



Status Report: Invasive Aquatic Plants in Maine

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Maine DEP

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

Protecting Maine's Air, Land and Water

Statutory Charge, Proposed Legislation

2000 and 2001 legislation:

- ✓ Eleven prohibited species + no transport of *any* aquatic plant
- ✓ Outreach; control; inspection program
- ✓ Task Force, Action Plan (USFWS/ANSTF approved)
- ✓ Drinking water supplies; surface use
- ✓ Invasive Aquatic Plant and Nuisance Species Fund – Dedicated!

2008: Cost savings from combining stickers

2014: Changed revenue distribution; 20% to “eradication activities”

2017 bills: Fee on paddlecraft; Needs assessment



Major Expenditures

DEP Staff

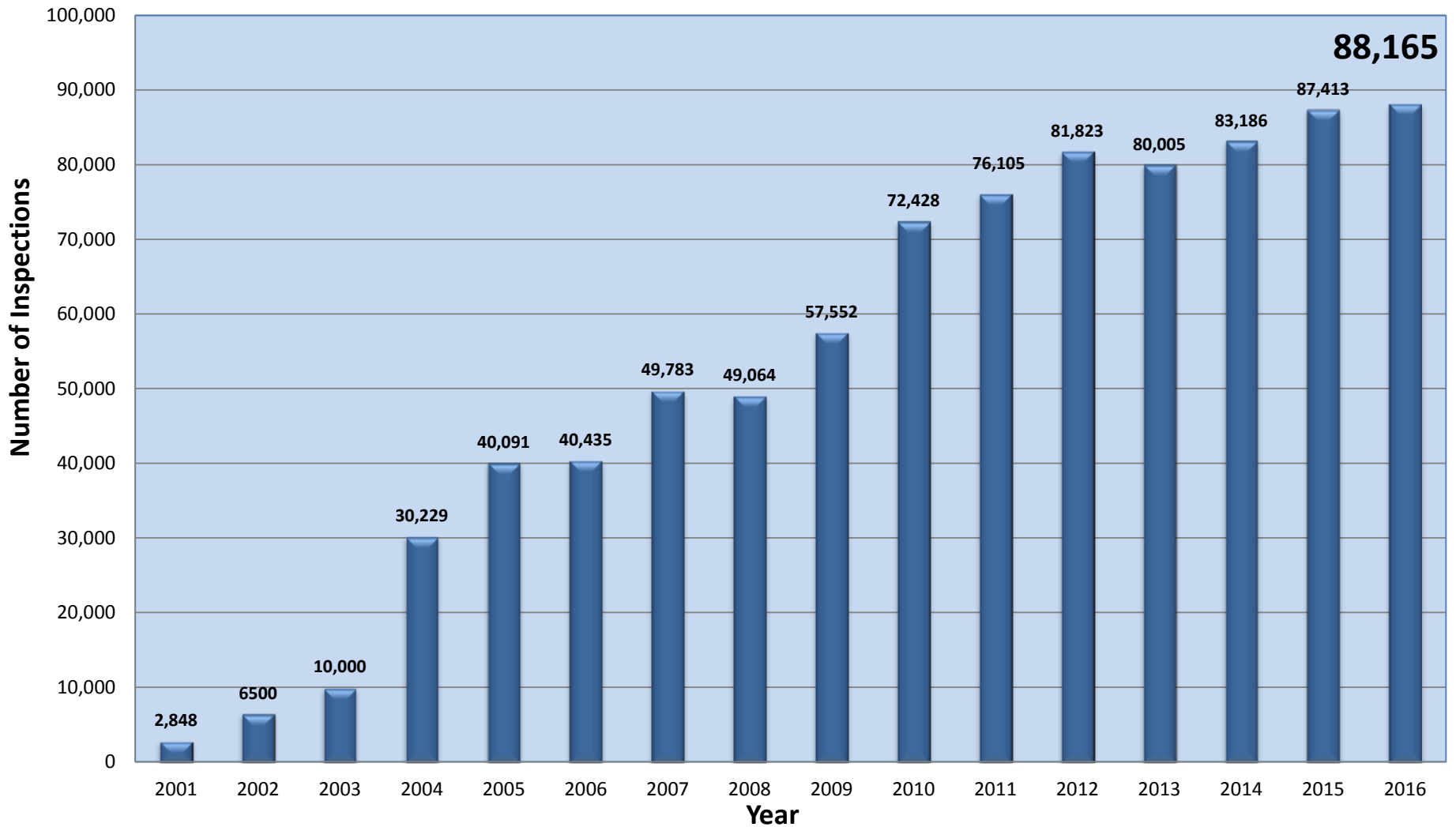
Grants

- Boat Inspections
