

J. REGULATED MEDICAL WASTE

On March 6, 1989, the New Jersey Comprehensive Regulated Medical Waste Management Act N.J.S.A. 13:1E-48 et seq. (Comprehensive Act) was signed into law. This law, as well as earlier state and federal regulatory programs, was primarily in response to beach wash-up incidents along eastern coastal areas during the summers of 1987 and 1988. As a fundamental component of the Comprehensive Act, the New Jersey Departments of Environmental Protection (DEP or department) and Health and Senior Services (DHSS) (Departments) formulated a comprehensive regulated medical waste (RMW) management plan (RMW State Plan) addressing the immediate, interim and long-term needs of the state. That management plan was issued in 1993 as Section II in the Solid Waste Management State Plan Update 1993-2002 entitled “Comprehensive Regulated Medical Waste Management Plan”.

Generally, the Comprehensive Act specified plan contents in three areas: baseline information of generator, waste composition and quantity information and disposal practices including: (1) an inventory of available treatment and disposal technologies; (2) forecasting of generation rates and waste composition; (3) county disposal capacity; (4) addressing the application of the most appropriate statewide RMW disposal strategy; (5) the degree to which RMW can be recycled; (6) the appropriateness of accepting RMW for incineration at county resource recovery facilities; (7) the need, if any, for a small quantity generator exemption from regulation; and (8) rule changes necessary to fully implement the Comprehensive Act.

During the period covered by the Solid Waste Management State Plan Update 1993-2002 - Section II entitled “Comprehensive Regulated Medical Waste Management Plan”, the Departments established baseline information and monitored the accuracy of the prior forecasts. In 1993, there were over 16,000 generators of RMW in New Jersey while in 2005 there are approximately 19,000 generators. This data reflects the identification and management of medically-related waste pursuant to regulations presently in effect. Data analysis has been performed in the following areas: RMW generation by facility type; waste generation by county; waste composition by class (i.e., sharps, pathological waste, cultures and stocks, etc.); transporter inventory and disposal capacity by county.

J.1 Alternative Treatment Technology Review

Alternative Treatment Technology Review

The Department, in conjunction with the DHSS, oversees the review and approval of RMW treatment technologies that are used as an alternative to incineration pursuant to N.J.A.C. 7:26-3A.47. The DHSS approves the treatment efficacy of a technology based upon standards set forth by the State and Territorial Association on Alternate Treatment Technologies (STAATT) as well as other health-based criteria. The treatment efficacy ensures the inactivation of vegetative bacteria, fungi, lipophilic/hydrophilic viruses, parasites and mycobacteria at a 6 Log10 reduction or greater. The Departments have authorized eight such alternate technologies for use in New Jersey for the treatment and destruction of RMW. These technologies were approved separately during the period of May 4, 1994 through November 8, 2000. There are currently eleven

registered sites utilizing one of these approved technologies in New Jersey. There are no commercial facilities currently operating that use any of these technologies although there is a single application for such a facility under review. The only facilities in New Jersey that treat and destroy RMW on-site are the six on-site operating incinerators or one of the eleven registered sites using an authorized alternative technology (see Table J-1).

J.2. Body Art Regulation

The public health risks inherent to tattoos and other forms of body art arise largely from the use of sharps and the potential to transmit bloodborne pathogens. Therefore, in 2001, the DHSS promulgated regulations at N.J.A.C. 8:27 et seq. entitled "Body Art Procedures". These new training and licensing requirements significantly raise the current health standards among body art professionals. This subchapter also incorporates the RMW regulations at N.J.A.C. 7:26-3A et seq. by cross-reference. This will insure safe handling and disposal of sharps generated by tattoo, body piercing and permanent cosmetic professionals. Prior to the adoption of these rules, no state standards existed for this industry. As a result of this rule, the number of body art establishments that have registered with DEP as medical waste generators in 2004 has risen to 116 establishments. This is up from 35 establishments registered in 2001 and none registered in 2000.

J.3. Floatables and Abandonment Monitoring

The Interagency Protocol For Response to Medical Waste Abandonments and Marine Floatables Incidents (Protocol) is a document that is compiled and updated each year by the various agencies involved and is distributed to local health departments by Memorial Day. The Department coordinates this activity, in conjunction with the Department of Health and Senior Services and several other State agencies. The Protocol outlines the procedures for notification and response in the event of exposure to potentially infectious waste and other solid wastes that can occur near the shore or inland, usually in the warm weather season. The Protocol is responsible for helping coordinate agencies' responses to medical waste and other wastes that might have escaped the RMW and solid waste streams so that they can be handled responsibly. The Department has continued the annual publication of this document from 1993 through 2004. Due to recent events, beginning in 2002, a reporting procedure and new definition were included in the protocol to reflect the potential risk of bioterrorism.

J.4. RMW – Generator Universes

The RMW population has averaged approximately 15,000 entities over the last 15 years. The size of the regulated community has slowly increased during that period. In 2005, it is estimated that the number of regulated generators will remain stable at approximately 19,000.

