

08/18/2025

Invasive Management Plan and Year End Report for Phragmites, Knotweed and Porcelain Berry
Prepared for
The Village of Croton-on-Hudson

Project Description –

This document serves to document non-native invasive species management strategies and actions taken for the Village of Croton-on-Hudson by Trillium Invasive Species Management, Inc.

Five Village owned properties are covered in this plan; Black Rock Park, Croton Landing Park, Duck Pond Park, Gouveia Park, and Kaplan's Pond Open Space Area. In 2016, management was initiated at four properties (Croton Landing, Duck Pond, Kaplan's Pond and Senasqua Park); management at Gouveia Park and Black Rock Park began in 2017.

Many non-native invasive species are present at all locations, however the primary targets selected by the Village are phragmites (*Phragmites australis*) and Japanese knotweed (*Reynoutria japonica*), as well as porcelainberry (*Ampelopsis brevipedunculata*) at Croton Landing.

This document outlines plant specific integrated management strategies including cutting and herbicide applications, it also serves as a record of the actions taken in each park. No plan is static and each strategy should be considered adaptable from year to year and responsive to seasonal conditions. All herbicide applications should employ best-practices and be implemented at each location in the most targeted method feasible.

Environmental and permitting factors –

In 2025, New York State Department of Conservation enacted changes to the Article 24 Freshwater Wetlands Permit. Previous to this change, no part of this project required a permit from NYSDEC. Due to this change, pesticide applications at Croton Landing Park, Kaplan's Pond Open Space Area and Gouveia Park may require Article 24 Freshwater Wetland permits.

Applications around waterbodies should only take place when low water conditions exist (i.e. low tide). In some cases, at the time of the initial survey in January of 2016, infestations along the banks of ponds with outlets were growing into the water. Low water conditions in late summer should provide a dry location for the applications. This has been the case throughout the project, however, if in the future water levels are high in an application area, applications shall only be performed in a manner such that no pesticide is applied to waters of the state.

The application of pesticides in or around wetlands and watercourses described by this plan is regulated by the Village of Croton-on-Hudson and a permit from the Village will be required to proceed with chemical applications at Croton Landing Park, Duck Pond Park, Kaplan's Pond Open Space Area, Senasqua Park and Gouveia Park.

Notes on the use of herbicides in natural areas –

Foliar application of herbicides such as glyphosate has the potential for off-target impacts through spray drift. All available best management practices shall be followed to reduce drift potential including but not limited to conducting spray operations in appropriate weather conditions (low wind, no rain or

dew), cutting of the plant eight weeks prior to application to reduce spray height, conducting applications when water levels are low, and the use of air induction nozzles to increase droplet size. This plan prescribes the use of a glyphosate-based herbicide approved for application within wetlands and waterbodies. All label instructions and guidance will be strictly adhered to.

Anticipated Time Frame –

The anticipated timeframe of this project was initially six-seven years. This timeframe allowed for approximately three-four years of progressive reductions in the existing infestation and three years of monitoring to ensure eradication.

For the initial two years, control work consisted of applications over most of the project area outlined in maps below. After that period, control work will most likely fall to treating isolated stems over any individual area, the number of which should virtually diminish to zero by year three or four. Any individual patch will be considered eradicated after three consecutive years of no re-growth.

In many locations, targeted treatment of isolated stems has been required beyond the initial anticipated time frame. This is largely due to patch characteristics that have led the infestations being more robust than a standard infestation (i.e. frequent flooding, cutting prior to initiation of management and cutting not integrated with this plan)

Invasive Plant Control Methods

Methods detailed in this management plan employ pesticides. All pesticides will be used according to their label in a manner that uses the least amount of pesticide in the most targeted manner that provides the best management outcome.

The methods outlined below are standard practices and expectations for initiating management of an infestation. Monitoring and spot treatments of all species will be required until infestations are eliminated.

Porcelain berry

Ampelopsis brevipedunculata is considered established in our region and New York State ranks its invasiveness as High.

Trillium ISM, INC proposes a control strategy of cutting where feasible, waiting for regrowth, then applying glyphosate (2% Roundup Custom) using a foliar spray-to-wet method with a backpack sprayer. Where cutting is not possible, glyphosate (2% Roundup Custom) will be applied using a foliar spray-to-wet method with a backpack sprayer.

Timing of cutting and herbicide applications will coincide with the phragmites control strategy.

Monitoring and spot treatments will be required to ensure eradication. This is required not only due to the plant's persistence, but also by an existing seed bank. Follow-up treatments will be required to ensure eradication of each patch and monitoring will be required for at least three years after no re-growth is observed to confirm eradication.

Note:

While on-site at Croton Landing in July 2016 much of the porcelain berry was cut in preparation for later herbicide treatment. Some of the patches have overgrown small trees and shrubs. The porcelain berry was not cut at these locations because of how completely it had smothered the trees and shrubs. At these locations very few, if any, of the shrub/tree leaves were visible among the porcelain berry leaves. Therefore, while some off-target impact is possible (assuming the shrub/trees are still alive under the porcelain berry) a foliar application of herbicide is not likely to impact the desirable vegetation.

Phragmites

Phragmites australis is wide spread in the region. New York State ranks its invasiveness as Very High.

Trillium ISM, INC proposes to control the majority of the stands by cutting, allowing for re-growth, then applying glyphosate (2% Roundup Custom) using a foliar spray-to-wet method with a backpack sprayer. Areas where phragmites is growing in low density among native shrubs and forbs will be treated with a cut-stem injection (aka cut and drip applying 50% Roundup Custom).

Phragmites Control Schedule–

Year One–

- 1- Late Winter - Spring – Cutting of all dense phragmites patches to clear biomass and allow for better access to stand, establish photo monitoring points. (Low density areas where cut-stem application is to be used will be left to grow so as to not disturb native shrubs and forbs)
- 2- Mid-Summer (Mid-July) – Cutting to deplete plant strength and reduce height for late summer treatment.
- 3- Late Summer (eight weeks post mid-summer cut) – Foliar and cut stem application of glyphosate. Cut stump application of glyphosate to woody shrubs (multiflora, burning bush).
- 4- Four Weeks Post Treatment Follow-up Application – A follow-up herbicide application to ensure complete coverage throughout patches.
- 5- Four Weeks Post Treatment Monitoring – Site visit for photo monitoring.

Note: Trails in the treatment area should be closed on herbicide foliar application days.

Year Two –

- 1- Mid-Summer Cutting (Mid-July) - Cutting to reduce height for treatment and to clear standing biomass.
- 2- Late-Summer (eight weeks post mid-summer cut) - Foliar and cut stem application of glyphosate.
- 3- Four Weeks Post Treatment Follow-up Application – A follow-up herbicide application to ensure complete coverage throughout patches.
- 4- Four Weeks Post Treatment Monitoring – Site visit for photo monitoring.

Note: Trails in the treatment area should be closed on herbicide foliar application days.

