

Volume III, Chapter 2: Reduction Recommendations

A. Overall goal

The Task Force advocates an overall goal of virtual elimination of mercury uses and releases. The toxicity and persistence of mercury in the environment, and the statewide existence of high levels of mercury in fish requires that New Jersey move on as many fronts as possible to eliminate additional mercury discharges, emissions, and depositions.

B. Milestones

The Task Force recommends that the State of New Jersey adopt a two-step milestone of 50 percent reduction below estimated 2001 levels by 2006 and a 65 percent reduction below estimated 2001 levels by 2011. This represents an approximately 75 percent reduction below estimated 1990 levels by 2006 and an 85 percent reduction below 1990 levels by 2011, not including additional reductions due to the removal of mercury from paint. Significant reductions in releases to other media are also feasible in this time period, and are in fact likely to occur as a result of the array of efforts required to reduce air emissions. Figures III.2.1., III.2.2, and Table III.2.1 depict the projected reductions by sector.

Achievement of this ambitious and important two-step reduction milestone will require major reductions in air emissions of mercury from all of the large source categories in the state, including coal combustion, steel and iron manufacture, solid waste management, and mercury-containing products in general use. It will also depend upon substantial commitments to mercury pollution prevention on the part of state government agencies, industry and business, and members of the public, including reductions in the amounts of mercury used in manufacturing and a wide range of consumer products. Passage of comprehensive mercury source reduction legislation will greatly facilitate success.

Fortunately, New Jersey has a working model for the multi-media effort needed to reduce mercury- the New Jersey Sustainability Greenhouse Gas Action Plan. Members of the Task Force believe that reducing mercury in the state's air and water, as reducing greenhouse gas emissions, is urgent. The cause of mercury reduction has been taken up by many other states and regions, by U.S. EPA, and by grassroots advocacy groups around the nation. Adoption and implementation of the recommendations in this report will put our state among the leaders of nationwide efforts to protect our families and the environment by preventing this toxic metal from further contaminating our air and water.

Prior Major Reductions

Substantial reductions of mercury release to the New Jersey environment are possible, as demonstrated by the previous reductions. A major advance is the greater than 90% reduction in emissions from municipal solid waste combustion and medical waste combustion since the early 1990s. Combined emissions from these sources are estimated

to have been greater than 5000 pounds per year in the early 1990s, and are reduced to approximately 350 pounds per year today. These reductions have been achieved through both emission controls and source reductions. Another major reduction is due to the removal of mercury compounds from paint. Until the early 1990s, emissions of mercury from painted surfaces in New Jersey are estimated to have been greater than 10,000 pounds per year. Today, these emissions are approaching zero, demonstrating the value of pollution prevention by the elimination of mercury-containing biocides from paint, achieved through a combination of voluntary actions by manufacturers and federal requirements. Figure III.2.1 depicts the greater than 80% reduction below estimated 1990 levels by 2011.

Anticipated Reductions in Air Emissions
Table III.2.1. Source categories and basis of estimated reductions
 All values in pounds per year

Source category	Year				Basis of estimated change
	1990	2001	2006	2011	
Non-ferrous & alum. processing (approx. est.)	1000	1000	250	100	75% reduction by 2006 due to controls & source reduction, 90% reduction by 2011
Coal combustion (electricity prod.)	705	705	528.75	132	15% red. due to energy conserv. by 2005 plus 10% extra; 75% red. by 2011 thru controls
Crematoria	95	125	159	189	Increase in number of cremations
Fluorescent tubes	430	215	75	54	Source reduction of mercury in products, improved practices
Laboratories	89	89	67	45	50% reduction by 2010 due to improved practices
Medical Waste incineration	742	2	2	2	Continuation of existing programs
MSW incineration	4542	349	200	200	Continued reductions through existing programs
Oil refining	184	184	156.4	156	15% reduction due to energy conservation by 2005
Other	127	127	95.25	64	50% reduction by 2010 due to improved practices
Painted surfaces		194	19	2	Continued decline at historical rate
Products in general use	600	300	225	150	Source reduction of mercury in products, improved practices
Refined fuels combustion	156	156	132.6	133	15% reduction due to energy conservation
Cultural and ritualistic uses	250	250	125	63	75% reduction by 2010 due to education, outreach
Sludge incineration	400	200	170	115	Projected emission based on recommended sludge 5 ppm & 2 ppm limits
Iron & steel manufacturing	935	935	234	94	75% reduction by 2006 due to controls & source reduction, 90% reduction by 2011
Totals	10255	4832	2439	1497	
percent reduction from 2001			50	69	
percent reduction from 1990			76	85	

C. General recommendations

The Task Force endorses the New England Governors/Eastern Canadian Premiers (NEGECP) Mercury Action Plan goal¹ of virtual elimination of anthropogenic mercury releases in the region.

