

Managing Invasive Species at Tommy Thompson Park

Dog-strangling Vine and *Phragmites Australis*

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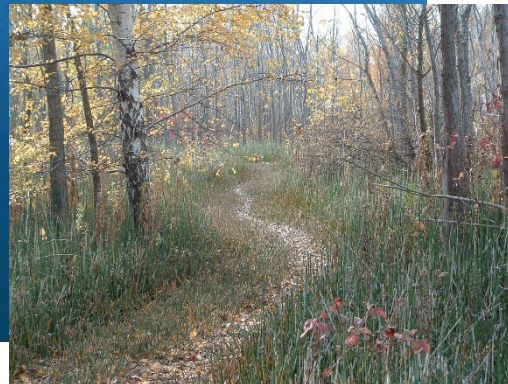
Presentation Outline

- Introduction to Tommy Thompson Park (TTP)
- DSV at TTP
 - Management Plan
 - Lessons Learned
- Phragmites at TTP, Cell 1 Wetland
 - Management Plan
 - Lessons Learned

Questions?

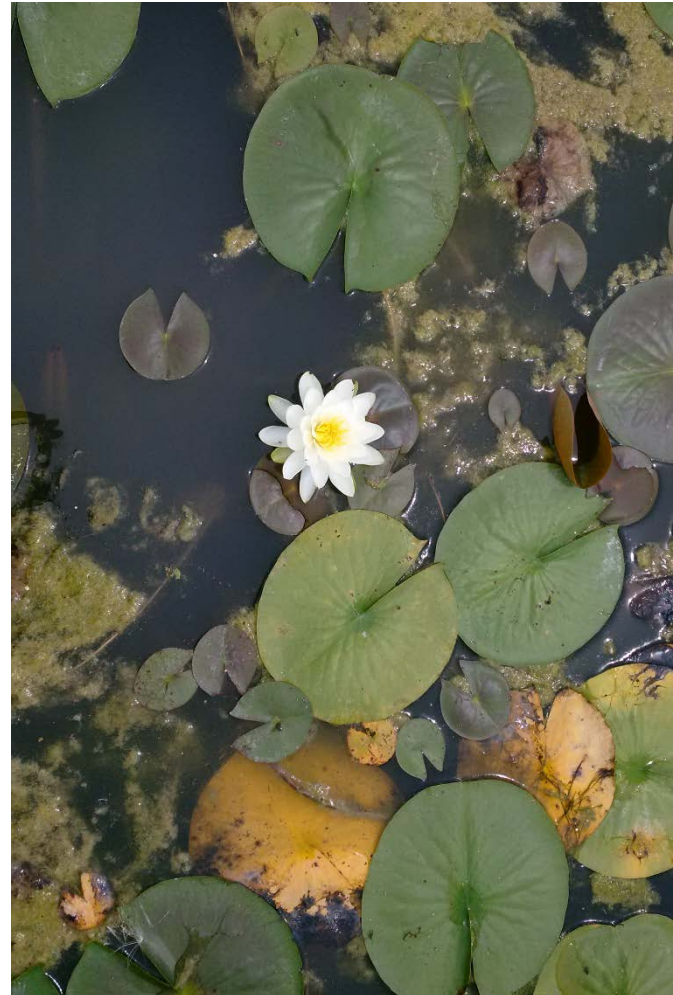
Tommy Thompson Park (TTP)

- Manmade landform (constructed 1959 - 2015)
- Environmentally Significant Area
- Important Bird Area



