F I S C A L I M P A C T R E P O R T

SPONSOR Stewart **ORIGINAL DATE** 2-17-09 **LAST UPDATED** **HB** 479

SHORT TITLE Reduce Exposure to Mercury **SB**

ANALYST Aubel

APPROPRIATION (dollars in thousands)

Appropriation		Recurring or Non-Rec	Fund Affected
FY09	**FY10**		
	$200.0	Recurring	General Fund

(Parenthesis ( ) Indicate Expenditure Decreases)

SOURCES OF INFORMATION
LFC Files

Responses Received From
Department of Health (DOH)
New Mexico Environment Department (NMED)

SUMMARY

Synopsis of Bill

House Bill 479 appropriates $200 thousand from the general fund to the New Mexico Environment Department (NMED) to initiate, with the assistance of Department of Health (DOH), a comprehensive plan to reduce human and wildlife exposure to mercury. Any unexpended or unencumbered balance remaining at the end of 2008 shall revert to the general fund.

FISCAL IMPLICATIONS

The appropriation of $200 thousand contained in this bill is a recurring expense to the general fund. Any unexpended or unencumbered balance remaining at the end of FY10 shall revert to the general fund. Development of the mercury reduction plan is likely to lead to a program being established for its implementation, either within DOH or NMED or both. In this regard it is similar to a pilot project.

NMED provides the following funding breakdown:

House Bill 479 appropriates $200,000 for use as follows:

- **$28,000** – To purchase and install dental amalgam separators in dental facilities serving low-income patients. Those separators greatly reduce the amount of amalgam waste containing mercury that is discharged and may pollute groundwater. This funding would allow the purchase and installation of 20 separators statewide. Separators would be loaned or donated to dental clinics.

- **$36,000 –** For outreach to citizens of New Mexico on hazards of mercury and common pathways for mercury exposure, especially for pregnant women. Information would also be provided on recycling of light bulbs, thermometers and auto switches containing mercury, as well as other consumer products that contain mercury, such as cosmetics, toys and clothing.

- **$80,000** – To improve and update information on fish mercury levels in all of New Mexico's waterways, as well as convey information about the health concerns associated consumption of fish with high levels of mercury in a manner that is understandable to the public. Information would be translated to other languages appropriate for the area. That funding would provide for flyers and signs for the state's waterways to provide risk information developed by a professional risk communicator. Signs must be sturdy and weatherproof.

- $**20,000 –** To gather and communicate fish mercury levels and health risks for fish that is available for sale to the public at supermarkets and fish markets.

- **$6,000** - For the Environment Department to establish a toll-free telephone message for citizens of the state with common questions, answers and referrals on mercury exposure and mercury pollution in the environment.

- **$10,000** - To establish a New Mexico mercury pollution reduction website.

- **$20,000** - For an additional air mercury monitoring site in the state. There are currently 2 mercury monitors in New Mexico, one in southwestern New Mexico and one in northwestern New Mexico. While the northwestern New Mexico monitor has not collected data for an entire year yet, the southwestern monitor has recorded the highest or second highest annual mercury concentrations in the U.S. over the past decade.

According to the December 2008 revenue estimate, FY10 recurring revenue will only support a base expenditure level that is $293 million, or 2.6 percent, less than the FY09 appropriation. All appropriations outside of the general appropriation act will be viewed in this declining revenue context.

SIGNIFICANT ISSUES

Mercury is a bio-accumulative (which means it undergoes chemical magnification up the food chain) neurotoxin that can remain active in the environment for more than 10,000 years. DOH notes that mercury exposure is a potential health issue for New Mexicans and that even very low levels can pose a concern, particularly for pregnant women, infants, and children. The toxicity manifests in a variety of conditions including learning disabilities, tremors, muscle in-coordination, loss of memory, personality changes, deafness, and loss of vision and is also toxic

to the kidneys. Many of the adverse effects of mercury are reversible, therefore minimizing or eliminating certain exposures can have a beneficial effect on the exposed individual.

