

2019
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 2019 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 effort to control 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:

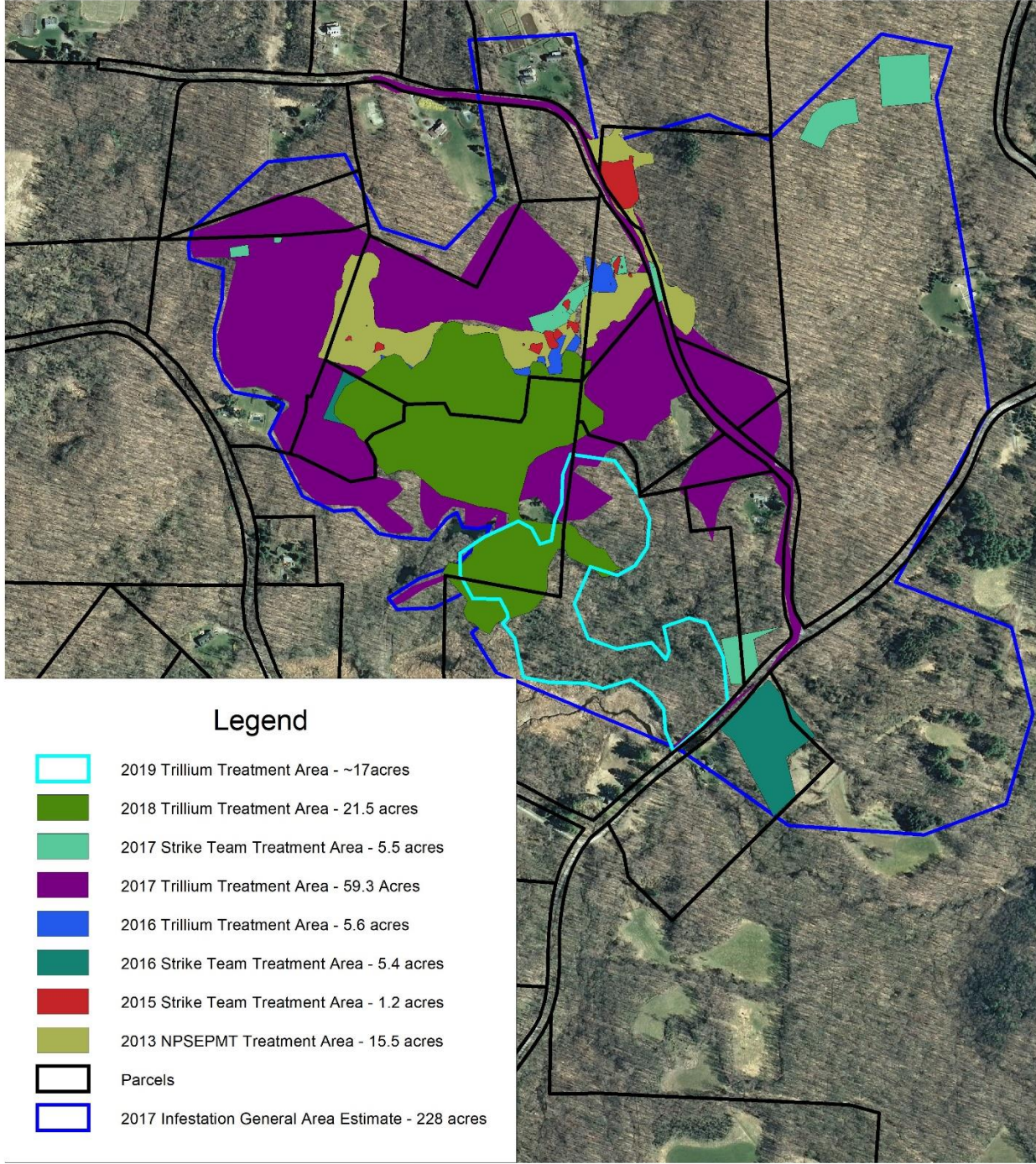
Salvia glutinosa is a perennial herb native to Europe and western Asia. Also known as sticky sage or Jupiter's distaff, it is sometimes used in ornamental plantings. The seeds of this particular species have a sticky coating and easily adhere to passing mammals. Though it prefers high light and moist 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. Trillium ISM, Inc. and NY/NJ Trail Conference have continued treatment over 2017, 2018 and 2019.