The Task Force encourages New Jersey to participate in and support regional, national, and global efforts to reduce mercury uses, releases, and exposures. These efforts include the NEGECP Action Plan and other mercury control efforts by Northeast States for Coordinated Air Use Management (NESCAUM), Environmental Council of the States (ECOS), and the USEPA.

¹ New England Governors/Eastern Canadian Premiers Mercury Action Plan, 1998, <http://www.tiac.net/users/negc/1998mercuryplan.html>, June 1998.

The Task Force recommends the removal of mercury from products and the phase out of sales of mercury-containing products where there are reasonably available alternatives. The Task Force also recommends adoption of legislation and executive orders addressing mercury sources, in order to reduce mercury emissions, depositions, and discharges from a variety of sources, including consumer products. See Table III.2.1 above. The Task Force supports the adoption of legislation that reflects the provisions of the Mercury Education and Reduction Model Act developed by the Northeast Waste Management Officials' Association (NEWMOA).² The Task Force urges New Jersey to work with interstate agencies to assist in the development of federal legislation that minimizes the use of mercury in products. New Jersey should also develop effective outreach and education on the importance of removing mercury from products. County household hazardous waste programs should play a key role in this effort.

The Task Force encourages phasing out the use of mercury-containing dental amalgams to the extent compatible with good dental practices, to further limit mercury releases to the environment.

The Task Force encourages New Jersey to use state purchasing and service contracts to reduce the purchase and use of products containing mercury, including motor vehicles containing mercury switches.

The Task Force emphasizes that mercury that is recovered from discarded products or otherwise segregated should be retired and sequestered permanently in a secure facility, rather than being reintroduced to commerce, so that the chances of its being ultimately released to the environment are minimized.

It is important to ensure that substitutes for mercury are not more hazardous than the mercury itself. The Task Force also recommends that replacements or proposed replacements for mercury be scrutinized regarding human and environmental health effects, and that such replacements not be automatically considered desirable merely because they replace mercury.

D. Source-specific reduction recommendations

Members of the Task Force agree that numerous approaches are needed to achieve the 50 percent reduction milestone by 2006. The feasibility of the overall and near-term milestones noted above is based on the Task Force's assessment that numerous approaches exist that can accomplish significant reductions from a variety of sources. The reduction options recommended for each specific source are discussed in detail in the reports on specific sources that appear in Volume III, Chapter 3. The highest priority specific reduction options are listed in Tables III.2.2. and III.2.3. These options were selected by the Task Force using the following procedure:

- Identification, description, and quantification of releases from each source. See discussion in Volume III, Chapter 3.

² See <http://www.newmoa.org/prevention/mercury/programs>

- Identification of reduction options for each source. The Task Force included representatives from industry, academia, government, non-profit organizations, and others with expertise in mercury. Task Force and DEP staff members with knowledge of the sources prepared first drafts of the source-specific write-ups and reduction recommendations. Discussions among Sources Subcommittee members refined the list of options. A list of approximately 110 options was developed.
- Categorization of options by type. The options were categorized as to whether they consist of measures to reduce or eliminate the original source and thus prevent mercury pollution (source reduction and best management practices), or whether they rely on end-of-pipe or stack emissions reduction devices (controls). Some options fit into neither category, and were further categorized as research and development or outreach and education approaches.
- Estimate feasibility of achieving each option. Criteria used in estimating feasibility included relative cost and effectiveness of the options.
- Estimate importance of achieving each option. Importance criteria included quantity of release, and also the likelihood that the release could contribute significantly to direct exposure potential or enter biologically-available environmental compartments such as air, surface water, or ground water.
- Prioritize options by feasibility and importance. A working ranking system in spreadsheet format was developed for this effort. In this system, options that were judged to be both important and feasible were ranked highest, those that were important but not feasible were judged medium priority, and those that were considered neither especially important nor feasible were ranked lowest.
- Consolidate prioritized options into final list of high priority recommendations. In this step, Task Force members identified their highest priority options. The Sources Subcommittee further reviewed the Task Force's list of 25 preliminary final choices, and The Task Force recommends that replacements or proposed replacements for mercury be scrutinized regarding human health and environmental options. Finally, the list was consolidated to eliminate redundancies. These final high priority options appear in Tables III.2.2. and III.2.3.
- The full Task Force reviewed the priority list, and suggested additional revisions and improvements.

