



2021 SLELO PRISM

Early Detection Program Report



2021 Highlights: Searched eleven Priority Conservation Areas including 166 Highly Probable Areas
Report Prepared by SLELO PRISM Staff: Zack Simek, Brittney Rogers, Robert Smith

Protecting our lands and waters through a changing climate must include a focus on invasive species prevention. Second to prevention is early detection – or the ability to detect new invasive species while in low abundance – which provides land managers an opportunity to limit the species spread and associated impacts to the environment, economy, or human health.



The SLELO PRISM Restoration and Resiliency Coordinators along with volunteers conduct invasive species surveys inside and outside of Priority Conservation Areas (PCA's) on a year-round basis. Various invasive species are more observable at different times of the year making seasonal early detection more efficient.



In 2020-2021 twelve sites with established hemlock stands were searched throughout the region, primarily searching for the presence of the invasive Hemlock Woolly Adelgid, results can be found in a report on the SLELO PRISM website.



The following report summarizes PCA's searched and findings by the Restoration and Resiliency Coordinators that occurred in 2021. This report may not include all invasive species present at a site, only what was found in 2021.

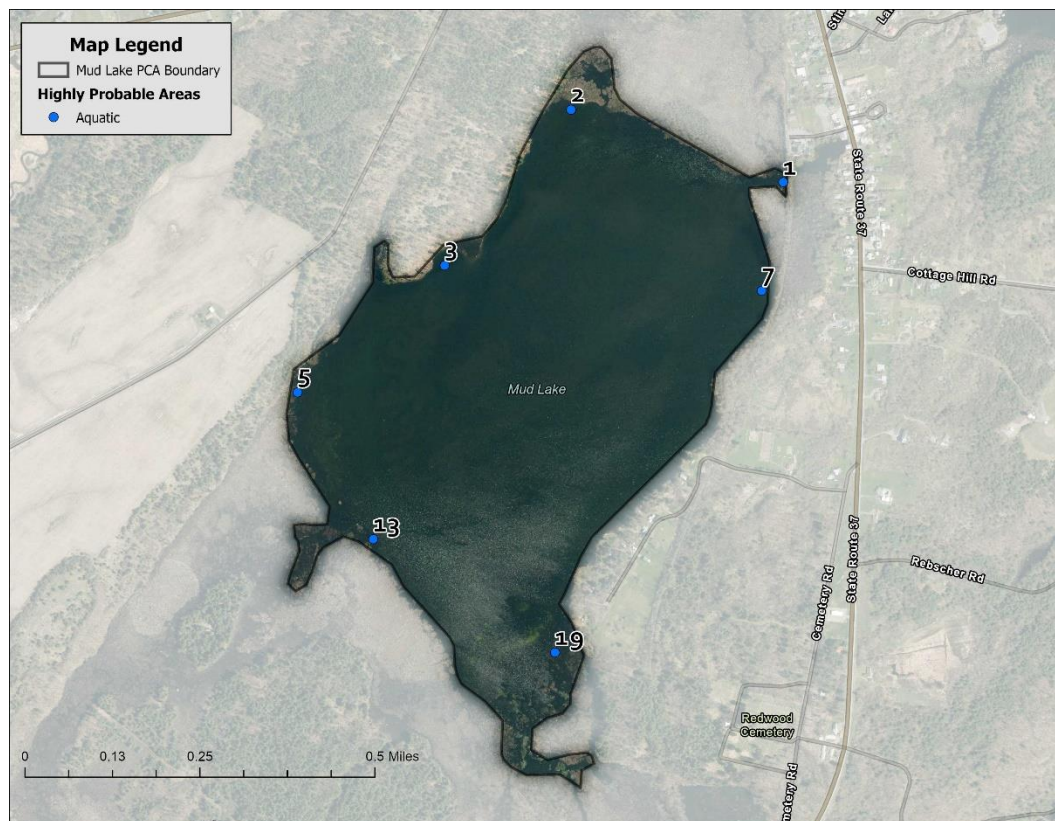
Executive Summary

During the 2021 field season, SLELO staff visited eleven Priority Conservation Areas (PCAs) and surveyed approximately 216 acres of 169 highly probable areas (HPAs) for aquatic and terrestrial invasive species. A total of 40 different species were found during the surveys. Overall, honeysuckle spp. was the most reported species, present at 42 different HPAs. Eurasian watermilfoil was the most frequently encountered aquatic invasive. No new infestations of tier 1 or 2 species were detected in 2021.