NMED notes that sources of mercury pollution include industrial facilities, consumer products, waste streams and natural events. In New Mexico mercury enters the environment primarily through the air emissions, through storm run-off, and from improper disposal of items containing mercury. EMNRD has reported that current mining practices do not contribute any significant amount of mercury contamination.

DOH specifies that at least one report states that the Four Corners and San Juan power plants in New Mexico discharge the highest levels of mercury in the West (Copeland et al., 2005). The agency continues: "Data collected from the National Atmospheric Deposition Program/Mercury Deposition Network (MDN) show that, in recent years, some of the highest annual atmospheric mercury concentrations in the nation were recorded in New Mexico (Mercury Deposition Network: a NADP Network at http://nadp.sws.uiuc.edu/mdn/)."

The proposed funding is to implement the findings of the Mercury Exposure Reduction Task Force, which was established by the 2006 Legislature through House Memorial 5. The task force report, *New Mexico Mercury Reduction Action Plan* (NMMRA), includes an Executive Summary and recommendations, which are included as Attachment 1.

DOH provides the following update on the work that has been conducted since the task force report was issued:

> In 2008, the NMED increased awareness of the need for proper disposal of autos with mercury switches through discussions and mailings with the state's auto recyclers registered in New Mexico. A total of 2,072 auto switches containing 4.56 lbs of mercury were safely recovered from 40 auto salvage operations in New Mexico. In addition, the NMED initiated a fluorescent bulb pilot recycling program. Fluorescent bulbs, including the popular compact fluorescent lamps/lights or CFLs, contain a very small amount of mercury. Using funding appropriated to the NMED from the 2007 Legislature, four community landfills in the state were selected to receive resources for bulb recycling: the Lincoln County Solid Waste Authority, the Santa Fe Solid Waste Management Agency, the Farmington Transfer station and Santa Fe County's Eldorado Transfer Station.
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> In addition, NMED and DOH, along with the state Game and Fish Department have published an updated "Fish Consumption Guidelines Due to Mercury Contamination" to help citizens make informed decisions about fish they eat from New Mexico's waters. Several other brochures have been developed to provide information on avoiding mercury exposure: "Mercury in the Environment and Human Exposure Pathways" and "Mercury and Pregnancy: Protecting Your Unborn Baby."

PERFORMANCE IMPLICATIONS

HB 479 will fund programs to reduce mercury emissions to the environment. There are no existing performance measures regarding mercury, but potential new performance measures could track the reduction in mercury emissions and concentrations in water bodies statewide.

ADMINISTRATIVE IMPLICATIONS

A Joint Power Agreement or other type of contract would be required between NMED and DOH.

OTHER SUBSTANTIVE ISSUES

The U.S. Environmental Protection Agency (EPA) promulgated the Clean Air mercury Rule (CAMR) in March 2005. In combination with the Clean Air Interstate Rule (CAIR), it phases in caps for mercury emission from coal-fired plants, presently one of the largest sources of mercury emissions. According to the NMMRAP, New Mexico will submit a state plan to meet its budget for reducing mercury from coal-fired plants by April 2007 and lists two contributor plants. One of these plants, the San Juan Generating Station, is currently under a consent decree to reduce emissions and is testing technology. How successful this technology will be in achieving its required goals has yet to be determined. Of equal concern, the report notes that much of the mercury found in New Mexico air originates elsewhere.

Mercury contributors range from large generators, such as coal-fired power plants, to numerous smaller generators ranging from dental amalgams to broken fluorescent light bulbs. Therefore, controlling mercury releases would require working with large companies to educating the public. Continued efforts would most likely be required for new companies entering New Mexico and in the case of public education. A permanent fish advisory program, if enabled, would also require continued funding. NMED reported during the budget process that federal funding will no longer be provided for that program.

The NMMARP notes there are 22 facilities in New Mexico with over 200 hazardous waste “operating units” cleaning up over 3000 contaminated sites. Half of these facilities are owned by the federal government, with over 250 former Department of Defense sites with environmental contamination. Complete databases of all sites are lacking, which would require cooperation with the related federal agencies to develop to determine mercury contamination.

