



March 5, 2018

Rights of Way Coordinator  
Massachusetts Department of Agricultural Resources  
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Boston, MA 02114

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Dear Rights of Way Coordinator:

The Association to Preserve Cape Cod (APCC) submits the following comments regarding Eversource Energy's five-year Vegetation Management Plan (VMP).

Founded in 1968, APCC is the leading regional non-profit environmental advocacy and education organization on Cape Cod. Supported by thousands of members from every Cape Cod town, APCC's mission is to promote policies and programs that foster the preservation of the Cape's natural resources. APCC focuses its efforts on the protection of groundwater, surface water, and wetland resources, preservation of open space, the promotion of responsible, planned growth and the achievement of an environmental ethic.

The VMP submitted by Eversource proposes vegetation control and maintenance using a combination of mechanical vegetation removal and herbicide application on the utility's rights of way (ROW) on Cape Cod. As has been pointed out numerous times in public comments submitted over the past several years by APCC, other environmental organizations, municipalities, elected officials and concerned citizens, Cape Cod has an abundance of sensitive habitats that support rare plant and animal species. Its sandy soils are highly permeable, which allows contaminants to easily leach through to groundwater. The groundwater is hydrologically connected to the Cape's many freshwater ponds and wetlands, and is also the source for the region's private and public drinking water supplies. These fragile resources are found on, and are in close proximity to, Eversource's ROW.

The VMP states that herbicides will be applied to control vegetation in most areas along its ROW, including within 10 feet of a surface water body or other wetland, and within 50 feet of a private drinking water well. Although the VMP does not list which herbicides Eversource specifically plans to use on Cape Cod, it does provide a link to the list of approved herbicides on the Department of Agricultural Resources' Rights of Way Sensitive Area Materials List, suggesting that some combination of these listed herbicides will be used.

In examining this list, APCC notes that many of the approved herbicides have been linked to some human health risk and/or environmental concern:

- Aminopyralid (Milestone, Opensight): Its sale has been suspended in various parts of the world. Since aminopyralid is a relatively new herbicide, little independent information is available in the published literature on the toxicity of aminopyralid to humans or other mammal species. Aminopyralid persists in soils with a half-life

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- ranging from 32 to 533 days, with a typical time of 103 days, and is considered to have a high mobility in soil.<sup>1</sup> In sediment-water systems, the half- life was 462 to 990 days.<sup>2</sup> It is soluble in water and has moderate to high mobility with the ability to leach through soils and possibly contaminate groundwater.
- Glyphosate (Round Up Pro, Rodeo, Accord Concentrate): In 2015, the World Health Organization’s International Agency for Research on Cancer classified glyphosate as “probably carcinogenic to humans.” Their scientists found there was a particularly strong link between glyphosate and non-Hodgkin lymphoma. On March 28, 2017, the California Environmental Protection Agency’s Office of Environmental Health Hazard Assessment confirmed that it would add glyphosate to California’s Proposition 65 list of chemicals known to cause cancer. Some research has also indicated that glyphosate may be an endocrine disruptor. It has been linked to liver disease, birth defects and reproductive problems in laboratory animals, and it may kill beneficial gut bacteria and damage the DNA in human embryonic, placental and umbilical cord cells. One study suggests that glyphosate may affect pathogens such as salmonella in ways that can contribute to antibiotic resistance. Other recent research suggests it can interfere with hormones.<sup>3</sup> Glyphosate acts as a powerful antibiotic against lactobacillus and bifidobacterium bacteria. Without these bacteria, honeybees cannot digest nectar and honey and become disoriented in their foraging.<sup>4</sup>
- Metsulfuron Methyl (Escort XP, Patriot Selective Herbicide): Several sources state that research suggests the chemical may be slightly toxic to birds, the aquatic environment and honey bees.
- Sulfometuron Methyl (Oust XP, Spyder Selective Herbicide): In laboratory tests on animal subjects, sulfometuron methyl caused anemia, atrophied testicles and testicular lesions, and increased the incidence of fetal loss. A sulfometuron methyl breakdown product causes DNA damage in the colon of laboratory animals.<sup>5</sup> Studies suggest that sulfometuron methyl may leach through the soil and enter groundwater.<sup>6</sup>
- Triclopyr, Butoxyethyl Ester (Garlon 4, Garlon 4 Ultra): Acute exposure to this herbicide has also been linked to blood, kidney, liver and nervous system toxicity in animals. Though not widely classified as a carcinogen, two unpublished studies on triclopyr exposure to rats and mice have suggested increased frequency of mammary gland cancer at high doses. In experimental animal studies, high doses of triclopyr have been shown to cause reproductive and developmental abnormalities, including increased fetal death and skeletal malformations, as well as liver and

<sup>1</sup> MacBean C, ed; The e-Pesticide Manual, 15th ed., Version 5.0.1. Surrey UK, British Crop Protection Council. Aminopyralid (150114-71-9) (2010)

<sup>2</sup> USEPA/OPPTS; Pesticide Factsheet. Aminopyralid (1560114-71-9). Conditional Registration. August 10, 2005. Available from, as of Jun 30, 2011: <http://www.epa.gov/opprd001/factsheets>

