Ministry of Natural Resources

Hydrilla Response in Ontario

Fall Meeting of the Great Lakes Panel on Aquatic Nuisance Species – 2024

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Hydrilla - Background

First Report in Ontario! (and Canada)

 Detected on June 30, 2024 at Hillman Marsh, Lake Erie by University of Waterloo Wetland Lab (Dr. Rebecca Rooney)

Ontario context

- Hydrilla is prohibited under Ontario's
 Invasive Species Act.
- It is illegal to import, possess, deposit, release, transport, breed/grow, buy, sell, lease or trade hydrilla.





Hydrilla – Response Timeline

DETECTION Jun 30- July 2	 University of Waterloo Wetland Lab, reports possible hydrilla at Hillman Marsh and notifies MNR MNR's Response Framework for New Invasive Species engaged 	
CONFIRMATION Jul 3-19	 MNR conducts initial survey/ collects voucher specimens CFIA confirms hydrilla - morphology and DNA sequencing CFIA and US - Confirm monoecious hydrilla biotype 	
NOTIFICATION Jul 20-27	 Ontario Critical Plant Pest Management Committee and DFO Great Lakes Governors and Premier' AIS Task Force Public, key stakeholders and First Nations 	
DELIMITATION Jul 31-Aug 1	 Joint surveillance operation – 6 agencies, including MI EGLE No hydrilla detected outside Hillman Marsh wetland cell 	
PUBLIC ENGAGEMENT Aug -Sep	 Provincial media release Engagement with stakeholders, recreation users of Hillman Marsh 	
CONTROL Sep-Oct	 Permitting and Procurement (Sep-Oct) Monitoring/ population assessment (Oct) Control – Procellacor FX herbicide treatment (Oct 17) 	





Detection at Hillman Marsh

Hillman Marsh Conservation Area

- Multi-use property owned by Essex Region Conservation Authority
 - Outdoor education, Birding etc.
 - Controlled waterfowl hunting
- Adjacent to Lake Erie, includes barrier beach, north of Point Pelee
- Includes 2 wetland cells, hydrologically separated from Erie, managed for waterfowl/shorebirds



Detection at Hillman Marsh

Hillman Marsh Conservation Area

- Hydrilla detected in West Cell
 - Dispersed throughout open water areas of cell (~30ha)
- No Hydrilla detected in East Cell or Hillman Creek at University of Waterloo vegetation plots







Detection at Hillman Marsh – Delimitation Survey

Joint Surveillance Operation (July 31 – Aug 1)

- 6 agencies , including MI EGLE
- Outer Hillman Marsh
 - >150 survey plots
 - No hydrilla detections







Detection at Hillman Marsh – Delimitation Survey

Joint Surveillance Operation (July 31 – Aug 1)

- 6 agencies
- Outer Hillman Marsh
 - >150 survey plots
 - <u>No hydrilla detections</u>
- Shorebird Cell/ Hillman Creek
 - 1) Channel connecting Pump house to Hillman creek
 - 2) Shorebird Cell
 - 3) West cell in proximity to pump intake
 - No hydrilla detections
- Decontamination of ALL watercraft and equipment





Development of Response Plan

Hydrilla Working Group (30+ people, 10+ agencies)

- 1. Joint Communications Plan (lead ISC and ERCA)
 - Media release -
 - Directed communications to waterfowl hunters
 - Signage at boat launches (OFAH)
- 2. Prevention measures
 - ERCA closure of Hillman Marsh to public access
 - ERCA closure of controlled waterfowl hunt
- 3. Preliminary management response (lead ERCA, MNR, ISC)
 - Funding and Procurement
 - Pre-treatment surveys (U of Waterloo)
 - Herbicide treatment





Pre-Treatment Survey – October 2024

Hydrilla detected in nearly every part of the West Cell – Hillman M

- Hydrilla present at 37 of the 60 plots
 - 4 plots had infestation rates between 71-95%,
 - tubers and turion structures on Hydrilla within the water column.
 - Highly infested areas around duck blinds
- Other dominant plants; Coontail (51/60), Duckweed (30/60), and Canada Waterweed) (21/60).
- Sediment core analysis for tubers is underway (47/ 60 cores only 3 sites with tubers (128, 256 and 764 tubers/ m²)



Map 1: The percent infestation of *Hydrilla verticillata* in the western wetland cell of Hillman Marsh, Learnington, Ontario. Blue dots indicate the plots without *Hydrilla*, and Yellow circles, ranging in size, indicate the percentage of infestation of *Hydrilla*.

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Herbicide Treatment

- Oct 17th ProcellaCOR FX herbicide applied by a SePro certified applicator
- 30 ha treated
 - 21.5 PDU/ha
- Permits and authorizations from Fisheries and Oceans Canada and Ontario Ministry of Environment, Conservation and Parks

Figure 1: Treatment Map and Path of Hillman Marsh. Points of hydrilla observations appear as pins.









Next Steps

1) Develop long-term management plan for Hillman

- Seek multi-year funding
- Explore options for Procellacor FX herbicide (2-3 treatments/ year?)
- Water level manipulation?
- Continue long-term monitoring/ efficacy
- Expand Hydrilla Surveillance within key sites in Lake Erie/ St.Clair wetlands
- Work with partner agencies
- 3) Communications Plan
- Engage key stakeholders (waterfowlers, marina operators etc.)





Acknowledgements

Ontario - Hydrilla Working Group

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Invasive Species Centre

Fisheries and Oceans Canada

Ministry of Environment Conservation and Parks

Ontario Federation of Anglers and Hunters

Parks Canada

University of Waterloo

Great Lakes – hydrilla technical experts

MI EGLE, NY DEC, OH DNR, IA DNR, Cleveland Metro Parks, and SePro