Year Three and moving forward with ongoing Monitoring/Spot Treatments

Monitoring and spot treatments will be required to ensure eradication. This is required not only due to the plant's persistence, but also by an existing seed bank. Follow-up treatments will be required to ensure eradication of each patch and monitoring will be required for at least three years after no re-growth is observed to confirm eradication.

Japanese knotweed

Reynoutria is a genus of knotweed that is widespread in the region. The species infesting Village lands may be identified when it flowers in late summer. New York State ranks invasiveness of all species (*japonica*, *bohemica*, and *sachalinensis*) in the genus *Reynoutria* as Very High.

Trillium proposes to conduct stem injection (2.5-5ml Roundup Custom per injection) or clip and drip treatments of plants with stem diameters greater than ¾" in mid-spring and follow-up with a foliar spray (2% Roundup Custom) on smaller plants later in the season when the plant is flowering and at its most vulnerable.

Japanese knotweed Control Schedule

Year One-

- 1- Fall - Late Winter - Spring – Cutting of dead knotweed stems to clear biomass and allow for better access to stand.
 - 2- Late spring – Early Summer – Stem injection of all stems with diameter greater than ¾".
 - 3- Late summer – Foliar application of glyphosate.
 - 4- Four Weeks Post Treatment Monitoring - Site visit for photo monitoring
- Note:** Trails in the treatment area should be closed on herbicide foliar application days.

Year Two –

- 1- Fall (of previous year) -Late Winter - Spring – Cutting to clear biomass and allow for better access to stand, establish photo monitoring points.
 - 2- Late Summer – Foliar application of glyphosate.
 - 3- Four weeks post-treatment – Follow-up foliar application
 - 4- Post Treatment Monitoring - Site visit for photo monitoring
- Note:** Trails in the treatment area should be closed on herbicide foliar application days.

Year Three and moving forward –

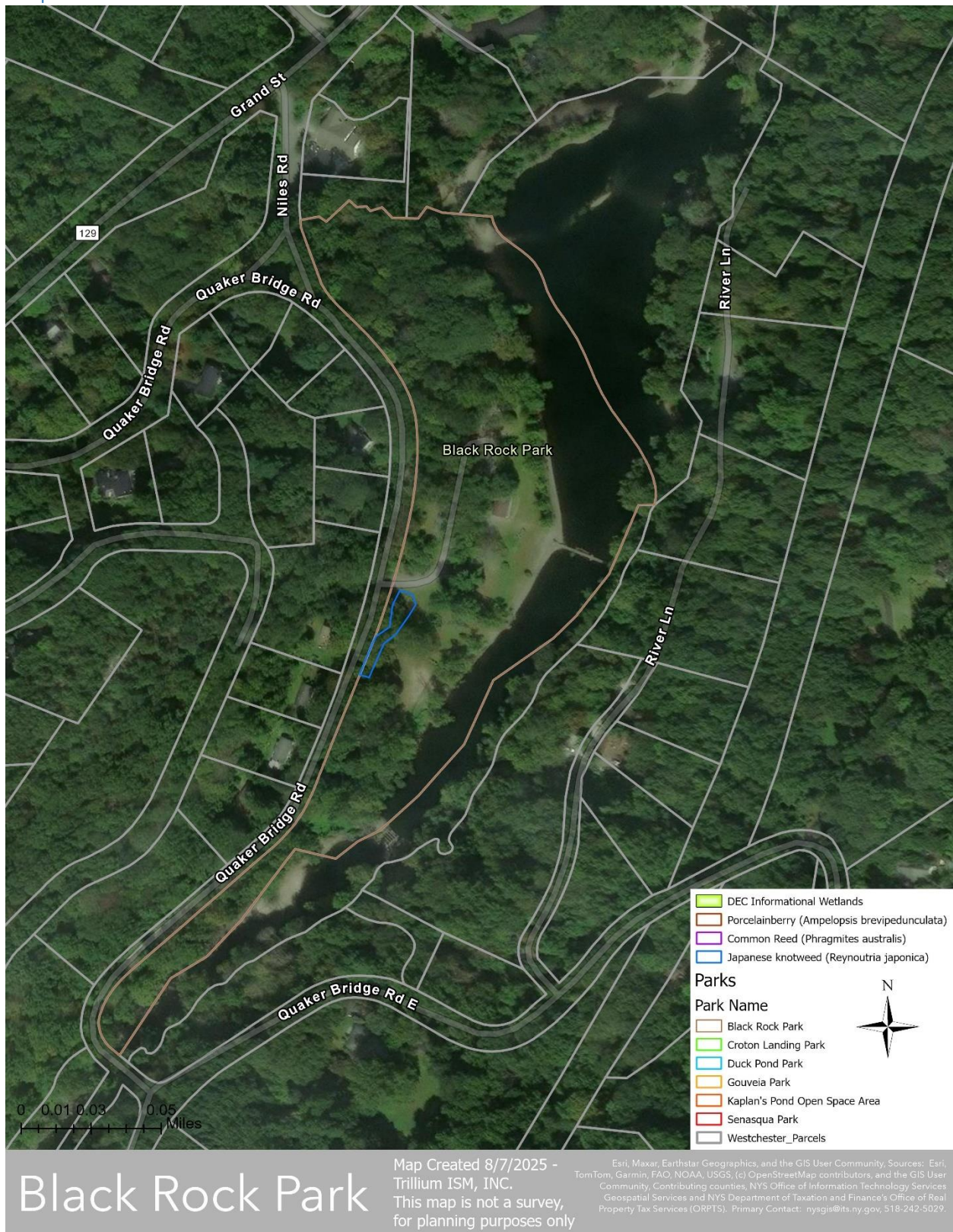
Monitoring and spot treatments will be required to ensure eradication. This is required not only due to the plant's persistence, but also by an existing seed bank. Follow-up treatments will be required to ensure eradication of each patch and monitoring will be required for at least three years after no re-growth is observed to confirm eradication.

Black Rock Park

Current Status

This infestation is vastly reduced yet continues to produce approximately a dozen stems and leaves each year originating from areas of the infestation that had been either mown or piled under leaves for the years prior to management initiation. These two actions, mowing and leaf piling, seem to have served to force the infestation to create large underground root reserves.

