

2017  
Final Report  
Dover, NY *Salvia glutinosa* Control Project

Prepared for  
The Lower Hudson Partnership for Regional Invasive Species Management

Prepared by  
Trillium Invasive Species Management, INC

This document summarizes the deliverables completed towards the 2017 Dover Salvia control project. Conception and execution of the project was made possible through a partnership between; The LHPRISM, the Appalachian Trail Conservancy and Trillium ISM, INC



This project was contracted by the Lower Hudson Partnership for Regional Invasive Species Management (PRISM) using funds from the Environmental Protection Fund as administered by the New York State Department of Environmental Conservation

**Project Introduction:**

This project augments an ongoing control effort of an extensive infestation of *Salvia glutinosa*, aka jupiter's distaff or sticky sage, occurring in Wingdale, within the Town of Dover, NY. The infestation was first discovered in 2009 along the Appalachian Trail by Nava Tabak, Conservation Scientist for Scenic Hudson, and originally estimated at approximately 82 acres. Starting in 2013, management has been undertaken by several crews on various areas within the infestation.

This is currently the only confirmed infestation of sticky sage in the LHPRISM and as such the plant is listed as a [Tier 2 species](#) by the LHPRISM (previously listed as a 'Threat' species), warranting a rapid response effort. There is little known about the invasiveness of the plant beyond this infestation, where it is found to be capable of growing at high densities in a wide variety of conditions and spreading by seeds which are dispersed by adhering to passing mammals.

This project conducted treatment on as much land as was feasible, initiated the establishment of best management practices for this species and explores the feasibility of eradication of this plant.