Figure III.2.1

Mercury Air Emissions Goals in NJ: Projected overall reduction of 75% from 1990 to 2006 and 85% from 1990 to 2011

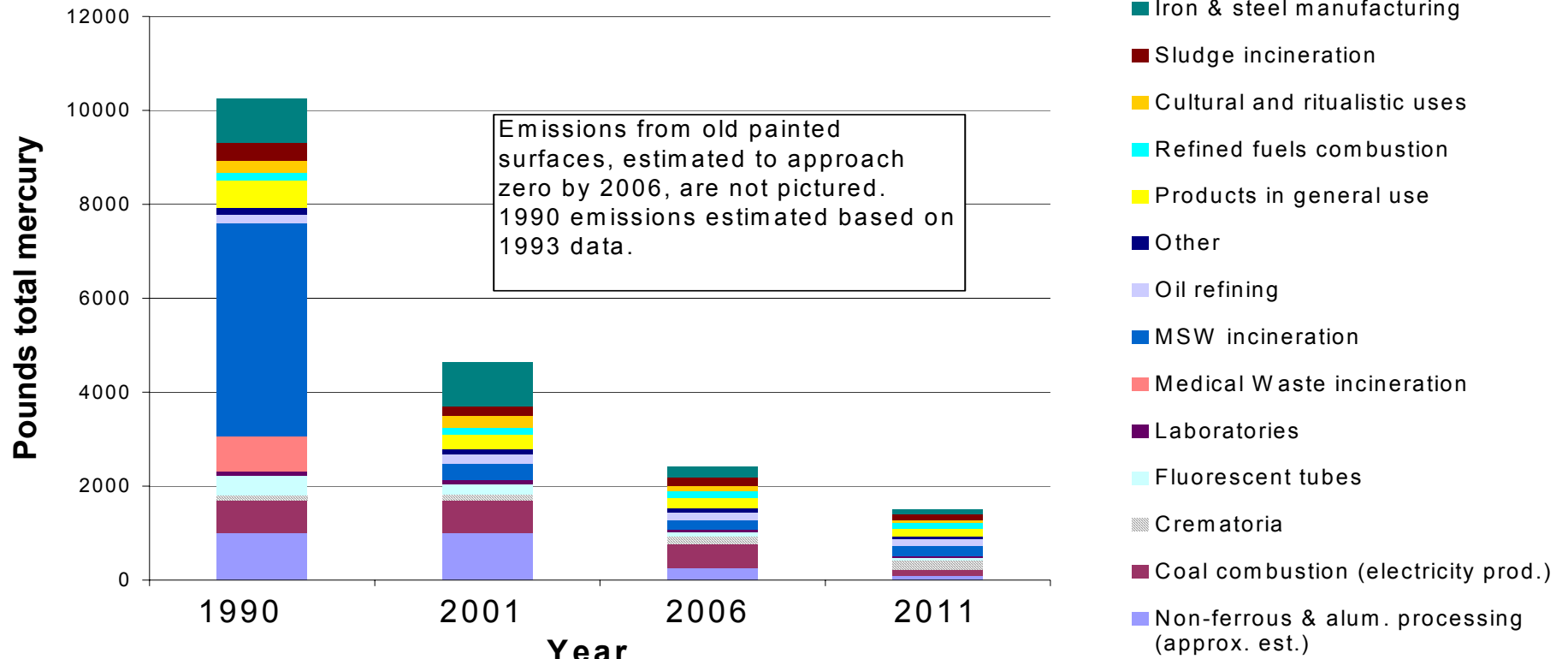
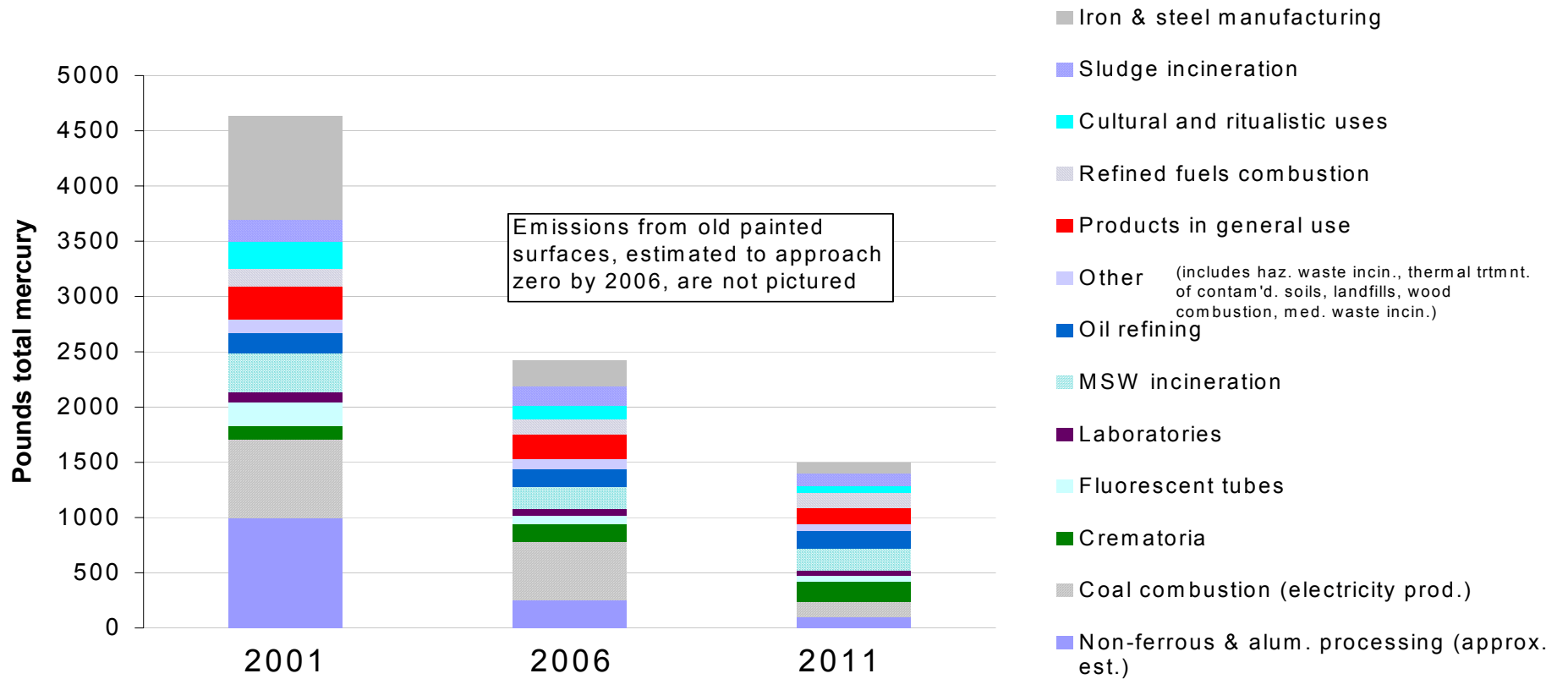


