



Vermont Aquatic Invasive Species Management



NEANS Panel
May 2014



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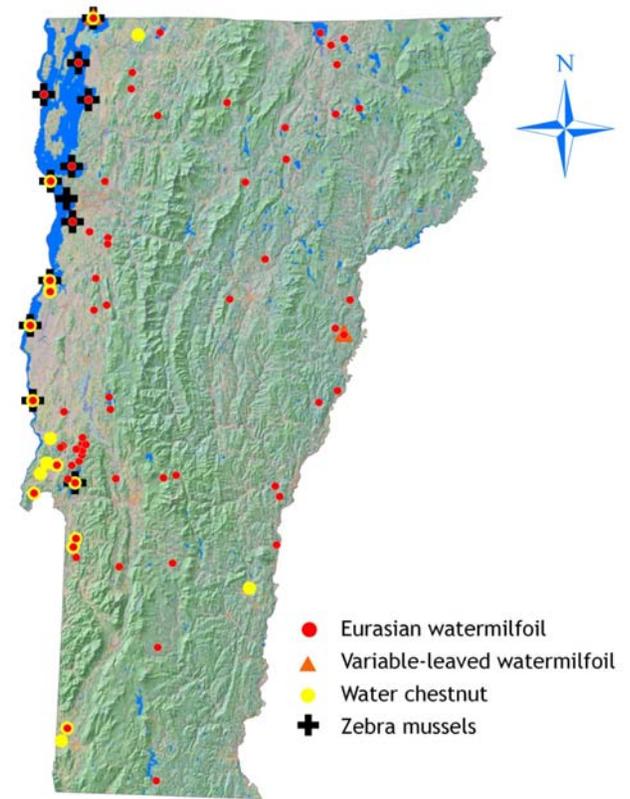
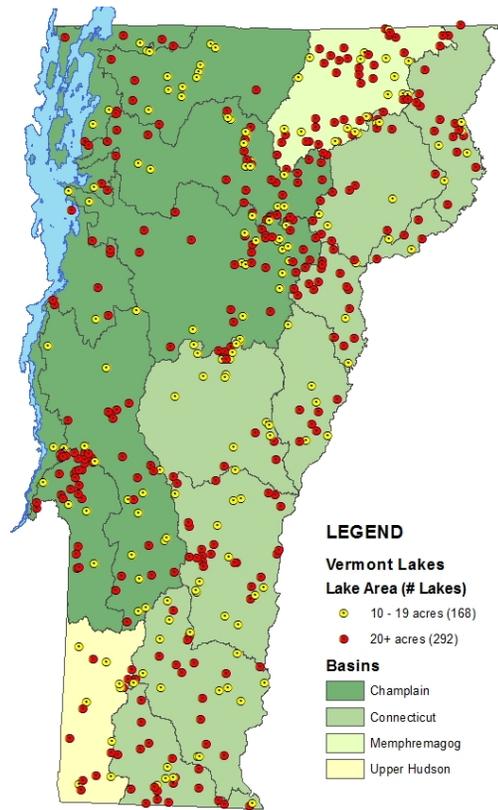
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% of Vermont lakes **NOT infested with:**

- zebra mussels > 99%
- Eurasian watermilfoil > 75%
- variable-leaved watermilfoil > 99%
- water chestnut > 95%

Other invasive aquatic species in Vermont



curly leaf pondweed

(*Potamogeton crispus*)

European frogbit

(*Hydrocharis morsus-ranae*)

brittle naiad

(*Najas minor*)



yellow floating heart

(*Nymphoides peltata*)



rusty crayfish

(*Orconectes rusticus*)