- Early Detection
- Plant Removal

Rapid Response

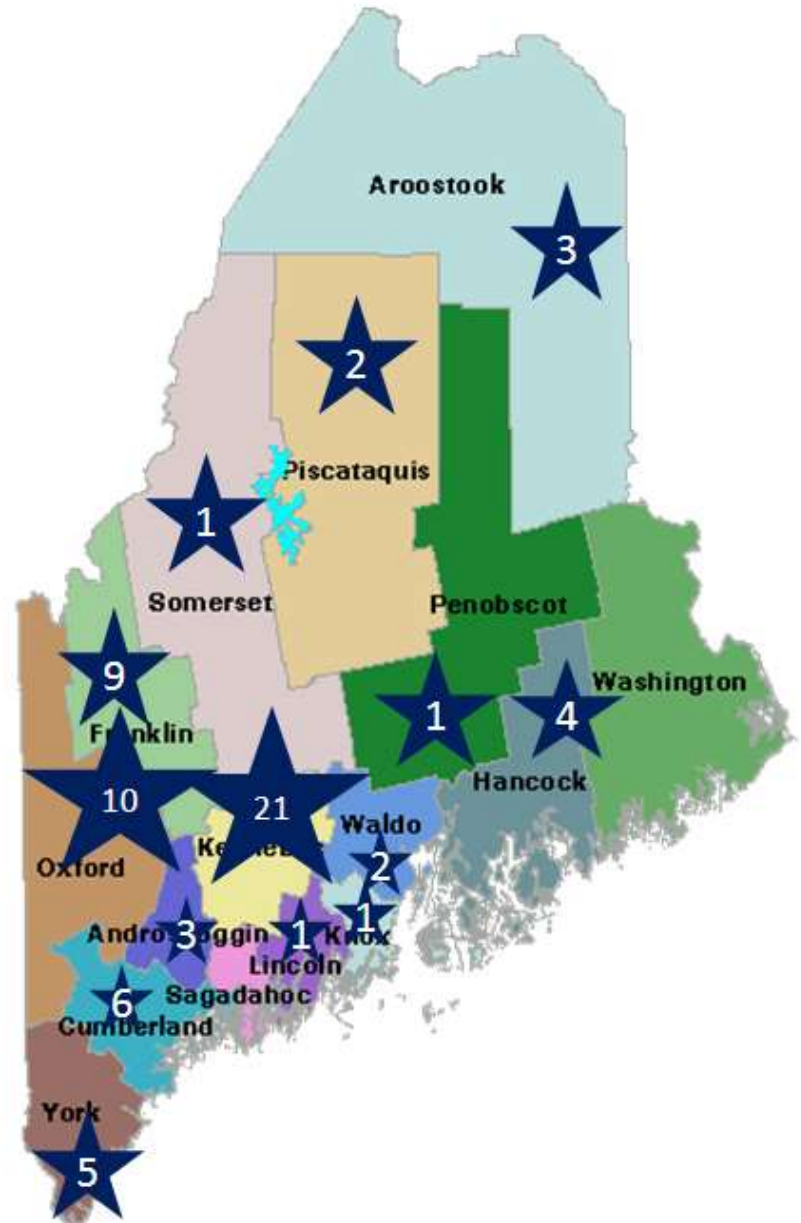


Courtesy Boat Inspections - Annual Totals

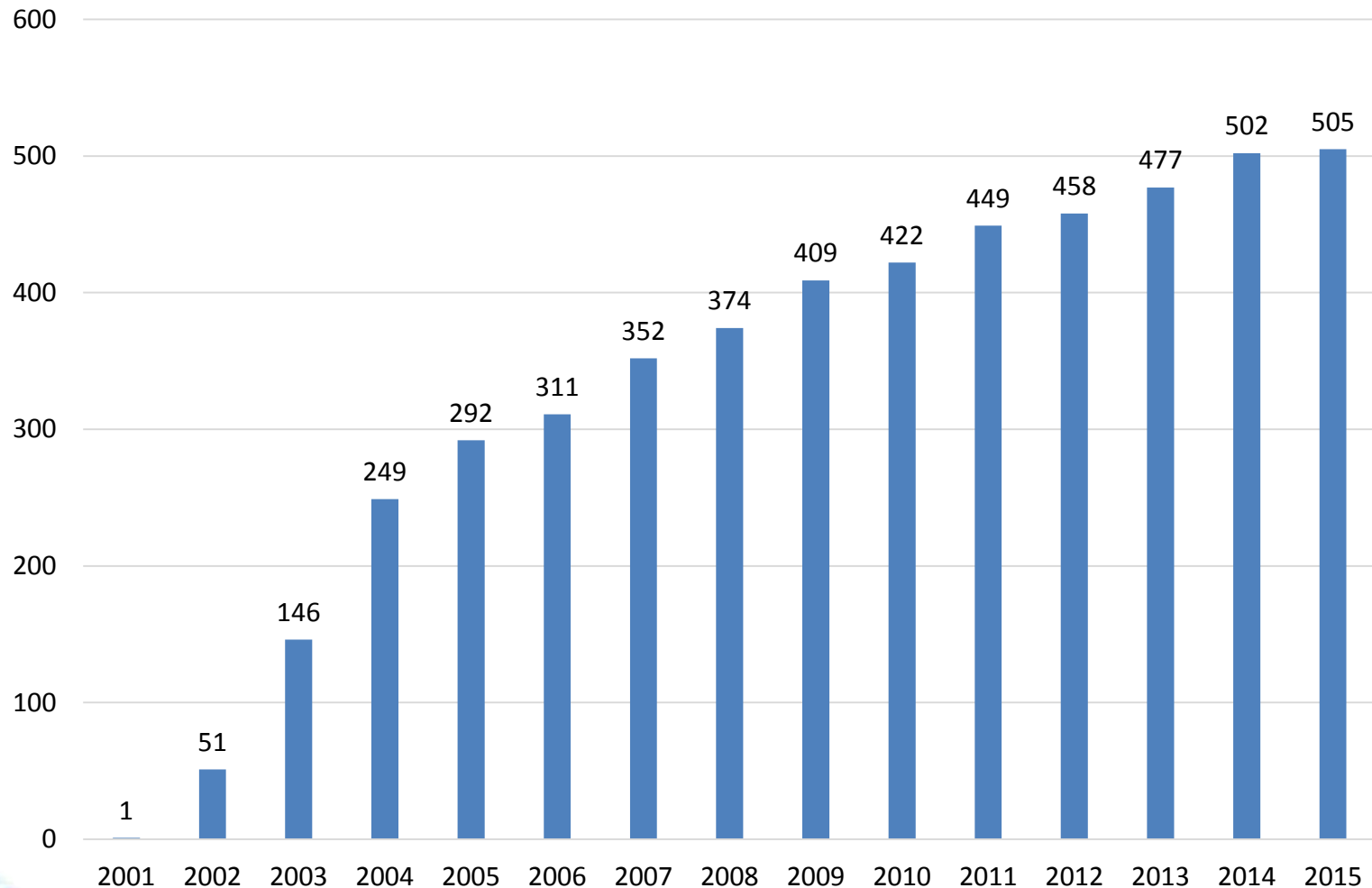


VLMP Workshops

- Multiple formats including Plant Paddle
- 225-300 trained annually
- 3800 trained to date
- Emphasis on teams: 90 and counting as of 2015



Maine Waterbodies With Reported IAP Survey Activity (2001-2015 Cumulative)