Figure III.2.2 1

Mercury Air Emissions Goals in NJ:
Projected overall reduction greater than 50% from 2001 to 2006 and greater than 65% from 2001 to 2011



III.2.2. Mercury Task Force Priority Reduction Recommendations

Action	Sources Addressed	Legislation required	Executive action/ order/department policy required	Education/ Outreach	Primary Agency for Implementation	Implementation/ Funding Status
SOURCE REDUCTION						
Reduce mercury in products and as a raw material	Sludge; wastewater; air emissions from solid, medical, and hazardous waste management and disposal facilities; indoor emissions from spills	Require labeling showing Hg content, per VT, ME, MN, NEWMOA.	Adopt Northeastern Governors' Mercury Action Plan goal of virtual elimination. State procurement preferences (per NEWMOA)	Increase public awareness of low-mercury products, available alternatives, and disposal options for products that do contain Hg.	NJDEP/DSHW, NJDEP with other states including NEWMOA, & US EPA	Variety of actions must be specified and funded
	Household batteries	Require labeling of button batteries with mercury content. Ban disposal of batteries in trash incinerators (require source separation).	In state purchasing contracts, require that battery vendors take back spent batteries for recycling.	Support and encourage collection and recycling of batteries by households and small businesses (exempt from the Universal Waste Rule).	NJ Treasury, NJDEP/DSHW, County HHW Coordinators, Rutgers	
	Electrical lighting components	Require Conditionally Exempt Small-Quantity Generators to recycle or otherwise appropriately manage discarded fluorescent lamps. Prohibit MSW incineration of spent lamps.	Support classification of discarded fluorescent lamps as universal waste. Adopt state	Promote appropriate management of discarded mercury-containing lamps. Educate	NJ Treasury, NJDEP/DSHW, NJDOT, County HHW Coordinators, Rutgers	