alewife

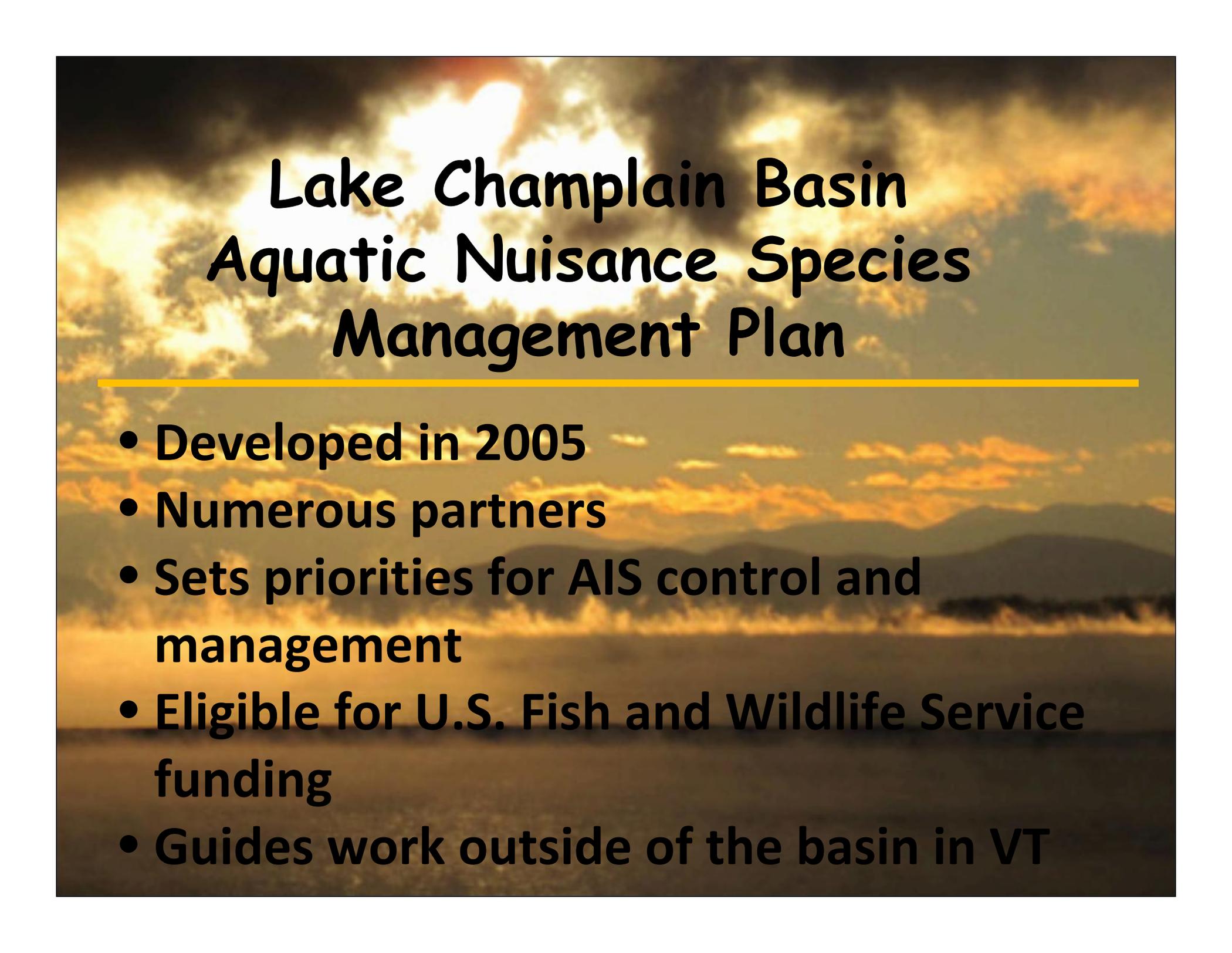
(*Alosa pseudoharengus*)



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Spread Prevention effective?

AIS	Year confirmed	Year last population confirmed	Total # populations to date
Eurasian watermilfoil	1961	2011	67 plus 30
zebra mussels	1993	1999	2
water chestnut	1940s	2013	25
variable-leaved watermilfoil	2008	2011	1
curly-leaf pondweed	1976	1980s	28
European frog-bit	1996	2013	9
yellow-floating heart	1940s	1940s	1
brittle naiad	1984	2012	8
alewife	1997	2003	2
rusty crayfish	?	?	20+



Lake Champlain Basin Aquatic Nuisance Species Management Plan

- Developed in 2005
- Numerous partners
- Sets priorities for AIS control and management
- Eligible for U.S. Fish and Wildlife Service funding
- Guides work outside of the basin in VT

Rapid Response Plan, Lake Champlain Basin

- Developed in 2009 LCBP ANS Subcommittee (based on ME's work, among others)
- Blueprint to facilitate RR for AIS
- Establishes RR Task Force of lead agencies - VT, NY and Quebec
- 5 step process: AIS confirmation; delineation, isolation, & evaluation; treatment selection, design & permitting process; treatment plan implementation; monitoring and evaluation
- If eradication not feasible, end RR *but* initiate spread prevention
- Guides work outside of the basin in VT