<sup>3</sup> Grossman, Elizabeth, National Geographic, April 23, 2015

<sup>4</sup> Vallianatos, Evaggelos; Why Honeybees Don’t Have A Chance In The Midst Of Pesticides; Huffington Post, 03/09/2017

<sup>5</sup> JOURNAL OF PESTICIDE REFORM/ WINTER 2002 • VOL. 22, NO. 4

<sup>6</sup> California Dept. of Pesticide Regulation

kidney defects. Butoxyethyl ester has a potential for surface water runoff and waterway contamination due to its low soil adsorption capacity. Butoxyethyl ester may pose significant risks to groundwater and surface water sources. Triclopyr has been shown to be moderately to highly toxic to freshwater plants and fish as well as some marine vertebrates and invertebrates when in butoxyethyl ester form. At least one study indicates that mammal populations in forested areas treated with triclopyr have been significantly reduced. Because triclopyr is a very potent plant growth disruptor, unintended target plants may be destroyed due to spray drift and runoff from rain. Additionally, triclopyr has been shown to disrupt the normal growth and nutrient cycling properties of microorganisms, fungi, mosses and algae, which are essential to the normal function of healthy ecosystems.<sup>7</sup>

- Paclobutrazol (Combistat): The EPA in 2015 determined in an ecological risk assessment that paclobutrazol posed a potential risk to birds, reptiles and terrestrial-phase amphibians, mammals, terrestrial and aquatic plants, as well as other aquatic organisms.<sup>8</sup> There is suspicion from lab experiments that paclobutrazol could reduce fertility. There is also some concern that this chemical can cause cancer or mutations but there is not enough data compiled yet to make an informed assessment. However, it is toxic to aquatic organisms, and may cause long-term adverse effects in the aquatic environment.<sup>9</sup>

In addition to the active herbicide products proposed for use, the largely unpublished “inert ingredients” and ingredients used as surfactants for the herbicide products are an unknown risk. According to the National Institute of Environmental Health Science, numerous studies indicate that inert ingredients, which are not labeled and considered proprietary business information, may enhance pesticide toxicity on the nervous system, the cardiovascular system, mitochondria, genetic material and hormone systems. These so-called inert ingredients may in fact be biologically or chemically active. Most of the tests required to register a pesticide are performed with the active ingredient alone, not with every ingredient present in the product.<sup>10</sup>

There are too many unknowns attached to the proposed herbicides and to their long-term effects on the Cape’s fragile environment and human population; what is known about these products is troubling. It is APCC’s position that if an adverse effect on the environment or human health has been detected that is linked to herbicide use on Eversource’s ROW on the Cape, it will be too late. Eversource’s continued use of these herbicides as part of its VMP has the potential to adversely affect the Cape’s sensitive habitats and water resources, as well as pose human health risks from exposure to herbicides, and this potential risk is enough to warrant discontinuation of their application above the Cape’s aquifer and in its sensitive habitat areas.

It must also be said that the practice of clear-cut mowing, which Eversource has stated is one of its alternative methods to control vegetation, can be devastating to sensitive habitats and rare species when done indiscriminately.

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<sup>7</sup> National Pesticide Information Center, 2002, Weed Control Methods Handbook, The Nature Conservancy, Tu et al.

<sup>8</sup> Federal Register Volume 81, Number 3 (Wednesday, January 6, 2016)

<sup>9</sup> CHEMWATCH, Apr-21-2009

<sup>10</sup> National Institute of Environmental Health Science, 2006 Dec; 114(12): 1803–1806

Clearly, there are other methods of vegetation management that can be utilized that will not introduce toxic chemicals to the environment or result in a blanket leveling of all habitats within the ROW.

Manual removal of vegetation is one of those methods. Hand removal of targeted woody vegetation along the ROW has been successfully demonstrated by volunteer groups in several Cape Cod towns. For several years now, the Brewster Conservation Trust and the Harwich Conservation Trust have each conducted vegetation management programs on their respective Brewster and Harwich properties along the ROW. Both organizations have proven that undesirable vegetation can be effectively removed with a small group of volunteers using only hand tools. The effort achieved the same objective as Eversource's VMP, but without the risk of herbicides or the destruction of clearcutting. Eversource may view the use of herbicides versus hand removal as a cost-saving business decision, but the health of the Cape's environment and its citizens should not be compromised based on the company's bottom line.

APCC urges the Massachusetts Department of Agricultural Resources to be more responsive to the concerns expressed by the broad spectrum of Cape Cod citizens, elected officials and organizations opposed to the utility's current VMP policies. MDAR and Eversource should work closely with community leaders to actively seek out viable low-impact options for vegetation management, such as hand removal, that will not place the Cape Cod's fragile environment at risk.

Sincerely,



Andrew Gottlieb  
Executive Director

cc: State Senator Julian Cyr  
State Senator Viriato deMacedo  
State Rep. Sarah Peake  
State Rep. Timothy Whelan  
State Rep. William Crocker  
State Rep. Dylan Fernandes  
State Rep. David Vieira  
State Rep. Randy Hunt