J.5. RMW - Generation Trends

Most of the RMW generated in New Jersey was generated by general medical centers until 1998. In that year, dialysis centers generated approximately the same amount of RMW as general medical centers. Dialysis wastes are in the form of liquid RMW, while general medical centers generate mostly solid RMW. In subsequent years, dialysis centers have surpassed general medical centers in the generation of RMW. Liquid RMW generation has risen steadily since 1990. Since 1999, dialysis centers, which generate almost solely liquid RMW as dialysate, have generated over two-thirds of New Jersey's RMW on a weight basis. Most of this liquid waste is not transported over roadways but is disposed of via the sanitary sewer. Liquid RMW totals remained under 10,000 tons until 1998 when the total liquid RMW reached over 16,000 tons. Since then, liquid RMW generation has nearly tripled and peaked with nearly 60,000 tons in the year 2000. Reporting of liquid RMW generation decreased with the delisting of dialysate as a RMW in regulatory amendments adopted December 2001, with only approximately 38,000 tons reported in 2003.

J.6. Security and Bioterrorism

The advent of real concerns about future bioterrorist incidents whereby large-scale epidemics of contagious disease are caused by the intentional release of biohazardous agents by terrorists raises the issue of disposal of the wastes related to these incidents. Various forms of wastes would be generated by such incidents including: decontamination, medical and home self-care wastes. Decontamination wastes would emanate from both wrapping contaminated materials and also disinfected materials that would still be considered contaminated to ensure safe disposal. Facilities and practitioners that treated affected persons would generate medical wastes on a large scale. A large-scale bioterrorism incident would of its very nature produce much larger amounts of waste than the regulated medical waste management infrastructure presently handles. Further, more types of patient-contact materials than are normally considered regulated medical wastes would be included in the waste categorization such as the present Class 6 Isolation Waste class to prevent additional exposures to the contaminated materials. A large-scale incident would also likely mean that much patient care would necessarily take place in home or in nontraditional medical facilities such as temporary infirmaries to handle large numbers of affected persons. Contamination could quite literally be almost everywhere. Home self-care medical wastes are exempted from regulation under present law, but in the event of a release of a virulent and highly contagious agent, wastes from homes and related patient contact wastes would need to be handled as regulated medical waste.

Consideration needs to be given to requesting that the Legislature amend New Jersey's Comprehensive Regulated Medical Waste Management Act (CRMWMA) for inclusion of agents used or intended for use in terroristic incidents, including related home self-care wastes not normally regulated under the present CRMWMA law. At present, the CRMWMA addresses both certain listed and characteristic medical wastes generated from the treatment, immunization or diagnosis of humans, certain research, biological production and animal wastes. Wastes contaminated with biological agents hazardous to human health outside medical or research arenas may not be covered by the CRMWMA. As an analogy, hazardous chemical wastes

generated at site cleanups are managed under the authority of both State and Federal hazardous waste regulations based on the character of the waste not the source of waste generation, as is the case with medical wastes, under the CRMWMA.

Transporters and disposal facilities are not authorized or licensed to transport or process wastes other than regulated medical waste. Amending the CRMWMA to include wastes known or suspected of containing dangerous biological agents from any source, for example those on the New Jersey Select Agent List or biological agent registry, would allow the existing medical waste companies and medical facilities with expertise in packaging and handling infectious agents to help deal with wastes generated during cleanup of biological or certain toxic agents at contaminated sites, or other situations unrelated to direct medical or research venues covered by the existing CRMWMA State law.

The commercial infrastructure of transporters and disposal facilities would be of great value to assist in the proper handling, transport and disposal of secured biologicals and biological cleanup wastes. In a large-scale incident, the existing medical waste infrastructure established for disposing of medical wastes could be instantly mobilized to assist with management of wastes from accidental or terroristic releases of certain biological or toxic agents.

J.7. RMW- Regulatory Issues

Irrespective of whether the CRMWMA is amended to directly address biological incidents beyond the medical, research and biological production arenas as outlined above, the regulated medical waste regulations at N.J.A.C. 7:26-3A et seq. need to be evaluated for updating in view of new agents such as prions that were not recognized years ago as being nearly indestructible and the possibility of medical facilities needing to deal with new Biosafety Level 3 and 4 agents.

Regulatory issues needing evaluation in view of new agents such as prions and the threats of bioterrorism include:

- More clearly defining proper packaging requirements and disposal facilities for wastes known or suspected of containing select list biologicals in view of the present regulatory reference to Class 6 Isolation Wastes; (i.e., prions require complete incinerative oxidation, or complete hydrolysis through various chemical mechanisms such as alkaline or other extreme chemical oxidative hydrolysis and, therefore, are not suitable for many management approaches including incomplete incineration which occurs in most typical waste incinerators.)
- incorporating references to appropriate Federal and/or international regulations and guidance;
- addressing security of containers of wastes containing select list agents;
- addressing geographical transportation continuous tracking/monitoring and reporting, as well as higher levels of security and packaging (if not preempted) for in-state transport of select-agent wastes; and

- further evaluation of the existing medical waste regulations following any future recommendations of the Domestic Security Task Force or other government agency recommendations.

