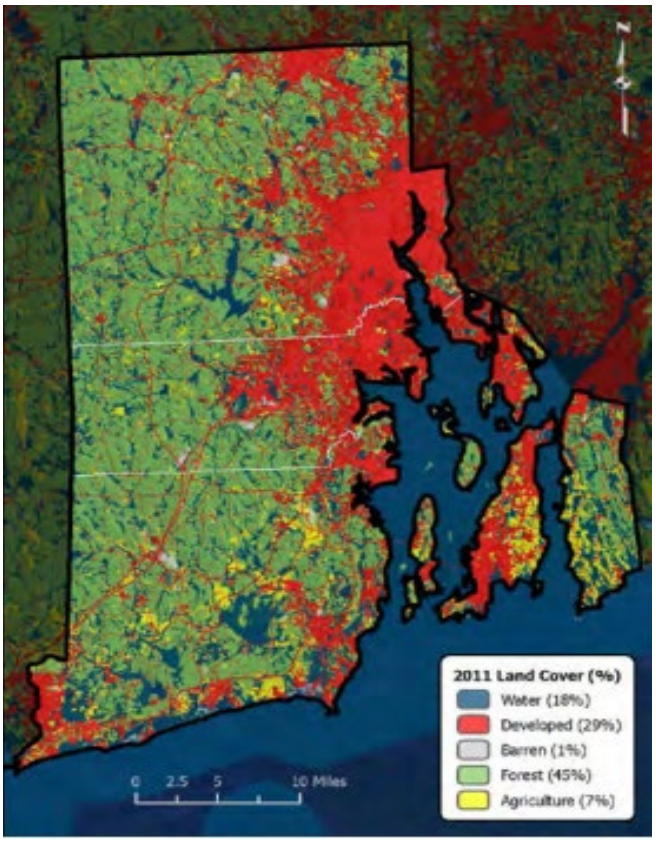
USDA United States Department of Agriculture

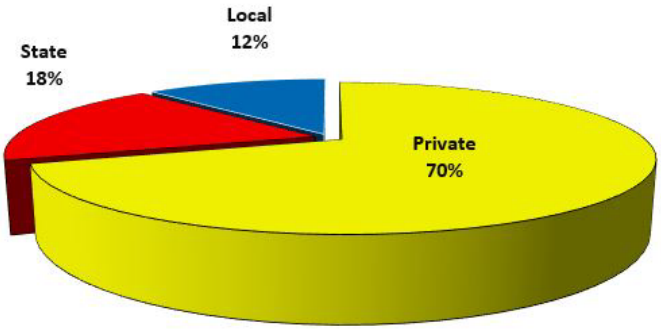
2025 Forest Health RHODE ISLAND *highlights*

Forest Resource Summary

Rhode Island's forests are 70 percent privately owned, largely by families and individuals who view their land as a source of enjoyment and a resource to be protected. Other private ownerships include corporate, tribal, conservation groups and clubs. The remainder of the forest land is in State or local town ownership.



Forest Land Ownership in Rhode Island, 2021



According to the most recently available USFS Forest Inventory & Analysis, there are approximately 377,492 forested acres in Rhode Island. Rhode Island's forests are considered second growth and approximately 96% is classified as timberland, forest land that exceeds the minimum level of productivity and is technically available to harvest. The most common species include red, eastern white pine, black birch, scarlet oak, and yellow birch with Oak-Hickory forest type comprising over 60% of the forest land.

Forest composition has been affected in the past by widespread pests and diseases, including chestnut blight (*Cryphonectria parasitica*) and Dutch elm disease (*Ophiostoma ulmi*) and faces new challenges with the widespread impact of Emerald Ash Borer (*Agrilus planipennis*) and Beech Leaf Disease (associated with the nematode *Litylenchus crenatae mccannii*).

Forest Service
Northeastern Area
State and Private Forestry

Rhode Island
Department of Environmental Management
Division of Forest Environment

November 2025

"In the forest and wood products sector, 513 firms generated 2,496 jobs with $408 million in gross sales in 2016. The total economic impact of the forest and wood products sector, including the spillover effects across all sectors of the Rhode Island economy, is estimated at $716 million annually, with 4,844 jobs arising from this economic activity."