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			<p>procurement policies requiring purchase of low-mercury bulbs.</p> <p>Relamp state buildings with electronic ballasts (to support energy -efficient fluorescent tubes.</p> <p>When setting up or supporting mercury recycling programs, specify recycling technology that reclaims mercury from all parts of the lamp,</p>	<p>waste management contractors and staff about the hazards of handling broken tubes or any materials contaminated with mercury.</p>		

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			<p>including the glass.</p> <p>Street/exterior lighting: Encourage removal from service of spent lamps only.</p>			
	Fever thermometers	Ban sale of mercury fever thermometers for residential and commercial use.	<p>In state purchasing contracts, specify non-mercury thermometers in applications where digital alternatives are feasible.</p> <p>Fund, support, and encourage local thermometer exchange programs.</p>	<p>Work with small and large retailers to obtain voluntary agreements to stop selling mercury thermometers and to distribute educational materials to customers.</p> <p>Educate public re: hazards of</p>	NJ Treasury, NJDEP/DSHW, NJDOT, County HHW Coordinators, Rutgers	

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				<p>mercury spills from broken thermometers, safe cleanup methods, and importance of turning in mercury thermometers at HHW.</p> <p>Educate physicians re: importance of not giving mercury thermometers to patients.</p>		
	Thermostats	<p>Include thermostats in sales ban of mercury-containing products.</p> <p>Ban mercury-containing thermostats from MSW and require separation/recovery from demolition waste.</p>	Pressure the National Electrical Manufacturers' Association and the Thermometer Recycling	Educate HVAC contractors and plumbers about the Universal Waste Rule and	NJ Treasury, NJDEP/DSHW, NJDOT, County HHW Coordinators, Rutgers	

III.2.2. Mercury Task Force Priority Reduction Recommendations

Action	Sources Addressed	Legislation required	Executive action/ order/department policy required	Education/ Outreach	Primary Agency for Implementation	Implementation/ Funding Status
			Corp. to promote thermostat recycling effectively. In state purchasing and construction contracts, specify all-digital thermostats and require contractors to remove and recycle thermostats containing mercury.	importance of recycling thermostats containing mercury through TRC. Partner with hardware stores to educate public re: digital thermostats and the importance of HHW disposal of mercury thermostats.		
	Mercury light switches	Include mercury-containing light switches in sales ban of mercury-containing products.	In state demolition and construction contracts, specify non-mercury light switches. Require contractors to	Educate building and demolition contractors about the importance of careful removal and proper	NJ Treasury, NJDEP/DSHW, NJDOT, County HHW Coordinators, Rutgers	

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			remove and recycle switches containing mercury.	disposal of mercury switches. Partner with hardware stores to educate the public about hazards of mercury and importance of recycling old switches and replacing them with non-mercury alternatives.		
Promote energy conservation and renewable energy to reduce use of fossil fuel	Coal, fuel oil, diesel and gasoline combustion			Educate the public about the Hg-pollution prevention advantages of energy conservation	Need to identify lead. Possibilities: NJDEP/NJBPU, Sustainability, Consumer groups	Coordinate with funded GHG gas reduction effort?
Phase out use of mercury containing amalgam for dental fillings. Ensure that state contracts provide equal insurance coverage for non-mercury fillings and consider not covering amalgam fillings.	Dental office waste, sludge, wastewater, crematoria	Yes. (Legislation in other states goes beyond NEWMOA goal of contract assurances and BMP publication.)		Yes	NJDEP/DSHW w. NJDHSS & Dental Assocs., County HHW coordinators, Rutgers	
Phase in use of effective traps		Yes		Yes	NJDEP/DSHW w.	