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 2013-19 Treatment Area



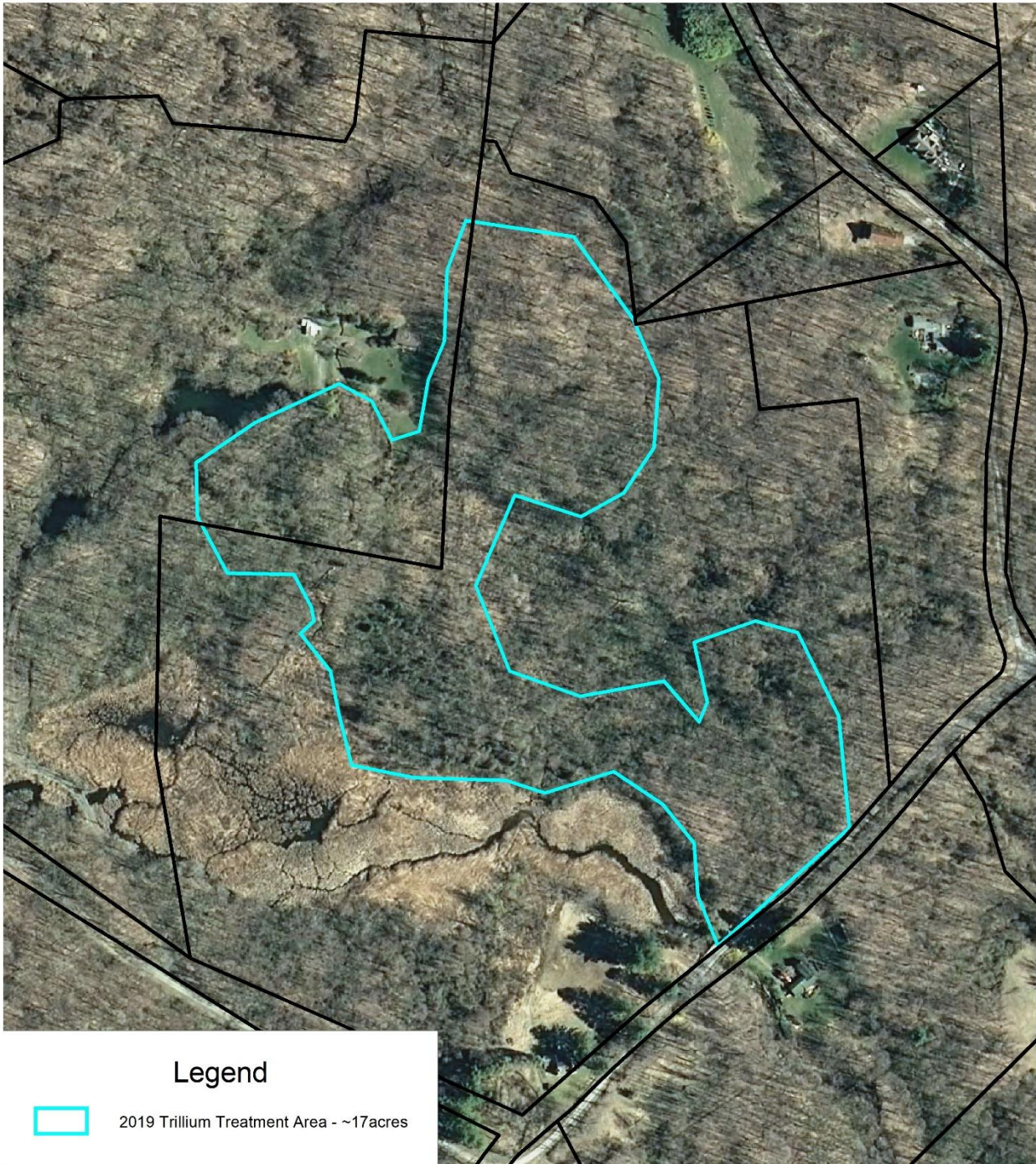
1000 0 1000 2000 Feet



Map Created December 2019 - Trillium ISM, INC
This map is not a survey, for planning purposes only.

***NY/NJ Trail Conference Strike Team treated in 2018 and 2019.
Their treatment area for those years is not represented in this map.**

Salvia Glutinosa - Dover, NY 2019 Treatment Area



Legend

 2019 Trillium Treatment Area - ~17acres

400 0 400 800 Feet

Map Created November 2019 - Trillium ISM, INC
This is not a survey, map is for planning purposes only.



Scope of work and Deliverables:

Trillium was contracted to secure Article 24 permits to treat for sticky sage around wetland DP-44 and treat as much sticky sage as feasible given the available funding. Two Article 24 permits, one for the northern property and one for the southern, are required to complete the project plan. The permit for the northern property was secured in 2018. The permit for the southern property was secured in 2019. Work crews applied Rodeo (EPA reg. no. 62719-324) at 2% v/v via backpack sprayers throughout the contracted treatment area, and expanded the treatment area to the East due to a surplus of contracted time.

In April, Trillium surveyed around wetland DP-44 for sticky sage. The collected information was used to submit an application for an Article 24 permit to apply herbicide within the buffer of the wetland on the Southern property.

Trillium expended roughly 54 person-hours over 3 workdays to treat roughly 17 acres of land. On average, the Trillium crew covered a little over 5.5 acres per day, with fluctuations dictated by salvia density, terrain and a dense barberry infestation. Daily treatment areas followed stone walls, wetland boundaries, and other landmarks to ensure cohesive coverage and coordinate with the NY/NJ Trail Conference Invasive Strike Force. Work within the 100' buffer of wetland DP-44 took place under NYSDEC Article 24 permits issued in 2018 (expires 12/31/2021) and 2019 (expires 12/31/23).

4/22/19 – Trillium surveyed the treatment area for plant density/infested area square footage and began preparation of Article 24 permit application.

5/9/2019 – Permit application completed and submitted to NYSDEC

8/02/19 – NYSDEC Article 24 permit issued.

8/8/19 – Treatment began. Power tools were used to help clear biomass for better access to infested areas. Treatment started at the south end of the area and headed northwest towards DP-44 wetland. Treatment was conducted in between the DP-44 wetland and the northeast ROW.

8/9/19 – Treatment continued north property and partially covered the eastern edge of the property as well as the south/southwestern areas.

8/12/19 – Treatment area continued, to finish towards the eastern boundary of infestation.

9/23/19 – Field data sent to Ryan Goolic. (herbicide use was reported to Ryan on 10/17/19).

Project Summary and Outlook for 2020

Substantial work was completed for this project in 2019. Approximately 17 acres were treated by Trillium ISM, Inc. with a foliar application of glyphosate at 2% v/v using backpack sprayers. Surveying occurred in April, a permit to treat was secured and treatment occurred in August. Foliar treatment continues to appear to be effective, signaled by decreasing target density within previously treated infested areas.

Cutting of the dense barberry stand within the 2019 treatment area would greatly facilitate survey and treatment of sticky sage. Much of the area is quite impenetrable. Resources and continued efforts are still needed to ensure this infestation is controlled and eventually eradicated.

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