-*"The value of Rhode Island Forests" A Project of the Rhode Island Forest Conservation Advisory Committee and the Rhode Island Tree Council; 2020.*

Forest Canopy Survey

In 2025, approx. 29,558 acres of forest damage were mapped through forest canopy surveys (aerial and ground survey, Fig. 1). The most prevalent damage causal agents were winter moth (18,246 acres damage) and beech leaf disease (7,678 acres damage). Damage from white pine needle disease complex (1,969 acres damage), emerald ash borer (1,288 acres damage), and fall cankerworm (376 acres damage) was also observed in 2025. Total acres of damage in 2025 were near double the acreage reported in 2024, largely due to an increase in observable winter moth and beech leaf disease damage.

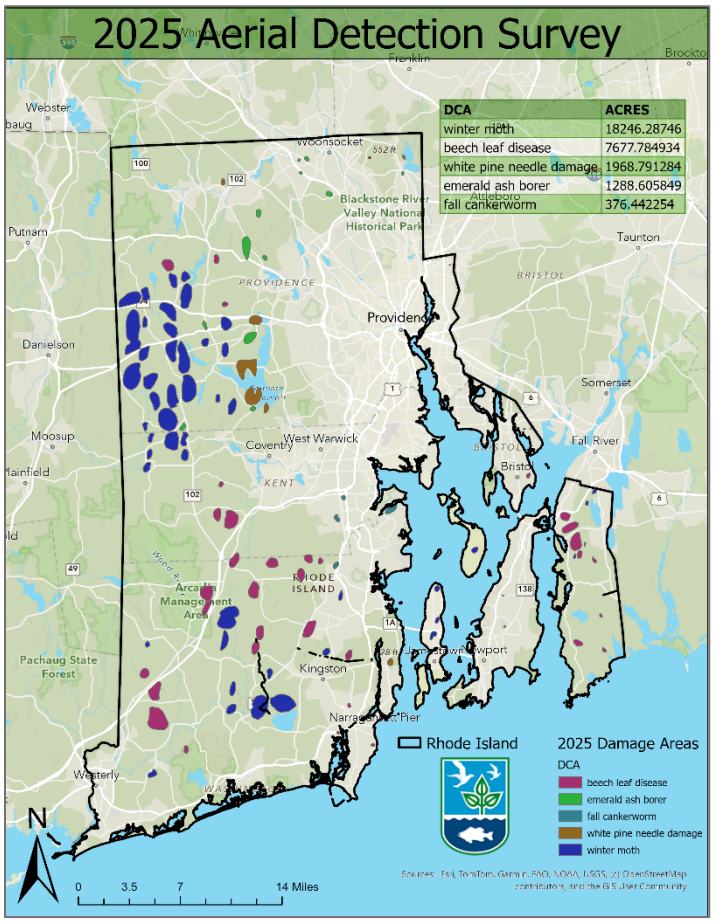


Figure 1. RIDEM Forest Health Program forest canopy survey results, 2025.

Forest Insects and Diseases

Winter moth

A significant uptick in winter moth defoliation was observed in 2025. Approximately 18,246 acres of damage to the forest canopy due to winter moth defoliation was observed, representing a 2.7-fold increase compared to defoliation in 2024. Like recent years, most of the damage was observed in western Providence County, a part of the state where winter moth outbreaks were not historically recorded.

Biocontrol efforts

In late May 2025, DFE conducted the second year of biocontrol collection efforts for the parasitoid *Cyzenis albicans*, in collaboration with the Andersen Lab at the University of Massachusetts. The goal of this project was to track winter moth parasitism rates with the specialist fly parasitoids. Collection sites were generally located at the same sites that were sampled in 2024, which were selected based on proximity to (1) previous *C. albicans* release sites and (2) areas of significant defoliation in recent years. Over 4,000 winter moth caterpillars were collected from five sites.

