

Cayuga County FLOWPA Program

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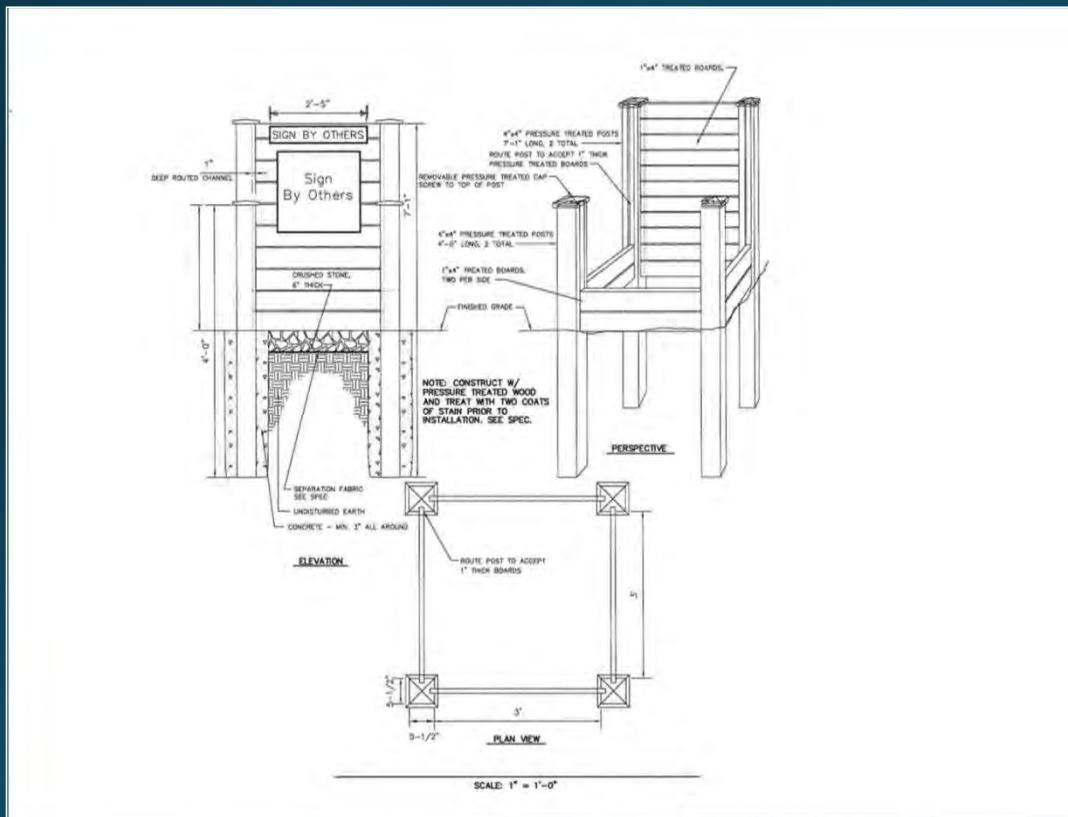
Major FLOWPA Programs

- USGS Gage Station O&M
- Invasive and Nuisance Species
- Septic System Inspections
- Shoreline Stabilization

Invasive Species Drop Box



Invasive Species Drop Box



- 6 following NYSDEC design
- 6 adjusted by nailing instead of using grooves
- 9 at public launches and 3 at private launches
- Needed to provide a person to clean the box

Locations

- Owasco Lake:
 - Emerson Park Boat Launch
 - Emerson Park Canoe Launch
 - Owasco Yacht Club
 - Owasco Marine (Owasco Outlet)
 - Owasco Marine (Mallard Wing)
 - Owasco Flats Canoe Launch
- Cayuga Lake:
 - Union Springs Frontenac Park
 - Village of Cayuga Boat Launch
- Little Sodus Bay
 - Village of Fair Haven: Cottage Street Launch
 - Village of Fair Haven: King Street Launch
 - Village of Fair Haven: West Barrier Bar Launch
- Sterling Creek
 - Sterling Nature Center canoe launch

Cost of Invasive Species Drop Box

- 12 Invasive Species Drop Boxes (~\$9,000)
 - FLOWPA Funded (\$7,500)
 - Materials: \$1,610.3 (~\$134 each)
 - Staff: \$2,180.47
 - Equipment: \$1,274.28
 - 9 Signs: \$381.25 (~\$42.36 each)
 - In-Kind (~\$1,500)
 - Donated Equipment Time: \$1,015
 - Donated Staff time: ~\$358
 - 3 sets of signs donated by NYSDEC: ~\$127