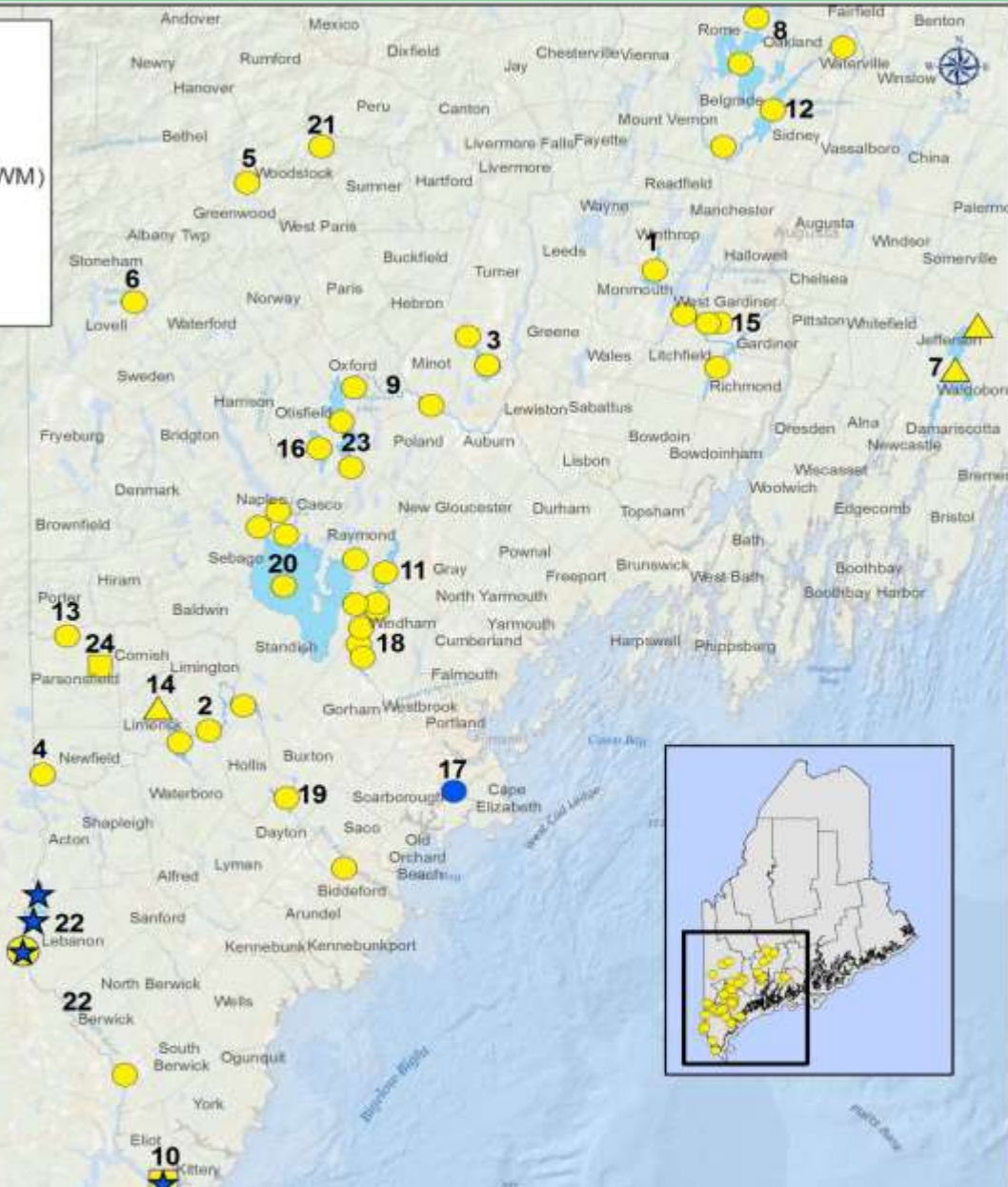
Invasive Aquatic Plants

Infested Maine Public Waters, January 2017

www.maine.gov/dep/water/invasives/

- Variable Leaf Milfoil (VLM)
- Eurasian Water Milfoil (EWM)
- ▲ Hydrilla (HYD)
- ★ European Naiad (EN)
- Curly Leaf Pondweed (CLP)

