsibility for take-back of drugs from hospitals and health care facilities; disposal of out-of-state drilling fluids from hydraulic fracturing in other states; potential environmental contamination and public health impacts from disposal of smoke detectors containing americium-241; expanded recycling in state facilities; and expanded recycling opportunities in the private sector.

I look forward to working with you on these and other important solid waste management issues facing New York in the coming years. You may contact my office at any time. Thank you for your interest in the work of our Commission.



Alan Maisel

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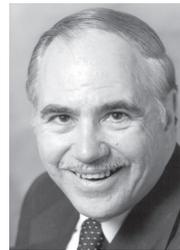
Dear Assembly Colleagues and Readers:

It is with great pleasure that I turn over the Chairmanship of the Solid Waste Commission to Assemblymember Alan Maisel. During the years that I served as Chair for the Speaker, we had the opportunity to work on many important solid waste issues.

I was an active participant in the Northeast States effort under the guidance of the Council of State Governments, Eastern Regional Office to create model legislation for recycling unwanted electronic equipment. I subsequently introduced a number of bills that would have established producer responsibility for recycling of e-waste. The Commission also wrote several bills requiring the recycling of construction and demolition debris in New York City and New York State, as well as by State agencies and their contractors. We developed legislation to encourage the use of reusable shopping bags, thereby reducing or eliminating the use of plastic bags. We wrote legislation which has become law - requiring the phase-out of mercury devices of automobiles; and requiring retailers to accept cellular telephones for recycling and banning their disposal as solid waste.

These bills represent some of the major accomplishments of the Commission during my tenure. I look forward to working with Chairman Maisel as he develops his own agenda for the Commission. Thank you all for your support, as we continue to work for a clean and healthy environment.

William Colton



NEWSLETTER CONTRIBUTORS

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COMMISSION CHAIR MAISEL AND ASSEMBLYWOMAN SCHIMEL REVIEW OGS RESOURCE RECOVERY PROGRAMS



Assemblymembers Maisel and Michelle Schimel (Great Neck) and Commission staffer Patrick Golden, discuss the OGS source separation program with OGS Deputy Commissioner for Real Property Management and Development William L. Hill, Jr.

In May 2010, Assemblymembers Maisel and Michelle Schimel met with the NYS Office of General Services (OGS) Commissioner John Egan and other OGS personnel to observe the agency's reuse, recycling, and composting initiatives. OGS has made great strides in its ambitious efforts to reduce the ecological impacts of the agency's operations. These efforts have included "green procurement" for State agencies and improved methods of managing waste materials generated in State-operated public and office facilities.

The OGS tour began with a visit to a new pilot project for the exchange of office supplies at the OGS offices at the Empire State Plaza. Usable furniture and supplies are stored in an area accessible to OGS staff. Operating on the notion that one person's trash is another's treasure; employees are encouraged to use this exchange. This

program can be established in other OGS-operated facilities.

Members next visited OGS sorting stations for recyclables and compostible materials from the food-service operations in the Empire State Plaza. These food-sorting stations, coupled with recyclable material collection containers in public areas and within the Plaza, are the most visible examples of OGS environmental initiatives. All Plaza buildings have recycling receptacles that accompany any waste containers. Recycled materials collected from offices include ledger paper, file folders, cardboard, books & magazines, newspapers, paper clips, batteries, and glass/plastic/metal containers. These recyclables are collected and stored on the Plaza's lower levels until they are shipped.

Members also visited the lower levels of the Plaza where compostible

materials are stored. Most recycling stations in public areas now include bins for compostible materials. The composting program is expanding from collection within the cafeterias to the Plaza complex. OGS has also mandated increased use of compostible dinnerware where available at food-service sites in state-operated facilities. The collected compost materials are shipped to an OGS-contracted compost facility off-site. The composted material generated from the OGS collection program is utilized for grounds maintenance on state properties.

The growth and improvement in reuse, recycling, and composting programs at state-operated facilities like the Empire State Plaza should be expanded to all State facilities. The Solid Waste Commission will continue to monitor these efforts.

ASSEMBLYMEMBER MAISEL TOUTS NEW LAW PROTECTING CHILDREN

Use of toxic pesticides on school and daycare playgrounds, athletic and playing fields banned

Assemblymember Maisel joined with Assemblymember Steven Englebright and many other Assembly colleagues to sponsor legislation (A 7937-C/S 4983-C) that would prohibit the use of toxic pesticides on school and daycare center playgrounds, turf, athletic and playing fields. The bill was sponsored by Senator Brian Foley and numerous other senators. It was signed by Governor Paterson as Chapter 85 of the Laws of 2010 on May 18, 2010.

The new law contains provisions for the use of pesticides in emergency situations with the approval of local health departments or school districts (for public schools). The law also exempts certain low-toxicity pesticides, such as boric acid, pesticides in tamper-proof bait containers and horticultural soaps from the prohibition.

Assemblymember Englebright noted “The Legislature has worked for nine years to pass this important legislation, protecting children from exposure to carcinogens, neurotoxins and other dangerous chemicals.”

Assemblymember Maisel acknowledged the significance of the bill’s passage “as a triumph of children’s health interests over the corporate interests that continue to promote unnecessary pesticide use. Given the potential harm pesticides present to children during crucial developmental stages and the availability of cost-effective alternatives, this law is most appropriate and timely.”

Assemblymembers Maisel and Englebright also commended Assemblymember Robert Sweeney, Chair of the Assembly Environmental Conservation Committee for his active and forceful support of the bill.

The President’s Cancer Panel issued its 2008 – 2009 Annual Report in April 2010, focusing on the impact of environmental factors on cancer risk. The Panel was particularly concerned that “..the true burden of environmentally induced cancer has been **grossly underestimated**. With nearly 80,000 chemicals on the market in the United States, many of which are used by millions of Americans in their daily lives and are un[tudied] or understudied and largely unregulated, exposure to potential carcinogens is widespread.”

One sector of exposure to environmental contaminants that the Panel singled out is the use of pesticides. The U.S. Environmental Protection Agency has registered almost 900 active ingredients, relying on label use conditions as the only protection from these toxic chemicals. Many registered pesticides have known or suspected carcinogenic or endocrine-disrupting properties. Pesticide labels list “inert” ingredients, such as solvents, fillers and other toxic chemicals that are not required to be revealed and are not tested for their ability to cause chronic diseases such as cancer. In other words, we have no idea what the actual potential harm from pesticide use is on the human population, particularly children.

