2017 Accomplishment Report

Executive Summary: States located along the leading edge of gypsy moth populations and highlighted in this document have worked cooperatively with the USDA Forest Service to implement a program to slow the spread of the gypsy moth since the year 2000 when Congress funded the strategy. The goal of the program is to reduce spread by at least 60% from the unrestricted rate of 20 km per year. Accomplishments to date include:

- ***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.
- ***Yielded*** a benefit to cost ratio 3 to 1 by delaying the onset of impacts that occur as gypsy moth invades new areas.
- ***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.
- ***Unified*** the partners and promoted a coordinated, area-wide action based on biological need through the establishment of the STS Foundation, which provides a formal framework for cooperation among its member 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.

2017 Gypsy Moth Slow the Spread Accomplishments

Funding: Partner contributions during 2017 included the following:

Forest Service, operations	$7,000,000
Forest Service, technology development	$ 115,000
State Partners	$2,629,000
TOTAL	$9,744,000

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.

Trapping: As allocations for STS have been reduced, the program has not been able to maintain the optimized trapping strategy, which dictates a 2 km spacing between base grid traps throughout the STS action area. Various strategies to cut the program's trapping costs have been implemented over the past 9 years, including narrowing the width of the action area (2006 to 2012), widening spacing between the base grid traps to 3 km across the entire action area (2013 and 2014) and most recently splitting the action area in half with the proximal portion trapped at 2 km and the distal portion at 3 km (2015 to 2017).

Illinois Indiana Iowa Kentucky Minnesota N.Carolina Ohio Virginia W.Virginia Wisconsin

The “split” strategy 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 65,000 per year.

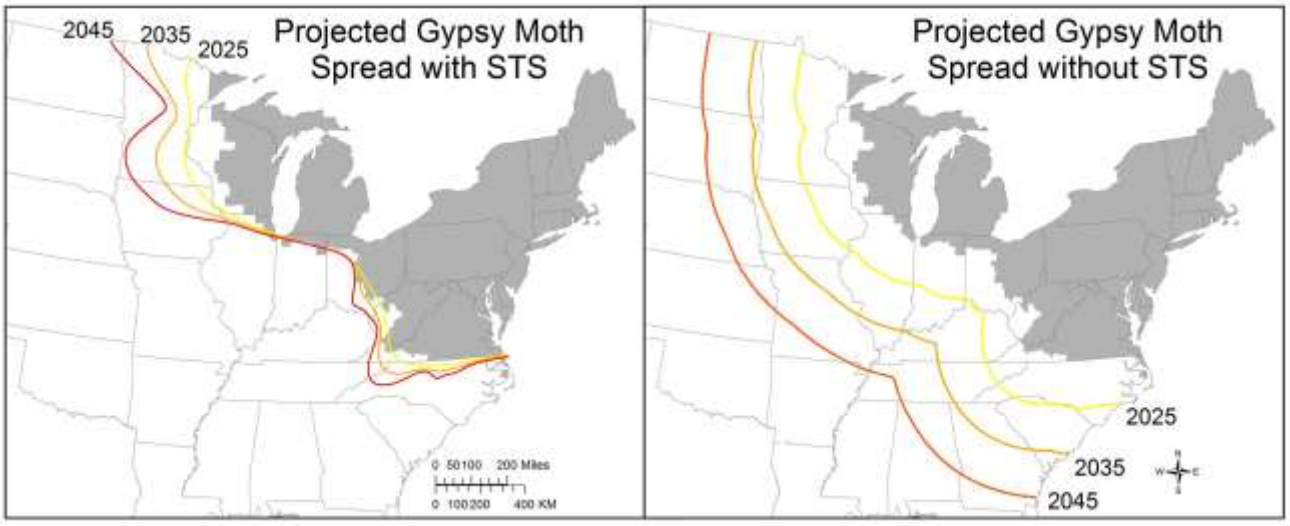
Treatments: Partners delineated more than 100 distinct gypsy moth colonies within the program area in 2016. Treatments subsequently occurred on just under 375,000 acres during the spring and summer of 2017 to reduce spread associated with those recently established infestations. Mating disruption continues to be the most widely used treatment because it is effective, target specific and inexpensive. In fact the cost of mating disruption fell by 8% in 2017 under the new 5-year contract that utilizes SPLAT.

STATE	# OF COLONIES MANAGED	ACRES OF TREATMENT Larvicides (Btk)	Mating Disruption
IL	16	15,325	37,698
IN	10	1,563	7,578
MN	1	0	1,765
NC	6	0	14,755
OH	35	3,747	89,287
VA	4	0	57,516
WI	51	13,440	131,719
TOTAL	123	34,075	340,318

Treatments were successful (30) or partially successful (9) on 39 of the 44 blocks treated with stand-alone *Btk* in 2017 (89%). Previous year (2016) mating disruption treatments were successful (68) or partially successful (11) on 79 of the 82 blocks respectively (96%).

Spread: The program continues to reduce spread by more than 60%. In 2017 spread rates remained fairly stable across the population front except IL, VA and NC where they decreased substantially. The decreased spread in IL is due to their aggressive pursuit of treatments but the overall decline in captures and spread in NC and VA was more likely due to *Entomophaga* following the cool wet spring.

With spread rates remaining fairly stable from 2016 to 2017, the projected spread map developed in 2016 and shown below still accurately represents the variability in spread rates across the population front



Summary of 2017 project accomplishments and cost; costs include federal and state matching funds.

Category	Accomplishment	Cost (thousands)
Monitoring	≈ 65,000 pheromone traps deployed in 11 states, spread measured and all treatments evaluated.	$4,542 (≈$69 per trap)
Treatments	162 infestations totaling 374,393 acres treated; 91% treated with gypsy moth specific products	$3,859 (≈$10 per acre)
Data management	Streamlined and standardized data collection, planning and evaluation of all implemented actions	$1,118
Technology Development	Upper population thresholds for mating disruption investigated; DA revisited to reduce costs.	$225