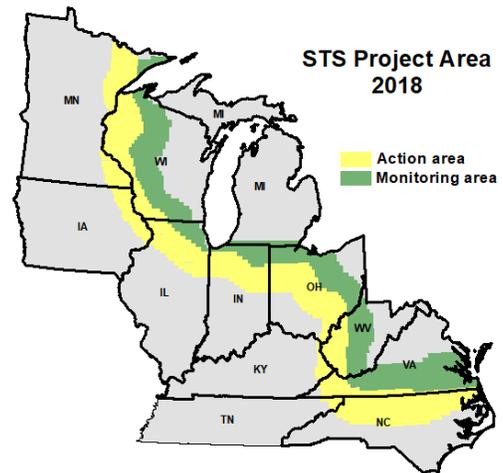


Executive Summary: The Slow the Spread Foundation in collaboration with 11 states and two USDA Forest Service Regions continue to impede the spread of the exotic gypsy moth along the leading edge of its infestation. Since 2000, Slow the Spread (STS) of the Gypsy Moth program has actively managed new populations in the action area with shared stewardship, successfully reducing the spread by at least 60% from the unrestricted rate of 20 km per year. In 2018, the program treated 362,384 acres for gypsy moth suppression.

Accomplishments to Date:

- **Reduced** the spread of this destructive pest by at least 60%, which has prevented establishment of this pest on more than 150 million acres since the program’s inception in the year 2000.
- **Strategically invested** in monitoring and active management with participating states that have resulted in a 3:1 benefit to cost ratio by delaying the negative impacts associated with gypsy moth infestations.
- **Protected** the extensive urban and wildland hardwood forests in the south and upper mid-west while also protecting the environment through use of gypsy moth specific strategies, primarily mating disruption.
- **Unified** partners in IL, IN, IA, KY, MN, NC, OH, VA, TN, WV, and WI and two university cooperators who coordinated area-wide action based on biological need through the establishment of the STS Foundation, which provides a formal framework for cooperating states.
- **Standardized** actions across the multiple administrative and jurisdictional boundaries in the program by utilizing a powerful decision algorithm to plot project boundaries, locate incipient infestations, prioritize and delineate infestations for treatment, evaluate the success of each treatment and measure spread each year.



2018 Gypsy Moth Slow the Spread Accomplishments

Funding: Partner contributions during 2018 included the following:

Forest Service, operations	\$7,000,000
Forest Service, technology development	\$ 110,000
State Partners	\$2,445,038
TOTAL	\$9,555,038

Project Area: The action area band where intensive monitoring and control measures were implemented (yellow band on map) remained at the biologically optimized 100-km width. The monitoring area (green band on map) provides trap catch data to predict moth populations and moth spread lines.

Monitoring: Monitoring traps are used to detect early infestations, to delimit building populations for potential treatments, and to model population spread. In 2018, 56,328 traps were monitored in the action area and 4,712 traps in the monitoring area. The current trap spacing splits the action area in half with the proximal portion trapped at 2 km and the distal portion at 3 km. This trapping scheme, although not the optimal strategy of a 2 km spacing throughout the action area, has been utilized since 2015, and has maintained the resolution in the trapping data needed for decision making while also reducing costs by decreasing total traps from the optimized 90,000 per year to about 61,000 per year.

