Requirements for Herbicide Application in relation to Private and Public Drinking Water Sources

Invasive Plant Control and Drinking Water Sources

As part of planning and development of the Invasive Plant Control Plan where herbicides will be applied, be sure to review the available GIS layers pertaining to drinking water supplies. The Vermont Agency of Natural Resources, Natural Resources Atlas (Online GIS) has a Drinking Water and Groundwater Protection layer set that includes pertinent layers: Private Wells, Public Water Sources, Source Protection Areas (SPA) for Surface and Groundwater. NRCS and partners assisting with planning and implementation of Invasive Plant Control Plans, need to be sure that State Law is followed regarding herbicide application near drinking water sources. This may require limiting or eliminating herbicide application in some areas.

Private Wells

There are few limitations (rules or laws) to herbicide application (foliar, cut stump, other above ground treatments) near existing private wells in Vermont. There are guidelines in the Water Supply Rules for siting new wells which requires setbacks from Rights of Ways (ROWs) where herbicides are applied or will be applied. The protective distance identified for herbicide application on ROWs is 100 feet. Where invasive plant control (and herbicide use) is planned and there is a private well on site, avoid treatment within 100 feet of the private well. While there is no law requiring this setback, it will help assure protection of that water supply when using Conservation Program funding to control invasive plants.

Public Water Supplies

Public water supplies include Public Water Sources (primarily public wells), Surface Water Source Protection Areas (e.g. watershed and actual surface water source), and Groundwater Source Protection Areas. The Vermont Water Supply Rules specify a Source Isolation Zone which is a 200 foot radius setback from public water drinking sources. This prohibits the application of pesticides and herbicides within this zone. The Source Isolation Zone would apply to public wells which are found in the point GIS layer Public Water Sources. For Surface Water Protection Areas, the Source Isolation Zone does not apply to the entire polygon delineated. It only applies to the inlet of the public source water. For example, Berlin Pond is the water supply for the City of Montpelier. The pond proper and the surrounding forested watershed is part of the Surface Water Source Protection Area which includes over 6,700 acres. Herbicides may be applied in this polygon in the forest but cannot be applied within 200 feet of the intake pipes for the public water supply. The intake pipe would show up under the separate Public Water Source point GIS layer. For Groundwater Protection Areas, the Source Isolation Zone would only apply to the specific public well water source associated with the groundwater protection area delineated polygon. Again, look in the Public Water Source point GIS layer for the actual location of public well source.

NOTE: In most cases the Source Isolation Zone is a 200 foot radius. For an unconfined aquifer unconsolidated (sand/gravel) well, and for spring sources the zone may be different (the isolation zone is often reduced in the down gradient direction). The water system owner should be able to provide that information. The water system's Operating Permit will often also describe the source isolation zone, which the water system and Water Supply Division will have a copy of.

If there are any questions please contact the Water Supply Division. If there are unique circumstances please review the project with Water Supply Division.

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Example screen shot from the Natural Resources Atlas. This shows the 'Drinking Water and Groundwater Protection' layer set. Individual layers include Private Wells (points), Public Water Sources (points), Surface Water Source Protection Areas (polygons) and Groundwater Source Protection Areas (polygons). http://anrmaps.vermont.gov/websites/anra/