Other regulatory issues needing evaluation for regulatory clarification to ensure the safe management and disposal of more dangerous medical wastes in the future and for relaxation of regulatory provisions based on historical compliance patterns, are as follows:

- Develop a permitting process to allow commercial privately-owned wastewater treatment works to accept liquid RMW for treatment;
- relax the intermediate handler requirements for in-house treatment of wastes in line with the recommendations of the DHSS;
- ensure the proper treatment of prions by creating a separate waste class of RMW that is known or suspected of containing prions to distinguish such waste from other RMW. Also, specify proper treatment methods for prions as they require particularly unique destruction requirements making them unsuitable for treatment by normal means used for other RMW containing more typical infectious agents. Wastes containing these agents should be isolated for special treatment;
- specify the permitting requirements for commercial RMW treatment, destruction and processing facilities;
- clarify and simplify the requirements for certifying bona fide out-of-state RMW processors for generators using mail order disposal systems to out-of-state facilities;
- explain, in regulation, how to manage RMW that has been abandoned;
- to prevent concentrated amounts of infectious agents from being disposed of into the municipal sewerage system, specify that Class 1 Cultures and Stocks of Infectious Agents cannot be disposed of in that manner; and
- develop an on-line system for completion of the annual generator reports to allow simple entry of the information at the source of generation.

J.8. RMW- Compliance Analysis

Since the inception of the Regulated Medical Waste Program, both of the Departments have continued to regulate and monitor compliance in the affected regulated community. In October 1991, the Department entered into a Memorandum of Understanding (MOU) with DHSS regarding the division of labor between the two Departments for regulation and monitoring of regulated medical waste activity. Since that time, the MOU has been modified twice with the latest revision occurring on April 25, 1997. As the MOU is currently written, both Departments

share program responsibilities. The Department has responsibility for all inspections of commercial and limited transporters, commercial collection facilities, RMW incinerators, transfer stations, registration and billing functions, waste flow reports of illegal disposal at transfer stations and landfills. DHSS's, Public Health, Sanitation & Safety Program is responsible for inspection of generators, non-commercial collection facilities functioning at sites registered as medical waste generators and destination facilities (excepting incinerators). DHSS is also responsible for 24-hour emergency response to incidents involving illegal disposal and abandonment, transportation accidents, washups of medical waste and reports of citizen exposure. Both Departments have performed thousands of inspections, issued hundreds of Administrative Orders and responded to and investigated over hundreds of incidents involving mishandled RMW.

In July 1997, the responsibility for inspecting and providing technical assistance to all RMW generators was shifted to the DHSS. Previously this was a shared responsibility between the Departments. Without additional resources, the DHSS assumed the direct responsibility to inspect the more than 18,500 active RMW registered generators located throughout the 21 counties of New Jersey. Since the onset of the RMW regulation, there have been more than 54,200 inspections conducted. Over the last three calendar years (2000-2002), an average of 2,864 inspections were conducted per year. In addition to inspection, field investigations are conducted relative to non-licensed generators and cases of abandonment of medical waste.

To address the task of inspecting the vast number of generators, steps were implemented to incorporate inspection frequency modifications. The basic intent of this frequency schedule is that the larger generators that have potentially more problems would be inspected on a more frequent basis. The basic frequency of inspecting RMW generators is outlined below:

GENERATOR CATEGORY	WEIGHT PER YEAR (LBS)	INSPECTION FREQUENCY
1	Less than 50	Every 5-7 years
2	50-200	Every 3-5 years
3	200-300	Every 2 years
4	300-1000	Every year
5	Greater than 1000	Twice per year

Using the total of 18,514 active generators and multiplying it by the frequency of inspections by weight generation equals an approximate average of 5,000 inspections that are designated to be completed each year. Historically, there have never been sufficient monies to fund the necessary number of Registered Environmental Health inspectors to complete the expected "minimum" number of inspections per annum. Funding has been static since the onset of the regulation in 1988. The responsibility for regulatory compliance was increased two-fold in 1996 when all inspectional responsibility and technical assistance to RMW generators was transferred from the Department of Environmental Protection solely to DHSS. Due to fiscal constraints, both past and current, the Department has been and will be unable to fulfill all of its obligations and responsibilities under the Comprehensive Regulated Medical Waste Management Act. To address this problematic situation, the criterion to be used, in addition to the Inspection Frequency Percentage by Generator Category, was the compliance history of the generator.

The following table illustrates that since 1996, large category generators have been targeted at a rate of approximately 500% higher than in previous years:

1. Large Generators Inspected as a Percentage of Total Inspection 1992-2003

Calendar Year	DHSS Total Inspections	Total Inspections	3-4-5- Generators Inspected	3-4-5- Percentage Total Inspected
2003	437	437	206	47%
2002	2184	2184	481	22%
2001	2476	2476	804	33%
2000	3931	3931	860	22%
1999	2646	2646	861	33%
1998	2383	2383	834	35%
1997	3285	3285	725	22%

Note 1997 was the first full calendar year that DHSS conducted all generator inspections

1996	3562	4328	326	8%
1995	4272	6758	419	6%
1994	2937	5357	338	6%
1993	3416	5870	377	6%
1992	2778	7072	239	3%

Generators with a violation history are inspected based upon the severity of the past violation(s) and the date of their last inspection. With this inspection schedule plan, a Category 1 generator with a good inspection history may not be inspected in excess of 7 years. Therefore, it is imperative to have each generator understand the RMW regulations and be in the highest degree of compliance possible. The inspection compliance rate has basically improved each year since the inception of the RMW statute. However, it should be noted that, since the DHSS has been targeting generators that have failed to pay the appropriate registration fees, inspections were purposefully scheduled with known violations. Therefore, the compliance rate has been directly reduced. If the last date of inspection was used as the only criteria for scheduling inspection, obviously the compliance rate would be significantly higher.