It is now up to parents and school personnel to ensure that this new law is properly implemented, in the interest of protecting all children from these carcinogens, neurotoxins and other dangerous chemicals, in settings where they spend up to half of their young lives.



DRILLING IN THE MARCELLUS SHALE

ASSEMBLYMEMBER MAISEL INTRODUCES A BILL TO BAN DISPOSAL OF WASTE FLUIDS FROM OUT-OF-STATE DRILLING OPERATIONS

The issue of hydraulic fracturing and horizontal drilling for natural gas in the Marcellus Shale formation has caused considerable controversy recently. Assemblymember Maisel has focused his attention on the matter of waste drilling ma-

terial disposal, particularly from out-of-state operations. But first, a brief description of oil and gas drilling and hydraulic fracturing in New York is in order.

BACKGROUND

The NYS Department of Environmental Conservation (DEC) reported 13,684 vertical oil and gas wells in New York for the calendar year 2008, of which more than 6,000 were natural gas wells with total annual gas production of 50.320 billion cubic feet. According to DEC, almost half of these wells currently use hydraulic fracturing techniques.

The Marcellus formation extends from the Southern Tier of New York into Ohio, Pennsylvania and West Virginia and is estimated to contain \$1 trillion worth of natural gas. Shale gas reservoirs have become the focus of interest as potential new domestic natural gas sources. The gas in the Marcellus Shale is found thousands of feet below the surface.

DEC explains that recent attention to these shale formations is driven by enhanced well development technology,

proximity of high natural gas demand markets in northeast states; and construction of the Millennium Pipeline through the Southern Tier of NY. It would appear that higher oil prices and increased national interest in reducing the use of imported fuel have shifted the economics as well.

Horizontal drilling can extend for up to a mile from a vertical drill site. This technique utilizes high-pressure sand, water and other drilling fluids that are forced into concrete enclosed casings in the shale formation, creating fractures in the rock and releasing gas that might otherwise not be available. Some of the fluids return with the extracted gas; these waste fluids must be properly managed. DEC estimates that a multi-stage fracturing operation for a 4,000 lateral well-bore might use between 2.4 million and 7.8 million gallons of water.

NYS DEC ENVIRONMENTAL EVALUATION OF HYDRAULIC FRACTURING AND HORIZONTAL DRILLING

On September 30, 2009, the NYS Department of Environmental Conservation (DEC) produced a draft Supplemental Generic Environmental Impact State (dSGEIS) to evaluate the impacts of expanded use of hydraulic fracturing with horizontal drilling. DEC Commissioner Alexander Grannis appeared at a NYS Assembly Hearing on Oil and Gas Drilling dSGEIS on October 15, 2009. He discussed what he characterized as the complex environmental impacts analyzed in the dSGEIS and described the Department's efforts to identify and provide appropriate mitigation measures based on sound science, engineering and experience to ensure that natural gas drilling production continues in an environmentally protective and safe manner in New York.

Among the numerous impacts needing to be addressed, DEC identified:

- known and unknown toxic effects of chemicals added to hydraulic fracturing fluids and their impact through exposure at the drilling site or possible con-

tamination of surface water and groundwater and other resources. Certain of these chemicals are classified by the U.S. Environmental Protection Agency (EPA) as known and possible human carcinogens;

- content and migration of flow-back fluids and emissions associated with these fluids, as well as storage and transportation impacts; and
- local infrastructure and quality of life impacts.
- DEC recently announced that an environmental impact statement will be required for every horizontal well drilling application within the New York City and Syracuse water supply systems.

The Department is now reviewing and responding to the thousands of comments submitted on the dSGEIS, which will be incorporated into the Final SGEIS; anticipated completion of the document is the end of 2010.

DRILLING IN THE MARCELLUS SHALE (cont.d)

U.S. ENVIRONMENTAL PROTECTION AGENCY DRILLING EVALUATION

On March 18, 2010, the U.S. Environmental Protection Agency (EPA) announced initiation of a comprehensive research study to investigate the potential adverse impacts that hydraulic fracturing and fracturing fluids may have on water quality and public health. EPA noted there are concerns

that hydraulic fracturing may impact groundwater and surface water quality in ways that threaten human health and the environment. EPA has been allocated \$1.9 million for the comprehensive, peer-reviewed study for FY10 and expects to complete the research study in two years.

MAISEL LEGISLATION TO CONTROL OUT-OF-STATE WASTE DRILLING FLUID DISPOSAL

The Maisel bill, cosponsored by Assemblymember Englebright and others, (A 10710) would establish a moratorium on the disposal and/or processing of any fluids used in hydraulic fracturing occurring outside of the State until 120 days after completion of a U.S. Environmental Protection Agency (EPA) comprehensive study and report evaluating the potential adverse impacts of these fluids on water quality and public health.

Assemblymember Maisel recognizes that some local governments may welcome the fees accrued from disposal of hydraulic fracturing fluids; however he remains concerned that there do not appear to be consistent waste testing requirements to prevent potential adverse environmental and public health impacts. Maisel notes that drilling operations in other states are reported to be sending drilling waste into New York for disposal with inadequate testing and analysis of these fluids.

For example, in April, Chemung County released the results of radioactive testing conducted on Marcellus Shale drilling cuttings from Pennsylvania which are currently being accepted at the Chemung County landfill. According to the County, testing results demonstrated that drill cuttings disposed of in the landfill were well below acceptable levels of radioactivity. However, local residents living near the landfill released their own study indicating that soil brought up from Marcellus shale formations tends to be highly radioactive.

Hydraulic fracturing fluids are currently being disposed of on a limited basis in NYS facilities. The Watertown Times reported earlier this year that the City Council voted in a close decision to continue accepting hydraulic fracturing fluid and brine from natural gas wells. In January, the City sewage treatment facility had accepted 35,000 gallons of mixed brine and drilling fluids from the Ross well in Otsego County that ultimately ended up in Lake Ontario. The well developer, Gastem, Inc. Quebec, was charged \$1,125 to dispose of the fluids.

According to the dSGEIS, drilling and fracturing fluids, mud-drilled cuttings, pit liners, flowback water and brine as classified as non-hazardous industrial waste which must be hauled under a NYS Part 364 waste transporter permit

issued by DEC. Transporters must identify the general category of waste transported and provide a signed authorization from each destination facility. However, manifesting is generally not required for non-hazardous industrial waste, which prevents tracking verification of disposal destination on an individual load basis.

Furthermore, the dSGEIS discusses the State Pollution Discharge Elimination System (SPDES) as the mechanism to regulate discharges. Unfortunately, the thousands of SPDES permits are not routinely monitored by DEC.