III.2.2. Mercury Task Force Priority Reduction Recommendations

Action	Sources Addressed	Legislation required	Executive action/ order/department policy required	Education/ Outreach	Primary Agency for Implementation	Implementation/ Funding Status
to capture mercury from dental offices.					NJDHHS & Dental Associations	
Develop and fund effective intervention strategies and outreach regarding cultural and ceremonial uses of mercury.	Cultural and ritualistic uses			Yes	NJDHSS	
CONTROLS ON DISPOSAL						
Implement programs that result in source separation, recycling and retirement of mercury-containing items, including restrictions on incineration of Hg-containing products.	Sludge; wastewater; air emissions from solid, medical, and hazardous waste management and disposal facilities; indoor emissions from spills	Require appropriate management of discarded mercury-containing items. Require source separation of mercury-containing wastes to be incinerated. Legislation required to address CESQG exemption under Universal Waste Rule: require either transport of intact tubes to landfill, or recycling.	Yes, including development and implementation of contract(s) to recycle or otherwise properly manage spent fluorescent tubes from state office buildings. Increase efficiency of post-combustion emissions controls on MSW incinerators. Support and fund pilot mercury source separation projects.	Yes Encourage source separation for MSW destined for MSW incinerators.	NJ DEP/DSHW, NJDEP, Treasury, w. Other states including County HHW Coordinators, Rutgers, NEWMOA, & USEPA	
Provide incentives to industry to eliminate mercury from products. Examples include government and other motor vehicle fleets, appliances, and computers.	Iron and steel manufacture	Legislation required to ban mercury-containing products from recycling/disposal facilities that are not equipped to control mercury emissions.	Government procurement guidelines to 1) include new vehicles and appliances that do not contain Hg switches; 2) require vendors/ mfgs to take back items containing Hg; 3) feature low-mercury fl. Tubes; 4) support		NJ DEP/DSHW, NJDEP, NJDOT, Treasury, in coordination w. other states inc. NEWMOA, & USEPA, Scrap metal Assocs., Auto Recycler Assocs.	

III.2.2. Mercury Task Force Priority Reduction Recommendations

Action	Sources Addressed	Legislation required	Executive action/ order/department policy required	Education/ Outreach	Primary Agency for Implementation	Implementation/ Funding Status
			re-lamping of state buildings.			
EMISSIONS CONTROLS						
Include mercury emissions in the labeling requirements for electricity sold	Coal combustion		Yes	Yes	NJBPU/NJDEP	
As part of a multi-pollutant strategy, develop a national mercury air emission standard for coal combustion.	Coal combustion		Strongly support increased government and public purchase of "green energy." Support USEPA policy.	Yes	USEPA, Elec. producers, interstate assoc., inc. ECOS, OTC, NESCAUM, STAPPA/ALAPCO	
Set a NJ mercury release emission performance standard for iron and steel manufacturers that could be met with a combination of pollution prevention and emission controls; require mercury stack testing with appropriate frequency.	Iron and steel manufacture		Yes		NJDEP/Air Quality Regulation	
Once emissions from aluminum processing facilities are identified (through on-going research project), review inventory and if appropriate, propose emission reduction options.	Aluminum processing facilities	???	???		NJDEP/AQR	Current research project is funded
TRANS-BOUNDARY ACTIONS						
Advocate regional and national source reduction, best management practices, and national standards for mercury controls for key source categories, including energy production and MSW	Air transport leading to NJ air deposition		Continue to work with interstate and national organizations to promote source control and Hg emissions	Yes	USEPA, interstate assoc., inc. ECOS, OTC, NESCAUM, STAPPA/ALAPCO	

III.2.2. Mercury Task Force Priority Reduction Recommendations

Action	Sources Addressed	Legislation required	Executive action/ order/department policy required	Education/ Outreach	Primary Agency for Implementation	Implementation/ Funding Status
incineration.			reductions.			

RESEARCH AND DEVELOPMENT				
Action	Sources Addressed	Executive action/ order/departement policy required	Lead Implementation Organization	Implementation/ Funding Status
Conduct research and implement where practicable programs to lower the amounts of mercury in products including lamps, measuring and control devices and switches, and other products.	Sludge, wastewater, air emissions from waste management and disposal facilities, indoor emissions	Yes. Support US EPA "Vision 2020" goal of development of fluorescent lamps that do not contain mercury.	?	Variety of actions must be specified and funded
Continue to monitor and report on current pilot studies of options for flue gas control of mercury from coal combustion, further develop instruments for measuring mercury concentrations continuously in flue gas, further develop mercury emission control technologies, and implement full scale demonstration projects between 2001 and 2003.	Coal combustion		US EPA, Electricity producing industries	
Research releases during handling and stabilization of dredged materials, and clarify potential releases from the dredging itself.	Dredged materials		NJ DEP, coordinated with US EPA, NJ Maritime Resources, US Army COE	
Acquire better information on portion of releases to air, water, and land that are oxidized inorganic mercury (Hg ⁺⁺), elemental mercury (Hg ⁰), and organically-bound mercury.	Most sources		US EPA, other federal and state agencies, electricity producers	
Study comparative cost of source separation and additional MSW incinerator emissions controls.	MSW incineration		DEP	Funding required