Emerson Park Launch



Union Springs Launch



Village of Cayuga Launch



Emerson Park Boat Launch Kiosk



Educational Kiosk at Emerson Park



- Plexiglass covers the panels
- Able to change out message

Kiosk Costs (~\$6,261.58)

- FLOWPA Funded (\$4,761.58)
 - Materials: \$1,237.25
 - Staff: \$3,524.33
- In-Kind (~\$1,500): All design work
 - Staff: ~\$1,500



Education Cost (~\$2,300)

- Conservation Field Days
- New York State Invasive Species Week
- Cayuga County Water Quality Management Agency
- Owasco Lake Watershed Management Council
- Owasco Lake Day
- Camp Rotary

Asian Clam Surveys

- Found in Owasco Lake in 2010.
- Used foundation money (2011) and USFWS GLRI money (2012 & 2013) for Scientific Diving International (SCIDI), InnerSpace Scientific Diving and Darrin Fresh Water Institute to survey.
- FLOWPA Funds used in 2015 and 2016.

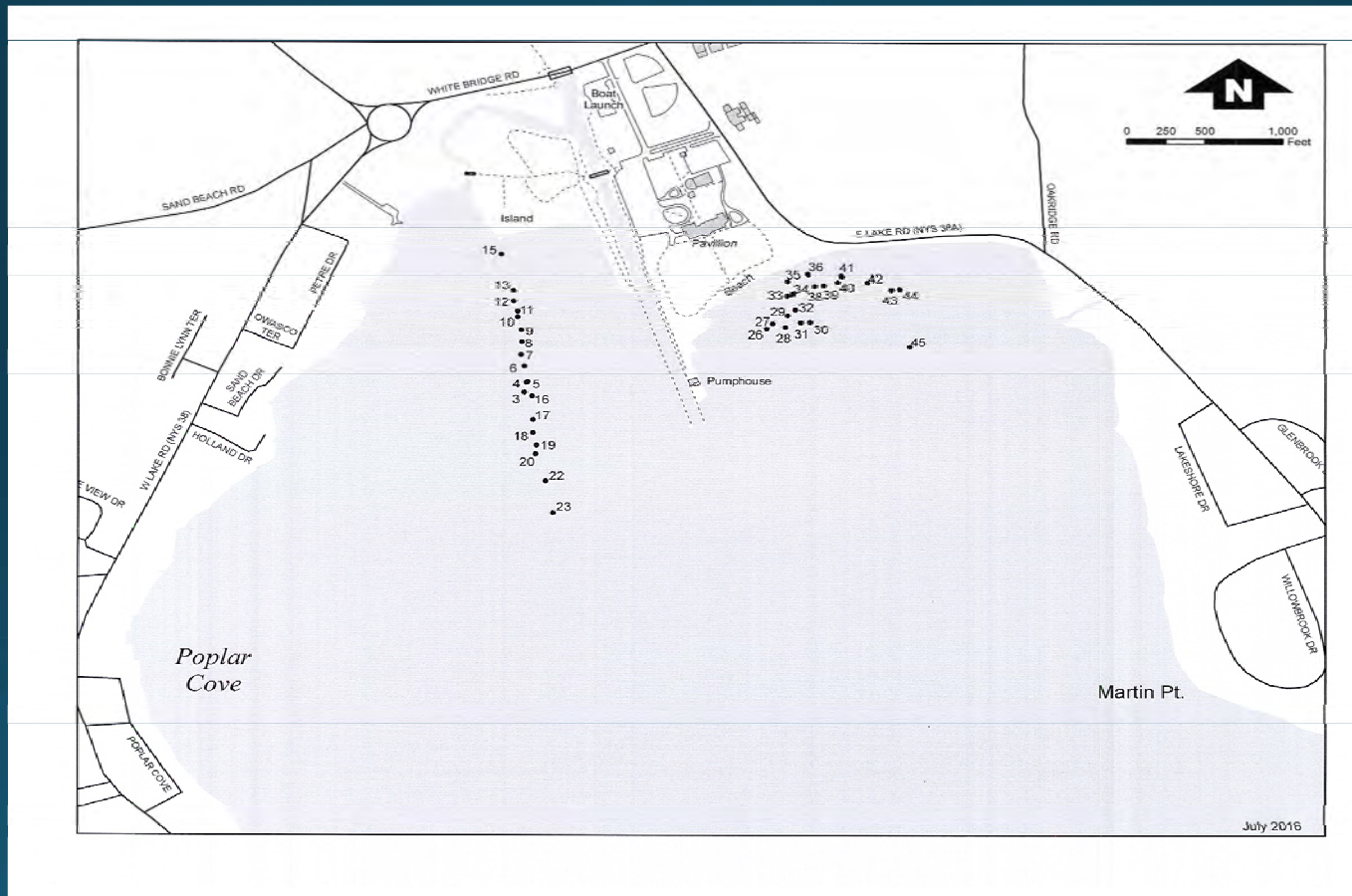


Asian Clams

- First year growth rates after initial spawn through the summer to early fall of about 4mm a month.
- Can reach 10-30 mm in size during their first year depending on food availability and temperatures.
- In Lake George clams were not identified as reproductive until they reached a minimum size of 12.7mm.
- Timing of reproduction in Lake George is mid-June through mid-October.



2016 Survey



Asian Clam Survey Results

- Drawdown appears to cause 100% mortality of clams in areas where the substrate was exposed during the winter.
- It appears that young of the year clams are transported into shallow areas by wind and wave action since there are no mature clams in these shallow areas to reproduce.
- Winter survival is poor for adults.
 - East side shows better survival rates. Possibly due to warmer water from Sucker Brook.
- Highest density of clams ever seen in Owasco Lake in late July of 2016. However very few of reproductive size.

Future Work

- Still looking for winter refuge that allows adult survival.
- Darrin Freshwater Institute Research
 - Hypothesis: *Chaetogaster limnaei* adversely affect the Asian clam population with respect to size distribution and relative abundance.
 - Have been observed eating the offspring of Asian clams inside adult clams
 - May alter the population structure of Asian clams
 - Will infect Asian clam within a short time period in a scale experiment