Assemblymember Maisel believes that until the impacts of use and disposal of all fluids associated with hydraulic fracturing and horizontal drilling are properly evaluated, it is inappropriate to dispose of these wastes in New York. The bill provides adequate time for assessment and public review of the study and report, by maintaining the moratorium on drilling fluids disposal until 120 days after the issuance of the EPA report for review.



Assemblymember Maisel joins Debra Winger for an Albany screening of the film "Gasland" by Josh Fox, which chronicles Fox's cross-country odyssey to document the impacts of hydraulic fracturing.

CHAIRMAN MAISEL INTRODUCES BILL TO ESTABLISH PRODUCT STEWARDSHIP BY DRUG MANUFACTURERS

Drug Companies would be responsible for drug take-back programs in Hospitals and Health Care Facilities

THE PROBLEM:

An Associated Press (AP) national investigative report in March 2008 found that a wide variety of pharmaceuticals, including endocrine disruptors, antibiotics, anti-convulsants and mood stabilizers, are found in the drinking water of at least 41 million Americans in 24 cities, at levels in the parts per billion or parts per trillion ranges.

The AP report cited testing in Philadelphia that discovered 56 pharmaceuticals or byproducts in drinking water, including medications for pain, infection, high cholesterol, asthma, epilepsy, mental illness and heart problems. The AP report also noted that medications were found in drinking water for 18.5 million people in southern California and 850,000 people in Northern New Jersey, as well as drinking water supplies in San Francisco, Tucson and Washington D.C.

In a study conducted from 2004 – 2009, the U.S. Geological Survey surveyed wastewater –treatment plant effluents (including two that received substantial discharges from pharmaceutical formulation facilities), stream water and reservoirs. The study found widespread contamination from drugs and personal care products in U.S. waters at levels similar to those in the AP report. Among the pharmaceuticals qualitatively identified were oxycodone, butalbital, metaxalone and carisoprodol.

Officials for the New York City Department of Environmental Protection, responsible for the delivery of drinking water to 9 million people, reported to the AP that this drinking water is not tested for pharmaceuticals. The New York State Department of Health (DOH) and the USGS tested the source of the City's upstate water supply and found trace concentrations of heart medicine, infection fighters, estrogen, anticonvulsants, a mood stabilizer and a tranquilizer.

More recently, the Ohio River Valley Water Sanitation

Commission reported on July 12, 2010, the preliminary results of a study it conducted looking for 158 contaminants, including 118 pharmaceuticals, hormones and personal care products. Researchers detected low concentrations of dozens of chemicals in the Ohio River upstream and downstream from Louisville, including medications used to fight depression, anxiety, high blood pressure, diabetes, heart disease and infection. The final report is expected early next year.

The presence of medications in drinking water creates a serious public health problem for the general populace, and most importantly infants and young children, through chronic exposure to a wide range of drugs. Additionally, surface waters are contaminated with animal drugs, including anabolic steroids and drugs to treat arthritis, cancer, heart disease, diabetes, allergies, dementia and even obesity, similar to drugs to treat humans. Pharmaceuticals in waterways are damaging wildlife across the nation, including feminization and low testosterone levels in male fish.

Concerns about chronic low-level exposure focus on certain drug classes; chemotherapy that can act as a powerful poison; hormones that can hamper reproduction or development; medicines for depression and epilepsy that can damage the brain or change behavior; antibiotics that can allow human germs to mutate into more dangerous forms; pain relievers and blood-pressure diuretics.

While drugs are tested to be safe for human use, the time frame is usually over a matter of months, not a lifetime. Pharmaceuticals also can produce side effects and interact with other drugs at normal medical doses. Pharmaceuticals are prescribed to people who need them, and are not meant to be delivered to everyone in their drinking water.

CURRENT RESPONSES TO THE PROBLEM

Homeowner Disposal of Drugs

New York State took initial action in 2006 with the passage of legislation requiring the NYS Department of Environmental Conservation (DEC) to conduct a public education campaign to educate the public not to flush unwanted drugs. DEC was authorized to provide advice regarding the disposal of drugs as solid waste. The Department was also authorized to conduct a demonstration project to determine the most effective ways of managing unwanted drugs to date; the Department has worked with various counties and local governments that have conducted small-scale drug take-back programs. In 2010, the Legislature authorized a two-year extension of this program.

Hospital and Health Care Facilities Drug Disposal

NYS hospitals and health care facilities, including nursing homes and long-term care facilities, find themselves with thou-

sands of unwanted, unused or expired pharmaceuticals. The NYS Department of Health (DOH) requires hospitals and health care facilities to flush unwanted or unused drugs. This guidance has contributed to contamination of waters of the State with common medications as municipal treatment plants are not capable of removing these chemicals.

In January 2010, the NYS Attorney General announced settlements with five health care facilities after his investigation showed that they released pharmaceutical waste into the New York City watershed in violation of the federal Safe Drinking Water Act. The settlements require the facilities to stop flushing unused drugs, which is a violation of state and federal waste management laws. The drugs included painkillers, antibiotics, antidepressants and hormones. The five facilities (two hospitals and three nursing homes) are located in the Mid-Hudson region.

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Drug Collection Efforts

There have been a few drug collections in the Northeast, which although successful, have barely scraped the surface of this problem. The Federal Resource Conservation and Recovery Act (RCRA) exempts household waste (including prescription and OTC drugs) from hazardous waste regulation. Furthermore, EPA has made clear that distributors may not accept already dispensed medication back as part of that waste stream. However, individual states may determine that drugs are hazardous wastes and must be managed as such. New York has not done so.

Successful drug collection programs have been established in the State of Washington (2 year pilot), Alberta Province, Canada (10 years), Wisconsin Clean Sweep funds local municipal drug collection programs, the EPA Great Lakes Earth Day Challenge of 2008, Cumberland County, PA, Salt Lake City, UT, Price Chopper 2008 collection program, and other locations across the country. These are single events or limited duration programs

To date, there have been a limited number of state programs for drug management and disposal.

California: A number of state agencies are tasked with developing model drug take-back programs for the public – no permanent program in place at this time.

Illinois: An Illinois law bars health care facilities from disposing of unused medications in wastewater systems. A collaborative is tasked with developing an organization that will produce educational materials for the public and assist in promoting the expansion of a network of pharmaceutical collection centers. Household waste drop-off points accepting pharmaceuticals must be located at the point of sale of the drugs.