Map

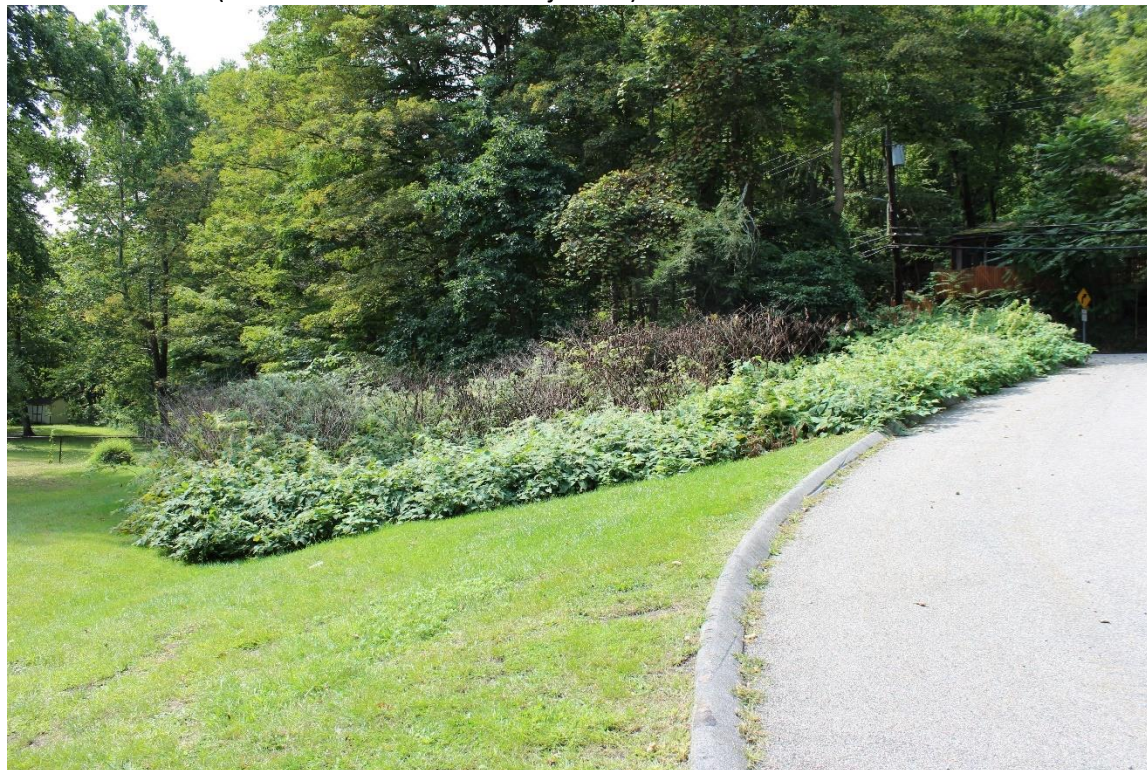


Management Record

Black Rock Park			
Japanese Knotweed Control Record			
2017	June 16 - Stem Injection of Rodeo, 80 oz product of product used	September 12 – Foliar application, 24 oz of product used	November 1 – Cutting of all dead material
2018	August 27- Foliar application of Rodeo at 2%. 4.5 oz of product used	September 27 – Foliar application of Rodeo at 2%. 3.2 oz of product used	
2019	May 24 – Survey for Knotweed	October 14 – Foliar application of Rodeo at 2%, 1.3 oz of product was used	November 4 – Monitoring site visit
2020	June 03 – Survey for Japanese knotweed	October 6 – Cut-stem treatment with Rodeo (100%); 3.75oz applied	
Summary of 2020: recently mown J. knotweed had re-grown very low. Plants were not large or robust but cut-stem treatment was still required.			
2021	May 20 – site visit: approximately 6 small clumps still remain. Recommend cut-stem treatment	July 27 – Cut stem with Rodeo (100%); 1.5oz applied	September 30 – Few small stems throughout and behind dogpark
2022	May 19 – Site visit: dozens of small stems growing through leaf litter. Most dense uphill from dog park fence.	October 18 – Cut-stem treatment with Round Up Custom (50%); 2oz applied	
2023	May 6 – survey for knotweed. Fewer stems were found growing, but they still persist throughout treatment area.	September 27 – Wiping treatment with Roundup Custom (2%); 0.34oz applied	
2024	August 8- follow up treatment for knotweed regrowth within mown areas. Foliar application of Roundup Custom (2%); 0.48 fl oz product applied.		

Photos

Initial infestation (2017 after summer stem injection)



2022 (represents current state of infestation)



Croton Landing Park

Current Status

Infestations at all locations have been either eliminated or vastly suppressed. The infestations of phragmites in the two southern wetlands have been eliminated and the larger infestation in the northern wetland continues to produce a small quantity of stems each year. Knotweed persists at some of the locations but has been largely eliminated. Porcelainberry has been suppressed and will never be eliminated due to the large seed sources from adjoining areas; climbing and matting vines are being targeted throughout the areas in an effort to maintain the character of the wetlands and adjoining spaces.

Map



Management Record

Croton Landing Park				
Phragmites Control Record				
2016	July 20 & 21 - Cutting	September 12-15 - Initial application of Rodeo. 101.8 oz of product was used	October 11 & 12 - Follow-up foliar application of Rodeo. 29.4 oz of product was used	
2017	May 15 & 16 – Cutting	August 18 – Loosestrife cut stump. Applied 87 mL of Rodeo	September 13 – foliar spray, cut stump and leaf wipe, applied 47 oz of Rodeo	November 1 – Cutting at dense regrowth areas
2018	August 27 - Foliar application, 8 oz of Rodeo. Cut-stem, 6 mL of Rodeo	August 28 – Foliar application, 24 oz of Rodeo was used (also treated porcelain berry)	September 27 – Foliar application, 24 oz of Rodeo. 6 mL of Rodeo used for cut-stem	
2019		October 14 – Cut-stem application, 1.7 oz 100% Rodeo	October 15 – Cut-stem application, 100% 5.7 oz Rodeo. Foliar application, 6.3 oz 2% Rodeo	November 4 – Foliar application, 0.5 oz 4% Rodeo
2020	June 03 - Survey	September 15 – Cut-stem treatment with Rodeo (100%); 3oz applied	October 07 – Cut-stem treatment with 13.5oz Rodeo (100%)	
2021	July 27 – Cut stem treatment in wetlands, 6oz of Rodeo (100%)	August 16 – Cut stem, volume included with porcelain berry	September 30 – Cut stem in wetlands 6oz Rodeo used (100%)	
2022	May 19- Phragmites stems overserved in 2 larger wetlands.	October 18 – Cut stem of phragmites in wetland basins 2 oz round up custom (50%) used.	October 20 – Cut stem and foliar application of phragmites along shore 4.56 oz of roundup custom used.	
2023	May 6 – few phragmites stems were observed in largest wetland, none in smaller two.	September 27 – Cut stem of phragmites, all wetland areas covered, 3 oz of Roundup Custom (50%) used		
2024	October 2-follow up treatment for phragmites regrowth via clip and drip with Roundup Custom (50%). 7.5 fl oz total chemical used for both phragmites and porcelain berry treatments.			
Japanese Knotweed Control Record				
2016	August 23 - Stem Injection. 32 oz of Rodeo used	September 12 - Foliar application, volume applied included in phragmites total		
2017	May 15 & 16 – Cutting	September 13 - Volume applied included in phragmites total		