SLELO staff and contractors managed invasive species at eighteen PCAs in 2021. Invasive species managed included pale swallowwort, Japanese knotweed, phragmites, oriental bittersweet, and yellow iris. Management efforts ranged from pale swallowwort treatments at 64 HPAs across 13 PCAs to yellow iris being treated at 1 HPA on 1 PCA. Total area under management was 81 acres.

Mud Lake

Mud Lake PCA was surveyed in June 2021 by Brittney Rogers and Robert Smith. SLELO staff examined seven HPA's for aquatic invasive species (Map 1) using visual surveys and rake tosses. Data was recorded using iMapInvasive's Simple Aquatic Survey (SAS) Pro mobile monitoring tool.



Map 1. Map of Mud Lake HPAs examined by SLELO staff in 2021.

The following **Invasive Species** were found:

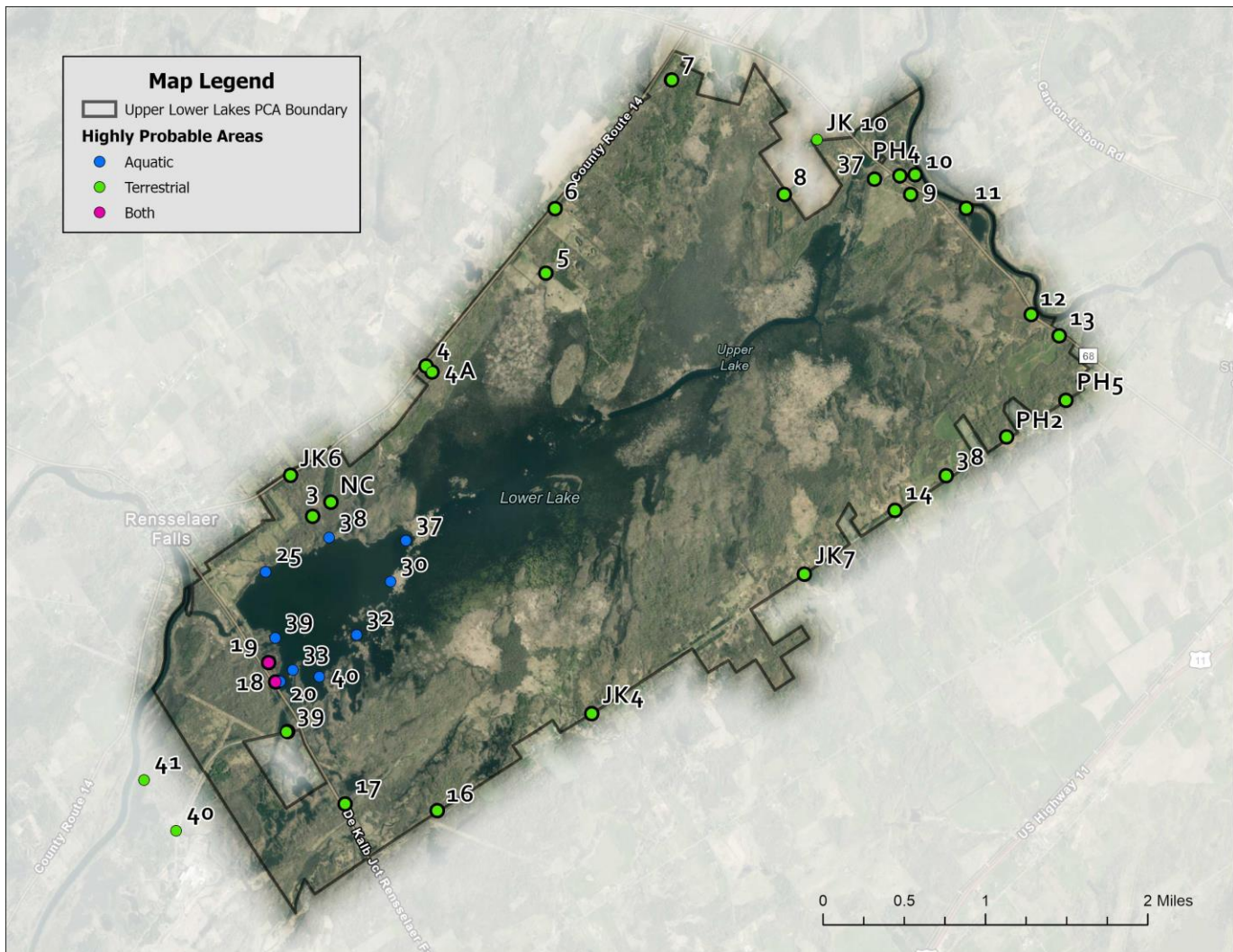
Invasive Species	Tier Ranking	HPA's Affected
Eurasian watermilfoil	4	4
European frog-bit	4	1
Banded mystery snail	*	3