Maine: In March 2010, the State of Maine House passed a bill requiring a statewide producer responsibility drug collection program which is still being negotiated in the Senate. Previously a mail-back pilot program was run by the Maine Drug Enforcement Agency.

Wisconsin: Grants to county, municipal and regional planning commissions for the collection of unwanted drugs are available.

THE SOLUTION

None of these actions have effectively eliminated dangerous drugs from our drinking water and our environment. As important as these events are, they are not a replacement of on-going, comprehensive collection programs to remove unwanted and expired drugs from households, healthcare facilities and other sources.

The concept of product stewardship has gained considerable attention and support, in recognition of the responsibility that manufacturers bear for products that can potentially create environmental or public health harm. The manufacturers would be held responsible for the recovery and environmental-sound disposal or recycling of these products.

Producer Responsibility for Hospitals and Health Care Facilities Drug Collections

Based on this concept, Assemblymember Maisel has introduced legislation (A 10274) that would require all drug manufacturers selling pharmaceuticals in New York to be responsible for creating and financing prescription and over-the-counter drug take-back programs for hospitals and residential health care facilities. Such facilities would be required to dispose of all unused and expired drugs through drug collection programs and these facilities would be prohibited from disposing of drugs as mixed solid waste in a landfill.

The bill would allow manufacturers to contract with third parties to run the programs, although the manufacturers would have to ensure the security of the collection programs. No fees could be charged to hospitals and residential health care facilities for drug collection. . Manufacturers would be required to dispose of all collected drugs in an environmentally sound manner, pursuant to rules and regulations promulgated by the NYS Department of Health (DOH). All manufacturers would be required to report

biannually to the DOH on their drug collection programs. The bill has been introduced in the Senate (S 7998) by Senator Toby Stavisky. The bill is supported by the NYS Health Facilities Association as well as a broad range of environmental and public health advocates.

Assemblymember Robert Sweeney recently introduced a DEC Departmental bill (A 11368), which Assemblymember Maisel also sponsors, that would establish an institutional pharmaceutical waste stewardship program and prohibit disposal of pharmaceutical wastes in landfills or waters.

Producer Responsibility for Household Drug Collections

Assemblymembers Steven Englebright and Alan Maisel introduced a bill (A 7345) several years ago that would require drug manufacturers to establish and be financially responsible for drug take-back programs for individual households. This important bill would require each manufacturer to hold at least one annual drug collection in each county of the state. Manufacturers would be authorized to contract with a public or private third party to conduct the drug collection program, but all costs would be borne by the manufacturer. No fees could be charged to the consumer for drug collection. Manufacturers would be required to report biannually to the DEC on their drug collection programs.

Most of the arguments against these bills come directly from PhRMA, the lobbying arm of the pharmaceutical industry, including the specter of higher drug prices, while suggesting, contrary to recent scientific evidence, that the amounts of drugs in our drinking water is minute. Drug companies make millions of dollars on the sale of drugs and currently contribute nothing for the disposal or contamination caused by millions of unwanted or unusable drugs.

PROTECTING YOUNG CHILDREN FROM BISPHENOL-A (BPA)

Assemblymember Maisel praises the Governor for signing the BPA bill

THE CHEMICAL BPA The stakes in the debate over the chemical bisphenol A (BPA) safety are extremely high - economically, politically and biologically. BPA has been used commercially since the 1950's and current BPA production globally exceeds 6 billion pounds. BPA has become a ubiquitous component of our economy, environment and bodies.

BPA is a principal component in the production of polycarbonate rigid plastic and epoxy resins. These plastics are found in a broad range of food and drink packaging applications, as well as many products made for and used by children such as pacifiers, baby bottles and teething rings. The chemical bond between BPA molecules is unstable and can be disrupted by heat, acidic reactions and other conditions that can release BPA into food or beverages within the containers or directly into the human body.

NYS LEGISLATIVE ACTION

Legislation was first introduced by Assemblymember Englebright in 2007 that would have prohibited the sale and distribution of products containing both BPA and phthalates, a family of chemicals used to improve flexibility in children's plastic products. The prohibitions applied to toys and child care products intended for use by children under the age of fourteen. A similar bill introduced in 2009 by Assemblymembers Englebright, Maisel and many other Assembly members, regulated products containing BPA marketed for children under the age of 14, including child care products, toys and all sports water bottles. The bill passed the Assembly in 2009 and died in the Senate that year.

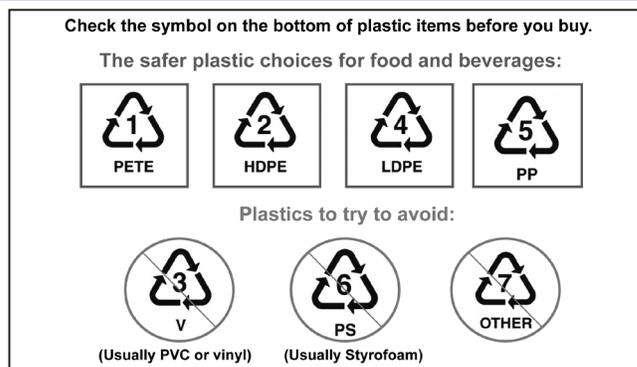
In April 2010, the Assembly again passed the BPA bill. The Senate passed a bill sponsored by Senator Antoine Thompson that only covered child care products for children under three. In late June 2010, the Legislature unanimously approved compromise legislation (A 6919-D/S 3296-H) that

- prohibits the sale and distribution of any child care product containing BPA intended for use by a child under the age of three after December 1, 2010;
- defines child care products as pacifiers, unfilled beverage containers, including baby bottles, baby bottle liners and cups, cup lids, straws and sippy cups;
- preempts municipalities from adopting local laws regulating BPA in these products;
- allows the Department of Environmental Conservation (DEC) to authorize product labeling of products that do not contain BPA with statements such as "Bisphenol A Free or BPA-Free.;" and
- establishes civil penalties of \$2500 for each violation and \$500 for each day that violation occurs and second violation civil penalties of \$2500 for each day of violation.

On Friday, July 30th, Governor Paterson signed the bill into law as Chapter 280 of the Laws of 2010.

Exposure to children raises significant concerns - children are uniquely vulnerable to chemical exposures because their smaller bodies are developing rapidly and they eat and drink more relative to their body weight than adults. Astonishingly, this chemical has been found in the urine of 93% of surveyed Americans over the age of six.