E. Source-reduction recommendations organized by type of action.

Reduction recommendations can be categorized by type of action expected to be required to complete the recommendation. These types of action include legislation, regulatory and actions by government under existing authorities, and outreach (by others as well as government and others).

F. State Legislation

The Task Force recommends that the New Jersey Legislature pass appropriate legislation to authorize the following actions:

1. Sales phase-outs and restrictions that:

- Rapidly phase out sales of mercury-containing products for which there are reasonably available alternatives that do not contain mercury, including mercury fever thermometers, switches, thermostats, appliances, and novelty items;
- Rapidly phase out the sale or resale of vehicles that contain mercury in switches or other mercury-containing components;
- Require product labeling showing mercury content, including button batteries and mercury-containing lamps.

2. Waste disposal and source separation requirements that:

- Prohibit mercury-containing products from recycling-disposal facilities that are not equipped to control mercury emissions;
- Prohibit disposal in trash incinerators of potentially mercury-containing material, such as fluorescent tubes, thermostats, and other electrical equipment;
- Require businesses classified as “Conditionally Exempt Small-Quantity Generators” under the Resource Conservation and Recovery Act (RCRA) to recycle or otherwise appropriately manage fluorescent lamps;
- Phase out the use of mercury-containing amalgam for dental fillings;
- Require that dentists install effective traps to capture mercury amalgam and dispose of amalgam appropriately (e.g., not with medical waste to be incinerated).

G. Executive actions/administrative orders/regulatory actions

1. General recommendations

The Task Force recommends that the Governor or, as appropriate, the Commissioner of the Department of Environmental Protection:

- Support regional and national initiatives to reduce mercury emissions from all sources, particularly development by the U.S. Environmental Protection Agency (USEPA) of a national mercury air emission standard for coal combustion;

- Continue to work with interstate and national organizations to promote source control and mercury emissions reductions, including the promotion of the Northeastern Governors' Mercury Action Plan goal of “virtual elimination of the discharge of anthropogenic mercury into the environment...”;
- Encourage source reduction, best management practices, and national standards for mercury controls for key source categories, including energy production, iron and steel manufacture, and municipal solid waste (MSW) incineration;
- Support the USEPA "Vision 2020" goal of development of fluorescent lamps that do not contain mercury;
- Provide incentives to industry to eliminate mercury from products;
- Develop a performance standard for mercury emissions control that must be met by recycling/disposal facilities contracted by the State;
- Support classification of discarded fluorescent lamps and vehicle switches as universal wastes under the provisions of RCRA;
- Support and fund pilot mercury source separation projects managed through New Jersey county household hazardous waste programs;
- Initiate and facilitate discussion among regulators, iron and steel manufacturers, auto dismantlers, scrap processors, and auto industry representatives to work out a coordinated plan to eliminate mercury in scrap metal and support a pilot “bounty” program if this stakeholder process endorses one;
- Encourage the removal from service of street lamps/exterior lighting lamps only if they are at the end of their life;
- Fund, support, and encourage local thermometer exchange programs;
- Require that mercury switches in State vehicles be removed or replaced by non-mercury containing switches during vehicle maintenance, and that the mercury be reclaimed and sequestered;
- Promote the purchase of electric power generated from certified green sources, including renewable sources and sources with low or zero mercury emissions.

2. State purchasing/contracting policies

The Task Force recommends that the Governor issue an executive order requiring the Department of the Treasury to adopt State purchasing and service contract guidelines that will accomplish the following and that the Governor take action to encourage the private sector to follow the State’s example:

- Require the purchase for State facilities of electric power generated from certified green sources including renewable sources and sources with low or zero mercury emissions;
- Require the purchase for State use of new vehicles and appliances that do not contain mercury switches;
- Require the purchase of low-mercury fluorescent lamps for State facilities;
- Encourage the re-lamping of State buildings with low-mercury lamps and electronic ballasts;

- Require that discarded fluorescent lamps from State and municipal facilities be managed appropriately so as to prevent the release of any contained mercury to the environment;
- Require that State construction/demolition contract language provide for the removal of mercury-containing thermostats and switches from demolition waste, and the appropriate management of any contained mercury before disposal;
- Require the purchase by the State of non-mercury fever thermometers for applications where alternatives are acceptable.

