

December 31, 2020

To: Shannon Harris & The Town of Esopus Town Board
Cc: Mike Cafaldo, Daniel Vetter, Water Front Advisor Board

Subject: 2020 Water Chestnut Harvesting Summary Report

In 2020 the team of volunteers and the Water Front Advisory Board continued our efforts to reduce the impact of the water chestnuts that had been overtaking our town beaches and water fronts in the Town of Esopus. Like most things in 2020, COVID-19 brought some interesting challenges to our continued efforts to reduce and manage the impact of water chestnuts to the Town of Esopus waterfront.

To reduce the COVID risks, we implemented policies to limit cutting pairs to family units or “pods”. Although we had additional people that wanted to get trained and be part of the team, we did not pursue training as we felt this increased the risk of contact outside a given cutter’s “pod”. Our strategy reduced the number of cutters, however we still made good progress.

Although anecdotal, the weed growth in 2020 seemed more aggressive than usual. I observed this at various points on the river both within and outside the Town of Esopus waters. Perhaps the ultra-warm summer and winter created an improved environment for them to thrive. They were late emerging due to a cool spring, but grew quickly and went to seed sooner than usual. There was significant light scatter growth in the previously cut areas. Our strategy for 2020 included:

- a) Continue to maintain and expand the area cleared of chestnuts by the Freer Town Beach waterfront bounded by Hidden Harbor to the South and Sleightsburg Spit to the North.
- b) Continue to maintain, clear and expand the following areas to the South:
 - a. Lighthouse Park, to provide summer long kayak paths.
 - b. The “fishing wall” along River Rd, providing an environment more conducive to fishing or launching a kayak
 - c. Scenic Hudson Water Trail access for kayaks
 - d. Area close to Scenic Hudson Pavilion to support Clearwater’s Tideline Program

Given that 1 acre of plants creates enough seeds for 100 acres the following year¹, we continued to make progress on our goal to reduce the number of seed-bearing plants while at the same time maintaining and improving the access for town residents. To the North by Freer Town Beach, we maintained the approximate 60 acres keeping managing any new scatter growth. We expanded the new cutting areas slightly; however, we still have approximately 7-10 acres remaining. To the South, we managed to open all areas previously cut, while slightly expanding the area by Scenic Hudson’s pavilion. We did not make as much progress to the South on new cutting areas as we would have liked. We continue to see positive signs of river health with new growth of water celery that tends to be beneficial to fish habitats, ducks and oxygenation, especially to the North. Milfoil growth has become more prevalent. Although this does not present as much a deterrent to waterfront usage, it is an invasive plant that is not well managed unless the roots are pulled.

We completed 145 machine hours of cutting, with a conservative estimate of 320 volunteer hours between actual cutting, machine maintenance, fueling and other logistics. If we consider the volunteer labor at a rate of \$22/hour this is a savings to the town of \$7040. There were a total of 33 different volunteers. We cut a total of 46 times. The first cutting took place on June 17 and the last on August 9th. After this date the weeds were heavily seeded making cutting

¹ http://www.in.gov/dnr/files/WATER_CHESTNUT.pdf

ineffective. We had community participation from the Bruderhof and Hidden Harbor members. The summary of this year's cutting statistics verses previous years are illustrated in the table below.