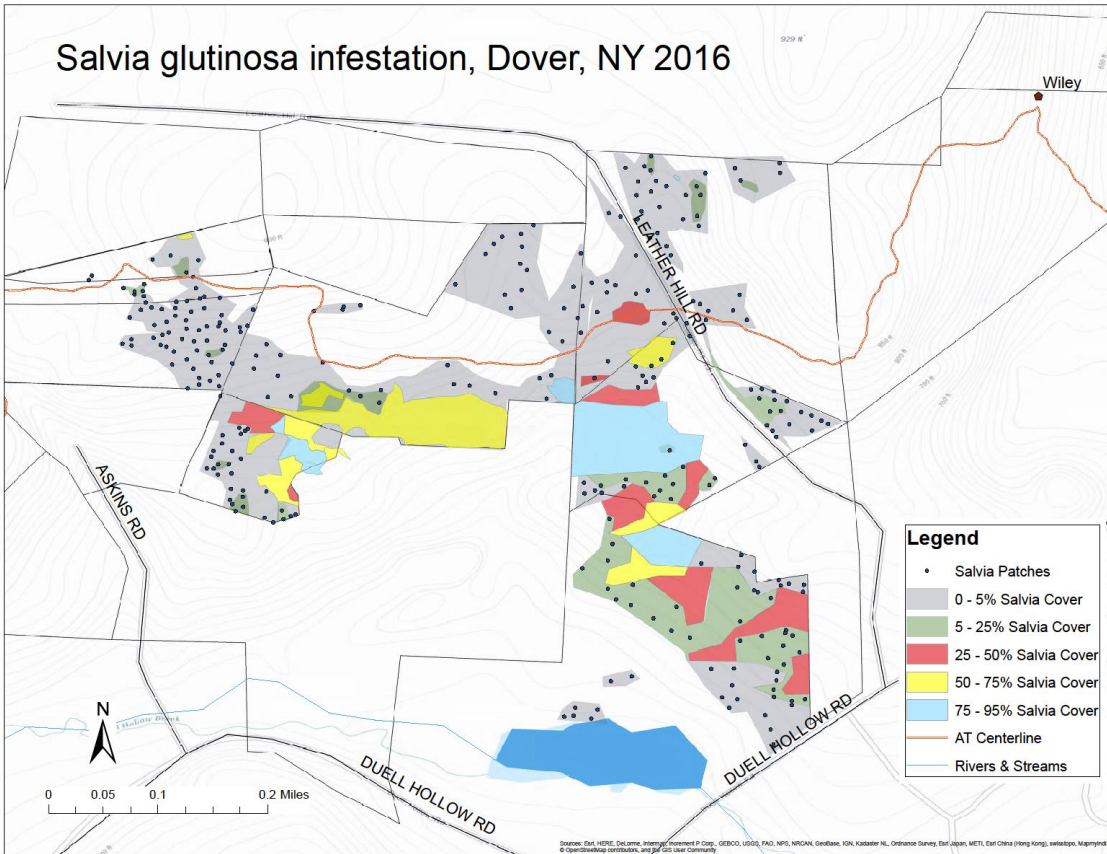
**Narrative:**

*Salvia glutinosa* is a perennial herb native to Europe and western Asia. Also known as sticky sage or jupiter's distaff, it is sometimes used in ornamental plantings. The species' seeds have a sticky coating and easily adhere to passing mammals. Though it prefers high light and moist soil, it is capable of developing into dense, homogenous stands in a wide range of growing conditions. This infestation appears to have been planted as an