Generator Compliance* Rate by Calendar Year 1990-2003

Calendar Year	DHSS Compliance Rate %	DEP Compliance Rate %
2003	72.4	N/A
2002	68.6	N/A
2001	72.3	N/A
2000	66.8	N/A
1999	65.1	N/A
1998	65.2	N/A
1997	64.1	N/A

Note: 1997 was the first full calendar year that DHSS conducted all generator inspections

1996	66.8	74.2
1995	71.8	73.6
1994	63.2	57.6
1993	53.3	59.8
1992	35.1	64.8
1991	21.6	77.3
1990	15.9	75.3

*Compliance denotes an inspection where no violations were issued.

We conclude there are a number of reasons for this overall increase in compliance. Obviously, over time, the individual physicians, hospitals, transporters, etc. and their professional support associations (AMA, ADA, etc.) are becoming increasingly aware and educated regarding the requirements of the regulations. As noted in Appendix Table J-8, the current trend towards increased compliance seems to have started at the beginning of 1992, which is when the first inspections were completed.

Additionally, increased interaction between the Departments ensures that inspections are conducted uniformly and that the information supplied is consistent and up to date.

In April 2004, the Departments conducted joint countywide compliance inspections of regulated medical waste generators in Ocean County to ensure that medical waste is properly disposed and that the public is protected from the potential hazards of discarded needles, syringes and other medical waste. The universe of regulated medical waste generators inspected included doctors, dentists, veterinarians, hospitals, healthcare facilities, nursing, assisted living and convalescent homes, medical analytical laboratories, outpatient surgical clinics, biomedical research facilities, funeral homes, schools and body piercing and tattoo parlors.

The Departments used a two-phase approach for Ocean County. The first phase, known as the Compliance Sweep, began in March 2004 and focused on providing outreach and assistance to known and potentially regulated individuals, businesses and government operations. Each potential regulated entity was mailed a copy of an enforcement alert publicized on the DEP's Compliance and Enforcement web page. The alert identified that unannounced inspections were going to be conducted during two weeks of April 2004 in Ocean County. The DHSS provided outreach and assistance to interested entities on three occasions at two locations. Dates, times and locations were posted on the DEP's webpage. The second phase, known as the Enforcement Sweep, involved a large-scale inspection effort utilizing approximately 21 inspectors from both the DEP and DHSS.

Potential entities to inspect were selected by culling out registered regulated entities located in Ocean County from the DEP's Medical Waste program's database, the DEP's New Jersey Environmental Management System (NJEMS) and by selecting potential generators from Dun & Bradstreet data based on SIC designations. Of the approximately 4,234 potential inspection targets, 1,541 were selected for inspection. Eliminating duplicate entries reduced the original list. These duplications consisted of having similar or identical names or addresses.

Of the 1,541 entities inspected, 800 were found to generate regulated medical waste. Of the 800 regulated medical waste generators, 160 were found with one or more violations. Of the 160 sites where violations were found, 110 occurred at registered generators while 50 were found at unregistered generators. Of the 160 sites with violations, 73 had more than 1 violation cited. A summary of the violations found appears in the chart below.

Regulation	Description	Number of Violations
N.J.A.C. 7:26-3A.8(a)	Registration – Generator failed to register with the Department	50
N.J.A.C. 7:26-3A.19(a)	Tracking Form – Generator failed to use an approved tracking form for each shipment of regulated medical waste	31
N.J.A.C. 7:26-3A.21(a)1	Tracking Form - Generator failed to retain a copy of the completed tracking form for a period of three years	38
N.J.A.C. 7:26-3A.21(d)	Annual Report - Generator failed to submit an annual report to the Department	75
N.J.A.C. 7:26-3A.21(f)	Annual Report - Generator failed to retain a copy of the annual report for a period of three years	80
N.J.A.C. 7:26-3A.12(a)1	Storage - Generator failed to store regulated medical waste in a manner and location that is appropriate	7
N.J.A.C. 7:26-3A.12(a)2	Storage - Generator failed to store regulated medical waste in a non-putrescent state, using refrigeration when necessary	4
N.J.A.C. 7:26-3A.12(a)3	Storage - Generator failed to prevent unauthorized access to outdoor storage area(s) containing regulated medical waste	4
N.J.A.C. 7:26-3A.12(a)4	Storage - Generator failed to limit access to on-site storage areas to authorized employees	4
N.J.A.C. 7:26-3A.12(a)5	Storage - Generator failed to store regulated medical waste in a manner that affords protection from animals and insects	3
N.J.A.C. 7:26-3A.10(a)1	Segregation - Generator failed to properly segregate regulated medical waste sharps	3
N.J.A.C. 7:26-3A.10(a)2	Segregation - Generator failed to properly segregate regulated medical waste fluids	15
N.J.A.C. 7:26-3A.10(a)3	Segregation - Generator failed to properly segregate other regulated medical waste	7