Regulations

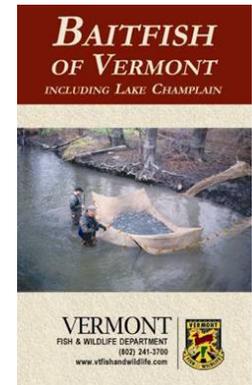
- Aquatic Invasives Species Transport Law
all aquatic plants plus zebra and quagga mussels,
plus other animals by rule
- VT Quarantine Rule (AAFM)

A = no movement, sale, cultivation, or possession ___7
of 8 listed species are aquatic

B = no movement, sale or cultivation...species that
are already here 22 listed species, 6 aquatic and 4
shoreline or wetland

- Baitfish Rules: control importation and use of baitfish
to prevent the introduction and spread of invasive
fish (changes in 2013)

- Felt-soled Wader Law: banned as of 2010



VT Rapid Response General Permit

- Authorized in 2010; GP issued in 2012
- Commissioners of DEC, DFW eligible for coverage (NOI)
- Chemical and non-chemical methods eligible
- Species found post 2007, lake or Lake Champlain segment
- 10 day public notice period

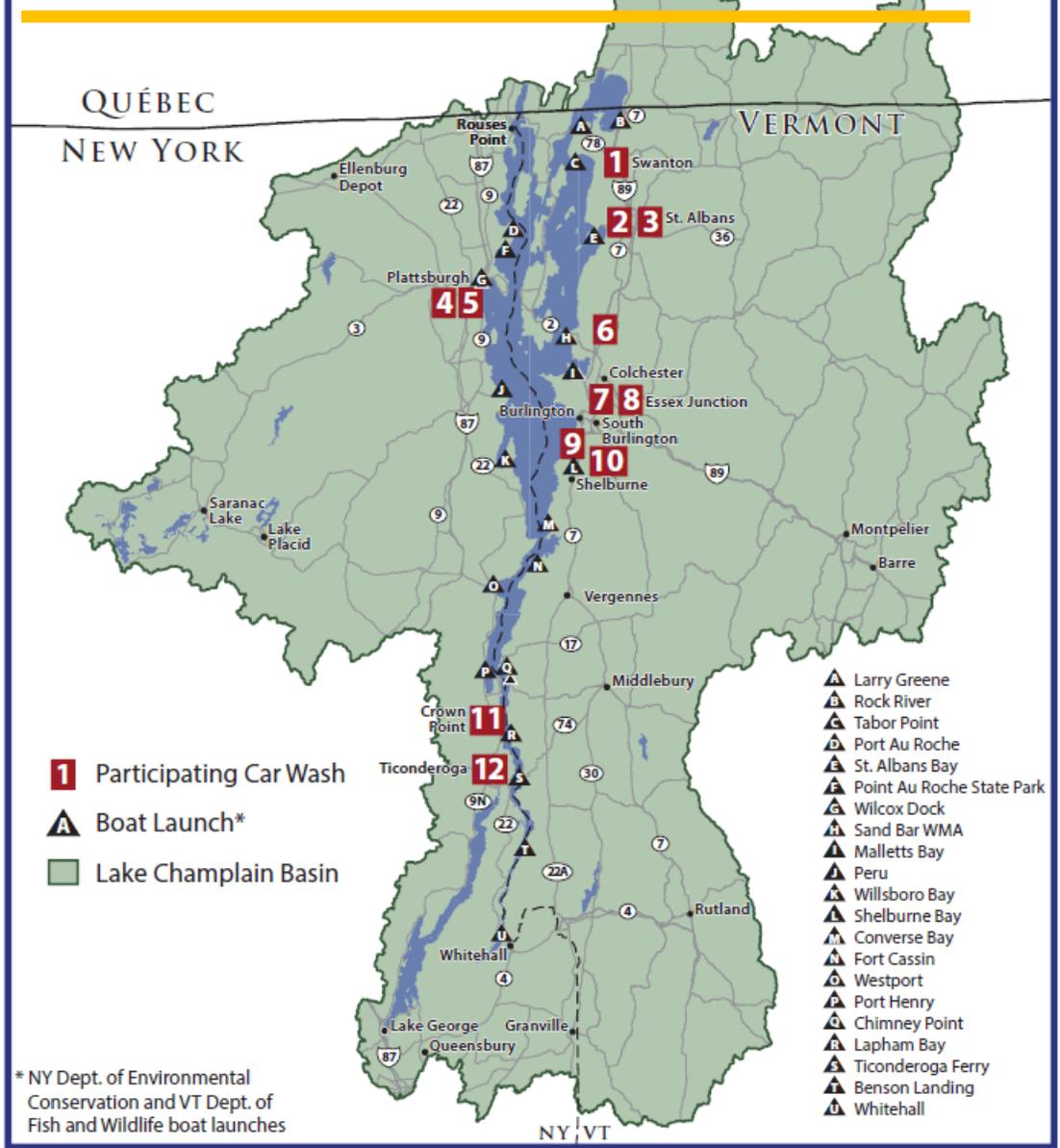


- Coverage authorized once to data: VLM in a segment of Lake Champlain

Temporary Closure Authorization

- Secretary of ANR can “temporarily” close – all persons, all vessels - portions of surface waters – lakes, ponds reservoirs - to support active AIS management plans