| | Machine Hours | # Cutting Times | # Individual Volunteers | # Loads | First Day Cut | Last Day Cut |
|------|----------------|-----------------|-------------------------|-----------------|---------------|--------------|
| 2020 | 145(N80, S65) | 46 | 33 | 112(N40, S72) | 6/17/20 | 8/9/20 |
| 2019 | 162(N127, S35) | 59 | 41 | 121(N103, S18) | 6/11/19 | 8/16/19 |
| 2018 | 134(N56, S78) | 44 | 34 | 122(N41, S81) | 6/15/18 | 8/8/18 |
| 2017 | 116(N65, S51) | 36 | 29 | 178(N65,S113) | 6/27/17 | 8/18/17 |
| 2016 | 178 (N87, S91) | 50 | 29 | 182 (N64, S118) | 6/16/16 | 8/9/16 |
| 2015 | 128 (N58, S70) | 39 | 30 | 153 (N53, S100) | 6/13/15 | 8/26/15 |
| 2014 | 131 (N81, S50) | 31 | 26 (S15,N19) | 207 (N97, S110) | 6/17/14 | 8/10/14 |
| 2013 | 95 | 32 | 24 | 94 | 6/6/13 | 8/4/13 |
| 2012 | 119 | | 26 | | 6/1/12 | 8/18/12 |
| 2011 | 150 | | 23 | | 6/14/11 | 8/11/11 |

The highway and recreation departments continue to be very responsive and collaborative on their support of the program, assisting with fueling, launching the boat and required maintenance. There were no major mechanical boat failures, however, the motor for the boat trailer required replacement. Dan Vetter investigated whether the hull should be painted with Feeney's. They evaluated the hull and felt it did not yet require painting.

Looking forward to next year, it is our hope we will be able to re-engage the volunteers that were unable to get involved due to covid policies. We hope to continue to expand the cutting areas, should the scatter growth be more manageable. Every year the growth is slightly different, so we will continue to adapt based on the current environment. We will also try to engage more with the Lower Hudson Valley Invasive Species group to help with tracking our progress and contributions to the effort to manage invasives.

We appreciate the support of the town on this effort. Our waterfront is a defining and differentiating feature of our community. We feel proud that we are able to enhance the town's ability to use this wonderful recreational resource. Achieving this through the efforts of volunteers in the community is certainly an amazing accomplishment. I have attached a few pictures illustrating the scatter growth, the growth from 1993 as well as some of the first paths cut in early June of 2020.

Carol Carson Tomassetti

Waterfront Advisory Board

Town Of Esopus Pictures from the 1993 and 2020



Photo August 1993,
Of Freer Beach and surrounding
area.
denser than 1991,
It got even denser by the time
we started working on a weed
harvesting program.



View from Lighthouse
Park when we started
cutting in June. Note
scatter growth to right.

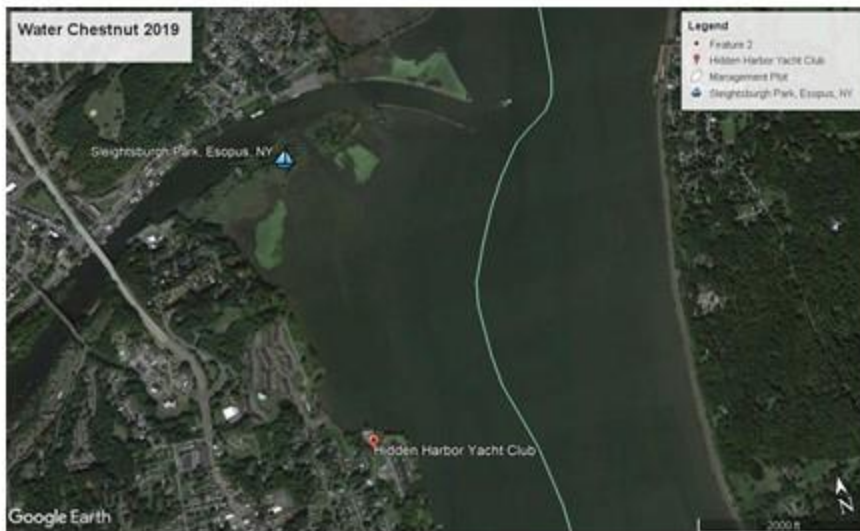


Chet & Maj-Britt Allen
opening up the area by
the fishing wall

Progress from 2011 to 2019



Google Earth
Capture
2011. Just as
we began
Chester
Operations in
Earnest



Google Earth
Capture
2019. Just
as we began
Chester
Operations in
Earnest