NMED notes that reductions in mercury exposure will reduce state health care costs. Substantiation for this claim is found in a study peer-reviewed study by the Mt. Sinai School of Medicine's Center for Children's Health and the Environment which calculated that the U.S. loses $8.7 billion annually due to the impact of mercury on children's brain development.

ALTERNATIVES

NMED reports that there is no alternative existing state or federal funds that would support this work.

Several states have enacted state-specific mercury source reduction legislation based on the Mercury Education and Reduction Model Legislation that includes specific objectives in the legislation. While prepared by the Northeast Waste Management Officials' Association, it could be modified for New Mexico.

WHAT WILL BE THE CONSEQUENCES OF NOT ENACTING THIS BILL

New Mexico would have limited means to evaluate and reduce the risks of mercury exposure to its citizens and wildlife until legislation provides for a specific plan and funding for mercury reduction.

POSSIBLE QUESTIONS

1. The task force report pursuant to HM05 (2006) recommended an "allocation of $200,000 to NMED and DOH (through an appropriation to NMED)…"
   What assurances are in place for a contract between NMED and DOH to transfer this $100 thousand to DOH to cover its costs?

2. How does the legislation ensure that the intention and recommendations of the Mercury Exposure Reduction Task Force are implemented?

3. What are the continued roles for the two agencies once the plan is prepared?

4. Who will implement the plan and at what continued cost?

5. Is the initial $200 thousand sufficient to carry out the objectives of the plan?

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MA/mt

Attachment

Attachment 1
Executive Summary: New Mexico Mercury Reduction Action Plan

Executive Summary

During the 2006 legislative session, Representative Peter Wirth introduced memorials asking the New Mexico Environment Department and the Department of Health to look at mercury issues facing the state. House Memorial 5 required the departments to develop a Mercury Reduction Plan for New Mexico. A Mercury Reduction Plan Task Force worked in collaboration with the Dental Mercury Workgroup, convened pursuant to House Memorial 13, to develop a state Mercury Reduction Action Plan. The two working groups[1] have completed a Mercury Reduction Action Plan that includes this executive summary, the recommendations, and the supporting report.

The Task Force proposes the following state policy regarding mercury and asks that this policy be adopted by the State of New Mexico:

> *It is the policy of the State to minimize harm from exposure to mercury in New Mexico by reducing or eliminating emissions, discharges, and use of mercury and/or mercury-containing products to the greatest extent possible, when such measures are technically and economically feasible, taking into account the health and environmental costs of exposure to mercury.*

This report and its recommendations provide mechanisms for implementing this policy.

Legislative Recommendations for Mercury Reduction

The Task Force recommends that the State of New Mexico:

a. Adopt the mercury policy recommended above:
   "It is the policy of the State to minimize harm from exposure to mercury in New Mexico by reducing or eliminating emissions, discharges, and use of mercury and/or mercury-containing products to the greatest extent possible, when such measures are technically and economically feasible, taking into account the health and environmental costs of exposure to mercury."
b. Allocate $200,000 to NMED and DOH (through an appropriation to NMED) to fund:
   i. staffing and resources to implement the reduction strategies that can be done immediately;
   ii. a mercury study including
      1. a comprehensive and quantitative inventory of mercury sources, waste and emissions;
      2. a comprehensive mercury exposure study on pathways for mercury exposure; and
      3. a monitoring program to assess air, water, soil and biota for mercury contamination.

[1] A list of the members of the Mercury Reduction Plan Task Force and Dental Mercury Workgroup is attached as Attachment 1. In addition, the two memorials, House Memorial 5 and 13, which convened the two working groups are attached as Attachment 2. Please note that there is a separate report for House Memorial 13.

iii. to educate the public on the hazards of mercury exposure; and
iv. to develop a state fish consumption advisory program, including both commercial and locally caught fish advisories, which will provide public information and outreach.

c. Make a statutory change to require that all dental facilities in New Mexico be equipped with amalgam separators to assure that little or no solid mercury drains into municipal wastewater or septic systems and that the separators be properly maintained by the dental facilities.
d. Fully support the Solid Waste Bureau legislative request to refund the grant and loan fund to safely remove and recycle mercury from the waste stream, where possible; to educate the public on mercury removal from the waste stream; and to assist local governments in conducting household hazardous waste collection programs.
e. Give preference to power generating plants that use renewable sources of energy, and evaluate economic incentives to promote sources of energy that emit minimal or no mercury emissions, such as renewable energy sources and advanced coal emission reduction technologies.