- Authorized under “Use of Public Waters Rules” 1998
- No more than 10% of surface water or 50 acres, whichever is less, closed
- No more than 10% of the shoreline impacted; other access provided to shoreline property owners impacted by closure
- Reviewed every two years
- Important spread prevention tool

Lake Champlain Cooperative Boat Wash Program

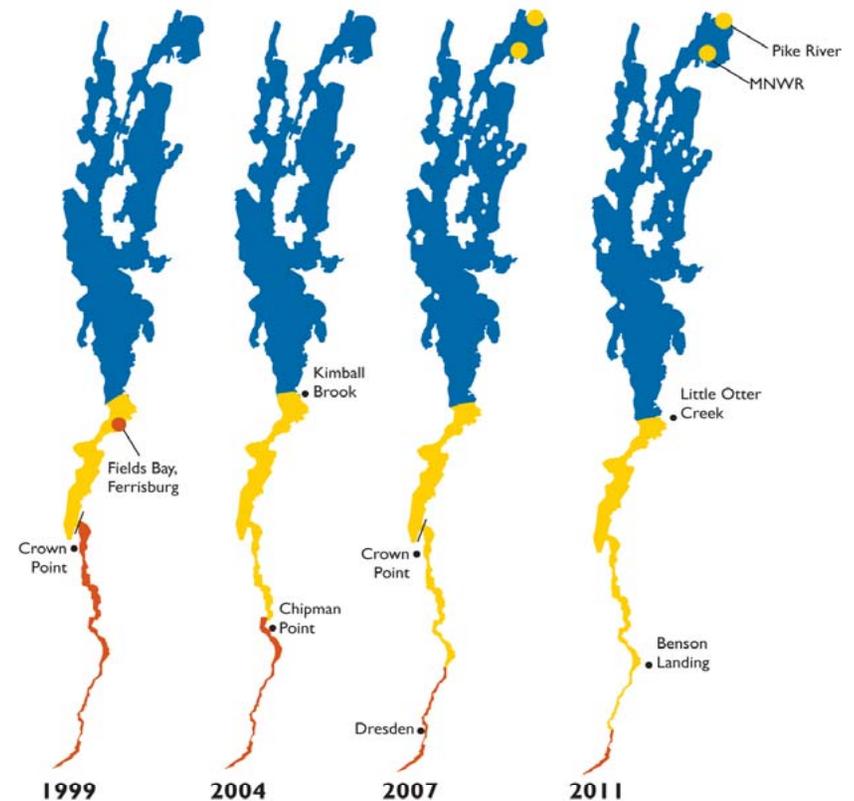


- Partnership with car washes within close proximity to Lake Champlain, LCBP and VTDEC (2011)
- Participating washes in brochure and receive roadside board identifying them as a partner

Water chestnut success

- Reduced water chestnut infestations over 46 miles in Lake Champlain in the last 30+ years but at a cost of over \$10.7 M.
- Goal: shift from expensive mechanical harvesting to maintenance handpulling, with ongoing future surveillance in all areas.
- 100% of mechanically harvested water chestnut annually in partnership with local farmers.
- Found in 25 “other” water bodies, EDRR efforts have led to effective control using HP only, and in some waters, water chestnut elimination.