BPA is a known estrogen-mimicking endocrine disrupter chemical - endocrine disruptors generally have been linked to breast cancer, early onset of puberty, heart disease, immune system disruption, brain deterioration, type-2 diabetes, prostate cancer and obesity. BPA can alter the expression of several hundred genes. Pre-natal and neonatal exposures to BPA has been linked to altered DNA function and genetic expression, male reproductive disorders and lowered sperm counts, insulin resistance, early puberty and changes in prostate and mammary gland development, leading to breast cancer and other cancers later in life.



FEDERAL ACTION AND STUDIES ON BPA

There has been a long and tangled regulatory history of BPA nationally, with conflicting studies and positions taken by federal agencies. Over the past decade, there have been hundreds of studies reporting developmental, reproductive, behavioral and neurological effects of low dose exposure to BPA. Despite this mounting evidence in laboratory animals, producers continue to maintain that BPA is safe at low doses.

In January, 2010, the **U.S. Food and Drug Administration (FDA)** announced that it had some concerns about the potential human health impacts of BPA and therefore would study the potential effects and ways to reduce exposure to BPS in food packaging. In a reversal on its previous position, the agency expressed "some concern" over the use of Bisphenol A and is now supporting a shift to a more robust regulatory framework for oversight of BPA. The FDA is also facilitating the development of alternatives to BPA for the linings of infant formula cans and allocating \$30 million for Bisphenol A research.

In December 2009, **U.S. Environmental Protection Agency (EPA)** Administrator Lisa Jackson released a list of chemicals of concern that did not include Bisphenol A. Reversing its position in March, 2010, the agency announced a number of actions to address the potential effects of BPA, including the addition of BPA to its list of chemicals of concern and requiring testing related to environmental effects. Recently, Jackson stated that the EPA will release its Bisphenol A action plan in the near future and assured the public that EPA will carry through on its new commitments.

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In an important development, the **National Institutes of Health (NIH)** recently dedicated \$30 million in funding to support a comprehensive analysis of the health effects of BPA exposure. This funding is part of the NIH's larger goal of addressing long term health outcomes resulting from developmental exposures.

STATE LEGISLATIVE AND REGULATORY ACTION

Action by Counties in New York State

Over the past year, many states, counties and cities have taken actions to remove Bisphenol A from consumer products. In New York State, Suffolk, Albany and Schenectady Counties have enacted laws prohibiting the sale of baby bottles and sippy cups that contain Bisphenol A.

OTHER STATE AND LOCAL ACTIONS

States have also taken actions to remove Bisphenol A from children's and other consumer products:

- In May 2009, Minnesota became the first state to ban the use of Bisphenol A in baby bottles and sippy cups intended for use by children three years old or younger.
- In June 2009, Connecticut enacted Public Act 09-103, that will ban the manufacture, distribution and sale of any reusable food or beverage containers (for children and adults) containing BPA, as well as infant formula and baby food sold in a container containing Bisphenol A. The Connecticut ban goes into effect October 1, 2011.
- Washington State enacted legislation similar to Connecticut, with a significant addition that included sport bottles on the list of covered products. The law was signed by Governor Christine Gregoire on March 19, 2010.
- Wisconsin passed a similar law, prohibiting the sale of sippy cups and baby bottles intended for use by children three years and younger that contain Bisphenol A. Wisconsin law contains a mandated labeling requirement stating that the products being sold are BPA-free. The Wisconsin law goes into effect in June 2010.
- Maryland recently unanimously passed a law prohibiting the use of Bisphenol A in empty bottles and cups intended for use by children up to four years old. The legislation mandates the use of safer alternatives by prohibiting manufacturers from replacing Bisphenol A with chemicals identified as a carcinogen or reproductive toxicant by the FDA. The legislation was recently signed into law by the Governor and will go into effect in January 2011.
- California's Environmental Protection Agency posted a request for information regarding BPA in February 2010 indicating that the state agency is considering placing BPA on the Proposition 65 list of chemicals "known to the State of California to cause cancer or birth defects." Placement on this list could restrict use of BPA and requiring product labeling.
- In May 2009, Chicago passed legislation prohibiting the sale of any empty food or drink container containing Bisphenol A that is intended for use by children less than three years old.

STUDIES AND JOURNAL ARTICLES ON BPA TOXICITY

- A study from the Harvard School of Public Health (HSPH) found that participants who drank for a week from poly-

carbonate bottles, the popular, hard-plastic drinking bottles and baby bottles, showed a two-thirds increase in the presence of Bisphenol A in their urine. While it has been previously understood that heating polycarbonate bottles could increase Bisphenol A leaching, in the HSPH study participants did not drink heated beverages and did not wash the containers.

- A laboratory study conducted by the Yale School of Medicine published March 2010, found that exposure during pregnancy to Bisphenol A resulted in permanent abnormalities in the uterus of offspring, including alteration to mice DNA. The Yale study found mice to be hyper-responsive to estrogen long after exposure to Bisphenol A.
- Children whose mothers are exposed to BPA may be more likely to have asthma, according to a study of laboratory mice exposed to the chemical by researchers at the University of Texas Medical Branch at Galveston and published in the February issue of *Environmental Health Perspectives*.
- A study published the February 2010 journal *Synapse* reported that mice exposed to BPA during their early development had impaired memory and altered levels of anxiety later in life, changes linked to changes in the parts of the brain that control cognition and impulsivity.
- A 2010 Yale University Medical School study showed that exposure to BPA has an epigenetic effect on genes, i.e., that BPA affects the hormonal "on/off switch" in mice and humans. The study found that genes that affect the development of the uterus were turned "on" at a time they would normally be turned "off," which causes uterine tissue to respond differently to normal estrogen signals. Changes in normal responses to hormones have been linked to cancers and reproductive problems during adulthood. The study also found that genes were still affected long after exposure, suggesting long term health impacts from BPA exposure.
- In a 56-page Scientific Statement, for the first time in its history *The Endocrine Society* in April 2009 urged adoption of the "precautionary principle" with respect to reducing exposure to endocrine disrupting chemicals, including BPA.

VOLUNTARY MARKETPLACE CHANGES AND ISSUES

In the past several years, some companies, including Wal-Mart, Toys "R" Us and CVS, stopped selling baby bottles containing BPA and Playtex has stopped manufacturing baby bottles made with the chemical. Wal-Mart Canada has also stopped selling baby bottles, sippy cups, pacifiers, food containers and water bottles containing BPA. Nalgene has also announced it will phase out BPA in all of its sports bottles. SIGG, the Swiss manufacturer of metal water bottles, agreed to replace older SIGG bottles with BPA liners for BPA-free bottles for customers who returned them.

