



Achieving our Mission Slowing the Spread of Gypsy Moth



The Gypsy Moth Slow the Spread Foundation was formed to establish a formal framework for cooperation among the states that implement this national program. The STS Foundation includes the states of North Carolina, Virginia, West Virginia, Kentucky, Ohio, Indiana, Illinois, Wisconsin, Minnesota and Iowa who work together with each other and the USDA Forest Service to slow the spread of gypsy moth

Executive Summary: States located along the leading edge of gypsy moth populations, together with USDA Forest Service, have been cooperatively implementing a project to slow the spread of the gypsy moth (STS) since Congress funded the strategy in the year 2000. The goal of the program is to reduce spread by at least 60% from the historical rate of 19 km per year. Implementation of STS provides the following benefits:

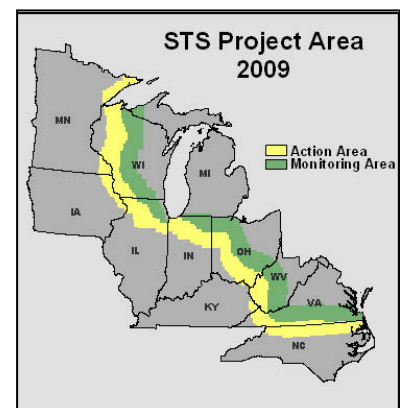
- *Reduces spread of this destructive pest by 60%, which has prevented infestation of more than 85 million acres since the program's implementation in the year 2000.*
- *Yields a benefit to cost ratio of more than 3 to 1 by delaying the onset of impacts that occur as gypsy moth invades new areas. The 20-year net present value after subtracting costs is estimated at 184 to 348 million dollars.*
- Protects the extensive urban and wild land hardwood forests in the south and upper mid-west while also protecting the environment through use of gypsy moth specific strategies.
- Unifies the partners and promotes coordinated, region-wide action based on biological need.
- Insures that actions are standardized 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 and measure spread rates each year.

Funding: 2009 was the 3rd year of substantial reductions in funding for the STS program. Specifically the STS partner contributions during 2009 collectively totaled:

Forest Service	\$8,095,000
State Partners	<u>\$2,847,000</u>
TOTAL	\$10,942,000

Project Area: The band where control measures were implemented (yellow band on map) was kept narrowed at an 80 km width to fit within the funding level.

Trapping: STS partners deployed traps at almost 96% of the 79,782 planned trap sites during 2009. Data from these traps were used to measure spread, evaluate treatment efficacy and to detect or delineate newly established infestations that will need to be treated during 2010.



Treatments: STS partners detected and delineated 131 distinct gypsy moth colonies within the STS area in 2008. Treatments subsequently occurred on just over 419,000 acres during the spring and summer of 2009 to control these infestations. Mating disruption continued to be the most widely used treatment and will continue to be a major part of STS because it is effective, inexpensive and target specific.

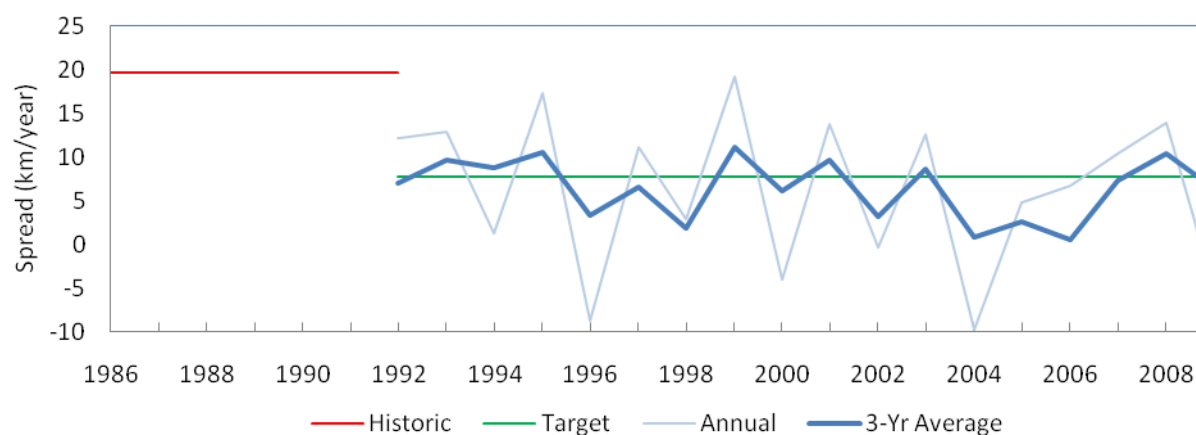
STATE	# OF COLONIES MANAGED	ACRES OF TREATMENT Larvicides (Btk, dfb or GypChek)	Mating Disruption
IL	11	1,653	10,701
IN	23	7,166	3,520
MN	11	1,402	99,400
NC	6	1,756	0
OH	15	1,996	27,102
VA	10	0	121,553
WI	54	22,495	113,464
WV	1	0	6,930
TOTAL	131	36,468	382,670

Treatments were successful on 45 of the 60 blocks (75%) treated with Btk, Dimilin or Gypchek in 2009. Previous year mating disruption treatments were successful on 53 of the 57 blocks (93%). ISCA Technologies SPLAT-GM was incorporated into operational use in 2009. The addition of a 2nd disruptant has led to greater competition and reduced prices for mating disruption treatments.

Spread: The effect of 3 consecutive years of reduced funding combined with the ongoing outbreak in the Mid-Atlantic States is evident in the steady increase in annual spread rates observed from 2005 to 2008. The wet, cool

weather conditions during the spring of 2009 led to widespread population collapses throughout the generally infested area and contributed to a decrease in spread rates observed in the STS program area.

Rate of Spread Measured in the STS Program Area



Summary of 2009 project activities that contribute to the success of the STS program

Category	Accomplishment	Cost (thousands)
Monitoring	≈ 76,000 pheromone traps deployed in 10 states, spread measured and all treatments evaluated.	\$5,295 (≈\$69 per trap)
Treatments	131 infestations totaling ≈ 419,000 acres treated; 91% treated with gypsy moth specific products	\$4,515 (≈\$10.78 per acre)
Data management	Streamlined and standardized planning; data collection and evaluation of all implemented actions	\$930
Technology development	New product developed for use in mating disruption and better understanding of phenology in northern areas	\$200