Caterpillars were transferred to UMass for rearing to pupal stage, upon which the cocoons were dissected to assess for parasitism. Parasitism rates varied from 1% in Foster to 13% in Little Compton, averaging 4% statewide (Table 1). While these rates are still generally low, they represent growth of the *C. albicans* populations at all sites.

Table 1. 2024 and 2025 Cyzenis albicans collection results from UMass.

Site	**2024 % *C. albicans* pupae**	**2025 % *C. albicans* pupae**
Flat River Rd, Coventry	0.2	2
Francis Carter Preserve, Charlestown	0.5	4
URI East Farm, Kingston	3.3	Not sampled
South Farm Preserve, Charlestown	0.6	4
King Preserve, South Kingstown	0.4	Not sampled
Whitehead Preserve, Little Compton	4.3	13
Rt. 94, Foster	Not sampled	1
Average	1.2	4

The Northeastern Forest Fire Protection Compact (NFFPC) Forest Health Working Team funded a mobilization effort to collect *C. albicans*-parasitized winter moth from areas of Maine with positive parasitism rates, for redistribution in Rhode Island. This effort was hosted by the Maine Forest Service. Field staff from Rhode Island, Maine, Vermont, and New Hampshire responded to the request and over 2,000 caterpillars were collected. *Cyzenis albicans* reared from this collection effort, and other efforts in Maine and Rhode Island, amounted in 800 parasitoids available for release in RI. One site was selected for the release of the available parasitoids, and future collection and redistribution efforts are being planned.

Pheromone trapping

Pheromone trapping to quantify adult winter moth densities continues in 2025. Traps were deployed in early November and will remain active until late December. Traps have been deployed at five locations in towns where extensive winter moth defoliation was either (1) historically documented, or (2) observed in 2024 (Table 1).

Traps set in 2024 captured an increase in winter moths at all sites (Table 2). Most notably, significant increases were captured in Hopkinton, Little Compton, and Foster. Note: Specific trap locations for Kingston and Little Compton changed between 2023 and 2024; therefore percent increase between years cannot be appropriately compared.

Table 2. Winter moth trapping locations for 2024 trapping survey.

Town	County	# collected 2023	# collected 2024	% increase 2023-2024
Hopkinton	Washington	2,332	5,816	149%
Kingston	Washington	1,461	2,630	80%
Little Compton	Newport	947	9,233	874%
West Greenwich	Kent	1,251	1,677	34%
Foster	Providence	4,804	17,730	269%

Fall cankerworm

Populations of the native defoliator fall cankerworm were observed causing small pockets of observable defoliation in Kent and Washington Counties. A total of 376 acres were observed to be impacted by fall cankerworm defoliation, which is the second year of a slight reduction from previous years. This decline suggests native natural enemies are responding and reducing cankerworm levels. While we do not expect long term impact from these pockets, DFE will continue to monitor populations and potential forest impact, especially in areas overlapping with winter moth.

Emerald ash borer

Emerald ash borer (EAB) has been documented in every county, and nearly every town in Rhode Island (Fig. 2). Ash decline is prevalent and mortality via aerial survey continues to be documented. In 2025, 1,288 acres of new ash mortality due to EAB was observed, amounting to close to 3,000 acres of total mortality observed since the invasion of EAB in RI.

Historically, DFE and URI, utilized biosurveillance and funnel trap surveys to detect and delimit the extent of EAB in Rhode Island. Although EAB has spread state-wide, DFE continues to support URI in their goals to monitor EAB population densities to identify locations for biocontrol release efforts through biosurveillance and funnel trap surveys.