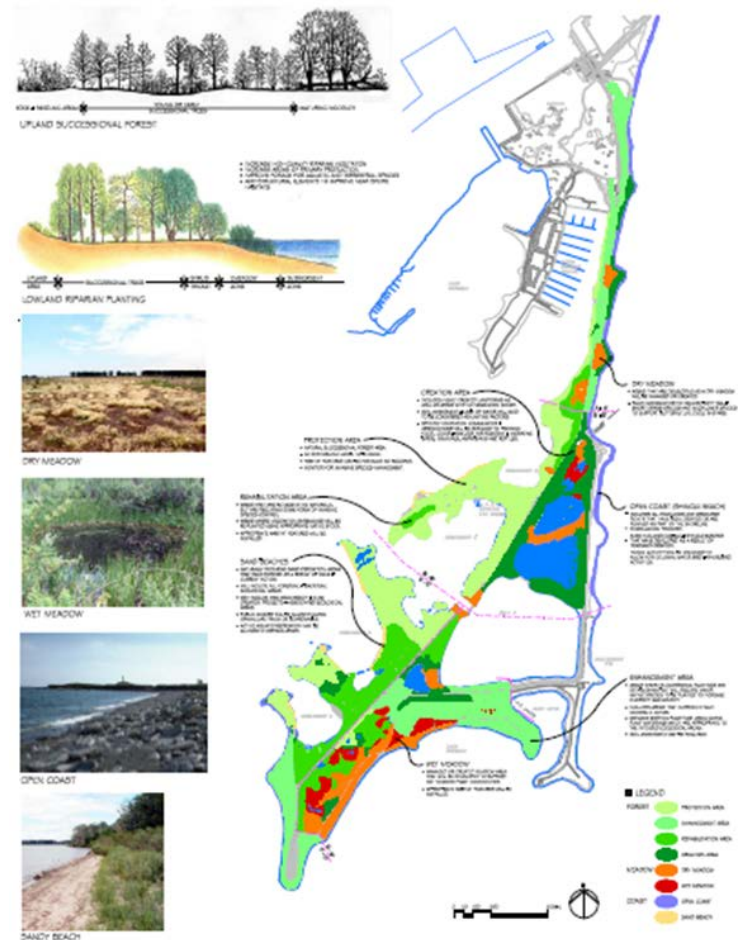
Master Plan Objectives

1. Preserve significant species
2. Protect environmentally significant areas
3. Enhance aquatic and terrestrial habitat
4. Enhance public recreational opportunities



Habitat Creation

- Over \$6.9M has been invested in habitat creation since 1995
 - 30 hectares aquatic
 - 30 hectares terrestrial
- Converted confined disposal facilities into wetlands
- Invasive Species management is important to protecting these ecosystems



DSV



- First detected in 2007 at 3 small locations
- Mechanical control implemented from 2009 to 2013
 - Not effective
- Chemical control implemented from 2013 to present
- 7 ha of DSV surveyed in 2013
- 2.2 ha of DSV surveyed in 2019



DSV Management Plan

- Management Plan aims to reduce the density and distribution of DSV
 - Eradication is not a goal
- Maintain native biodiversity
- Early detection of new individuals is critical
- Chemical spot sprays of all known DSV plants twice a year (June/August)



Photo by: Leslie J. Merhoff, U of Connecticut, Bugwood.org



DSV Lessons Learned

- Need to cover similar ground each year to check on previously DSV infested areas
- Having refined tracking technology is very helpful (Collector app) for tracking and coordinating
- Having a network of on-the-ground volunteers is very helpful in finding new sites
 - New patches/individuals found each year
- Restoration plantings following DSV removal is important
 - Long term DSV sites are challenges to restore



Phragmites



Cell 1 Wetland Construction



Pre-construction (2001)



Restored and Vegetated (2008)

Phragmites at Cell 1 Wetland



2007 Aquatic Vegetation Survey

2010 Aquatic Vegetation Survey

- Phragmites is first detected in 2007
- Mechanical control (mow) was conducted in 2007 and 2008