* Species is not currently tier ranked

NO NEW TIER 1 OR TIER 2 SPECIES WERE DETECTED IN 2021

Upper and Lower Lakes WMA

Upper and Lower Lakes WMA PCA was surveyed for terrestrial invasive species in July-September and aquatic invasive species in October 2021 by Brittney Rogers, Robert Smith, and Megan Pistolese. SLELO staff performed visual surveys at ~22.77 acres of 27 terrestrial HPAs throughout the PCA. Nine aquatic HPAs on Lower Lake were examined by visual survey and rake toss (Map 2). Data was recorded using iMapInvasives SAS Pro and iMap Mobile Advanced (iMMA) monitoring tools.



Map 2. Map of Upper Lower Lakes HPAs examined by SLELO staff in 2021.

The following **Invasive Species** were found:

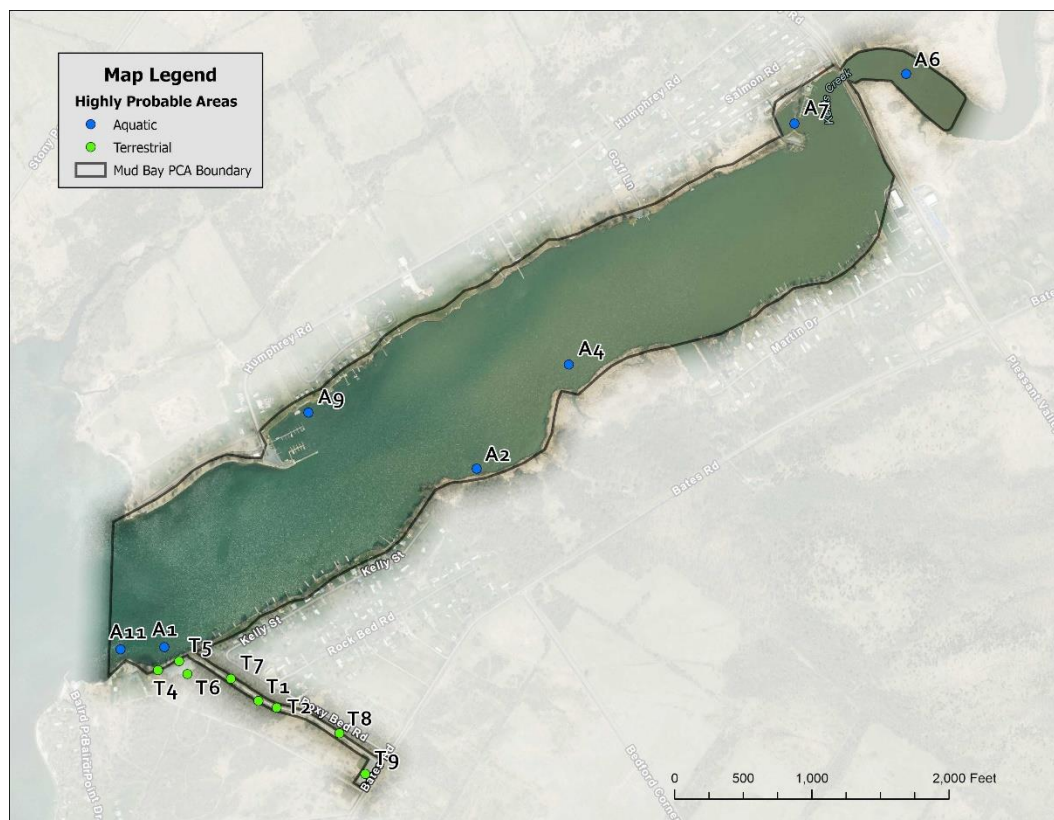
Invasive Species	Tier Ranking	HPA's Affected
Common buckthorn	3	18
Common reed grass	3	3
Japanese knotweed	3	6
Oriental bittersweet	3	8
Pale swallow-wort	3	1
Eurasian watermilfoil	4	7
European frog-bit	4	10
Honeysuckle spp.	4	18
Purple loosestrife	4	5
Spotted knapweed	4	3
Wild parsnip	4	17
Banded mystery snail	*	5
Black locust	*	1
Chinese mystery snail	*	1
Bittersweet nightshade	*	1
Common St. John's wort	*	2
Common valerian	*	1
Garlic mustard	*	2
Great mullein	*	2
Tufted vetch	*	5
White poplar	*	1