2018	August 28 – Foliar application of Rodeo at 2% 8 oz of product was used		
2019		October 14 – Volume applied included in phragmites total	October 15 – Volume applied included in phragmites total
2020	June 03 - Survey	September 15 – cut-stem treatment with 2oz Rodeo (100%)	
2021	July 27 – Cut stem with Rodeo. Volume included with Phragmites	August 16 – Cut stem with Rodeo. Totals included with porcelain berry	September 30 – Cut stem with Rodeo. Volume included with phragmites total
2022	May 19- Site visit- Knotweed persistent in standard locations	October 18- Cut stem of knotweed. Cut plants bagged and removed. 4oz of Roundup Custom used (50%).	
2023	May 6 – site visit, knotweed persists	September 27 – foliar spray treatment of knotweed with 0.88 oz of Roundup Custom (2%)	
2024	October 2- Knotweed foliar spray treatment with 0.85 fl oz Roundup Custom (10%)		
Invasive Vine Control			
2018	September 19 – Cut-stem application of Accord XRT II at 100%. 40 mL was used	November 1 – Cut-stem application of Rodeo at 100%. 120 mL was used	
2019		October 25 – Foliar application, 24 oz 2% Rodeo. Cut-stem application, 2 oz 100% Rodeo	November 1 – Foliar application, 7.3 oz 2% Rodeo. Cut-stem application, 4 oz 100% Rodeo
2020	June 03 - Survey	September 09 – Cut-stem treatment with Rodeo (100%); 6oz applied	September 15 – Cut-stem treatment with 3oz Rodeo (100%) September 16 – Cut-stem treatment with 7oz Rodeo (100%)
Summary of 2020: Phragmites and J. knotweed both have reduced rates of regrowth compared to previous years. Porcelain berry was very dense but the climbers were aggressively treated and fruit production was substantially reduced.			
2021	May 20 – site visit: Very few phragmites stems and knotweed stems are evident, abundant p.berry seedlings are present in larger, northern, wetland. Older, climbing p.berry stems are removed from most of the wetlands, except for along the train tracks.	July 27 – Cut stem with Rodeo 100%. Volume included with Phragmites	August 16 – p.berry cut stem, 5oz used September 30 – p.berry cut stem, 6oz used
2022	May 19 -site visit: Porcelain berry prevalent.	October 18- Cut stem of Porcelain Berry vines growing up trees. 2 oz of roundup custom (50 %) used.	
2023	May 6 – site visit, Porcelain berry prevalent	August 10 – Cut stem of Porcelain berry vines around main wetlands. 5.5 oz of Rodeo (50%) used.	

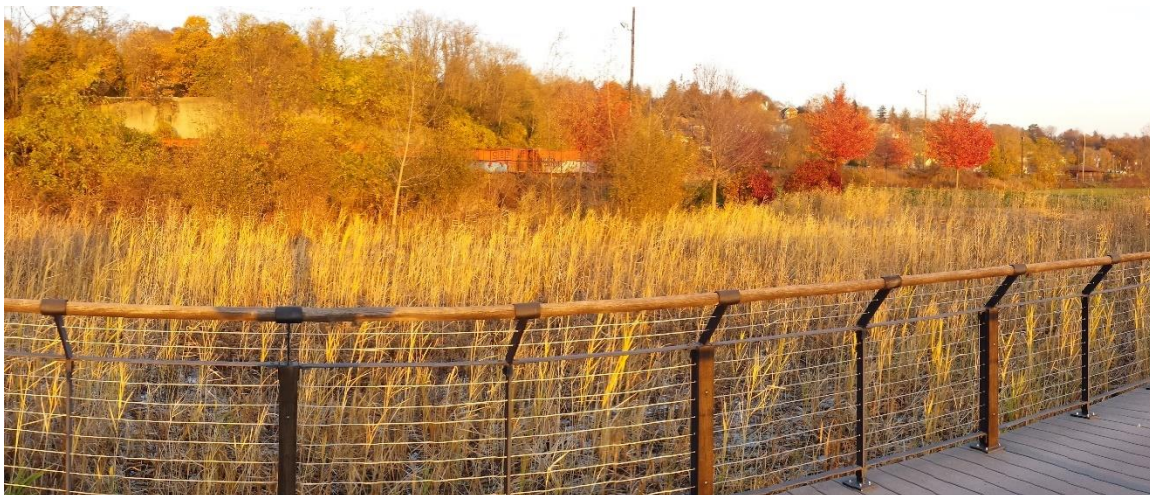


2024	October 2- Cut stem of Porcelain berry vines around main wetlands and vines climbing up trees. 7.5 fl oz of Roundup Custom (50%) used for both cut stem of porcelain berry and clip and drip for phragmites (see above).			
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Photos

