

Cary Institute issues report on road salt use

By Kristine Coulter
Staff Writer

EAST FISHKILL – The Cary Institute of Ecosystem Studies released its findings regarding the human and environmental impacts of road salt use during the winter months. The findings were released at the East Fishkill Highway Department, on Route 52, on Wednesday, Dec. 15. The Town of East Fishkill, which was held up as an example, has recouped \$243,810 in salt savings during its first year of using retrofitted road salt trucks.

“Snow is a fact of life in the Northeast, but there are techniques to keep roads clear that result in less of a salt burden, on both the environment and municipal pocketbooks,” remarked Cary Institute president and report co-author Dr. William H. Schlesinger. The Cary Institute is a private, not-for-profit environmental research and education organization in Millbrook, which focuses on air and water pollution.

“The report’s goal is to help balance roadway safety with the quality of freshwater resources, both are essential to the health and prosperity of the region’s citizens,” stated Dr. Schlesinger.

According to background information compiled by Cary Institute, it was in New Hampshire in 1938 that granular sodium chloride was first used on an experimental basis to deice roads. At that point in

time, a total of 5,000 tons of salt was used on highways nationwide. In 2010, nationally between 10 million and 20 million tons of NaCl, the chemical abbreviation for sodium and chloride, are used on highways.

“The recognition” of the problem, of using too much salt locally, was 10 years ago, stated, Stuart Findlay, Cary Institute. Findlay was co-author of the report. The report’s lead author was Vicky Kelly.

Findlay said documentation was taken of when and where salt was used and where it was showing up.

“We started seeing high concentrations in local streams and the Fishkill Creek,” said Findlay.

During the summers, explained Findlay, there were high concentrations of salt and the concentration increased over the years. This suggests salt is being contained in the watershed, said Findlay.

The United States Environmental Protection Agency (EPA) suggests 20 mg/L of sodium in drinking water is a safe concentration. A study conducted in Dutchess County, according to Cary Institute information, found the average sodium concentration of 125 private wells was 48 mg/L and 40 percent of the wells had been concentrations greater than 20 mg/L. In high accumulation sodium and chloride can be harmful to plants and animals. Sodium is also a primary concern for those

people with high blood pressure.

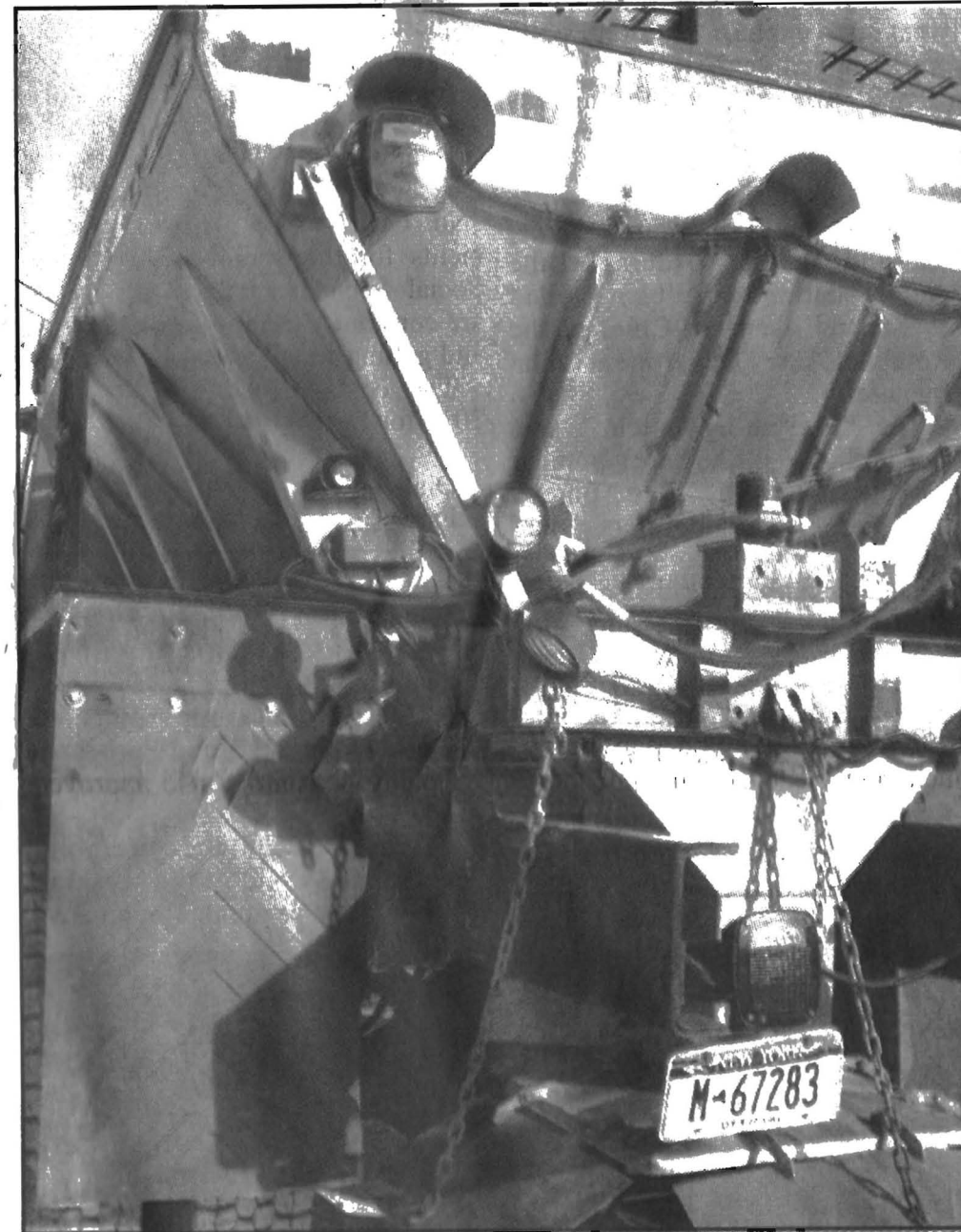
The road salt management plan, suggested by Cary Institute, includes: set goals, have a timeline to meet those goals, perform cost benefit analyses to the cost of salt compared with cost of the salt-cutting measures, have an implementation plan, perform record keeping to ensure the plan is working, review annually new technology, information and alternatives.

The Town of East Fishkill, in the winter of 2008-2009 paid \$744,590 to purchase 10,637 tons of salt. In 2009, the highway department trucks were retrofitted with applicator regulators, which knows how much salt should be used for the road conditions to be safe. The town spent \$500,780 cost to purchase 7,154 tons of salt in 2009-10. Even though the snow total for the winter of 2008-09 was less than in 2009-10, the town saved \$234,810 and used roughly 3,500 tons less of salt for last year’s winter.

Keeping the roads safe is still the main priority, said East Fishkill Town Supervisor John Hickman.

“It’s good for the equipment,” said Hickman. He said town officials are “pleased to be part of the solution.”

Peter Berasi, East Fishkill Conservation Advisory Council, said of the retrofitted trucks and equipment, “It’s fabulous because it not only preserves the environ-



An East Fishkill Highway Department retrofitted road salt truck that will reduce the amount of salt used on town roads. —photo by Kristine Coulter

ment but saves roads in harsh winters, as well.”

After years, roadside vegetation, concrete and metal are damaged by salt.

East Fishkill Town officials had “a lot of insight” in using the computers that adjust the amount of salt spread on its roads said Berasi.

The report was prepared in collaboration with scientists from Vassar College Department of Earth Science and Geography and Cornell Cooperative Extension of Dutchess County.