* Species is not currently tier ranked

NO NEW TIER 1 OR TIER 2 SPECIES WERE DETECTED IN 2021

Mud Bay

Mud Bay PCA was surveyed for terrestrial invasive species in August and aquatic invasive species in July 2021 by Brittney Rogers and Robert Smith. SLELO staff performed visual surveys at ~1.62 acres of eight terrestrial HPAs throughout the PCA. Seven aquatic HPAs were examined by visual survey and rake toss (Map 3). Data was recorded using iMapInvasives SAS Pro and iMMA applications.



Map 3. Map of Mud Bay HPAs examined by SLELO staff in 2021.

The following **Invasive Species** were found:

Invasive Species	Tier Ranking	HPA's Affected
Common buckthorn	3	6
Pale swallow-wort	3	3
Eurasian watermilfoil	4	7
Honeysuckle spp.	4	5
Purple loosestrife	4	1
Wild parsnip	4	1
Brittle naiad	*	1

* Species is not currently tier ranked

NO NEW TIER 1 OR TIER 2 SPECIES WERE DETECTED IN 2021

Lakeview Pond

Lakeview Pond, a waterbody within the Lakeview WMA PCA, was surveyed in July 2021 by Brittney Rogers and Robert Smith. SLELO staff examined two HPA's for aquatic invasive species (Map 4) using visual surveys and rake tosses. Data was recorded using iMapInvasive's Simple Aquatic Survey (SAS) Pro mobile monitoring tool.



Map 4. Map of Lakeview Pond HPAs examined by SLELO staff in 2021.

