SUBJECT: H.586, p.14 lines 12-17, 50-ft buffers in right-of-way (ROW) permits
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H.586 P.1 lines 11-14
Beginning July 1, 2014, a permit issued under this chapter for the application of pesticides in a right-of-way shall prohibit the application of pesticides within 50 feet of either side of any surface water, within 50 feet of any culvert, at the base of any signage post, or in any roadside ditches.

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12 Sec. 10. 6 V.S.A. § 1113 is added to read:
13 § 1113. PERMITS; RIGHT-OF-WAY
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15 application of pesticides in a right-of-way shall prohibit the application of
16 pesticides within 50 feet of either side of any surface water, within 50 feet of
17 any culvert, at the base of any signage post, or in any roadside ditches.

PREMISE: Fifty-foot buffers are needed in right-of-way herbicide permits to protect water resources. Keeping poisons out of water—a public trust resource-- means reducing our reliance on pesticides to manage pests and using a variety of methods to manage vegetation. In addition, increasing buffers to 50 feet will require creating sources of funding to support the use of responsible alternatives.

RAILROADS: The 2006 Railroad IVMP describes the railroad ballast and how it is built of loose stone to allow water to drain off into adjacent ditches, which carry the water away. What it doesn't say is that any herbicides used on that ballast are likely to be carried off with that water into the ditches, which may connect with surface waters or groundwater. The problem for the tracks is seeds and soil entering the ballast, allowing plants to grow, create organic matter and hold moisture in a place that needs to drain and be free of vegetation. Herbicides do not remove the dirt harboring the plants; they only stop or discourage plant growth. Periodic ballast cleaning is needed to remove the dirt, the source of the weed problem, rather than toxic herbicides. Ballast cleaning is more expensive than herbicide applications, and needs funding from state and federal sources, just as highways do. Spraying glyphosate 2 feet from water at bridge abutments and spraying only to end of railroad ties where water is less than 10 feet from the rails are most likely to contaminate water with an endocrine-disrupting herbicide (Richard S 2005; Gasnier C 2009) that contributes phosphorus to the aquatic ecosystem (Cummings 2009).

For clearing trees along the ROW, Chontrol Paste (a biological product) can be used to control resprouting of cut stumps. (See references for Chontrol Paste on science pages.) Establishing desirable low-growing plant species along the ROW can be useful in crowding out taller species. (See Railroad IVMP 2006-2011.)

The Infra-Red Burner developed and paid for through federal funds in the late 1990s needs protection and retrofitting with solar or hybrid energy, or alteration to do steam treatment in sensitive areas such

those mentioned above. (See Appendix C of Railroad IVMP)

HIGHWAYS:
Guardrails are a principal user of herbicides in Vtrans' management scheme. Craig Dusablon of VTrans told VPAC in spring of 2013 that more guardrails mean more herbicides used. Asphalt can be installed on each side of guardrails to prevent erosion of silt into streams and reduce pesticide use at the guardrails to alternate years or less often. (photo of Maine Rt 9) Also, asphalt can be installed around signposts to prevent weed growth.

Poison ivy on highway infrastructures is another problem for which herbicides are used; however, herbicides make it difficult or impossible to replant the area with desirable vegetation. See the following article for alternatives. http://www.pesticide.org/Alternatives/phase-2-solutions-for-consumers/poison-oak-and-ivy

Highway herbicide use saw a spike in 2010, from approximately 5100 lbs in 2009, to more than 20,000 lbs in 2010, 29,000 lbs in 2011, and 33,000 lbs in 2012 (based on reported pesticide use data by county from Agency of Agriculture.

Maine has a 50 foot buffer for waters in their highway program. See sheet on other state's regulations.

UTILITIES:
Electric ROWs and substations are expanding, so herbicide use shot up in 2010-2012 to tens of thousands of pound of herbicides per year. Electric substations are increasing in size and number, are treated with herbicides regardless of proximity to water or wetlands, and need regulatory oversight. More and more water resources are vulnerable to contamination. Natural communities are degraded by construction, infrastructure, and then long-term maintenance with herbicides.

Requiring 50 foot buffers in ROWs to water and wetlands means using alternatives. Chontrol Paste can be used for cut-stump treatment instead of Garlon (triclopyr, at 2 gallons per acre, toxic to aquatic biota) which is used up to fifteen feet from water. Managing larger vegetation without using Garlon or basal oil as a basal bark treatment 15 feet from water needs alternative, non-toxic methods, such as cutting and using Chontrol Paste.

Substation applications must be limited through regulatory oversight, possibly through inclusion in ROW permits or in the VT Pesticide General Permit.
(http://www.vtwaterquality.org/lakes/docs/pgp/lp_2011%20FINAL%20VT-NPDES%20PGP.pdf) Many substations have underground drainage that acts as a point source of pollution to waters of the state. I suggest that where a substation has no weeds, no application should be necessary. Where a few weeds appear, individual weeds could be targeted, rather than the broadcast sterilizing application that has been the practice. Goats could be "hired" to eat vegetation outside the substation. Wetland plants were damaged outside the Charlotte substation in August 2013 after Vegetation Control Services used herbicides inside and around the substation. If substations are expected to be sterile environments, they

should be built as enclosed structures to keep weed seeds and soil out. In this way, utilities can take responsibility for the long-term costs of their development and maintenance.

In closing, I recommend

1. 50 foot buffers in Right-of-way permits to protect water.
2. Collaboration with people at UVM to develop alternative technology for weed control, including work on the weed-burner:
3. Collaborative process with Gwendolyn Hallsmith, Senator Pollina, stakeholders, NGOs and public to develop funding mechanisms to support sustainable ROWs;
4. Legislation to include utility infrastructures in ROW permits or in the Vermont Pesticide General Permit.