2016





2022 Photos (represents current level of infestation)



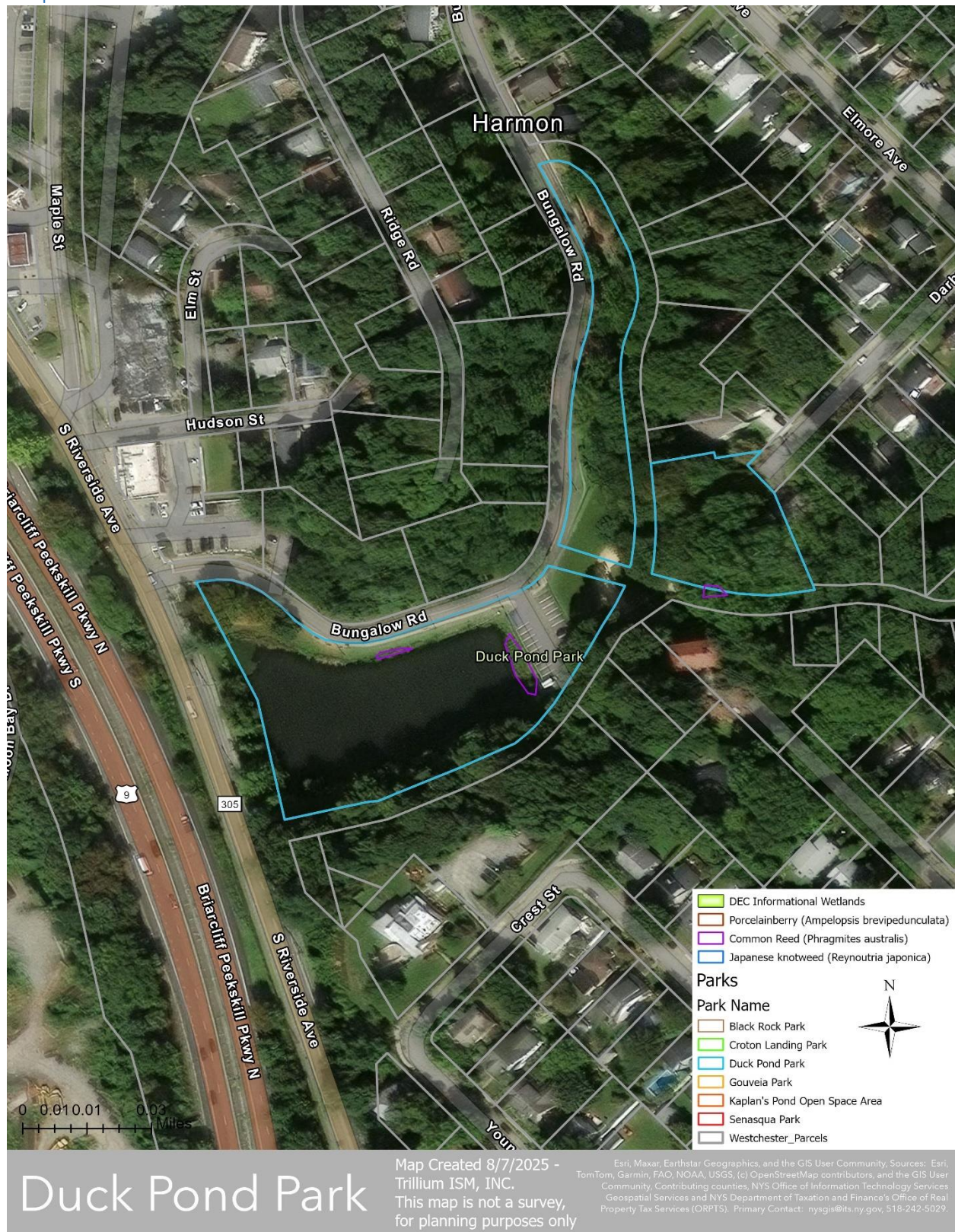


Duck Pond Park

Current Status

Phragmites at the original two locations have been eliminated. A third, western, location was added by the Parks Department in 2023; this infestation is mostly eliminated and had one stem growing during a spring 2025 survey.

Map



Management Record

Duck Pond Park			
Phragmites Control Record			
2016	July 20 & 21 – Cutting	September 12 & 15 - Initial foliar and cut-stem application of Rodeo. 5.3 oz of product was used	October 11 & 12 - Follow-up foliar and cut-stem application of Rodeo. 2.7 oz of product was used
2017	May 15 – Cutting	September 12 – foliar application of Rodeo, 0.67 oz of product was used	November 2 – Cutting of all treated area
2018	August 27 – Foliar application of Rodeo at 2%, 1.3 oz of product was used.	September 27 – Foliar application of Rodeo at 2%, 0.5 oz of product was used	
2019	May 24 – Survey	October 14 – Foliar application, 0.3 oz 2% Rodeo. Cut-stem application, 5 mL 100% Rodeo	November 4 – Foliar application, 0.25 oz 2% Rodeo
2020	June 03 - Survey	October 07 – Cut-stem application of 1oz Rodeo (100%)	
Summary of 2020: Patch on eastern edge of pond persists and was aggressively treated.			
2021	May 20 – Survey: no phragmites observed. Recommend planning on cut-stem to any plants that may emerge by the end of the season.	July 27 – No Phrag observed	September 30 – No Phrag observed
2022	May 19 – site visit: no phragmites observed.	October 18- Survey: no phragmites detected at this. Park should be checked yearly with intention to cut stem any individuals that emerge.	
2023	May 6 – no phragmites stems were observed along pond edge.	September 27 – 0.16 oz of Roundup Custom (2%) used treating phragmites via wiping (new area treated at basin NE of baseball field)	
2024	August 20- Phragmites was treated via a foliar treatment of Roundup Custom (2%). A total of 0.04 fl oz chemical was used. Note: some rhizomes growing in the stream channel behind dugout. No leaves present, battered by the stream flow. These were dug up as best as possible.		

Photos

2016



2022 (represents current state)



2023 (additional infestation behind baseball field)

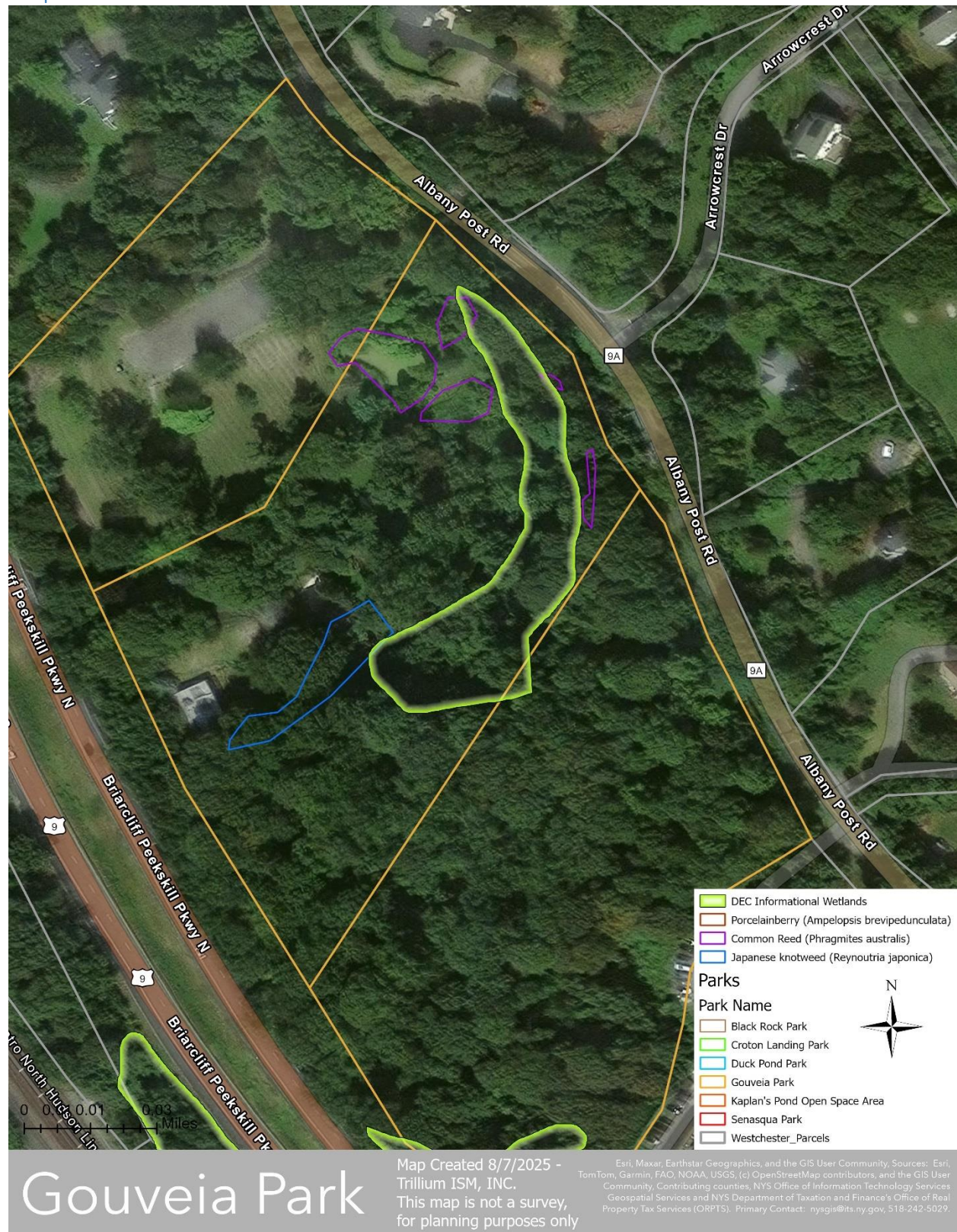


Gouveia Park

Current Status

Infestations at the initial locations have been eliminated except for one small group of stems found in the northeastern most area. In 2025 the Parks department has added a stand of knotweed to our management targets, this area will see it's initial treatment in 2025.