The following **Invasive Species** were found:

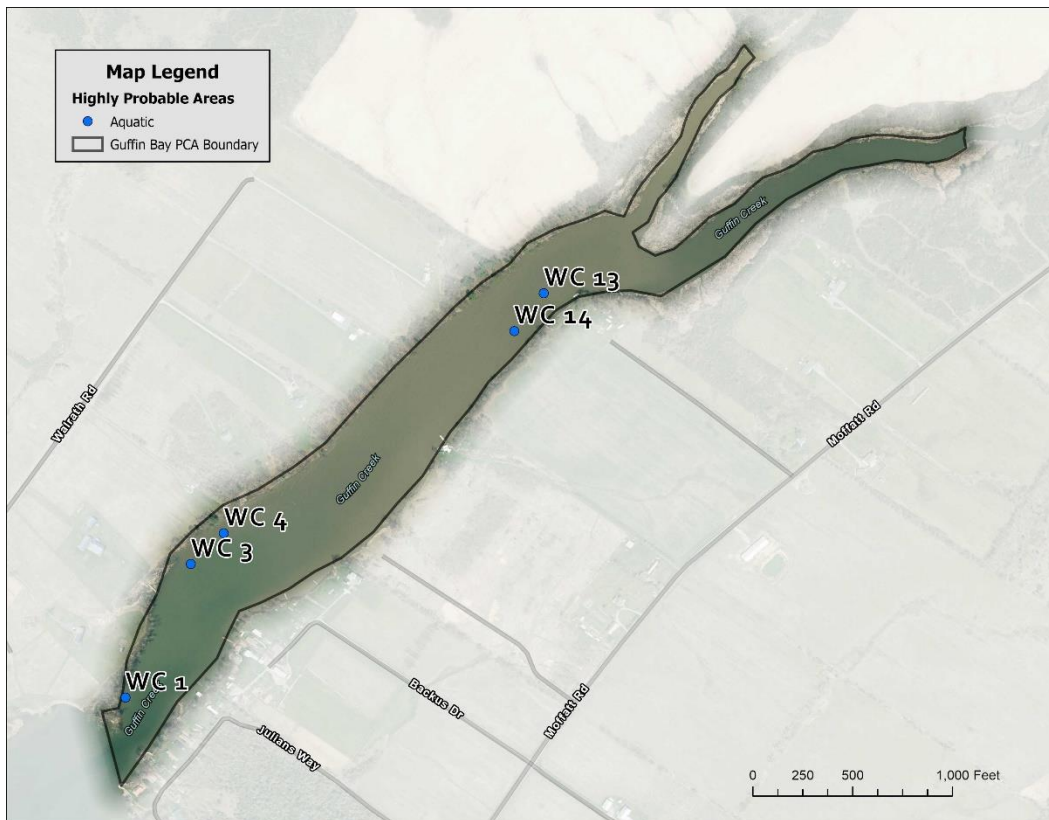
Invasive Species	Tier Ranking	HPA's Affected
Eurasian watermilfoil	4	2
European frog-bit	4	1
Brittle naiad	*	1

* Species is not currently tier ranked

NO NEW TIER 1 OR TIER 2 SPECIES WERE DETECTED IN 2021

Guffin Bay

Guffin Bay PCA was surveyed in August 2021 by Brittney Rogers and Robert Smith. SLELO staff examined seven HPA's for aquatic invasive species (Map 5) using visual surveys and rake tosses. Data was recorded using iMapInvasive's SAS Pro mobile monitoring tool.



Map 5. Map of Guffin Bay HPAs examined by SLELO staff in 2021.

The following **Invasive Species** were found:

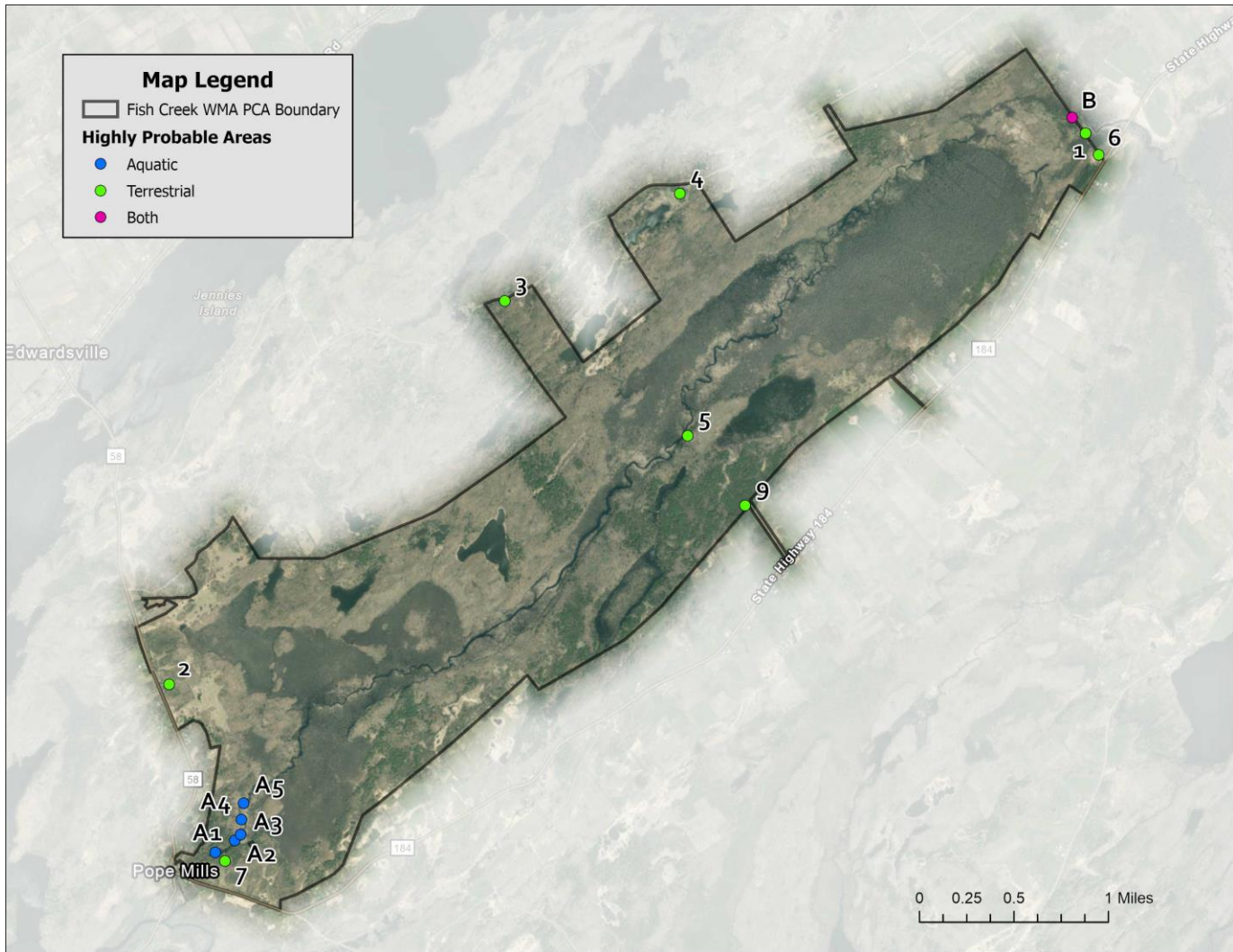
Invasive Species	Tier Ranking	HPA's Affected
Water chestnut	3	1
Eurasian watermilfoil	4	1
European frog-bit	4	1

* Species is not currently tier ranked

NO NEW TIER 1 OR TIER 2 SPECIES WERE DETECTED IN 2021

Fish Creek WMA

Fish Creek WMA PCA was surveyed for terrestrial invasive species in October and aquatic invasive species in August 2021 by Brittney Rogers and Robert Smith. SLELO staff performed visual surveys at ~12.25 acres of nine terrestrial HPAs throughout the PCA. Five aquatic HPAs were examined by visual survey and rake toss (Map 6). Data was recorded using iMapInvasives SAS Pro and iMMA applications.



Map 6. Map of Fish Creek WMA HPAs examined by SLELO staff in 2021.