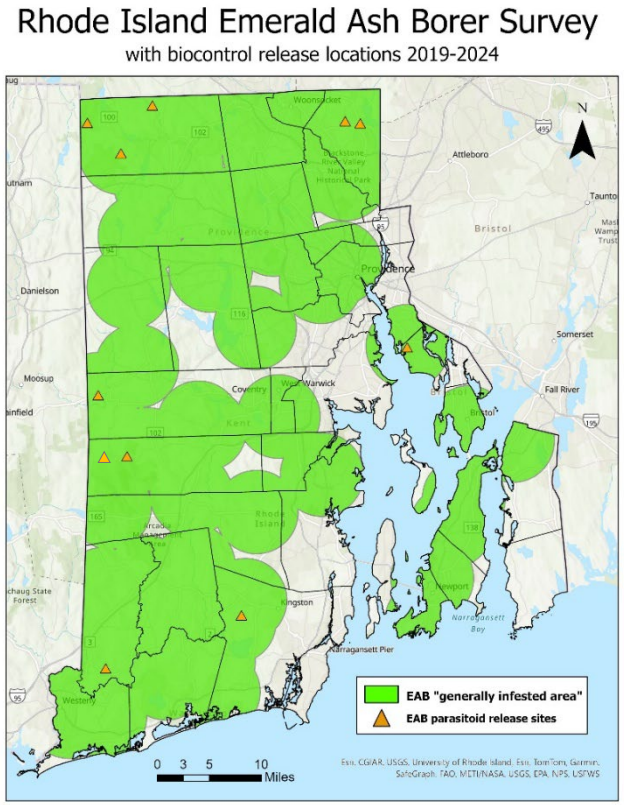


Figure 2. Areas of Rhode Island considered "generally infested" (green areas) are within a three-mile buffer of where EAB has been collected. Biocontrol release sites are indicated on map with an orange triangle.

Emerald Ash Borer Biocontrol

DFE and URI partner to slow the spread of EAB through biocontrol releases of the parasitic wasps *Spathius galinae*, *Tetrastichus setifer*, and *Oobius agrili,* sourced from the USDA APHIS rearing facility in Brighton, MI. Since 2019, approx. 88,400 wasps have been released between 11 sites (Fig. 2). In 2025, URI and DFE conducted the first year of releases at one site in Washington County, and the second year of releases at three sites spanning Washington, Kent, and Bristol Counties. Biocontrols have been released in four of the five RI counties: Providence, Kent, Washington, and Bristol. Yellow pan trapping to monitor for parasitoid recovery was conducted at one site in Providence County and one site in Kent County in 2025. Yellow pan trap samples are currently being processed.

Emerald Ash Borer Treatments

Between 2023 and 2025, DFE supported three RI communities and the Narragansett Indian Tribe to conduct insecticide treatments for EAB, through USFS suppression grant funding. Systemic treatments with emamectin benzoate were applied to high value ash trees, providing at least two years of protection to over 450 trees.

Southern pine beetle

In 2025 southern pine beetle (SPB) traps were deployed at 12 sites by three partners: DFE, URI, and NBNERR (Fig. 3). Traps were distributed throughout the extent of pitch pine in Rhode Island (Washington, Kent, and Newport Counties). Three of the 12 traps were removed at the end of the spring 6-week trapping period, while nine traps were kept in operation through December.