N.J.A.C. 7:26-3A.11	Marking/Labeling/Packaging – Generator failed to properly package their regulated medical waste	3
N.J.A.C. 7:26-3A.14	Marking/Labeling/Packaging – Generator failed to properly label regulated medical waste container	3
N.J.A.C. 7:26-3A.15	Marking/Labeling/Packaging - Generator failed to properly mark package of regulated medical waste	3
N.J.A.C. 7:26-3A.12(b)2	Storage - Generator stored regulated medical waste for greater than 1 year	4
N.J.A.C. 7:26-3A.22(b)	Generator failed to submit exception report to Department for missing completed tracking form	3
N.J.A.C. 7:26-3A.19(d)1	Failure to complete box 4 of the tracking manifest	2
N.J.A.C. 7:26-3A.19(e)	Generator failed to properly complete tracking form for self transported regulated medical waste.	1
N.J.A.C. 7:26-3A.8(a)1	Generator failed to pay annual fee.	1

The last aspect of this analysis was to identify any areas currently in need of attention. To accomplish this, we reviewed violation tallies to see if there were any program areas, (aside from the previously discussed ‘serious violations’ which indicate increased compliance), in which the number of violations were actually increasing. This review determined that there are four areas in need of additional attention.

1. Efforts to identify potential non-notifiers are ongoing. The DEP is developing an on-line capability to register as a regulated medical waste generator. The Department anticipates having an on-line registration system in the Spring of 2005. One complaint repeated raised by the regulated community during the Compliance and Enforcement Sweep, especially from non-notifiers, is that the requirement to be registered is not well known. A program to advise new doctors, dentists and entities establishing businesses in New Jersey of their regulatory requirements concerning the handling and disposal of medical waste is needed.
2. The number of generators registering in the wrong category and the number of generators who fail to pay registration fees on time continues to be problematic. From the inspections perspective, we can remind the regulated community of their registration responsibilities; however, we currently only see a small portion of the population each registration year. The DEP has proposed late fees that may help to alleviate the latter problem, but something will have to be developed to address the ‘category’ issue.
3. Although the number of violations for generator logging, incomplete tracking forms lacking non-essential information and submissions of annual reports is on the decline, these violations still account for the majority of the NOV's issued. The Departments will consider some form of advisory letter to be forwarded to the RMW community advising and reminding them of their responsibilities.

4. Since the late 1980's, the frequency of incidents involving medical waste beach wash-ups has dramatically dropped. Visual analysis of the debris from recent washup events demonstrates that little or no regulated medical waste is being disposed in this manner. The bulk of the waste is solid waste with minimal medical waste present. For the small amount that is found, most, if not all, is improperly disposed syringes either homeowner generated through diabetic or other legitimate use, or through illegal drug use. The Departments are working to update current information provided to the public regarding the safe and proper disposal of syringes as well as improve the current collection system for homeowner generated syringes.

J.9. The Regulated Medical Waste Project

Infrequently, exposure may result from contact with improperly handled RMW. Though remote, there is an increased risk of disease. The Regulated Medical Waste Project operated through DHSS provides the necessary consultation, advisement and investigation if appropriate. This Project is solely responsible for the surveillance of needlestick injuries and human exposure to medical waste. Relative to each exposure, case management assists with the completion of a questionnaire and assists the treating physician. The victim is instructed to report immediately to their primary care physician and/or clinic. The current immunization status is ascertained relative to the victim. Tetanus vaccination should be current. Hepatitis B vaccination and HIV serological testing is recommended, if appropriate. HIV counseling is available if requested. This service is available 24 hours per day, 7 days per week. This Project, relative to all reported needlestick injuries and human exposure to medical waste, maintains a case file system/data base. Since 1989, there have been more than 300 human exposures to medical waste reported to this program.

The Regulated Medical Waste Project has the sole responsibility to address all incidents involving medical waste throughout the state. Incidents involving medical waste are such things as: emergency response, assistance to other state and local governmental agencies to address consumer and regulated community complaints, abandonment of RMW, motor vehicle accidents involving medical waste, beach wash-up of medical waste, employee and consumer medical waste exposures, needlestick surveillance, site remediation and personal protection recommendations and techniques. This Regulated Medical Waste Project response is available 24 hours per day, 7 days per week.

The Regulated Medical Waste Project provides the following technical support and assistance to field staff, the DEP, the regulated community and the general public relevant to medical waste issues: telephone and general consultations, legislative and legal review, assistance and review of letter of regulation interpretations, monthly reports, scheduling of priority activities and inspections, internal audits of data-systems, standard operating procedures, problematic inspectional issues and the satisfaction of inquiries and information requests.

J.10. Management of Sharps/Needle Disposal

The Department supports the enactment of legislation that would assist in the management of the collection and disposal of sharps/needles from home health care or less legal uses. Unauthorized and/or illegal disposal of sharps/needles has resulted in beach wash-ups causing the closure of New Jersey beaches. Proposed legislation allowing needle exchanges would reduce the possibility of illegal disposal and resultant negative environmental effects.

