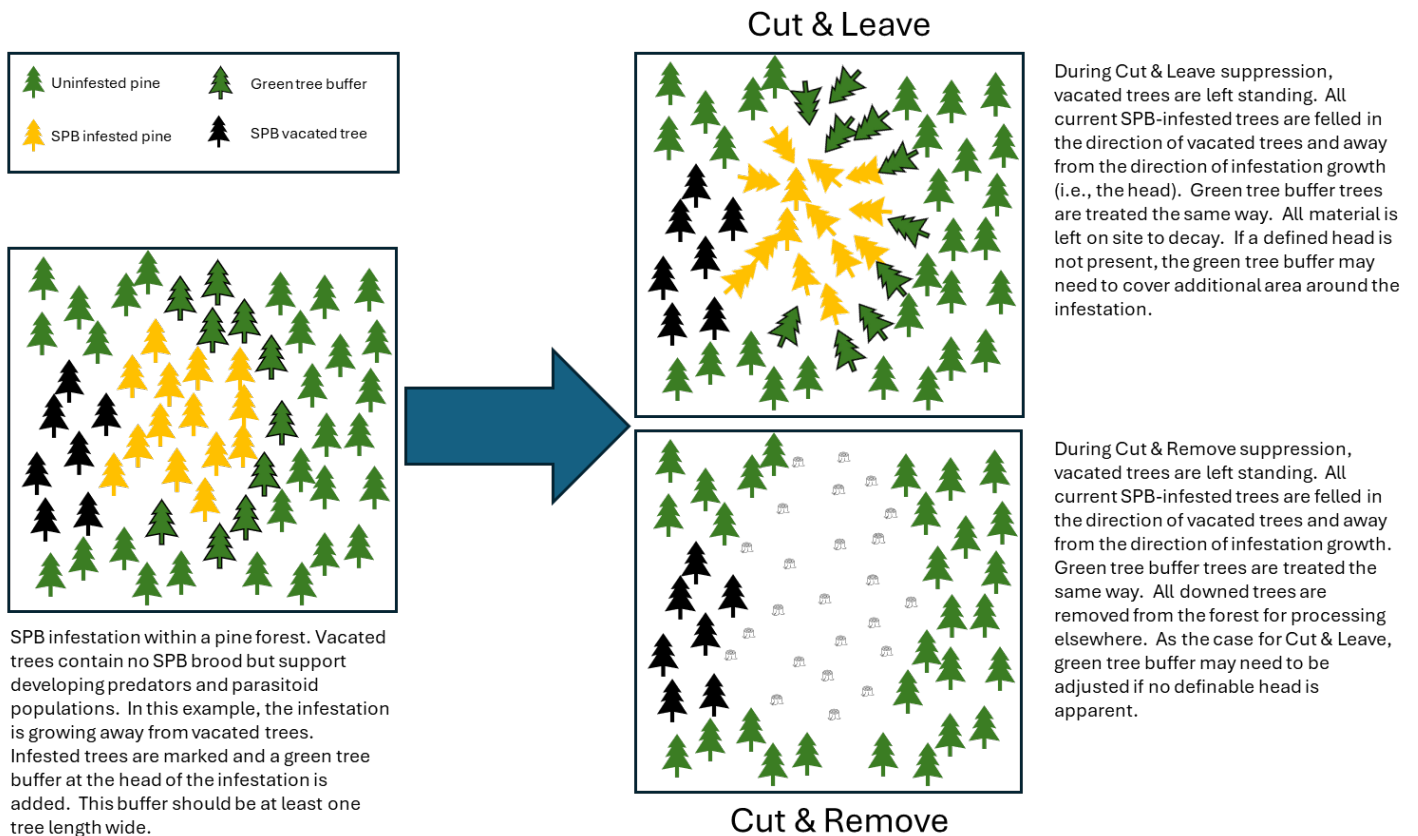


## Southern Pine Beetle Spot Suppression and Post-Treatment Monitoring

Objective: Collect data on effectiveness of SPB suppression in northeastern states.