Infested Systems			
1 <i>Annabessacook Lake</i> Annabessacook Lake	VLM	14 <i>Pickereel Pond</i> Pickereel Pond	HYD
2 <i>Arrowhead</i> Lake Arrowhead and Little Ossipee River	VLM	15 <i>Pleasant/Cobbossee</i> Pleasant Pond, Cobbossee Stream, Horseshoe Pond and Purgatory Stream	VLM
3 <i>Lake Auburn</i> Lake Auburn and The Basin	VLM	16 <i>Pleasant Lake</i> Pleasant Lake	VLM
4 <i>Balch Pond</i> Balch Pond	VLM	17 <i>Pleasant Hill Pond</i> Pleasant Hill Pond	EWM
5 <i>Bryant Pond</i> Bryant Pond	VLM	18 <i>Presumpscot</i> Presumpscot River, Dundee Pond and North Gorham Pond	VLM
6 <i>Cushman Pond</i> Cushman Pond	VLM	19 <i>Saco River</i> Limington Rips to Bonney Eagle Dam, Skelton Flowage and Biddeford	VLM
7 <i>Damariscotta</i> Damariscotta Lake and Davis Stream	HYD	20 <i>Sebago/Brandy Pond</i> Brandy Pond, Songo River, Sebago Cove, Panther Run, Sebago Lake, and Sebago Basin	VLM
8 <i>Great Pond</i> Great Pond and Great Meadow Stream	VLM	21 <i>Shagg Pond</i> Shagg Pond	VLM
9 <i>Hogan</i> Hogan Pond and Little Androscoggin River	VLM	22 <i>Salmon Falls River</i> Northeast Pond, Spaulding Pond, Salmon Falls River Reservoir	EN, VLM
10 <i>Legion Pond</i> Legion Pond	EN, CLP	23 <i>Thompson</i> Thompson Lake and The Heath	VLM
11 <i>Little Sebago</i> Little Sebago Lake, Collins Pond and Mill Pond	VLM	24 <i>West Pond</i> West Pond	CLP
12 <i>Messalonskee</i> Messalonskee Lake, Belgrade Stream and Messalonskee Stream	VLM		
13 <i>Ossipee</i> Ossipee River in Porter and Parsonsfield	VLM		



[Online Map](#)

Northeast Pond – European naiad (*Najas minor*)

- Intentionally introduced in 1930s as waterfowl food
- Annual growth
- Characteristic recurved leaves
- Bushy growth up to 8 ft. tall; very brittle stems
- Flowers in July
- Seeds develop mid to late summer
- Seeds drop off plant as mature plants die in mid to late fall
- Seeds germinate for next year's growth in early spring



Northeast Pond/Salmon Falls River Infestation

- Discovered 9/2015 by volunteer
- Distinguish from natives by July, removal window and dieback Oct.
- Rapid spread potential: waterfowl and recreational watercraft
- Can dominate shallows of waterbodies, causing biological, ecological, recreational and aesthetic problems
- Found downstream in 2016





MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

www.maine.gov/dep

Integrated Management

DASH

Benthic Barrier

Herbicide

Objectives

Eradication

Long-term Suppression

Local/State Partnership

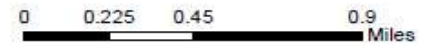
Milton Three Ponds Milton, NH / Lebanon, ME 2017 *Najas minor* Management