Map



Management Record

Gouveia Park			
Phragmites Control Record			
2017	May 15 – Cutting	September 12 – Foliar spray and leaf wiping, applied 9.3 oz of Rodeo	November 2 – Cutting of all treated area
2018	August 27 – Foliar application, 2 oz of Rodeo at 2%. Used 10 mL of Rodeo for cut-stem application	September 27 – Foliar application of Rodeo at 2%. 1.3 oz of product used	
2019	May 24 – Survey	October 14 – Foliar application, 4 oz 2% Rodeo. Cut-stem application, 0.2 oz 100% Rodeo	November 4 – Foliar application, 0.5 oz 2% Rodeo. Cut-stem 3 mL 100% Rodeo
2020	June 03 – Survey	October 06 – Cut-stem application with 2oz Rodeo (100%)	
Summary of 2020: Eight clumps persist but with noticeably reduced density and vigor.			
2021	May 20 – Site Visit: ~ 6 small patches observed.	July 27 – 5 stems, cut-stem with Rodeo (100%)	October 7 - 2 stems of Phragmites uphill from pond
2022	May 19- Site Visit: 1 group of phragmites observed by small stormwater pond. None detected around main pond.	October 18 – Approximately a dozen stems of phragmites were treated with roundup custom (50 %).	
2023	May 6- One group of phragmites observed by small stormwater pond. None detected around main pond.	September 27 – No treatment needed as no phragmites were observed.	
2024	August 20- One small clump of phragmites observed just above the mini catch basin. Treated with a total of 0.04 fl oz of Roundup Custom (2%) via foliar application.		

Photos

2017 Photos



2022 photo of pond (represents current status)



2025 Knotweed initial photo

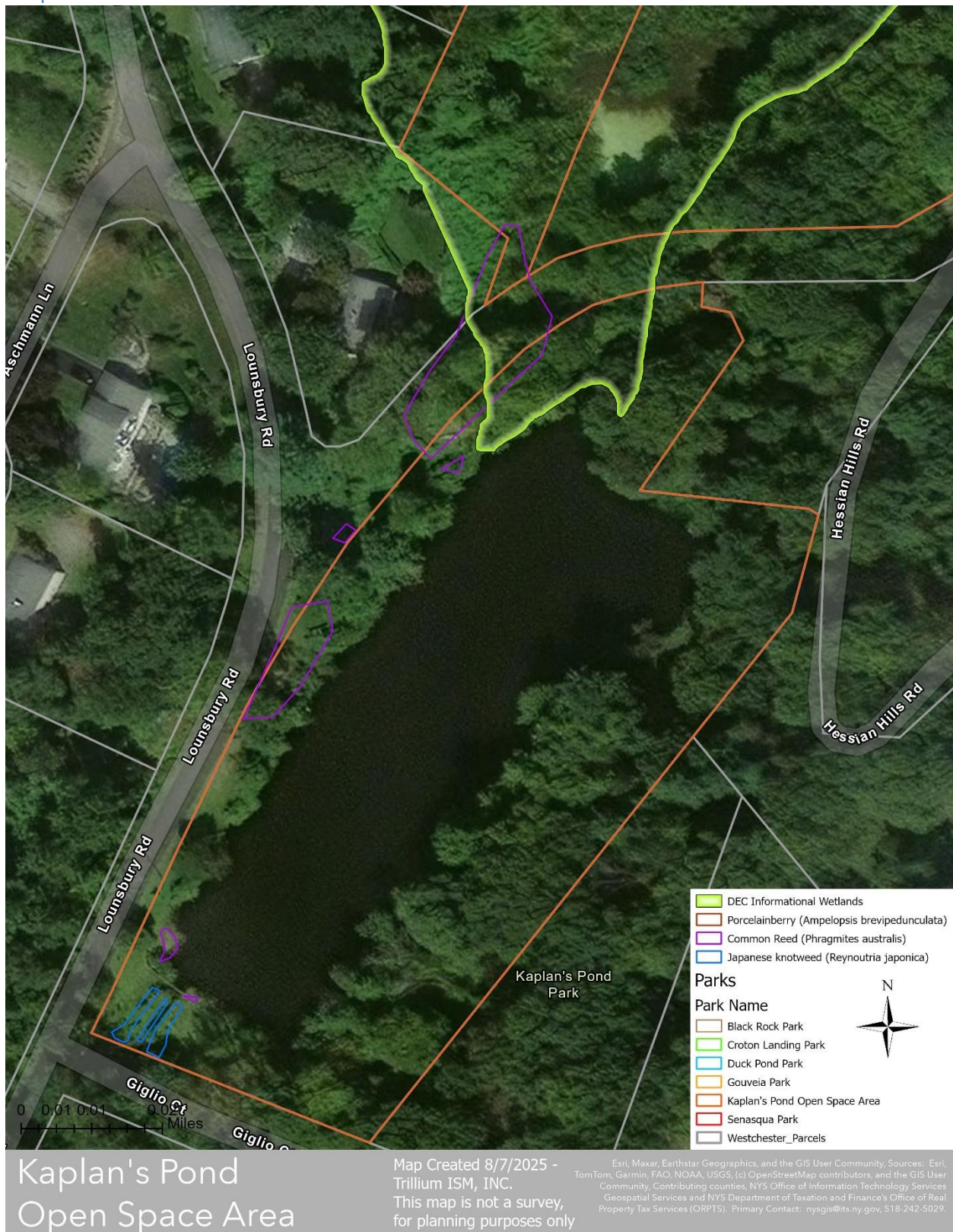


Kaplan's Pond Open Space Area

Current Status

Infestations of phragmites have likely been eliminated. No stems were observed in a 2025 survey. Knotweed persists in small amounts on the edges of the pond outlet and overflow area; likely due to the mowing required to maintain the overflow.

