

# WATER CHESTNUT MANAGEMENT GUIDANCE & FIVE-YEAR MANAGEMENT PLAN FOR THE SUDBURY, ASSABET, AND CONCORD RIVER WATERSHED

FEBRUARY 2017



**FOR THE ASSABET SUDBURY & CONCORD RIVERS**

23 Bradford Street · Concord, MA 01742

978 · 369 · 3956

[office@oars3rivers.org](mailto:office@oars3rivers.org)

[www.oars3rivers.org](http://www.oars3rivers.org)

## ACKNOWLEDGEMENTS

This Guidance document was produced by OARS through a project entitled “Planning and Guidance for Water Chestnut Management in the SuAsCo Watershed.” We would like to thank the members of the project’s Technical Advisory Committee who contributed their time and ideas to this document: Amber Carr (SuAsCo Cooperative Invasive Species Management Area), Jeff Castellani (Aquatic Control Technology/SOLitude, Inc.), Ron Chick (River Stewards Committee, Friends of Saxonville), Tom Flannery (Lakes and Ponds Program, Mass. Department of Conservation and Recreation), Michele Girard (Mass. Association of Conservation Commissions), Delia Kaye (Concord Natural Resources), Tom Largy (Wayland Surface Water Quality Committee), Lealdon Langley (Wetlands Program, Mass. Department of Environmental Protection), Frank Lyons (Hop Brook Protection Association), Eileen McGourty (Eastern Mass. National Wildlife Refuge Complex, U.S. Fish & Wildlife Service), Dave McKinnon (Lincoln Conservation Dept.), Judy Schmitz (Wetlands Circuit Rider, Central Region, Mass. Department of Environmental Protection), and Michael Stroman (Wetlands Program, Mass. Department of Environmental Protection). Special thanks also to Bettina Abe (Acton Natural Resources Department), Eugene Benson (Mass. Association of Conservation Commissions), and Kathy Sferra (Stow Conservation Commission).

The project was supported through the Natural Resource Damage Assessment and Restoration Programs of the U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration, and Massachusetts Department of Environmental Protection, using funding via the Nyanza Trustee Council, to restore natural resources that were injured by the release of mercury and other contaminants from or at the Nyanza Chemical Waste Dump Site in Ashland, Massachusetts. We are grateful to the Nyanza NRD Trustees for their support.

This work was prepared by OARS staff Suzanne Flint, Alison Field-Juma, and Jessica Furbeck and any errors or omissions are OARS’ responsibility. The Guidance is intended as a living document and we will endeavor to keep it up-to-date with the help of its readers and users.

## EXECUTIVE SUMMARY

Lakes, ponds and rivers across the Commonwealth of Massachusetts are being choked by invasive water chestnut (*Trapa natans*). The result is degraded ecology and habitat value, loss of recreational value, and the high cost of control efforts. It can be challenging to figure out how to effectively manage water chestnut due to a lack of life-cycle information, diverse approaches to permitting, cost, and evolving control methods. This Guidance provides the latest research and management experience compiled for Conservation Commissions, communities, researchers and other stakeholders to use in developing effective management approaches and plans. The document reviews the control options and permitting needs for each option and provides model language for permitting under the Wetlands Protection Act for use by both applicants and Commissions. It includes a 5-year Water Chestnut Management Plan for the Sudbury, Assabet and Concord watershed, and extensive references. It is intended to be a living a document.

## APPENDIX I: RESPONSES TO OARS/MACC ON-LINE SURVEY

Town Conservation Commissions were surveyed about water chestnut management and permitting in October to December of 2015. The Massachusetts Association of Conservation Commissions distributed a request for survey responses via email to their members. Not all respondents answered all questions.

51 towns responded: Ayer, Berlin, Braintree, Brewster, Burlington, Concord, Danvers, Dedham, Dennis, Dudley, East Longmeadow, Foxborough, Freetown, Grafton, Hadley, Holyoke, Hopkinton, Lanesborough, Leverett, Lincoln, Littleton, Marlborough, Maynard, Medfield, Medford, Millbury, Millis, Needham, New Bedford, Newton, Northampton, Northborough, Northbridge, Norton, Norwell, Pembroke, Pepperell, Pittsfield, Randolph, Rehoboth, Shirley, South Hadley, Stow, Sturbridge, Sudbury, Topsfield, Westfield, Weston, Westwood, Wilmington, and Worcester.

DO ANY OF YOUR MUNICIPALITY'S WATERBODIES CONTAIN WATER CHESTNUT PLANTS?

Reporting water chestnut	51 responses
Yes	24
No	9
Uncertain	18

IF YES, WHAT TYPES OF WATERBODIES? (SELECT ALL THAT APPLY)

Water Chestnut Locations	24 responses
River / stream	4
Pond / Lake	12
Both	8

IF YES, HOW WOULD YOU RATE THE INFESTATION(S)? (SELECT ALL THAT APPLY)

Infestation Size	24 responses
Small or Emerging	4
Established	10
Extensive or Full	9
Not Certain	1

DOES YOUR MUNICIPALITY HAVE A LOCAL WETLANDS PROTECTION BYLAW OR ORDINANCE?

Have wetland bylaw?	51 responses
Yes	42
No	9

DOES YOUR MUNICIPALITY HAVE A CURRENT MANAGEMENT PLAN FOR WATER CHESTNUT REMOVAL?

Management Plan	49 responses
Yes	9
No	38
Not Sure	2

WHO IS RESPONSIBLE FOR MANAGEMENT OF WATER CHESTNUT? (SELECT ALL THAT APPLY)

Who is responsible for management	24 responses
ConsCom	6
State/Federal Agency	6
Local association	8
No one/NA	4

WHAT TYPE OF PERMITTING WOULD BE NEEDED FOR HANDPULLING? (SELECT ALL THAT APPLY)

Permitting for Handpull	49 responses
Administrative or none	13
Request for Determination	18
Order of Conditions	12
Emergency Order	2
Unsure	4

WHAT TYPE OF PERMITTING WOULD BE NEEDED FOR USE OF HARVESTERS OR HYDRORAKES? (SELECT ALL THAT APPLY)

Permitting for harvester/hydrorake	47 responses
Request for Determination	1
Order of Conditions	42
Administrative	1
Unsure	3

WHO IS RESPONSIBLE FOR THE DISPOSAL OF WATER CHESTNUT? (SELECT ALL THAT APPLY) AND DISPOSAL METHOD

Responsible for disposal & method (41 responses)	41 responses
State/federal agency take care of disposal, some don't know where it goes, others report composting	6
Conservation commission/Town DPW with composting on public or private land	13
No one or Not Applicable	12