Legend

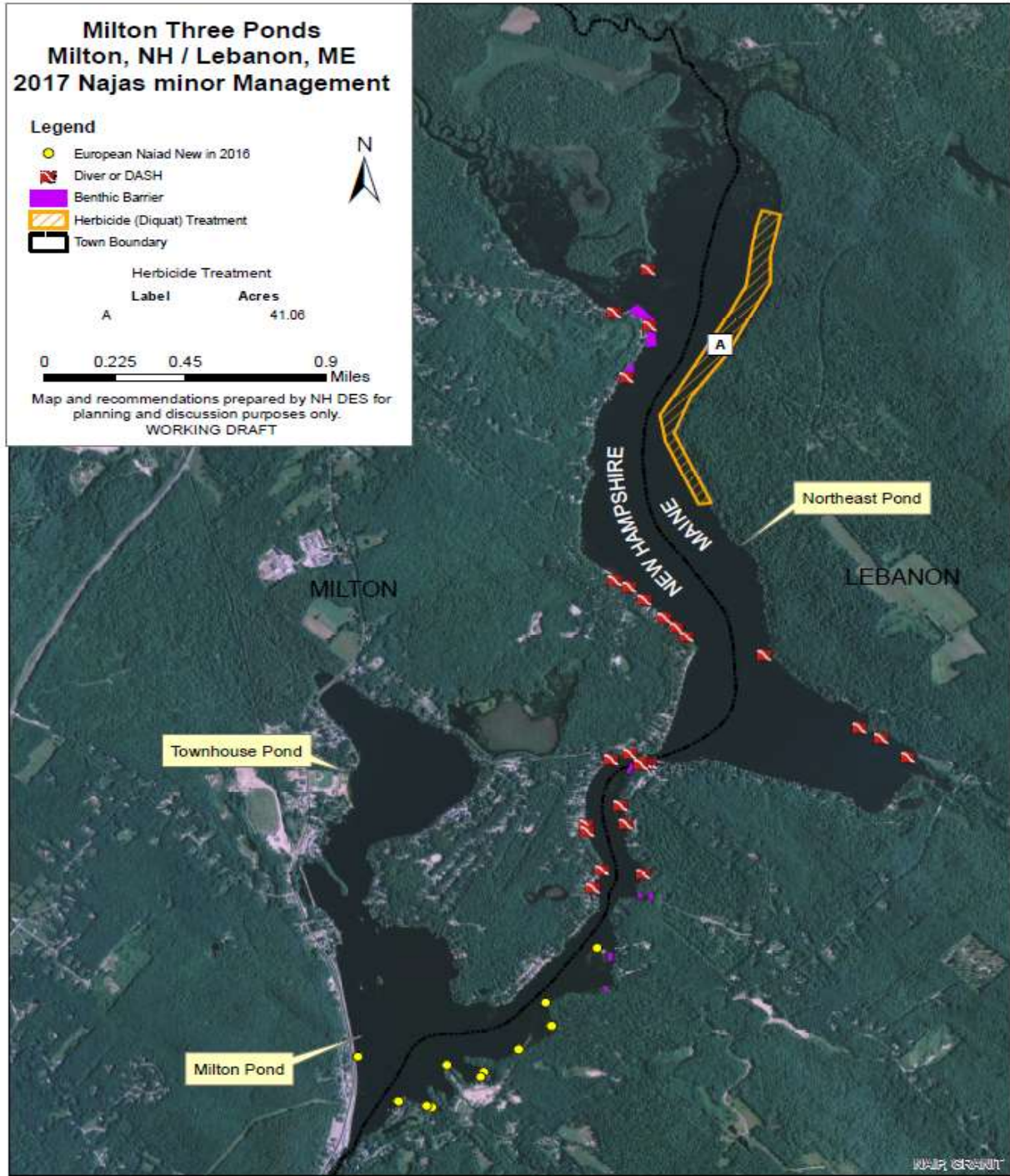
- European Naiad New in 2016
- Diver or DASH
- Benthic Barrier
- Herbicide (Diquat) Treatment
- Town Boundary