It should be noted that on Nov. 2, 2009, *Consumer Reports* reported it had tested a variety of canned foods, including soups, juice, tuna, and green beans, and found that almost all of the 19 name-brand foods tested contain some Bisphenol A. The Consumer Reports testing found BPA in some canned products that were labeled "BPA-free."

PRODUCT STEWARDSHIP FOR ELECTRONIC EQUIPMENT RECOVERY AND RECYCLING NOW LAW IN NEW YORK STATE

ASSEMBLYMEMBER MAISEL SUPPORTS THE GOVERNOR'S PROGRAM BILL

NYS LEGISLATIVE HISTORY

The Solid Waste Commission has a long history of involvement in the electronic equipment recycling issue initiated by former Commission Chair William Colton. In 2004-05, the Commission participated in a year-long effort spearheaded by the Council of State Governments/Eastern Regional Conference (CSG/ERC) and the Northeast Recycling Council (NERC) to develop a regional model for managing unwanted electronic equipment.

- In 2005, Assemblymember Colton introduced two model bills that held producers of electronic equipment responsible for the recycling, reuse and remanufacture of that equipment, with financial support based on
- the weight of electronic equipment producers sold in NYS (market share); or
- the weight of producer electronic equipment returned for recycling (return share).

Subsequently, Assemblymember Robert Sweeney, Chair of the Environmental Conservation Committee, introduced legislation establishing product stewardship requirements for manufacturers of electronic equipment.

NYS "ELECTRONIC EQUIPMENT AND RECYCLING ACT" BECOMES LAW

Chairman Maisel and many other legislators supported and passed the landmark "Electronic Equipment and Recycling Act" proposed and signed by the Governor in June 2010. The new law takes effect April 1, 2011.

The law assigns responsibility to manufacturers for the collection, recycling or reuse of discarded electronic equipment. Computers, keyboards, televisions, printers, battery-operated digital music players, digital video recorders and video game consoles are covered by the new law. Manufacturers would be prohibited from charging any fees to household consumers for the collection, handling and recycling or reuse of such equipment.

LEGISLATION ENACTED IN OTHER STATES

Numerous states have already established some form of e-waste take-back programs or e-waste disposal bans:

- **Producer Responsibility and Landfill Disposal Ban:** Connecticut, Maine, Minnesota, New Jersey, North Carolina, Oregon, Texas and Washington State
- **Advanced Recovery Fee (charged by Retailers) -** California
- **Flat Fee:** Maryland
- **Disposal Ban Only:** Arkansas, Massachusetts (cathode ray tubes only), Rhode Island and New Hampshire (ban on disposal or incineration of video display devices)

The Commission will continue to monitor the administration and implementation of this important new law.

THE ISSUE

Electronic equipment such as televisions, desktop and personal computers, computer monitors, and laptops from households, schools, offices and other facilities contain numerous hazardous components, including lead, cadmium, mercury, chromium, polyvinyl chloride and beryllium. Left to traditional disposal methods, these components can pose a significant threat to public health and the environment.

The public has already demonstrated its support for the recovery of unwanted electronic equipment. There has been a tremendous response to local and regional electronics collection days held across the state, indicating that people do not want to throw away this valuable equipment, preferring its recovery, recycling and reuse.



ASSEMBLYMEMBERS MAISEL AND SPANO INTRODUCE IONIZING SMOKE DETECTORS DISPOSAL STUDY BILL

THE BILL

In May 2010, Assemblymembers Alan Maisel and Mike Spano introduced legislation (A 11019), sponsored in the Senate (S 8236) by Senator Jose Peralta, directing the Commissioner of Environmental Conservation (DEC), in cooperation with the Department of Health (DOH), to study and report on the potential risks of ionization smoke detector disposal.

These agencies would be required to examine and evaluate all available data and studies relating to the dangers posed by the disposal of ionization smoke detectors, provide independent analysis, and report upon the potential harm and contamination posed by the disposal of millions of ionization smoke detectors in NYS. This analysis and report would take into account the quantity of smoke detectors that have entered and will continue to enter the solid waste stream, the concentration of smoke detectors in specific landfills locations and the potential exposure of landfill and sanitation workers, firefighters, workers who manufacture smoke detectors, as well as the general public, to americium-241.

The DEC Commissioner would be required to produce a report to the Governor and the Legislature, making specific recommendations on the continued sale of ionization smoke detectors and the regulation of the disposal of ionization smoke detectors as hazardous wastes.

POTENTIAL EXPOSURE IMPACTS OF AMERICIUM-241

A U.S. Environmental Protection Agency (EPA) fact sheet on americium describes the properties, uses and effects of exposure to this radioactive metal. If americium-241 enters the human body, it tends to concentrate in the bone, liver and muscle and can remain in the body for decades, continuing to expose the surrounding tissues to radiation. Americium-241 poses a significant risk if ingested, exposing tissue to both alpha and gamma radiation, thereby increasing the risk of developing cancer.

HOW ARE SMOKE DETECTORS CURRENTLY REGULATED?

Currently, the Nuclear Regulatory Commission regulates the radioactive materials in smoke detectors. Because the amount of americium in these devices is deemed so small, current NRC regulations exempt individuals purchasing smoke detectors from licensing requirements including those related to disposal of radioactive materials. The public can dispose of single, household smoke detectors as ordinary trash.

Of particular concern is the concentration of smoke detectors that are being

disposed of as solid waste in landfills over the lifetime of such landfills, as well as exposure of workers and the public who may come into contact with americium-241.

This new bill provides an opportunity to assess the risks associated with disposal of ionization smoke detectors and consideration of regulations for their disposal. This process should minimize or avoid the potential harm and contamination posed by their disposal as solid waste.

HOW DO SMOKE DETECTORS WORK?

A descriptive paper titled "How do Smoke Detectors Work?", authorized by Anne Marie Helmenstine, Ph.D. on the website chemistry.about.com explains basic information on smoke detectors.

There are two types of smoke detectors, ionization detectors and photoelectric detectors. A smoke alarm uses one or both methods, sometimes plus a heat detector, to warn of a fire. The devices may be powered by a 9-volt battery, lithium battery or 120-volt house wiring.

Ionization detectors: This type of detector contains a source of ionizing radiation which is a minute quantity (approximately 1/5000th of a gram) of americium-241, an alpha particle and gamma emitter with a half-life of 432.7 years. Americium is a man-made metal produced when plutonium atoms absorb neutrons in nuclear reactors. The largest and most widespread use of americium-241 is as a component in household and industrial smoke detectors.

