This is the fifth in a series of updates

outlining the water treatment and disposal options being considered right now by CMS Land and government officials. As part of the Little Traverse Bay Environmental Project, millions of gallons of groundwater, high in alkalinity and containing trace amounts of mercury and other contaminants, are collected at the shoreline in order to protect the Bay. Collection of this water will go on for the foreseeable future, but what to do with it for the long term remains a crucial unanswered question. Any final solution must answer the following questions:

- Does the solution **protect human health** and **Little Traverse Bay?**
- Does it provide a **local solution** to this local problem?
- Is it **supported by sound science?**
- Does it **significantly reduce the mercury levels** of the water?
- Does it **relieve local road congestion and safety issues** associated with tanker truck traffic?
- Does it **minimize disruption to the community, economy and tourism?**
- Is the solution **economically reasonable?**

CMS LAND

Exploring Options for Protecting Our Bay

OPTION: Secure National Pollution Discharge Elimination System (NPDES) permits to treat, remove mercury and safely release collected water to Little Traverse Bay.

Under the U.S. Clean Water Act, the NPDES permit program controls water quality by regulating the release of pollutants into waters of the United States. NPDES permits are used to regulate discharges to the Great Lakes from wastewater treatment plants and a wide variety of other facilities and sites. CMS Land plans to submit two separate NPDES applications due to differing amounts of mercury contained in the water collected at Resort Township's East Park and the Bay Harbor development.

A permit application will be submitted for the Bay Harbor development soon that calls for using the *best proven technology to actually remove about 90 percent of the mercury contained in the water collected as part of the environmental project.* Research commissioned by CMS Land indicates that technology has been identified that will reduce the mercury concentration in the collected water from about 110 parts per trillion (ppt) to about 10 ppt before release to the lake. For reference, the state standard for mercury discharge to Lake Michigan is 1.3 ppt while the federal standard for drinking water is 2,000 ppt. Because proven technology is currently not able to reduce the mercury concentration to 1.3 ppt, regulators would need to approve a variance to allow discharge to the lake.

In November CMS Land applied for an NPDES permit to reduce the alkalinity (pH) of the water collected at East Park, mix it with clean ground water and then release it to Lake Michigan. Scientific analysis indicates that the mixed water will meet mercury standards for release to the bay.

CMS continues to investigate scientific processes that may prove to be even more effective in removing mercury in the future.

Utilizing NPDES permits meets all of the objectives to be considered an appropriate local solution. The process is supported by science. The mercury content in the collected water would actually be reduced by about 90 percent making the NPDES the most environmentally friendly option being considered. An additional benefit is that NPDES permits must be reviewed every five years and require that contaminant reduction measures are implemented if required and possible. The NPDES option is relatively economical and would be a local solution, removing the majority of the tanker trucks from the roads and relieving local traffic congestion and public safety concerns.

Next: Summary of all solutions

A Solution for Northwest Michigan

	Trucking	Injection Wells*	Local Injection Well	City of Petoskey	Local Discharge
Local Solution			✓	✓	✓
Supported by Science	✓	✓	?	✓	✓
Reduces Mercury		✓	?	?	✓
Relieves Traffic Congestion			✓	✓	✓
Minimizes Local Disruption			✓	✓	✓
Economical			✓	✓	✓
Protects the Bay & Human Health	✓	✓	?	✓	✓

*Antrim and Otsego Counties

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LITTLE TRAVERSE BAY ENVIRONMENTAL PROJECT

Learn more at ***www.protectingourbay.com***