### Suppression techniques in the northeast:

- (1) Cut & Leave (C&L): Because of limited markets where SPB currently is found, C&L has been the primary method of spot suppression. This method involves directionally felling all currently infested trees as well as a green tree buffer at the “head” of an infestation. Trees should be felled away from uninfested trees or opposite to the direction of spread and towards older, dead, vacated trees. This head seems to be less defined in northeastern compared to southeastern spots, and consequently, more green trees may need to be removed from a larger portion of the spot perimeter. All cut material is left on site after this treatment. This material is a concern to Rx fire programs. Implemented initially in smaller infestations (< 50 trees), C&L has also worked on larger infestations.
- (2) Cut & Remove (C&R): Same methodology as C&L, but trees are removed from the forest for processing elsewhere. To date, C&R is rare in the northeast but may become an option outside of Long Island and MA islands where markets for the material may exist.



## Methods:

- Once SPB spots are located, ground truthing should be undertaken to determine if the infestation is still active, and if so, to conduct a more thorough evaluation and delineation/marketing of the perimeter around the entire infestation. Data should be recorded using the attached datasheet.
  - Number of infested trees are counted by development stage if possible (Stage 1 trees – fresh attacks; Stage 2 trees – SPB brood present; Stage 3 trees – vacated trees). At a minimum, the number of fresh attacked trees are tallied.
  - If infestation is active and has over 20 infested trees and contains successful fresh attacks, and is an area where suppression is warranted (e.g., high hazard stand with many uninfested trees remaining, adjacent to important habitat, etc.), suppression should occur as quickly as possible.
  - An appropriate green tree buffer to be felled at the head of the infestation should be established just prior to implementation of suppression measures.
  - Detection date should be considered in decision to treat or leave.
    - June-October detections
      - Timeframe to consider suppression
    - Late fall and winter detections
      - Depending on activity level, these should be left to overwinter and then rechecked the following spring-early summer to determine if the spot has died out or is still active. If active during this revisitation, prioritize for treatment.
  - Before or concurrent with suppression cutting, the spot perimeter should be surveyed again to determine if the infestation has moved beyond previously delineated boundary. If so, the boundary should be adjusted to account for newly infested trees and the green tree buffer distance measured from the current perimeter/boundary.
  - Cut all currently infested trees and buffer trees (leaving vacated trees standing) following chosen suppression methodology.
- Two to four weeks after suppression treatment
  - Re-visit site and walk perimeter of felled trees surveying for signs of newly attacked trees or missed infested trees. Survey all trees within 300 ft from suppression cut perimeter.
  - If suppressed infestation is in a matrix of forest types, check adjacent/nearest pitch pine stands for signs of SPB attack.
- If attacked trees are located adjacent to suppression treatment, fell these trees as quickly as possible. Survey out beyond these trees to make sure no more attacks are located.

<b>SPB SPOT LOCATION INFORMATION</b>	
Spot location (town, state):	GPS coordinates:
Date detected:	# Stage 1 trees:
# Stage 2 trees:	# Stage 3 trees:
<b>FOREST TYPE &amp; MANAGEMENT INFORMATION</b>	
Forest type:	Managed / unmanaged
Pine spp. present:	Other conifers:
Disturbance:	Rx fire: yes no
BA Pine in spot (ft <sup>2</sup> /ac)	BA hardwood in spot (ft <sup>2</sup> /ac)
BA Pine at front (ft <sup>2</sup> /ac)	BA hardwood at front (ft <sup>2</sup> /ac)
<b>SUPPRESSION</b>	
Suppression date:	Suppression method:
# trees cut:	# trees removed:
Green tree buffer width (ft):	
<b>POST SUPPRESSION SURVEY 1 (2-4 weeks after cutting ends)</b>	
Post-treatment survey date:	Distance (ft) from edge surveyed:
# Stage 1 trees:	# Stage 2 trees:
# Stage 3 trees:	Follow up: yes no
Other adjacent pine stands surveyed: yes no	
<b>POST SUPPRESSION SURVEY 2 (End of growing season)</b>	
Post-treatment survey date:	Distance (ft) from edge surveyed:
# Stage 1 trees:	# Stage 2 trees:
# Stage 3 trees:	Follow up: yes no
Other adjacent pine stands surveyed: yes no	