Table J-1
ALTERNATIVE MEDICAL WASTE MANAGEMENT TECHNOLOGIES AUTHORIZED IN
NEW JERSEY
(AS OF 6/08/04)

TECHNOLOGY	PROCESS	PRODUCT**	VENDOR**
1 Steam Sterilization and Shredding	Air is evacuated from the sterilization chamber and steam is injected into the chamber. The treated material is shredded and ground.	Remedy-One Rotoclave®* Models 1250-G1, 1500-D1, 2500-D1, 1500-D(formerly 1500D2)	Tempico, Inc P.O. Box 428 251 Highway 21 North Madisonville, LA 70447-0428 (800) 728-9006
		San-I-Pak™Mark VII Sterilizer Compactor with Shredder*	San-I-Pak™, Inc. 23535 South Bird Road Tracy, CA 95378-1183 (209) 836-2310
2 Chemical Disinfection and Mechanical Shredding	A chemical disinfectant is mixed with the waste and then the material is shredded and ground in a mechanical grinder or Hammermill chamber. Chemical disinfectant & water mixed w/ RMW in grinding chamber. Processed waste rinsed w/ water and solid/liquid waste separated in rinse/separator chamber. NaOCL applied to RMW then dropped into shredder. After shredding more chem. & water applied, then solid and liquid separated w/ film remaining.	Condor™ Medical Waste Treatment System*	Condor Healthcare Services, LLC 1532 East Katella Avenue Anaheim, CA 92805-6627 (714) 456-0790
		MST 1200 ENRC* Medical Safetec Brand	Circle Medical Products, Inc. 5616 Massachusetts Ave Indianapolis, IN 46218 (317)-541-8080
		Steris® Ecocycle 10™ Processing System Model P 3000*	Steris Corporation 5960 Heisley Road Mentor, OH 44060 (216) 354-2600
3 Microwave And Shredding	Waste is shredded and moistened with steam. The material is then microwaved in a treatment chamber and shredded, and Ground in a particulizer.	STI Chem-Clav Processing System Model STI-2000CV* HG-A250-S* and HGA-100-S*	Sterile Technology Industries, Inc. 1155 Phoenixville Pike, Unit 105 West Chester, PA 19380 (610)-436-9980 SaniTec, Inc. 26 Fairfield Place West Caldwell, NJ 07006 (973) 227-8826

4 Steam Sterilization	<p>RMW is steam sterilized. High vacuum treatment boils off and condenses liquid. RMW is dried and cooled to below 170°F (approved for treatment only. Processed medical waste must still be managed as RMW).</p>	<p>Tuttnauer Medical Waste Sterilizer Model#3648-144***</p>	<p>Tuttnauer USA CO., LTD. 33 Comac Loop, Equip-Park Ronkonkoma, NY 11779 (800) 624-5836</p>
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*The above medical waste disposal technologies are alternatives to incineration that have been authorized by NJDEP and the Department of Health and Senior Services to operate in New Jersey

** The use of product trade names or vendor names is for identification purposes only and authorization of these technologies does not constitute an endorsement of the vendor's product by the State of New Jersey

***This technology is approved for treatment only and therefore all medical waste processed must be managed as RMW in accordance with N.J.A.C. 7:26-3A. unless the sterilizer is used in conjunction with a shredder/grinder approved by NJDEP that destroys the waste.