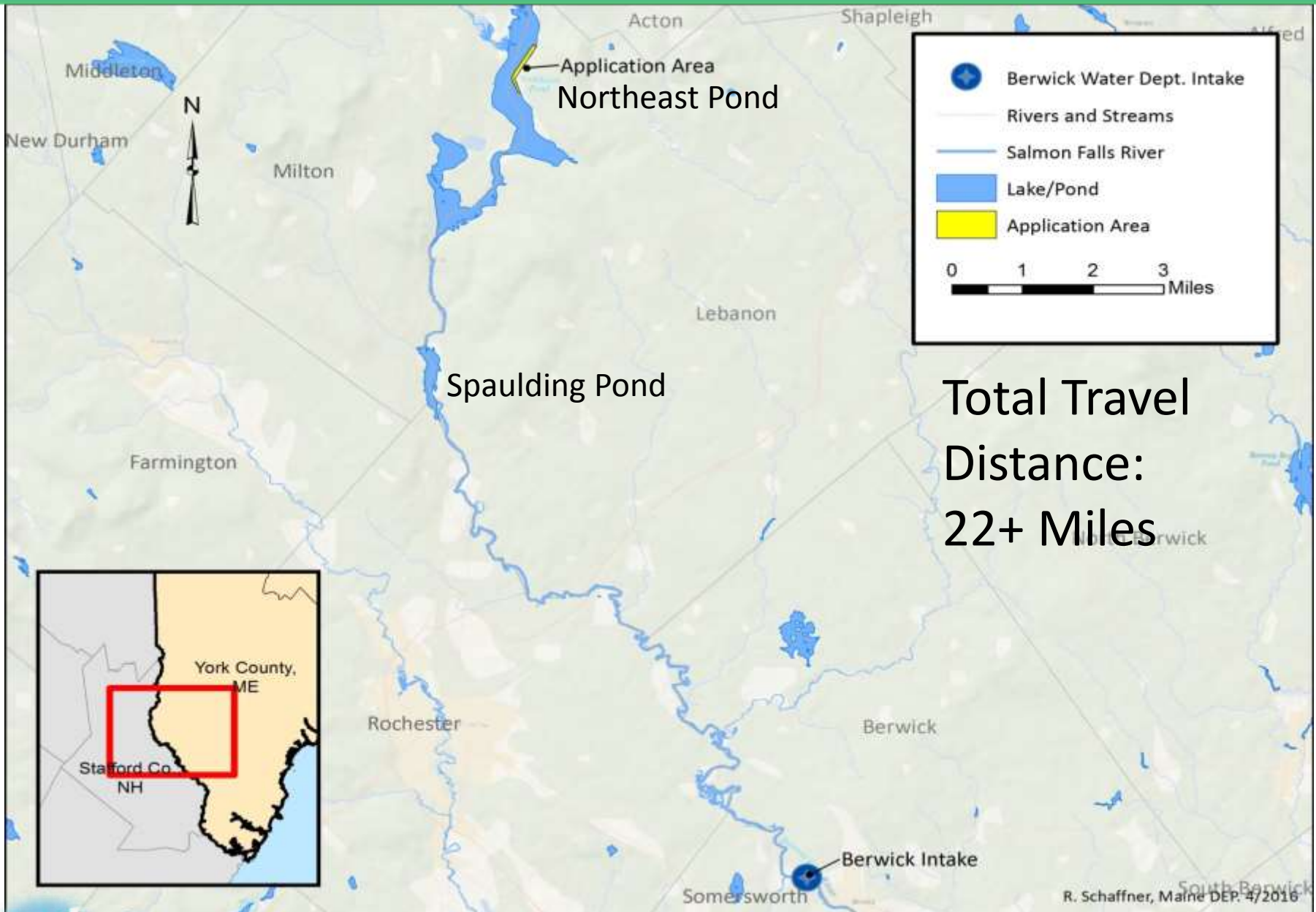


Herbicide Treatment	
Label	Acres
A	41.06



Map and recommendations prepared by NH DES for planning and discussion purposes only.
WORKING DRAFT





Herbicide: Diquat dibromide

- Effectively kills the plant
 - Contact herbicide
 - Required contact time: several hours
 - Degradation rate: ~48 hour half-life
 - Applied only at dose needed to be effective
 - Registered for *N. minor* control in aquatic systems
- Treatment in July: after plants are established but before seeds form



Herbicide cont'd

- Liquid formulation applied by weighted hoses deployed from a boat
- Plant control achieved in 10-14 days post treatment
- Contractor applies herbicide to achieve planned concentration in treatment area
- Herbicide targets the above sediment portion of the plants



DEP General Permit

- Notice of Intent
- Public meeting
- Notification
- Monitoring herbicide in treatment area and downstream until non-detect
- Monitoring plants pre and post treatment
- Visual observations for effects on fish and other wildlife





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