Map



Management Record

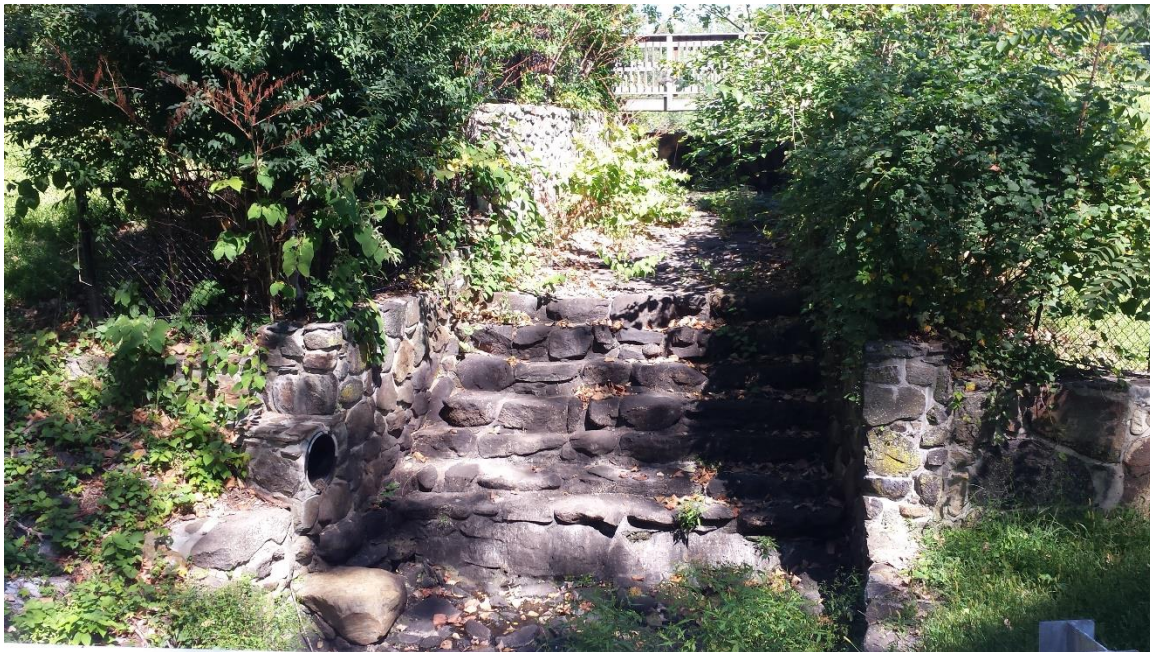
Kaplan's Pond Open Space Area			
Phragmites Control Record			
2016	July 20-21 – Cutting	September 12-15 - Initial foliar application of Rodeo. 22.7 oz of product was used	October 11-12 - Follow-up application of Rodeo, 5.4 oz of product was used
2017	May 15-16 – Cutting	September 12 – Foliar application, 3.3 oz of product was used	
2018	August 27 - Foliar application of Rodeo at 2%. 2.5 oz of product was used	September 27 – Follow-up foliar application of Rodeo at 2%. 0.75 oz of product was used	
2019		October 14 – Foliar application, 3 oz of 2% Rodeo	November 4 – Foliar application, 0.5 oz 4% Rodeo
2020	June 03 - Survey	October 06 – cut-stem application with .25oz Rodeo (100%)	
2021	September 30 - 2 stems by boat need treatment		
2022	May 19 – Site visit: No phragmites observed.	October 20 – Approximately 40 stems of phragmites were cut stemmed in the wetland with 1.5 oz Roundup Custom (50%)	
2023	May 6 –no phrag observed in wetland.	September 27 – One phragmites stem found, treated via wiping with Roundup Custom (2%), 0.064 oz of chemical used.	
2024	August 20- No phragmites observed.		
Japanese Knotweed Control Record			
2016	August 23 - Stem Injection of Rodeo. 12 oz of product was used	September 12 - Foliar application of Rodeo. Volume applied included in phragmites total	
2017	May 15 – Cutting	September 12 - Foliar application of Rodeo. Volume applied included in phragmites total	
2018	August 27 - Foliar application of Rodeo at 2%, 0.5 ounces of product was used	September 27 – Foliar application of Rodeo at 2%. Volume applied included in phragmites total	
2019	October 14 – Volume applied included in phragmites total	November 4 - Volume applied included in phragmites total	
2020	June 03 - Survey		
Summary of 2020: Japanese knotweed infestation near the spillway appears to have been eradicated. Phragmites in north marsh area continues to reduce, only four clumps were found.			
2021	May 20 – Survey: Conclusion that knotweed was eradicated appears to have been incorrect. Several stems have emerged in the spillway near the dam. A few phragmites stems were observed in the back of the northern wetland.	July 27 – Cut stem with Rodeo (100%); 1oz	September 30 – 2 stems, cut stem treated
2022	May 19 – Site visit: Knotweed observed at spillway, under shrubs and on both sides of the lawn.	October 20- Several large stems growing along spillway. Dozens of smaller stems found in the adjacent mown area. 2 oz of	

		Roundup custom (50%) was used.	
2023	May 6 – Knotweed observed at spillway	September 27 – Knotweed treated via wiping with Roundup Custom (2%), volume applied included in phragmites section	
2024	August 20- Low density knotweed treated with 0.08 fl oz of Roundup Custom (2%) via foliar application around shrubs and outflow.		

Photos

2016





2022 (represents current conditions)



Senasqua Park

Current Status

This infestation has been significantly suppressed; however, some stems persist due to the very rocky nature of the location and occasional brush clearing that has occurred to keep tree growth down.

Map



Management Record

Senasqua Park			
Japanese Knotweed Control Record			
2016	August 23 - Stem injection of Rodeo. 20 oz of product was used	September 12 - Foliar application of Rodeo. 3.5 oz of product was used	
2017	May 16 – Cutting	September 12 – foliar application of Rodeo, 2.3 oz of product was used	
2018	August 27 - Foliar application of Rodeo at 2%, 1 oz of product was used	September 27 – Foliar application of Rodeo at 2%, 4 oz of product was used	
2019	No action taken		
2020	June 03 - Survey	October 06 – Cut-stem application of 2.5oz Rodeo (100%)	
Summary of 2020: Small number of stems persist in the rip-rap.			
2021	May 20 Survey: noted two stems growing.	July 27 – Cut stem with Rodeo (100%); 1oz used	
2022	May 19- Site visit: several stems persist.	October 18 – less than 10 individuals growing. 0.5 oz of roundup custom (50%) used.	
2023	May 6 – few stems observed	September 27 – 3 knotweed individuals found and treated using 0.064 oz of Roundup Custom (2%) via wiping	
2024	August 20- No knotweed observed.		