The following **Invasive Species** were found:

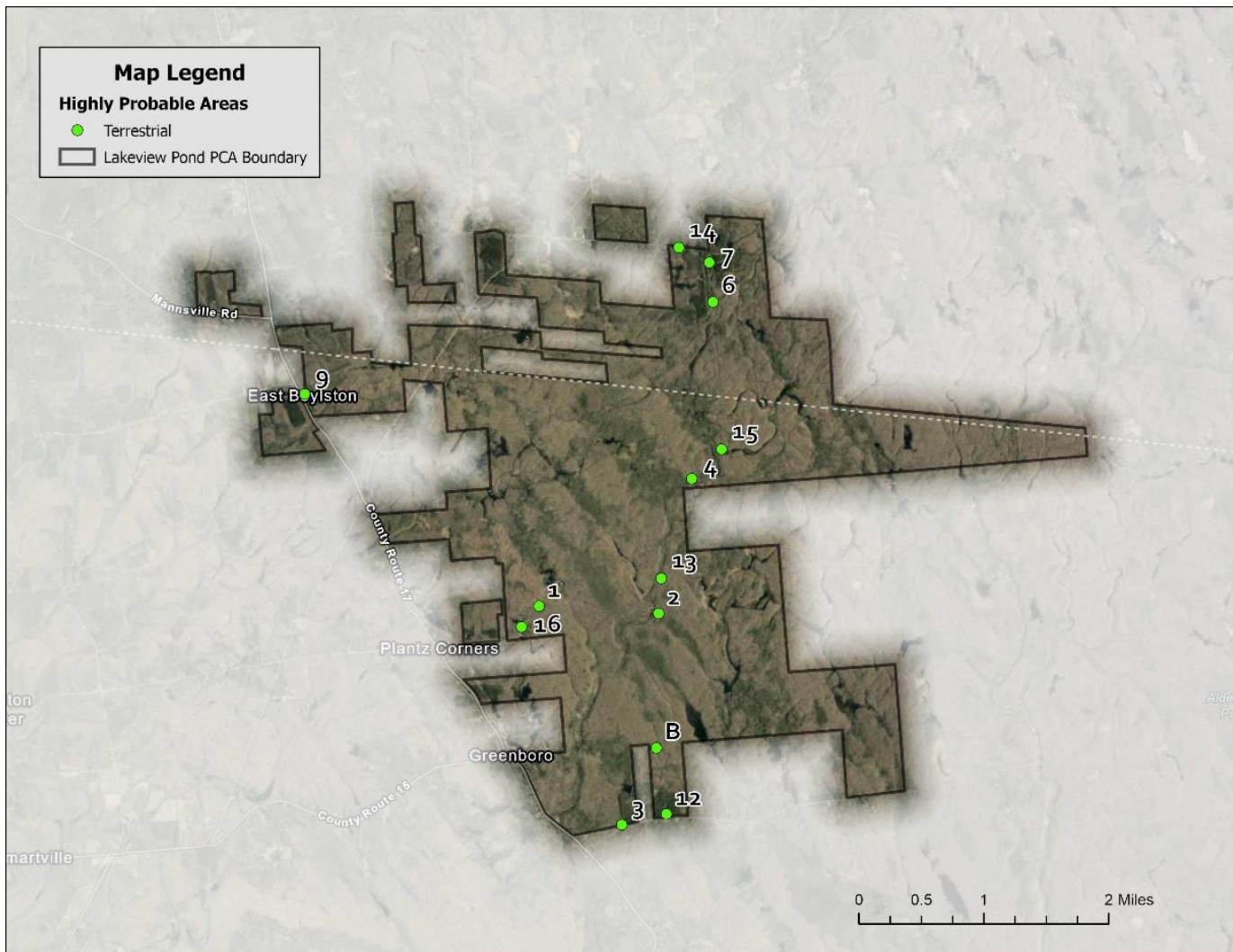
Invasive Species	Tier Ranking	HPA's Affected
Common buckthorn	3	5
Common reed grass	3	1
Glossy buckthorn	3	2
Pale swallow-wort	3	1
European frog-bit	4	6
Honeysuckle spp.	4	6
Purple loosestrife	4	4
Spotted knapweed	4	1
Wild parsnip	4	5
Colt's foot	*	1
Common mullein	*	1
Mugwort	*	1
St. John's wort	*	1
Tufted vetch	*	1
White poplar	*	1