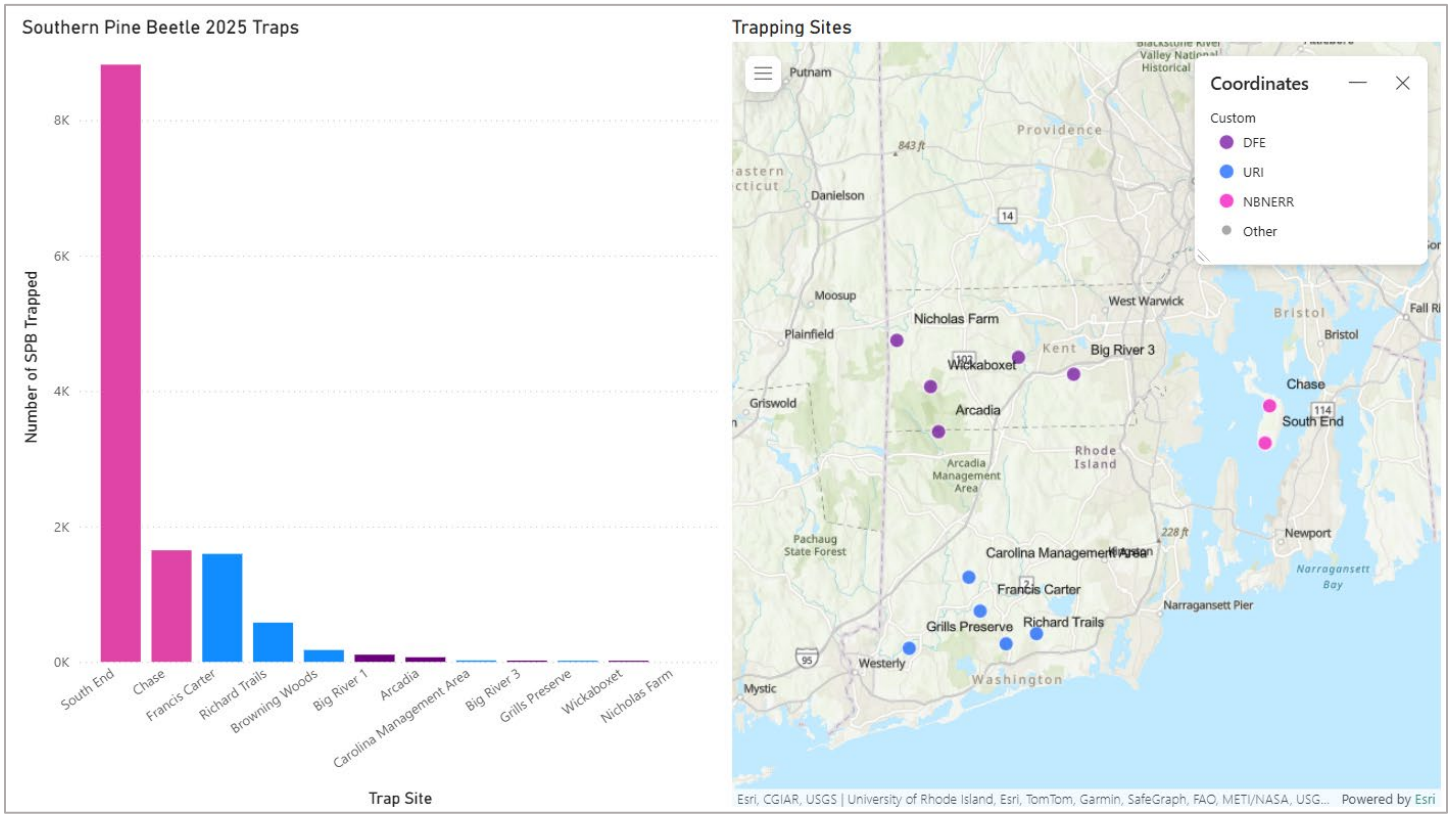


Figure 3. Southern pine beetle trap locations and results in 2025.

DFE and URI have been trapping for SPB in since 2015, for a 6-week period in the springtime. Numbers of beetles captured between 2015-2022 remained low (less than 300 in one trapping season). In 2023, a significant uptick in number of spring-trapped SPB was recorded (Fig. 4). Additionally, trapping in the "fall" season (approx. 8-10 weeks, starting in late August) was added to the program, and NBNERR began partnering on this project to add two traps on Prudence Island. With ongoing and new SPB outbreaks occurring in neighboring states, these program developments contributed to a more extensive monitoring effort of a significant forest health threat in RI.

