

Sun Valley Dune Restoration- Hampton, NH

ROCKINGHAM COUNTY
CONSERVATION DISTRICT

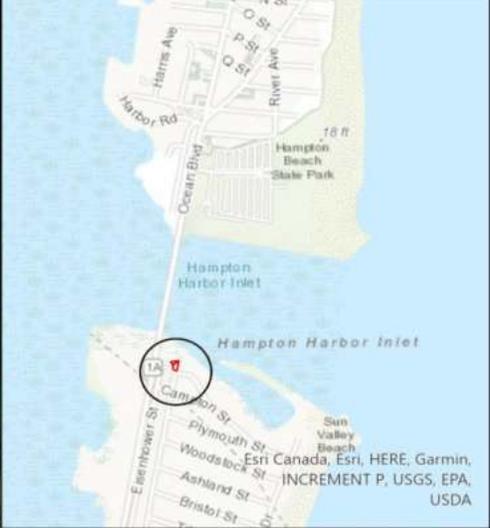
TRACY DEGNAN, SENIOR PROJECT MANAGER

ARIANNA SPEAR, CONSERVATION & STEWARDSHIP
MANAGER



Background:

- 0.10 acre (4356 sq ft) degraded dune system
- Primarily dominated by state-listed invasive Asiatic or Oriental bittersweet (*Celastrus orbiculatus*)
- In 2025, RCCD was hired by UNH CE through the Flood Ready Neighborhood (FRN) project to complete invasive plant control.
- Biomass removal with assistance from the Bashlines, summer 2024 – no funds for follow up control at that time



Legend
[Red Hatched Box] Invasive Treatment Area
[Yellow Line] Roads

0 20 40 80 120 160 US Feet



Project Notes:
0.10 acres +/- total treatment area
Target Species: Oriental bittersweet



Chemical Control & Integrated Pest Management (IPM):

What is IPM?

Integrated Pest Management, or IPM, is a pest control strategy that combines the use of biological, cultural, mechanical (physical) and chemical control in ways that attempt to minimize health and environmental risks and economic loss when controlling pests.

What IPM strategies were employed during this project:

- Chemical (low volume foliar herbicide application)
- Mechanical (cutting and removing dead biomass)
- Cultural (planting native American beachgrass (*Ammophila breviligulata*)).

Why Chemical Control:

- Feasible for large areas or sites with dense infestations.
- Other control methods are often ineffective for species such as bittersweet as it will send up new shoots from root fragments.
- Effective at targeting and killing persistent root systems.
- Causes less soil disturbance than mechanical removal.
- Helps prevent rapid regrowth of invasive plants.



New Hampshire

Department of Agriculture,
Markets, and Food

July 29, 2025

Shawn N. Jasper, Commissioner

Arianna Spear
Rockingham County Conservation District
110 North Road
Brentwood, NH 03833-6614

RE: Watershed Special Permit – Town of Hampton, Portsmouth Avenue Invasive Species Control

SPECIAL PERMIT - SP-285

Dear Ms. Spear:

Rockingham County Conservation District's 2025 application for a Special Permit on behalf of the Town of Hampton to apply pesticides to control state-listed invasive species, including Oriental bittersweet (*Celastrus orbiculatus*), located within a parcel on Portsmouth Avenue in Hampton, New Hampshire, has been approved. This approval is given subject to the following conditions:

1. This Special Permit is approved for the application of the below-listed pesticides, plus any appropriate adjuvants suitable for use in or near water, as specified in your 2025 Permit application and in accordance with the conditions of this Special Permit:

<u>Product</u>	<u>EPA Reg. Number</u>
Aqua Neat	228-365
Escort XP	432-1549
Escort XP	101563-167
Milestone	62719-519
Polaris	228-534
Roundup Custom ATU	524-343
Vastlan	62719-687

2. With regard to any pesticide applications that might be made within town or state rights of way, **if there is reason to believe that these activities will pose any kind of safety hazard or in any way interfere with or otherwise affect traffic along public roadways**, the applicant is instructed to contact the appropriate town official, if a town road, or Roger Appleton, NHDOT District #6 Assistant District Engineer (603-817-4963, District6@dot.nh.gov), if a state road, for instructions on how safely to proceed with the operation.



DataCheck Results Letter For NHDES Ecological Review

NHB Database Records:

The following record(s) have been documented in the vicinity of the proposed project. Please refer to this list when coordinating.

Natural Community	State ¹	Federal	Notes
Beach grass grassland	–	--	Dune communities are sensitive to trampling or recreational use that harms the vegetation, since plants growing in the sand serve a critical function in anchoring it in place.
Intertidal flat*	–	--	
Plant species	State ¹	Federal	Notes
field wormwood (<i>Artemisia campestris</i> ssp. <i>caudata</i>)	E	--	This species grows in dry dune systems and is sensitive to disturbances that eliminate its habitat or disturb the natural dynamics of the dune area.
Gray's umbrella sedge (<i>Cyperus grayi</i>)	E	--	This species grows in sandplains and disturbed openings, and is sensitive to disturbances that eliminate its habitat.
hairy hudsonia (<i>Hudsonia tomentosa</i>)	T	--	This species requires periodic disturbance to its habitat (disturbed openings, river and streambanks). However, existing plants are very sensitive to trampling when growing on open sand.
long-spined sandbur (<i>Cenchrus longispinus</i>)	E	--	This species grows in sandplains and disturbed openings, and is sensitive to disturbances that eliminate its habitat.
sand dropseed (<i>Sporobolus cryptandrus</i>)*	E	--	This species grows in dry dune systems and is sensitive to disturbances that eliminate its habitat or disturb the natural dynamics of the dune area.
seaside sandmat (<i>Euphorbia polygonifolia</i>)	E	--	This species grows on sandy coastal beaches and is sensitive to excessive disturbances such as trampling and ATV use as well as a significant reduction in disturbance (loss of dynamic dune movement) from habitat fragmentation.
seaside threeawn (<i>Aristida tuberculosa</i>)	E	--	This species grows in dry dune systems and is sensitive to disturbances that eliminate its habitat or disturb the natural dynamics of the dune area.
Vertebrate species	State ¹	Federal	Notes
Common Tern (<i>Sterna hirundo</i>)*	T	--	Contact the NH Fish & Game Dept (see above).
Least Tern (<i>Sternula antillarum</i>)	E	--	Contact the NH Fish & Game Dept (see above).
Piping Plover (<i>Charadrius melodus</i>)	E	T	Contact the NH Fish & Game Dept (see above) and the US Fish & Wildlife Service (see below).



August, 2025

Low volume foliar application using a dicot selective herbicide –to protect the American beachgrass.



September, 2025





Volunteers remove biomass

October, 2025



Plant beach grass



Before planting



After planting

Next Steps

- Followup foliar spot treatment
bittersweet resprouts and new
seedlings
- Monitor Tree-of-Heaven for sucker
sprouts; plant native shrub in/near
same location
- Supplement with native plantings as
needed.

Similar Restoration Objectives – Odiorne Point State Park – Summer 2025



Thank you!

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