 - Can transfer from one clam to another in a small scale lab experiment
 - County Planning staff took clam samples last year and sent them to Darrin Freshwater Institute for research and DNA analysis. None of the parasites were found in Owasco Lake samples.
 - Trying to find someone who would be willing to look next year.

Asian Clam Survey Cost (~\$2,542.15)

- FLOWPA Funds (\$1,554.90)
 - Two staff organizing, running analysis and reporting (\$1,554.90)
- In-Kind (~987.25)
 - Owasco Marine provided pontoon boat and fuel (~\$169.00)
 - One diver and equipment (~\$100 for scuba rental)
 - Five volunteers for five hours (\$28.73/hour/volunteer, \$718.25)

Water Chestnut



- Assisted Finger Lakes PRISM
- Water chestnut pull in Seneca River
- Provided information on infestations in County
- Assisted with education
- ~\$518 FLOWPA funds

Aquatic Vegetation Harvesting

- FLOWPA funds \$19,000 in 2014. County match \$100,000.
- The waterbodies covered by the aquatic harvesting program in 2014 were Owasco Lake, Cayuga Lake, Lake Como, Otter Lake and Little Sodus Bay.
- The program removed an estimated 287,170 dry pounds of aquatic vegetation, 6,501 pounds of nitrogen, 512 pounds of phosphorus and 3,223 pounds of potassium.



	Owasco Lake	Cayuga Lake	Fair Haven Bay (Little Sodus Bay)	Lake Como	Otter Lake	Totals
Volume (yd ³)	940	742	306	122	99	2,209

USGS Gage Operations and Maintenance

- Owasco Inlet gage upgraded to USGS standards in 2009 using SFY07-08 FLOWPA and County funds.
- Near real-time accurate flow data, which is added to the USGS network and stored as part of the National Water Information System.
- Flood warning for Moravia and used by Auburn to regulate Owasco Lake levels.
- Used in conjunction with John Halfman's data to estimate pollutant loads to the lake.
- \$15,830 per year paid by FLOWPA funds.



Septic System Inspection Program

- \$4,400 FLOWPA funds in 2015 (1/3 of the staff costs for one inspector).
- 2000 septic systems inspections performed and inspection reports generated by inspectors certified by the Health Department in 2015.
- Also reviewed design proposals for 78 new septic system installations and 73 modified/ repaired septic system installations and followed-up on 37 septic system failures and violations of the Sanitary Code.