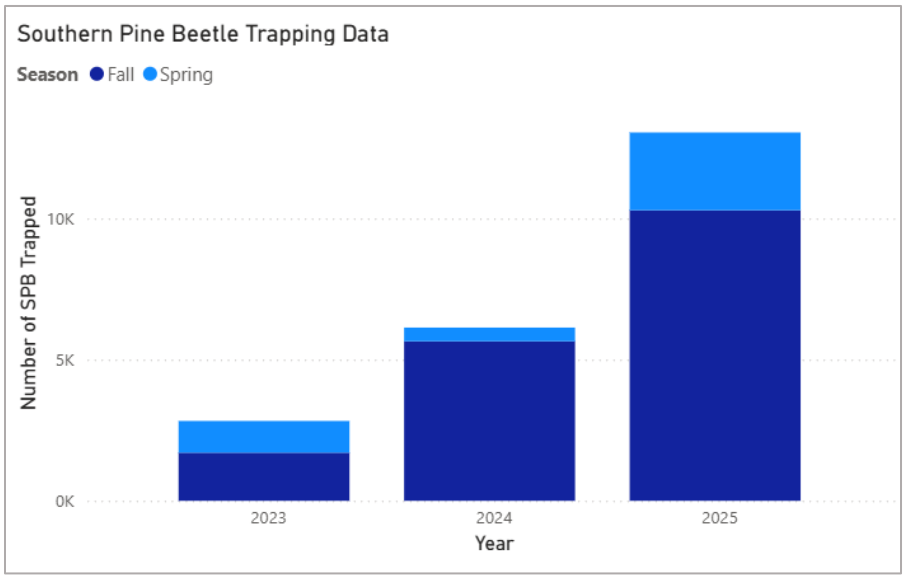


Figure 4. Number of SPB trapped in the spring and fall trapping periods between 2023-2025.

Spring and fall trap captures were higher in 2025 than any other year of trapping (Fig. 4). The continuing trend of fall trap captures being significantly more than spring captures was documented in 2025. Most beetles trapped this year came from the Prudence Island traps (Fig. 3), largely from the South End trap where nearly 9,000 beetles were collected. Over half of those captured in the South End trap were collected in a two-week period between September 9th-23rd, 2025. These extremely high numbers of SPB are suggestive of a burgeoning outbreak on Prudence Island and intensive follow-up monitoring is occurring.

These data showing the increase in number of trapped over time qualifies SPB as a top forest health concern in RI and response planning with partners is ongoing.

Hemlock woolly adelgid

Winter mortality monitoring

Winter morality of hemlock woolly adelgid (HWA) was monitored at six locations in Rhode Island in 2024-2025. Average winter mortality between the four sites was 53%. Higher mortality was observed in the northernly site, Pulaski Park (75% mortality). This is an improvement in percent winter mortality compared to last winter (16% average), but is still not enough to have a significant impact on populations.

Biocontrol efforts

Biocontrol predator releases continued in 2025. New releases of the predator beetle *L. nigrinus* sourced from Rocky Gap State Park in Cumberland, MD were conducted in Glocester, RI this year. Additionally, over 1,000 *L. osakensis* predator beetles were released in West Greenwich, RI in December 2024. Previous and current year

Figure 5. RI DFE staff Donna Coutu collecting L. nigrinus at Rocky Gap State Park.

releases of *Laricobius spp.* and *Leucotaraxis spp.* predators are providing significant coverage of the extent of eastern hemlock trees in RI.

Monitoring for recovery of *Laricobius spp.* began in 2025 and is ongoing. Recovery efforts thus far have been greatly successful, with *L. nigrinus* beetles recovered from the Glocester and Exeter, RI release sites. These results are suggestive of the beginnings of biocontrol establishment at these sites. Recovery monitoring for *Leucotaraxis spp.* will commence in the spring of 2026.

Rhode Island's eastern hemlock trees continue to decline due to HWA, and stress may be exacerbated by the presence of heavy elongate hemlock scale (EHS) and abiotic stressors. Early signs of establishment of *L. nigrinus* provides optimism for management of HWA.

Beech leaf disease

Beech leaf disease (BLD) has been detected in all 5 Rhode Island counties and is likely be found in every town with the presence of American beech trees. Nearly 7,700 acres of forest damage attributed to beech leaf disease was observed in 2025 during forest canopy surveys. This is double the acreage of observable beech leaf disease damage recorded in 2024, showing that the progression of beech leaf disease continues to be rapid and severe (Fig. 6).

Figure 6. Photograph taken during spring aerial detection survey showing notable beech defoliation and dieback in Washington County.