Photos

2016



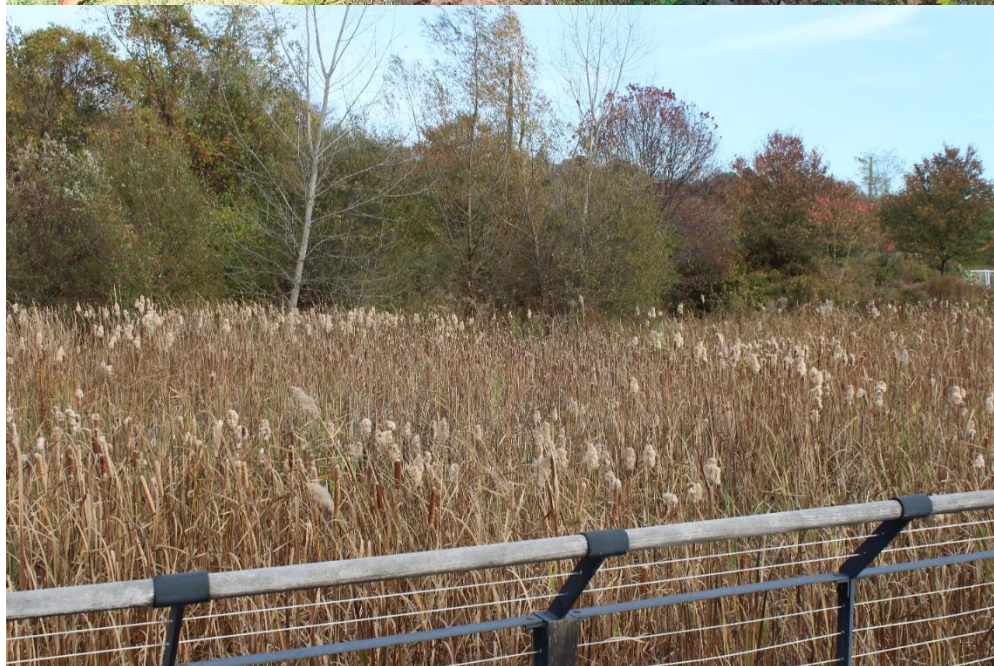
2021 site visit



Project Photos

2019 Croton Landing





Duck Pond





Kaplan's Pond





Black Rock Park





Gouveia Park



**Project Photos from 2020 site visit-
Black Rock Park –**



Croton Landing -





Duck Pond



Gouveia



Kaplan's Pond



Notes –

All plant material will be left to dry, piled in place, or disposed of on-site, except any material bearing viable seeds which will be bagged, and taken to a landfill by the Village if necessary.

All clothing, boots and equipment shall be clean upon entry to the site and prior to leaving the site to prevent invasive species propagule spread.

Prior to herbicide application, NYSDEC law requires all neighboring landowners within 100 feet of the treatment area be notified of the application.

It is important to note that even when infestations are eradicated, monitoring should continue for new introductions, particularly with regard to regionally widespread invasives. Invasive plant control requires long term management.

Plan Updates

August 2016 Plan Update –

In July 2016 Trillium observed infestations of porcelain berry (*Ampelopsis brevipedunculata*) at two of the parks covered by this document. Porcelain berry was found growing at Croton Landing (see updated map) and at Kaplan's Pond.

The porcelain berry infestation at Kaplan's Pond occurs within and adjacent to the northern patch of phragmites. This infestation extends well beyond the phragmites project area on to privately owned land. Eradication of porcelain berry at this location is not feasible given the large infestation growing on adjacent land, therefore porcelain berry will only be treated where it is growing alongside phragmites. Note, because porcelain berry is not a target species at Kaplan's Pond the map has not been updated.

The porcelain berry infestation at Croton Landing occurs on the edges and berms of the constructed wetlands in several locations. This infestation appears to be confined to small patches within the phragmites control area and should be targeted for eradication.

May 2017 Plan Update –

Inclusion of two parks into the plan; Gouveia Park and Black Rock Park.

Black Rock Park – Control of an infestation of Japanese knotweed growing at the entrance to the park. Control will follow the control method as outlined below, but will require an environmental assessment due to the proximity of the treatment area to groundwater protection zone 2. The proposed treatment area is over 1400 feet from the closest well, as determined by Village Engineer, Daniel O'Connor.

The infestation will require approximately 3.5 quarts of Rodeo for stem injection and foliar application. The active ingredient in Rodeo is glyphosate. Glyphosate has a low potential to contaminate groundwater due to its strong adsorptive properties¹.

Gouveia Park – Control of a phragmites infestation growing around the small pond (~3500 square foot pond) and along an old road cut. This project will require a wetland/watercourse permit from the

¹ <http://npic.orst.edu/factsheets/archive/glyphotech.html>
<http://pmep.cce.cornell.edu/profiles/extoxnet/dienochlor-glyphosate/glyphosate-ext.html>

Village Water Control Commission. Water flows into the pond through a pipe from the nearby stream. This pipe will need to be sandbagged closed to lower the water level of the pond to ensure no herbicide is applied directly to water in the pond.

December 2017 –

Treatments occurred as planned for the year. Permits for operations expired at the end of this season. A new permit will be required to continue work on the parks in 2018.

November 2018 –

Treatments occurred as planned. Permits for operations were renewed and will expire in 2020. See tables below for treatments and updates per park.

Croton Landing - Additional time was spent treating dense patches of porcelain berry and Asiatic bittersweet vines on the berm bordering the railroad. A cut-stem application was employed. Treatments of porcelain berry resumed in 2018 in an attempt to save desirable vegetation on the berm bordering the soccer field and fenceline. 'Windows' were cut in vines, to prevent them from growing up trees and shrubs. Herbicide (100% Accord XRT II as well as Rodeo) was applied to cut vine stumps, to kill the plant at the root and minimize the volume used.

June 2020 –

2019 treatments occurred as planned and target plant populations were, in general, reduced from previous years. Substantial time was spent in 2019 at Croton Landing dealing with porcelain berry. Porcelain berry is invading from edges of the park, the banks of the Hudson river, nearby roads (Rt. 9) and the railway, where significant sources of seed production are proving difficult to combat.

Site visits on 03 June 2020 to all parks found that target plant populations are at very minimal levels; with the exception of porcelain berry at Croton Landing. However, it should be noted that the Croton Landing porcelain berry has been significantly reduced by the effort over the past several years.

Furthermore, on the site visit, the invasive plant yellow-flag iris was noted invading the constructed wetlands at Croton Landing.

January 2021 –

2019 treatments have yielded positive results – all infestations show improvement in density reduction.

May 2021 –

A site visit was conducted on 5/20/21 to review the impact of the previous year's work. Specific observations are noted at each park's section. In general, all areas have reduced populations. A new permit will be needed to proceed with work in 2021.

May 2022-

A site visit was conducted on 5/19/22 to review the impact of the previous year's treatment. Observations and notes are recording under each parks section.

October 2022-

Treatments were carried out on October 18th and 20th. All parks were visited.

May 2023 -

A site visit was conducted on 5/6/23 to review the impact of the previous year's treatment.
Observations and notes are recording under each parks section.

August and September 2023 –

Treatments were carried out on August 10th and September 27th. All parks were visited.

August and October 2024-

Treatments were carried out on August 20th and October 20th. All parks were visited.

August 2025

Maps, outline and discussions were updated.

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