2011 Phragmites Survey



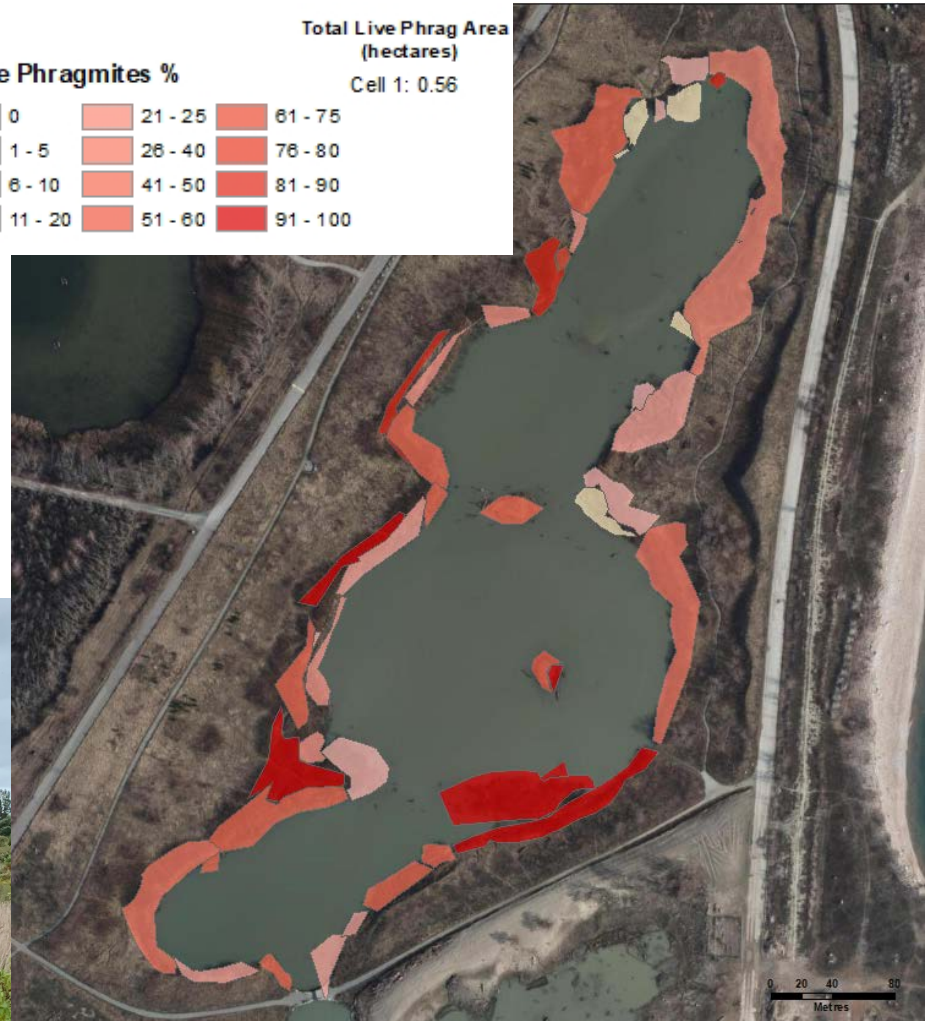
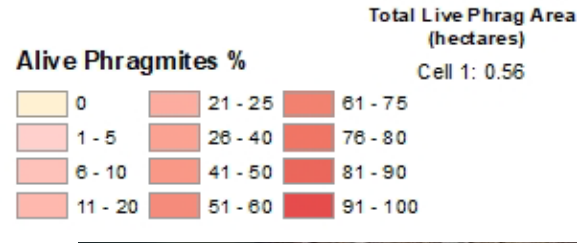
2013 Phragmites Survey



2018 Phragmites Survey

- Phragmites is dominate in Cell 1 in 2013
- In 2018 chemical treatment initiated

- Chemical treatment is highly successful with 74% die off with one fall application
- 2019 second chemical treatment conducted
- Evidence of some native seed bank regeneration



Phragmites Management Plan

- Management Plan aims to reduce the density and distribution of Phragmites
 - Eradication is not a goal
- Restore biodiversity to the ecosystem
- Chemical spot sprays of terrestrial plants in Cell 1 occurs once a year in the fall
- Five year plan will conclude with native vegetation plantings
- Ongoing spot treatments will likely be necessary- chemical or mechanical



Phragmites Lessons Learned

- Experimenting with mechanical control methods may have increased Phragmites distribution
- Woody debris features placed in the wetland as habitat have made machine access for Phragmites management difficult
- Off-site incineration of Phragmites following the cut of dead standing stalks was not cost effective
- Ensuring you have the budget to support your management plan
- Mowing dead standing phragmites makes monitoring easier



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