DFE and URI measured the six long-term beech leaf disease monitoring plots in August 2025, part of a region-wide effort led by the USFS. One plot per county have been established, except for Newport County, where two plots were established. Beech crown health in all plots has declined significantly since 2020. However, only one additional tree in the six plots died between 2024 and 2025. Besides observing severe BLD symptoms, the Washington County site had some defoliation caused by fall cankerworms *Alsophila pometaria*. In the Bristol County site, beech samples positive with Anthracnose caused by *Apiognomonia errabundawas* were collected. These other insect and disease pests are contributing to compounding stress on the already weakened beech trees.

White pine needle damage

The white pine needle disease complex responsible for white pine needle damage/decline (WPND) caused almost 2,000 acres of forest damage in spring 2025. This was not unexpected when considering the heavy amount of precipitation received in May of 2024, and drought conditions in fall of 2024. Disease symptoms were limited to Providence County, where crowns were visibly thinned due a large portion of previous years' needles turning brown and dropping in mid- to late- May. WPND is favored by wet weather in May, June, and July when white pines are flushing new growth, followed by dry late-season weather. Therefore, disease is predicted to continue to be prevalent in the spring of 2026 (see section of abiotic factors below).

Spongy moth

Spongy moth populations remain low since the crash of the most recent outbreak in 2017. No defoliation or new mortality directly attributed to spongy moth activity was documented in 2025. Populations have remained low due to high levels of spring precipitation, which is favorable to the spongy moth-attacking entomopathogen *Entomophaga maimaiga*.

In December 2024, DFE piloted a new spongy moth egg mass survey using methodology adapted from MA DCR and Lymantria *spp*. trapping data from RI CAPS survey. Survey methodology focused on areas highly impacted in the last outbreak, as well as areas with high *Lymantria spp.* trap catches in the RI CAPS survey from summer of 2024. Two sites with 10 randomly selected plots were surveyed. No egg masses were found. This new methodology will be piloted in 2025 and 2026 to test effectiveness; however results in 2024 are suggestive that random plot surveying may not be effective in detecting egg masses when spongy moth populations are low, even with these adapted methods.

Figure 7. Random spongy moth plot selection at one site for egg mass survey. Note: some plot locations needed to be moved due to locality occurring in the water body.

Abiotic Factors

Spring precipitation

According to the Northeast Regional Climate Center, the spring of 2025 was decidedly wet. May was the 2nd wettest on record, deviating 236% of normal, and ended the period of drought that started in fall of 2024. Wet conditions were particularly conducive to several forest pathogens that were noted this year. These pathogens included but are not limited to the white pine needle disease complex and anthracnose on a suite of hosts, causing early defoliation of their hosts in many cases.

Summer/Fall heat and drought

According to the Northeast Regional Climate Center, the summer of 2025 was markedly hot. June and July were the 7th hottest on record with June setting the record, now 100°F from 98°F, for the state. Precipitation levels fell throughout June to September leading to abnormal dryness with August receiving 66% of normal precipitation. High temperatures paired with precipitation levels resulted in early leaf drop of many species.

Fire

2025 was an average fire season, with 60 fires burning 66 acres. For comparison, the 10-year average is 64 fires for 70 acres burned.

References

Forest Land Ownership

USDA Forest Service. 2021. Forests of Rhode Island, 2021. Resource Update FS-242. Madison, WI: U.S. Department of Agriculture, Forest Service. 2p. https://doi.org/10.2737/FS-RU-242

Rhode Island Forest Inventory

USDA Forest Service, Forest Inventory and Analysis Program, Thu, 11 Nov 2025 14:32:34 GMT. Forest Inventory EVALIDator web-application Version 2.1.2. St. Paul, MN: U.S. Department of Agriculture, Forest Service, Northern Research Station. [Available only on internet: https://apps.fs.usda.gov/fiadb-api/evalidator].

Land Use/Land Cover

RIGIS, 2011. Rhode Island Land Use/Land Cover. Rhode Island Geographic Information System (RIGIS) Data Distribution System, URL: http://www.rigis.org, Environmental Data Center, University of Rhode Island, Kingston, Rhode Island.

Rhode Island Climate Data

Network for Environment and Weather Applications. Accessed 02 Dec 2025. Weather Data Query. https://newa.cornell.edu/.