3. Regulatory actions/permitting

The Task Force recommends that the Commissioner of the Department of Environmental Protection:

- Revise the State’s air pollution control regulation governing Municipal Solid Waste (MSW) incinerator emissions to increase the required efficiency of post-combustion emissions controls;
- Recommend to the Director of the State Bureau of Public Utilities (BPU) that “portfolio” mercury emissions per electrical energy production be reported to consumers, via labeling, by each retail electricity supplier;
- Revise the State’s air pollution control regulations for mercury to set an emission performance standard that can be met with pollution prevention and/or air pollution control devices. The timing of the standard should allow for mercury elimination and separation to be implemented over a reasonable period, with air pollution control devices only required after this period if the pollution prevention measures do not independently achieve the performance standard;
- Propose appropriate emission reduction requirements if the Commissioner deems mercury emissions from aluminum processing facilities to be significant;
- Revise the State’s sewage sludge mercury provisions to reflect a phased reduction in mercury levels, and include the New England Governor’s Association recommended emission standard for sludge incineration facilities as an alternative to the final sludge concentration goal;
- Adopt state standards if EPA does not, by December 2003, proceed to promulgate and implement effective mercury limits.

4. Incentives for businesses and industry to remove/reclaim mercury from products.

The Task Force recommends that the Governor or, as appropriate, the Commissioner of the Department of Environmental Protection:

- Support programs that provide incentives to auto dismantlers and scrap processors to remove mercury-containing components from products, and to manage the mercury appropriately so as to prevent the release to the environment;
- Strongly encourage the National Electrical Manufacturers’ Association and the Thermometer Recycling Corp. (TRC) to promote thermostat recycling efforts;

- Ensure that health insurance contracts available to State employees provide coverage for non-mercury fillings.

H. Education/ Outreach

The Task Force recommends that the Commissioner of the Department of Environmental Protection initiate programs and policies that:

1. General outreach and education

- Inform and educate the public about New Jersey's advocacy positions favoring the virtual elimination of mercury from the State's air, water, and soil;
- Use the county hazardous waste programs to increase public awareness of low-mercury products and available alternatives;
- Educate residents, businesses, and others about the importance of segregating and properly disposing of mercury-containing waste;
- Support and encourage collection and recycling by households and small businesses of accumulated liquid mercury fever thermometers, thermostats, fluorescent lamps, batteries, and other products containing mercury;
- Educate the public about the importance of purchasing certified green power from non-mercury-generating sources.

2. Targeted outreach to businesses

- Educate auto dismantlers, shredders, fleet managers, vehicle service facilities, and other relevant audiences about the importance of removing mercury-containing components from vehicles and appliances before they are processed into scrap;
- Educate heating, ventilation and air conditioning (HVAC) contractors and plumbers about the Universal Waste Rule and the importance of proper management of thermostats containing mercury;
- Educate building and demolition contractors about the importance of careful removal and proper disposal of mercury thermostats and switches;
- Educate waste management contractors and staff about the hazards of handling broken lamps or any other materials contaminated with mercury;
- Partner with hardware stores to educate customers about the availability of digital thermostats and non-mercury light switches, and the importance of disposal of mercury-containing thermostats and switches through household hazardous waste programs, in advance of passage of sales ban legislation;
- Work with small and large retailers, in advance of passage of sales ban legislation, to obtain voluntary agreements to stop selling mercury thermometers and to distribute educational materials to customers.

3. Targeted outreach to medical professionals and their patients

- Educate physicians about the importance of not using mercury thermometers and about encouraging their patients not to use them;
- Educate dentists about the available alternatives to mercury amalgam, the importance of effective amalgam traps and proper amalgam disposal.

4. Targeted outreach addressing cultural uses of mercury

- Develop and fund effective intervention strategies to reduce the cultural uses of mercury;
- Prepare and disseminate culturally sensitive education materials in the appropriate languages;
- Work with community and religious leaders to identify and promote acceptable alternatives to the cultural use of mercury.