This type of detector contains an ionization chamber and a ionizing radiation source. The ionization chamber consists of two plates separated by a small gap. The battery applies a voltage to the plates, charging one plate positive and other plate negative. Alpha particles released by americium-241 ionize oxygen and nitrogen atoms in the chamber, which generates a continuous electric current. When

smoke enters the ionization chamber, the smoke particles attach to the ions and neutralize them, so they do not reach the plate. This drop in "current" between the plates triggers the alarm.

Photoelectric detectors - One type of detector operates by smoke interrupting a light beam, which sets off an alarm. In the most common type of unit, light is scattered by smoke particles onto a photocell, initiating an alarm. In a T-shaped chamber, a light-emitting diode (LED) shoots a beam of light across a photocell, which generates a current when it is exposed to light. When smoke is present, the light is scattered by the smoke particles, causing insufficient light to hit the photocell, hence triggering the alarm.

Which Method is Better? Both types of detectors are effective smoke sensors and both types must pass the same test to be certified as UL smoke detectors. Ionization detectors respond more quickly to flaming fires with smaller combustion particles. Photoelectric detectors respond more quickly to smoldering fires, which are the most common casualty-producing fire. According to the National Bureau of Standards, most of the fires producing the 12,000 fatalities a year that occur in the US are the smoldering kind, and the photoelectric detector sounds the alarm for flameless fires in ample time to permit escape from the premises.

ASSEMBLYMEMBERS MAISEL AND COLTON TOUR UNIQUE MARINE TERMINAL

The Port of Coeymans Marine Terminal is a newly-restored industrial port on the shores of the Hudson River twelve miles south of Albany. In April, Assemblymembers Maisel and William Colton and Assembly staff visited the Port to observe the facility's many activities. The Port prides itself in providing facilities, equipment and space to a broad spectrum of environmentally-conscious businesses. The Port utilizes the Hudson River to provide access for worldwide water-based shipping, a highly energy-efficient mode of freight transport.

The Port supports industries and activities that provide sustainable products and services. This approach, which is of significant interest to the Assembly and the Solid Waste Commission, recognizes the importance value of fostering such initiatives in New York State. Tenants at the Port include businesses that manufacture

building materials and products from recycled materials; assemble infrastructure components such as bridge sections; produce cooling towers; and process scrap metal for sale and use worldwide. Of particular interest was an operation that recycles construction and demolition (C&D) debris, and a process that produces value-added material from scrap glass for various applications.

C&D is being recycled, segregated and processed into usable materials at the Port of Coeymans. C&D recycling has become increasingly attractive and economical as contractors find new opportunities for utilizing the broad range of materials salvaged from C&D sites and processing technologies continue to improve. Legislation introduced by Assemblymembers Colton and Maisel (A.1264, A.1320 and A.1576) would require recycling of 50 percent of C&D debris in New York City,

New York State and by state agencies and their contractors, respectively.

The scrap glass-refining process housed at the Port utilizes a promising new technology that may enhance end uses of scrap glass. Historically, glass recovery has proven to be a difficult recycling market. The new process can grind glass to various sizes designed to meet user specifications, thereby providing products better suited to the marketplace than the crushed glass products from previous technologies.

Another interesting development was the July 13th shipment of a pre-fabricated, 350 foot long, 2,400 ton bridge on two welded barges from the Port down the Hudson River to replace the 110-year old Willis Avenue Bridge. The swing bridge will make the 130 mile journey south to its ultimate destination, connecting Upper Manhattan and the South Bronx.

For more information about the Port of Coeymans, visit their website.



Assemblymember Maisel observes water transport at the Pt. of Coeymans Marine Terminal.

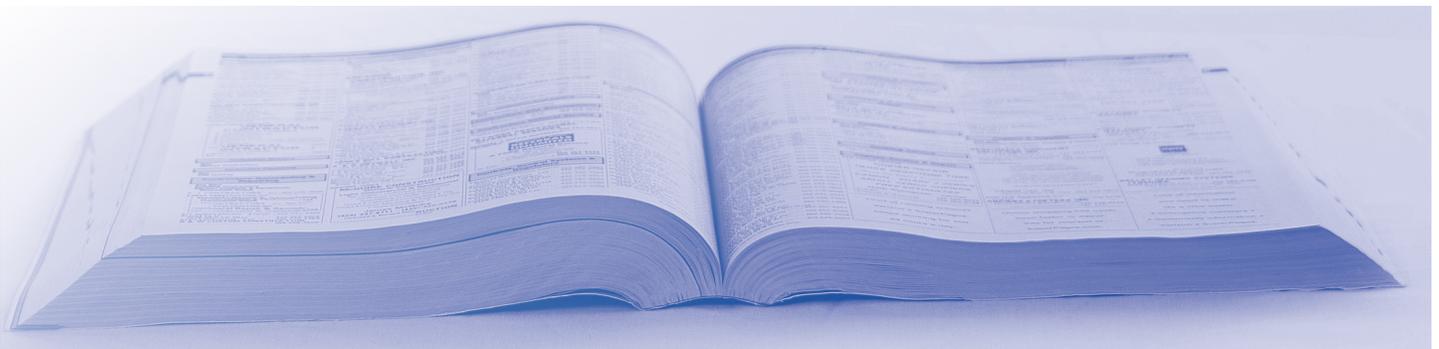
ASSEMBLYMEMBER MAISEL INTRODUCES BILL TO REQUIRE RECYCLING OF TELEPHONE DIRECTORIES

Telephone directories are useful publications; however, their over-abundance has created a significant amount of waste in the U.S., estimated to be 660,000 tons annually. A recent DEC study on Municipal Solid Waste Composition and Characterization using 2008 data estimates that New York State produces more than 50,000 tons of phone book waste. Many households and businesses receive unsolicited multiple directories as publishers and distributors compete for attention.

Assemblymember Maisel has introduced legislation that would:

- prohibit telephone corporations from delivering a telephone directory to any residential customer who has not requested the publication;
- require non-telephone corporations or distributors to inform customers of their right to refuse delivery of directories at their residences; and
- require distributors of directories to ensure that directory recipients have access to services for recycling these publications; and
- ban the disposal of and co-mingling of separated telephone directories as solid waste by haulers and solid waste facilities.