Table J-2 REPORTED REGULATED MEDICAL WASTE GENERATION (RMW) 1990 TO 2002**

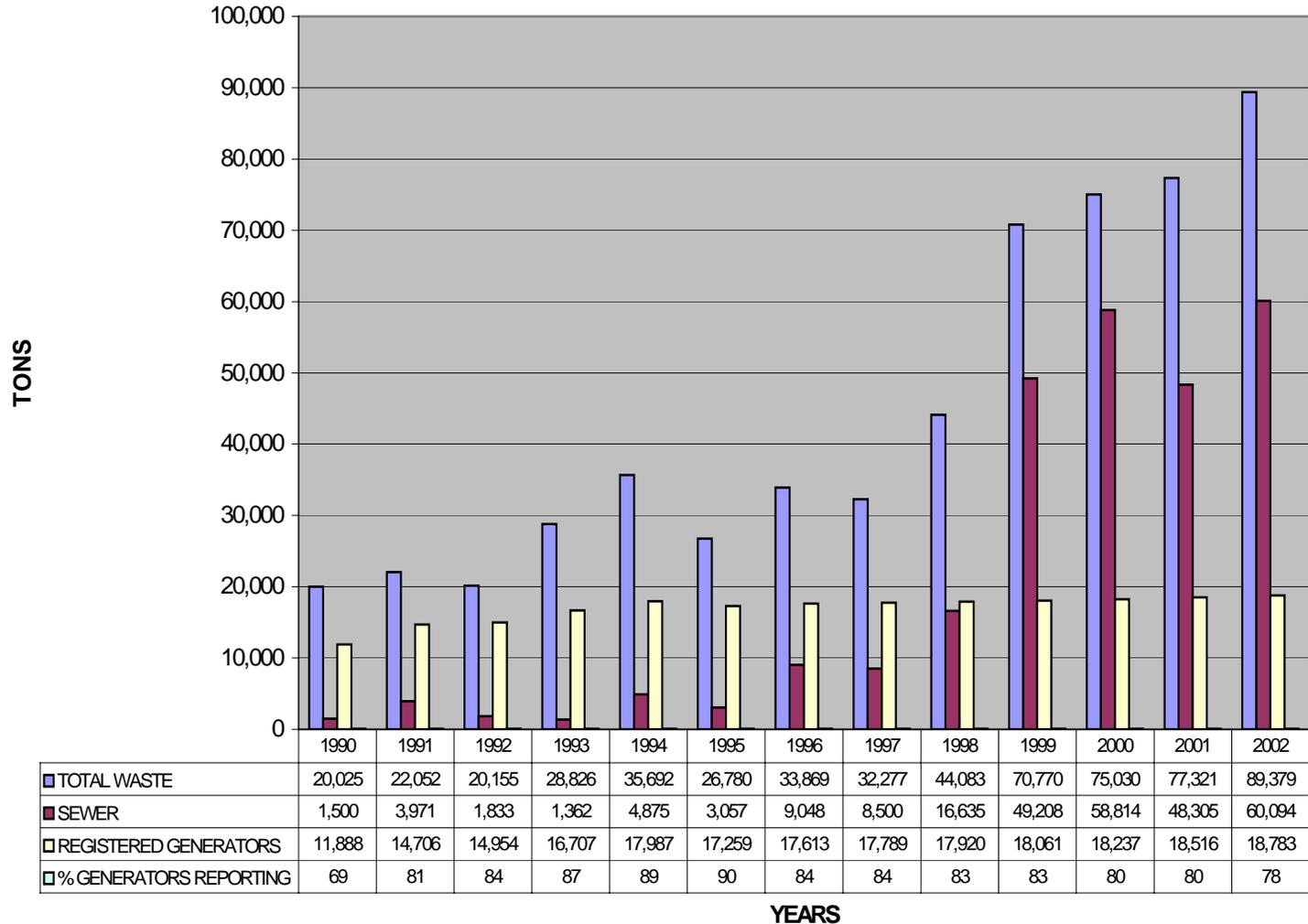


Table J-3
2002 MANAGEMENT OF REGULATED MEDICAL WASTE (RMW)
GENERATED BY COUNTY*

COUNTY	TREATED WASTE	UNTREATED WASTE	TOTAL TONS
ATLANTIC	0.14	1,863.57	1,863.70
BERGEN	265.95	6,286.21	6,552.16
BURLINGTON	381.13	607.37	988.50
CAMDEN	833.92	752.54	1,586.46
CAPE MAY	0.55	906.07	906.62
CUMBERLAND	2.65	2,035.33	2,037.99
ESSEX	678.75	7,513.56	8,192.31
GLOUCESTER	2.07	448.12	450.20
HUDSON	8.26	9,098.42	9,106.67
HUNTERDON	19.71	1,174.19	1,193.90
MERCER	41.73	10,058.74	10,100.48
MIDDLESEX	569.16	9,135.41	9,704.57
MONMOUTH	5.64	9,680.52	9,686.15
MORRIS	8.28	7,644.30	7,652.59
OCEAN	1.17	2,386.05	2,387.22
PASSAIC	65.61	7,816.58	7,882.19
SALEM	0.21	200.74	200.96
SOMERSET	103.08	3,107.85	3,210.93
SUSSEX	0.23	195.85	196.08
UNION	672.81	4,531.66	5,204.47
WARREN	0.06	274.98	275.04
	3,661.11	85,718.07	89,379.18

*Data Represents 78% of registered generators that reported for 2002

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**TABLE J4
2002 REGULATED MEDICAL WASTE (RMW)
GENERATED BY WASTE CLASS ***