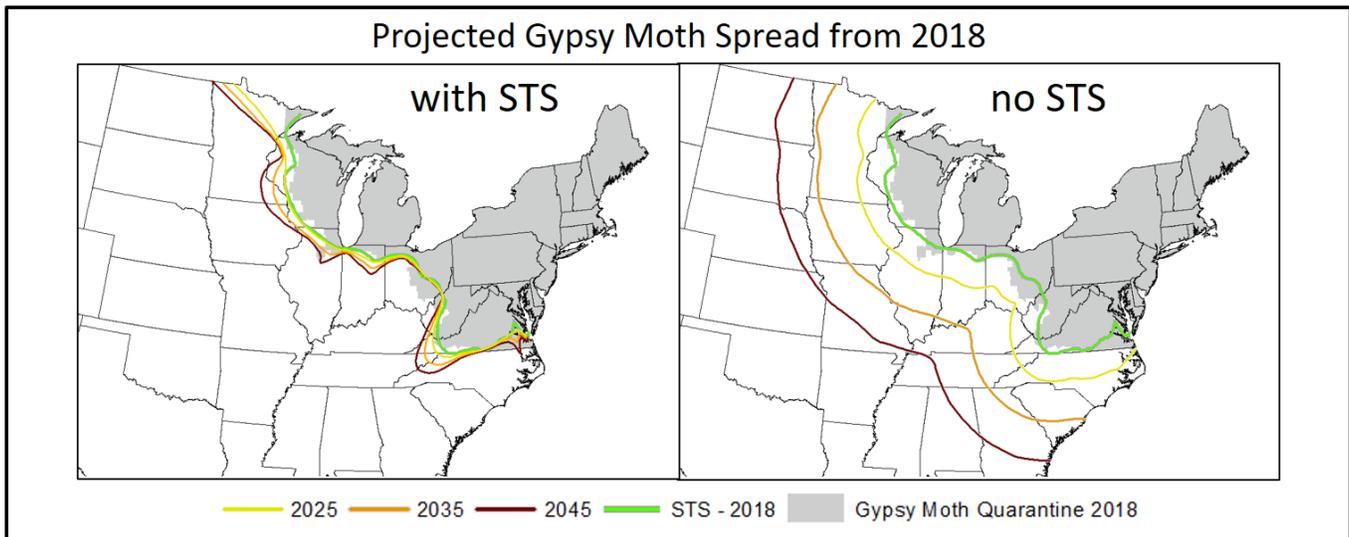
Treatments: Partners delineated more than 137 distinct gypsy moth populations within the action area in 2017. Treatments subsequently occurred on 362,384 acres during the spring and summer of 2018 to reduce spread associated with those recently established infestations (Table 1). Mating disruption continues to be the most widely used treatment because it is effective, target specific and inexpensive (\$~7 per acre).

Table 1. Acres treated in 2018 in eight states and on federal lands in the STS Action Area.

STATE	# OF COLONIES MANAGED	ACRES OF TREATMENT	
		Larvicides (<i>Btk</i> , etc.)	Mating Disruption
IA	1	920	0
IL	13	9,486	33,279
IN	4	798	3,158
MN	8	1,066	60,936
NC	11	0	115,494
OH	52	1,694	29,520
VA	12	0	19,899
WI	36	13,730	51,676
Fed. land	-	0	20,688
TOTAL	137	27,734	334,650

Mating disruption treatments evaluated in 2018 were 89% successful (99) or partially successful (14) on 127 blocks, slightly lower than treatments evaluated in 2017 (96% successful). Applications of *Btk* were 84% successful (26/31 blocks).

Spread: The program continues to reduce spread by more than 60%. Across the three zones (North, Central, and South) of the program, each zone showed negative advancement at the front of the infestation, measured by the 10-moth line. The front of the infestation ebb and flows from year to year. The figure below predicts the projected spread of gypsy moth at three intervals (2025, 2035, and 2045) with and without the STS program.



Summary of 2018 project accomplishments and cost; costs include federal and state matching funds.

Category	Accomplishment	Cost (thousands)
Monitoring	≈ 61,000 pheromone traps deployed in 12 states, spread measured and all treatments evaluated.	\$4,501 (≈\$73 per trap)
Treatments	127 infestations totaling 362,384 acres treated; 92% of the acres treated with gypsy moth specific products	\$4,208 (≈\$7 per acre)
Data management	Streamlined and standardized data collection, planning and evaluation of all implemented actions	\$1,031
Technology Development	Upper population thresholds for mating disruption investigated; DA revisited to reduce costs.	\$135