STATUS OF WATER CHESTNUT INFESTATIONS ON LAKE CHAMPLAIN

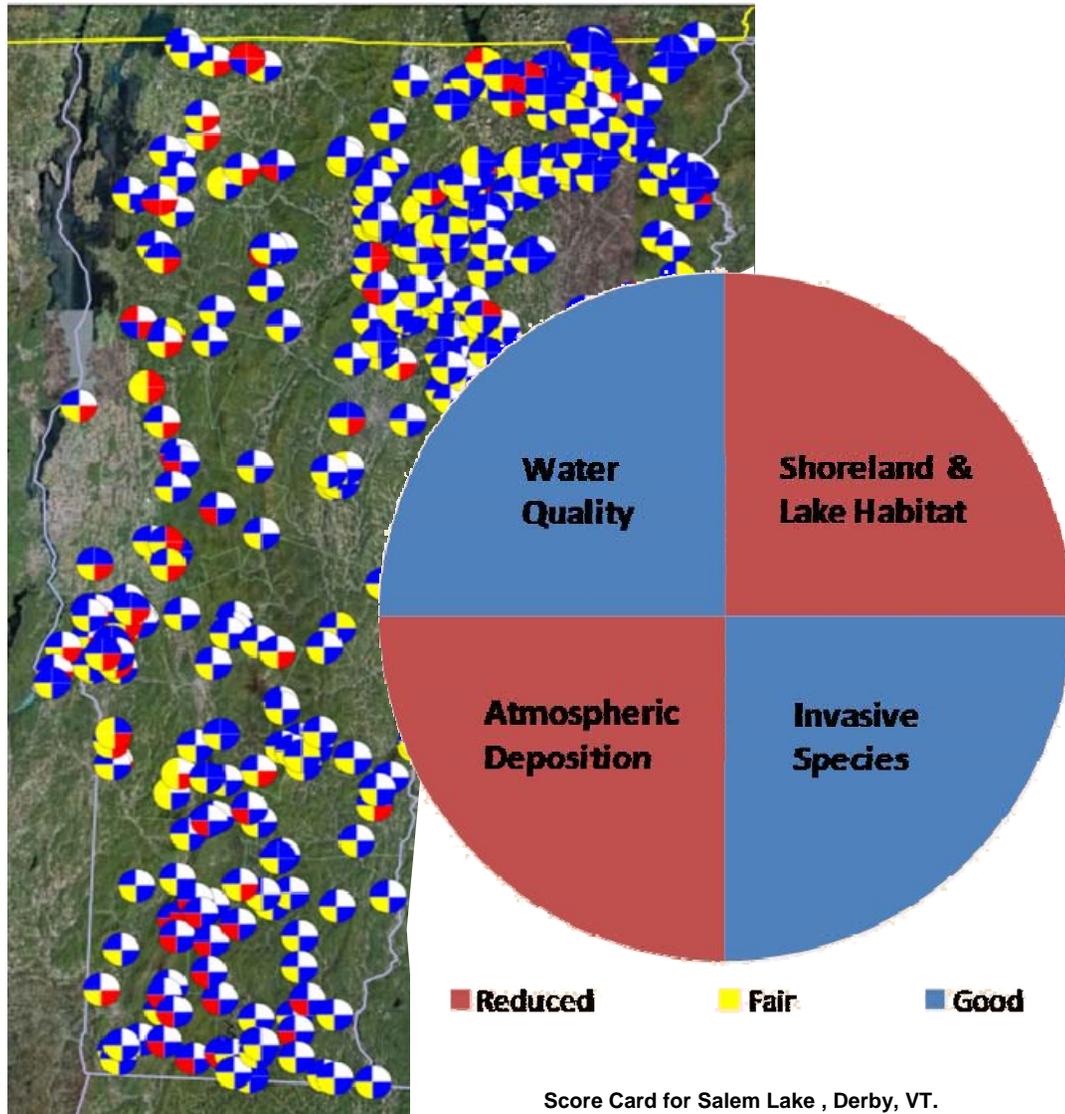


STATUS

GOOD	No water chestnut present and no management needed
FAIR	Water chestnut present with less than 25% coverage (typically managed hand-pulling)
POOR	Water chestnut present with greater than 25% coverage (typically managed by mechanical harvesting) in an area covering greater than 10% of the segment

DATA SOURCES: VTDEC, NYSDEC, QC MDDEP

Vermont Lake Scorecard



- Scorecard accessible on Lakes and Ponds Section website
- Status of Vermont lakes in terms of AIS, atmospheric deposition (acidification and mercury contamination), water quality, shoreland condition
- A **blue** rating = “good,” **red** = “reduced,” **yellow** = “fair”

Vermont Lake Score Card
www.vtwatershedmanagement/lakes/scorecard

Partnerships

- KEY to AIS management success
- The more the merrier...

USFWS

TNC

VT State Parks

VT Fish & Wildlife

Lake Champlain Sea Grant

Army Corps of Engineers

Federation of Vermont

Lakes and Ponds

VT towns

Lake Champlain Basin Program



Lake Champlain Basin Program



Meg Modley
**Aquatic Invasive
Species Coordinator**