COUNTY	CLASS 1	CLASS 2	CLASS 3	CLASS 3S	CLASS 4	CLASS 5	CLASS 6	CLASS 7	TOTAL
ATLANTIC	9.89	97.68	555.01	1,111.96	88.98	0.00	0.00	0.19	1,863.70
BERGEN	634.56	535.83	1,281.55	2,937.04	1,148.11	12.49	0.07	2.52	6,552.16
BURLINGTON	28.87	123.00	705.02	10.15	117.49	3.84	0.00	0.13	988.50
CAMDEN	137.83	82.44	1,111.76	20.56	231.26	1.47	0.17	0.97	1,586.46
CAPE MAY	0.32	0.10	9.80	889.65	6.73	0.00	0.00	0.02	906.62
CUMBERLAND	3.97	2.14	103.19	1,860.07	68.59	0.00	0.00	0.03	2,037.99
ESSEX	143.78	93.06	1,555.92	6,006.81	342.71	25.76	14.73	9.54	8,192.31
GLOUCESTER	0.43	1.99	170.50	3.66	42.67	0.00	0.06	230.89	450.20
HUDSON	74.81	53.39	529.40	8,285.77	132.89	0.29	0.02	30.11	9,106.67
HUNTERDON	33.63	2.16	82.39	1,038.70	36.96	0.00	0.00	0.06	1,193.90
MERCER	245.27	73.20	349.17	9,238.97	148.96	44.10	0.02	0.79	10,100.48
MIDDLESEX	216.04	308.71	1,202.92	7,580.70	362.76	18.70	0.14	14.59	9,704.57
MONMOUTH	23.29	143.21	2,113.51	7,174.61	231.28	0.07	0.01	0.18	9,686.15
MORRIS	64.59	68.65	832.93	6,441.89	238.67	5.74	0.01	0.10	7,652.59
OCEAN	37.17	36.79	443.28	1,632.40	237.04	0.20	0.01	0.33	2,387.22
PASSAIC	26.01	7,071.08	616.72	40.99	127.19	0.00	0.00	0.19	7,882.19
SALEM	4.68	6.15	167.86	1.12	21.14	0.00	0.00	0.00	200.96
SOMERSET	219.50	30.85	478.50	2,361.54	101.10	15.00	0.00	4.43	3,210.93
SUSSEX	4.95	4.44	111.08	1.54	21.78	0.00	0.01	52.28	196.08
UNION	558.07	35.40	631.16	3,289.48	341.06	327.76	0.17	21.38	5,204.47
WARREN	2.33	5.94	66.03	166.70	33.33	0.68	0.04	0.00	275.04
	2,470.00	8,776.19	13,117.69	60,094.30	4,080.73	456.12	15.45	368.71	89,379.18

CLASS 1 – CULTURES & STOCKS	CLASS 4 - NEEDLES, SYRINGES & SHARPS
CLASS 2 – PATHOLOGICAL WASTES	CLASS 5 - ANIMAL WASTE
CLASS 3 - HUMAN BLOOD	CLASS 6 - ISOLATION WASTE
CLASS 3S – HUMAN BLOOD DISPOSED VIA SEWER	CLASS 7 - UNUSED SHARPS

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TABLE J 5
2002 REGULATED MEDICAL WASTE (RMW)
GENERATED BY
STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES *

SIC#	DESCRIPTION	NUMBER	TOTAL TONS
0741	VETERINARY SERVICES FOR LI	18	3.34
0742	VETERINARY SERVICES	498	62.53
0752	ANIMAL SPECIALTY SERVICES	22	0.76
2821	PLASTICS MATERIAL SYNTHETI	2	0.01
2833	MEDICINALS & BOTANICALS	5	609.01
2834	PHARMACEUTICAL PREPARATION	20	175.24
2835	DIAGNOSTIC SUBSTANCES	3	0.31
2844	TOILET PREPARATIONS	3	0.65
3841	SURGICAL & MEDICAL INSTRUM	3	233.14
5171	PETROLEUM BULK STATIONS AN	1	0.01
5912	PHARMACIES	32	28.66
6321	ACCIDENT AND HEALTH INSURA	1	0.01
7032	CAMPS (YOUTH, SUMMER)	5	0.20
7261	FUNERAL SERVICES	428	2,230.61
7299	MISC PERSONAL SERVICES	40	0.23
7948	RACING, TRACK OPERATION	1	0.03
7996	AMUSEMENT PARKS	1	0.06
8011	DOCTORS OF MEDICINE	5,266	4,860.56
8021	DENTISTS OFFICES	3,542	113.56
8031	OSTEOPATHY OFFICES	418	24.25
8041	CHIROPRACTOR OFFICES	2	0.03
8043	PODIATRISTS OFFICES	516	5.28
8049	HEALTH PRACTITIONERS	205	1,865.02
8051	SKILLED NURSING CARE	253	138.34
8052	INTERMEDIATE CARE FACILITI	25	6.49
8059	NURSING AND PERSONAL CARE	140	6.49
8062	GENERAL MEDICAL & SURGICAL	108	18,454.26
8063	PSYCHIATRIC HOSPITALS	26	87.92
8069	SPECIALTY HOSPITALS	21	21.84
8071	MEDICAL LABORATORIES	246	1,421.38
8082	HOME HEALTH CARE SERVICES	112	195.46
8092	KIDNEY DIALYSIS CENTERS	64	57,202.15
8093	SPECIALTY OUTPATIENT FACIL	261	274.08
8099	HEALTH & ALLIED SERVICES	334	326.89
8211	ELEMENTARY & SECONDARY SCH	1,386	11.14
8221	COLLEGES, UNIVERSITIES & P	67	68.97
8361	RESIDENTIAL CARE FACILITIE	5	2.57

8422	ARBORETA AND BOTANICAL OR	4	0.05
8731	RESEARCH & DEVELOPMENT LAB	93	553.35
8733	NONCOMMERCIAL RESEARCH ORG	1	16.92
8734	COMMERCIAL TESTING LABS	40	305.40
9223	CORRECTIONAL FACILITIES	68	29.64
9229	PUBLIC SAFETY	7	0.92
9431	HEALTH DEPARTMENTS	108	29.24
9711	NATIONAL SECURITY (ARMED F	7	9.41
9999	MISCELLANEOUS	236	2.80
		14,644	89,379.18

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