This legislation is consistent with the established hierarchy of waste generation of preventing waste production, followed by recovery, reuse and recycling of waste. A 2006 EPA study, "Solid Waste Management and Greenhouse Gases", found that reducing one ton of phone book generation eliminates "greenhouse gas emissions" of 1.72 metric tons of carbon equivalent. Additionally, every ton of recovered material used that replaces virgin materials in new phone book manufacture reduces greenhouse gas emissions by 0.72 metric tons of carbon equivalent.



Fiscal Year 2010-11 ENVIRONMENTAL BUDGET ISSUES

2010 has presented enormous budgetary challenges, balancing the need to reduce state spending while preserving programs that are critically im-

portant to New Yorkers, including environmental and public health protection and public lands protection and accessibility.

DEC BUDGET HIGHLIGHTS

Waste Tire Fund

The Waste Tire Management and Recycling Fund created in 2003 has been renamed the “Waste Management and Cleanup Fund” and has been extended for three more years. The Fund will continue to pay for waste tire disposal site cleanups, as well as certain DEC personnel costs.

Hazardous Waste Generator Fees

The DEC Hazardous Waste Regulatory Fee structure has been overhauled and is now based on actual waste generated rather than estimates of waste generated. A new \$130/ton of waste fee has been established which is capped as follows:

- For generators of less than 4,000 tons/year - **\$300,000**
- For generators of 4,000 – 10,000 tons/year - **\$400,000**
- For generators of more than 10,000 tons/year - **\$800,000**

The current exclusion from fees for generators of less than 15 tons/year is continued. The breakdown of generators is:

- approximately 65 generators will pay higher fees;
- approximately 375 will pay the same or lower fee; and,
- remaining generators will pay no fees as they are under the 15 tons/year threshold.

Other Fees

No changes have been made to the hazardous wastewater generation fees (including surcharge fees) and the treatment, storage and disposal (TSD) fees. Up to \$2.1 million from these fees will be transferred to the Environmental Protection Fund (EPF).

Additional Penalties

Increased civil and criminal penalties in the Environmental Conservation Law (ECL) for violations of the Minerals (Section 71-1307) and Freshwater Wetlands (Section 71-2103) programs will be deposited into the EPF. There are also increased civil and criminal penalties for Water Resources, Air and General violations.

Environmental Protection Fund Solid Waste Account Appropriations FY 09-10 & FY 10-11 (in thousands of \$)

Fiscal Yr. → Category ↓	Enacted FY09-10	% of EPF	Enacted FY10-11	% of EPF
TOTAL APPROPRIATIONS	\$222,000	100	\$134,000	100
Solid Waste Account	\$17,650	8.0	\$11,014	8.2
Landfill Closure	750	0.3	600	0.4
Municipal Recycling (DEC)	10,825	4.9	6,639	5.0
Secondary Materials (DED)	2,250	1.0	1,000	0.7
Hudson River Damage Assessment	450	0.2	200	0.1
Pesticides Program	575	0.3	575	0.4
Cornell Breast Cancer Program	450	0.2		
Pollution Prevention Institute	2,350	1.1	2,000	1.5

SOLID WASTE MANAGEMENT PLANS NEW YORK STATE AND NEW YORK CITY UPDATES

NEW YORK STATE

Pursuant to a 1980 State law, the New York State Department of Environmental Conservation (DEC) completed the State Solid Waste Management Plan in 1987. The Plan summarized the current status of solid waste management; set management goals, including 50% reduction and recovery in ten years; and recommended actions for the State and local governments to achieve these goals.

Twenty-three years later, DEC has issued a new State Solid Waste Management Plan draft, following a comprehensive process involving many stakeholders. The draft updates

the current status of solid waste management in the State and addresses broader global solid waste management issues such as climate change and energy conservation. The draft reviews current policies, sets new goals, and recommends policy and program actions, focusing on waste reduction and recovery.

The document is available at <http://www.dec.ny.gov/chemical/41831.html>. Comments on the Draft Plan were due by August 16, 2010. The Commission will be reviewing the document and Commission Chair Maisel plans to submit comments to DEC. The Commission welcomes your suggestions.

NEW YORK CITY

Following several years of extensive deliberation, New York City finalized its Comprehensive Solid Waste Management Plan (SWMP) in 2006. The goal of the new Plan was to greatly improve the City's solid waste management practices based on criteria of environmental responsibility, economic viability, and fairness. The Plan required each borough to manage its own fair share of waste and replace a truck-based waste transport system with water and rail-

based transport. The goal was to decrease traffic congestion and air pollution in waste transfer neighborhoods and citywide.

Since that time, the City has been working on facility development and legal arrangements necessary to implement the Plan. The current status of facility development and contracts needed for the Plan's implementation by the City's Department of Sanitation (DSNY) is listed below.

City-Owned Facilities

North Shore Marine Transfer Station (MTS) –

fully permitted; construction underway with completion expected May 2013.

Hamilton Avenue MTS –

fully permitted to accept DSNY-managed waste; construction underway with completion expected May 2013.

East 91st Street MTS –

partially permitted, legal challenges; City expects construction to begin late 2010.

Southwest Brooklyn MTS –

permits are pending for acceptance of DSNY-managed waste; City expects construction to begin early 2011.

West 59th Street MTS –

under environmental review (expected to be completed 2011); to be leased as a commercial waste and/or construction and demolition debris recycling/export facility.

Gansevoort MTS –

Proposals being received for design of a recyclables transfer facility and recycling education center.

Staten Island (Rail) Transfer Station –

began operation in 2006; accepting DSNY-managed waste.



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Marilyn M. DuBois, Editor

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Other Facilities (Contracted)

Harlem River Yard (Rail) Transfer Station –

20-year service contract accepting DSNY-managed waste began in 2007.

Varick Avenue (Rail) Transfer Station –

20-year service contract accepting DSNY-managed waste began in 2008.

Review Avenue (Rail) Transfer Station –

20-year service contract accepting DSNY-managed waste will begin in 2012.

Essex County Resource Recovery Facility –

City negotiating a 20-year inter-governmental contract to begin accepting DSNY-managed waste in 2015.

South Brooklyn Marine Terminal Recyclables Processing Facility –

20-year service agreement to process city-wide recyclables; construction expected to begin late 2010.

There may be various opportunities to provide input with facility development and contractual arrangements. For more information on the Plan and its implementation, go to www.nyc.gov/dsny and click on the appropriate topics.



To further our efforts to reduce waste, please inform us if you have a change in address by calling us at (518) 455-3711, fax at (518) 455-3837 or write us at: The LCSWM, 4 Empire State Plaza, 5th Floor, Albany, NY 12248