



November 1, 2013

Michael McClean  
Director of Rights-of-Way-Programs  
Massachusetts State Pesticide Bureau  
251 Causeway Street, Suite 500  
Boston, MA 02114-2151

Dear Mr. McClean:

The proposed use of herbicides in rights-of-way management by NStar on Cape Cod raises concerns about exposures among people and animals passing through sprayed areas and about groundwater contamination. Since all Cape residents rely on the Cape's sole source aquifer as a source of drinking water, protecting groundwater quality is a public health priority. The Cape's sand and gravel aquifer allows relatively fast movement of groundwater and limited breakdown of organic contaminants.

Results of our 2010 Silent Spring Institute study of Cape Cod public drinking water wells have previously been cited by an NStar spokesman<sup>1</sup> as evidence that spraying herbicides in power line rights-of-way will not affect Cape Cod groundwater. As we stated in a letter to the *Sandwich Broadsider*<sup>2</sup> in December 2010, the results of this study cannot be considered evidence that herbicide use is safe. We are writing to clarify the scope of our drinking water research and explain why our results do not support the conclusion that herbicide spraying will not affect drinking water sources.

Our studies of public and private drinking water wells were primarily designed to measure concentrations of chemicals associated with wastewater, mostly from septic systems, in Cape Cod drinking water. We did not design these studies to evaluate possible impacts of herbicide spraying in rights-of-way areas. In our 2010 study<sup>3</sup> of 20 public drinking water wells on Cape Cod, we tested for five herbicides, including just one, triclopyr, that is among the five herbicides proposed for use by NStar in the 2013 Yearly Operational Plan. In our 2011 study<sup>4</sup> of 20 Cape Cod private wells, we tested for eight herbicides, including four of the herbicides in the 2013 YOP. The samples we tested did not contain detectable levels of the herbicides that we included in our studies. However, the results of these two studies are of limited relevance to NStar vegetation management plan for several reasons. First, we did not specifically select drinking

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<sup>1</sup> McCall, A. *Cape environmental groups fight NStar plan*. *Sandwich Broadsider*. December 4, 2010 [cited 2013 November 1]; Available from: <http://www.wickedlocal.com/yarmouth/topstories/x893569487/Cape-environmental-groups-fight-NStar-plan>.

<sup>2</sup> Schaider, L. and C. Osimo. *Laurel Schaider and Cheryl Osimo, Newton: NStar Use of Herbicides Raises Concerns For Public Health*. *Sandwich Broadsider*. December 15, 2010 [cited 2013 November 1]; Available from: <http://www.wickedlocal.com/sandwich/news/x319810221/Laurel-Schaider-and-Cheryl-Osimo-Newton-NStar-Use-of-Herbicides-Raises-Concerns-For-Public-Health>.

<sup>3</sup> Schaider, L.A., et al., Pharmaceuticals, perfluorosurfactants, and other organic wastewater compounds in public drinking water wells in a shallow sand and gravel aquifer. *Sci Tot Environ*, 2014. **468-469**:384-93.

<sup>4</sup> Schaider, L.A., et al., *Emerging Contaminants in Cape Cod Private Drinking Water Wells*. 2011, Silent Spring Institute: Newton, MA.

water wells close to power line rights-of-way, so the wells we tested were not necessarily those most likely to be impacted. Second, we did not include all herbicides included in the 2013 YOP, nor the undisclosed “inert” ingredients in pesticide formulations that also raise health concerns. Third, our private well samples were collected almost a year after the beginning of NStar’s voluntary moratorium on spraying, meaning that we would have been unlikely to detect herbicides from recent spraying.

Pesticides continue to be among the chemicals that Silent Spring Institute is testing for in ongoing groundwater and household exposure studies. The active and “inert” ingredients raise multiple health concerns, and alternatives should be evaluated. Although most herbicide products have not been thoroughly tested for potential health effects, a 2009 study of products containing glyphosate (the active ingredient in Accord, one of the products proposed for use) showed endocrine effects in human cells at low doses,<sup>5</sup> and a 2013 study showed that glyphosate induced human breast cancer cell growth at low concentrations.<sup>6</sup> NStar can add to its green commitment and protect the health of Cape residents by choosing herbicide-free alternatives for rights-of-way maintenance.

Sincerely,



Dr. Laurel Schaidt, Ph.D.  
Research Scientist, Silent Spring Institute



Cheryl Osimo  
Cape Cod Outreach Coordinator, Silent Spring Institute  
Executive Director, Massachusetts Breast Cancer Coalition

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<sup>5</sup> Gasnier, C., et al., Glyphosate-based herbicides are toxic and endocrine disruptors in human cell lines. *Toxicology*, 2009. **262**:184-91.

<sup>6</sup> Thongprakaisang, S., et al., Glyphosate induces human breast cancer cells growth via estrogen receptors. *Food Chem Toxicol*, 2013. **59**:129-36.