ornamental by a previous landowner ~20 years ago. Since that time, it has spread to infest ~180 acres.

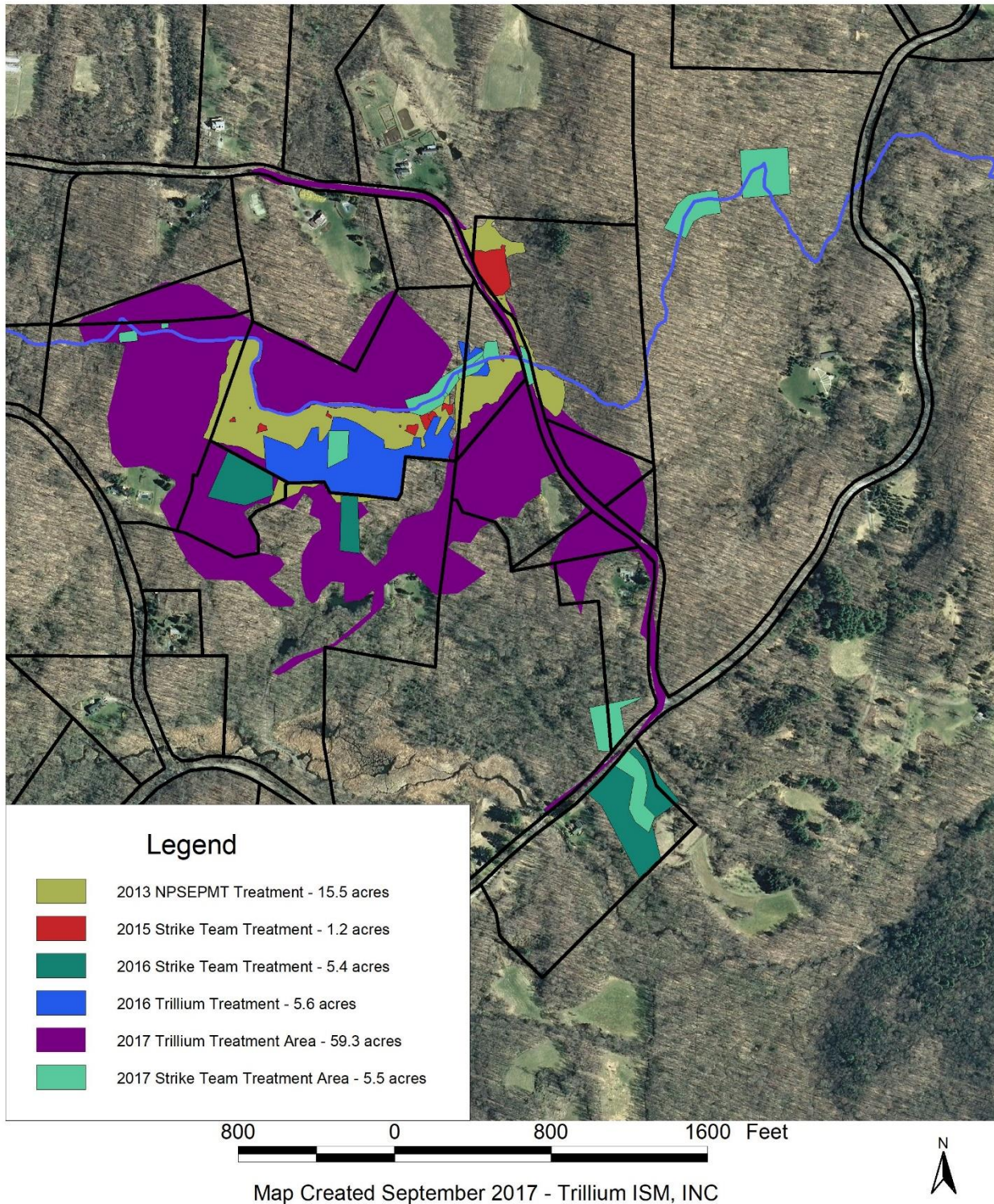
At the time of initial discovery, the infestation was estimated to have a general infested area of ~80 acres. Control efforts were conducted in 2013 by the National Park Service Exotic Plant Management Team, by the NY/NJ Trail Conference Strike Team in 2015 and 2016 and by Trillium ISM, INC (under contract with the Appalachian Trail Conservancy) in 2016.