Recommendations to NMED

The Task Force recommends that the New Mexico Environment Department:

a. Conduct a comprehensive and quantitative inventory of mercury sources, waste and emissions, initiate action steps identified and report back to the Legislature with recommendations, if necessary, regarding statutory changes suggested by NMED.
b. Create initiatives to recover and recycle mercury-containing equipment and products, including but not limited to, automotive switches, fluorescent lights, relay switches and measuring devices. These initiatives should include increasing public awareness of the hazards of mercury, encouraging the public to buy non-mercury-containing products, and informing the public of the proper disposal of mercury-containing products.
c. Increase business and governmental awareness regarding the hazards of mercury, mercury-containing equipment, alternatives to this equipment and proper disposal of mercury-containing materials.
d. Work with states, tribes and at a national and international level to reduce airborne mercury emissions.
e. Provide adequate staffing and resources for enforcement of mercury-related regulations, including NM wildlife habitat standards, and promotion of storm-water best management practices.
f. Consider crematoria initiatives, including adoption or adaptation of the best management practices being developed by Colorado for crematoria.

Recommendations to DOH

The Task Force recommends that the New Mexico Department of Health:

a. Conduct a comprehensive mercury exposure study on pathways for mercury exposure and report back to the legislature with recommendations, if necessary, regarding statutory changes suggested by DOH after input from stakeholders;
b. Identify and publish a list of all products containing mercury that are ingested or applied to the body, provide education to the public and medical community, and consider a ban on mercury-containing products, where appropriate. The list shall include:
    - Dietary supplements, herbs, homeopathic and Ayurvedic medications that contain mercury
    - Medications marketed in New Mexico that contain mercury
    - Any cosmetics sold in New Mexico that contains mercury

c. Avoid use of dental mercury amalgam in vulnerable patients in the following ways:
    1. Avoid placing, removing or polishing amalgam in the teeth of pregnant women, or women who may become pregnant, as the developing brain of the fetus is the most sensitive receptor to mercury toxicity;
    2. Avoid using mercury to restore children's teeth as their developing central nervous systems are particularly susceptible to mercury impairment;
    3. Avoid using mercury in other vulnerable patients including those with kidney disease, central nervous system disorders, autoimmune disorders, and allergic/chemical hypersensitivity, and breastfeeding women; and
    4. Avoid placing amalgam in patients with other kinds of metal surfaces in their mouths.

d. Minimize exposures to airborne mercury in dental offices.
    1. Promote the use of methods and equipment to reduce the exposure to mercury vapor in dental patients and staff; and
    2. Inform dental practitioners of the health and environmental risks of mercury exposures.

e. Reduce exposures to mercury from vaccines containing mercury preservative by:
    1. Implementing a plan to make influenza vaccine that contains no mercury preservative available for pregnant women, with support from health care providers;
    2. Educating providers who care for pregnant women on the availability and benefits to their patients of influenza vaccine that contains no mercury preservative;
    3. Continuing to promote the production and use of vaccines that contain no mercury preservative; and
    4. Introducing a resolution at the Association of State and Territorial Health Officers meeting calling on vaccine manufacturers to move toward all vaccines that contain no mercury preservative.

f. Educate the public on the risks and benefits of dental mercury amalgam and vaccine containing mercury preservatives.

Recommendations to NMED and DOH

The Task Force recommends that the both departments:

a. Reduce exposures from food containing mercury, including fish, by developing a state fish consumption advisory program for both commercial and locally caught fish, providing public information and outreach, and studying the feasibility of requiring mercury labeling of food products and posting warnings at all commercial establishments and restaurants that sell fresh, frozen, packaged or cooked fish.
b. Create an ongoing Mercury Reduction Advisory Committee that is similar in structure and function to the Task Force established by House Memorial 5.
c. Create a comprehensive fact sheet on mercury that includes exposures from fish, dental amalgam, vaccines, and other common sources.