Areas initially treated in 2013 were reported to have a high control success. However, these same areas required repeat treatment in 2016 by Trillium as the infestation had rebounded to a high density. This is likely due to the three-year gap in treatment and indicates that while herbicide treatment is effective on existing plant growth, a viable seed bank exists: continual treatment for several consecutive years is necessary for eradication.

**Maps:**

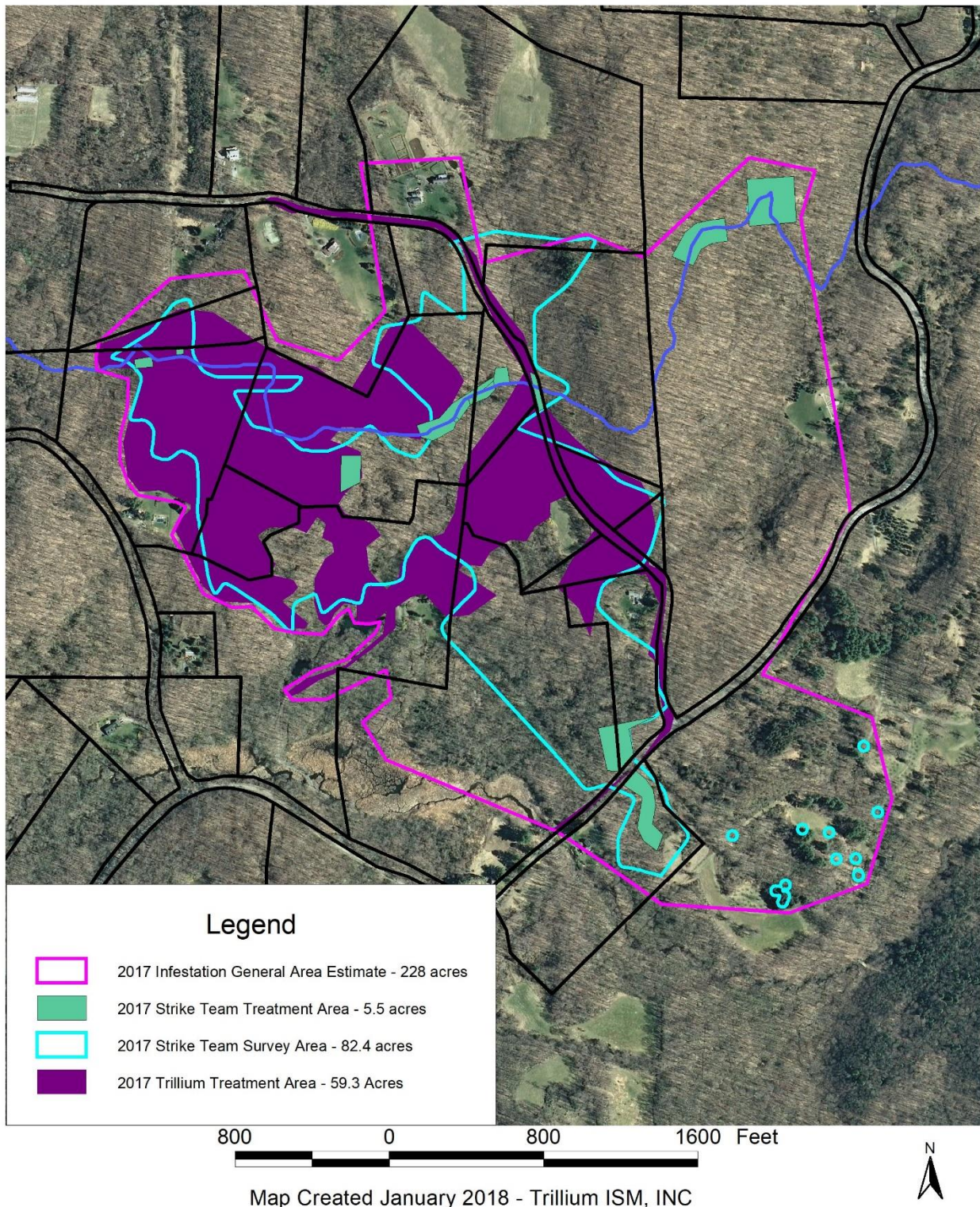


# Salvia Glutinosa - Dover, NY



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## 2017 Efforts



## **Scope of work and Deliverables:**

Coordination meeting – Trillium met on-site with ATC and LHPRISM representatives on 05/04/17. At this meeting a general strategy was developed for Trillium. It was agreed that Trillium would focus on working the denser areas of the infestation, working from the core outwards with a focus on areas near vectors such as trails, residential areas and roads.

Trillium was contracted to work on as much land as feasible given the available funding. Work crews applied Accord XRT II (epa reg no 62719-556) and Rodeo (epa reg no 62719-324) at 2% v/v via backpack sprayer.

Initially estimated at 20-man days, Trillium expended 26 man-days and covered ~60 acres of land. The average area covered per day was 2.3 acres, however actual area coverage per day fluctuated with infestation density.

Three-person crew work days - 5/16, 5/25, 6/27, 6/28, 8/1, 8/2

Two-person crew work days - 6/29, 6/30, 7/3, 7/31

## **Project Summary and Outlook for 2018**

This year represented a significant increase in efforts and resources dedicated to controlling this infestation. The goal was to control as much area as possible and determine if eradication is a feasible goal.

Approximately 60 acres were treated by Trillium ISM, INC with a foliar application of glyphosate at 1% v/v using backpack sprayers. The acreage treated represented a significant portion of the core of the infestation as well as the western extent of the infestation. Treatment occurred in May, June, July and August; over which time no difference in herbicide efficacy was observed. It was very useful to treat in several week intervals as this allowed crews to observe efficacy of control work and follow-up on any areas that were missed on a previous trip.

The Town of Dover issued a resolution to treat infested road rights-of-way and, as a result, all salvia along Town roads was treated with the help of the NY-NJ Invasive Strike Team.

A NYS regulated class 2 wetland exists within the general infested area. In 2017 *S. glutinosa* was observed growing on the edge of this wetland and it is reasonable to expect that the plant is growing within the wetland.

The year saw an increase in landowner participation and a better resolution of the infestation extent. Over the past years many landowners have signed on to allow control work on their property. In 2017, several more land owners in the core area were contacted and permission was secured to work on their properties. Additional landowners were identified as having *salvia glutinosa* on their properties, on the north and north-eastern extent of the infestation. These landowners should be contacted to ensure complete control of the infestation. Unfortunately,

much of the eastern extent of the infestation is not well known; this area needs more survey work and close contact with the owner of a few large parcels.

Based on the area covered in 2017, it is reasonable to expect that the entire known infested area can be treated in 2018 with a modest increase in effort from Trillium and Strike Team crews. Much of the 2017 treatment area was very dense, it may be expected that 2018 follow-up work in those areas will cover more area-per-time than the initial control work. A goal of complete control will also require outreach to new landowners, survey work on the eastern extent of the infestation and a NYSDEC Article 24 permit to apply herbicide within the 21.5-acre class 2 wetland, DP-44.

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