* Species is not currently tier ranked

NO NEW TIER 1 OR TIER 2 SPECIES WERE DETECTED IN 2021

Little John WMA

Little John WMA PCA was surveyed in August - September 2021 by Brittney Rogers and Robert Smith. SLELO staff performed visual surveys at ~12.61 acres of 13 terrestrial HPAs throughout the PCA (Map 7). Data was recorded using the iMapInvasives iMMA application.



Map 7. Map of Little John WMA HPAs examined by SLELO staff in 2021.

The following **Invasive Species** were found:

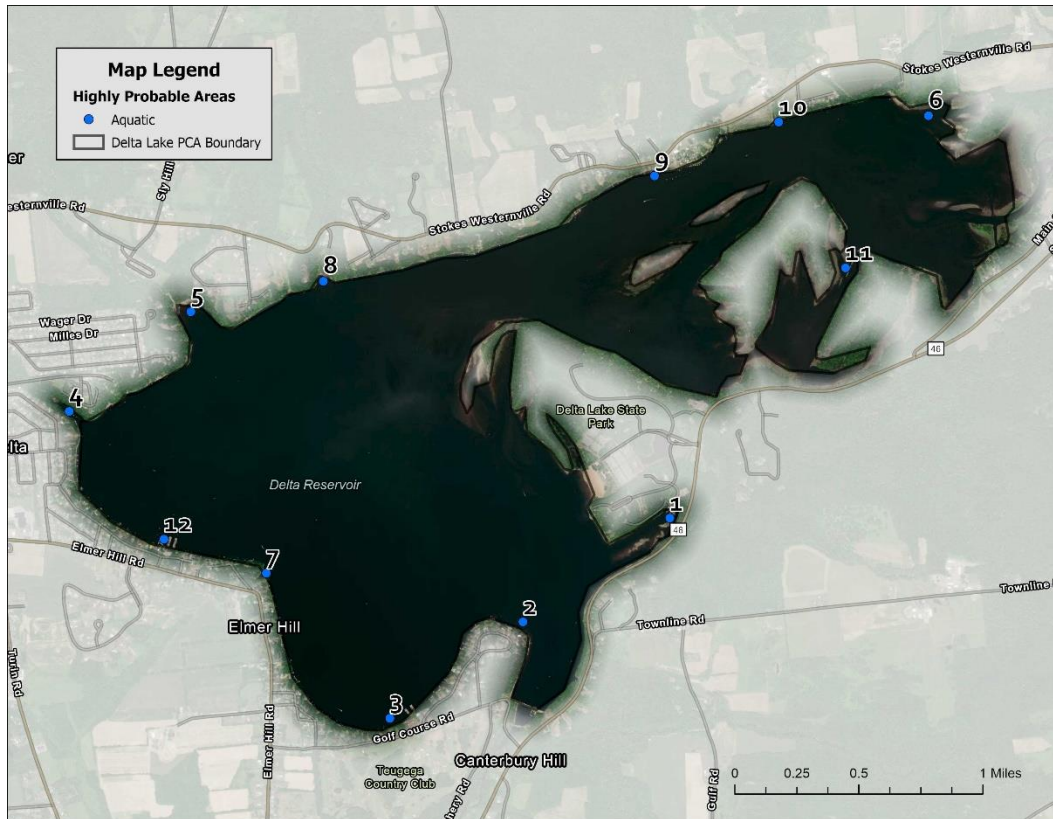
Invasive Species	Tier Ranking	HPA's Affected
Common buckthorn	3	4
Common reed grass	3	2
Glossy buckthorn	3	3
Honeysuckle spp.	4	1
Purple loosestrife	4	1
Spotted knapweed	4	2
Wild parsnip	4	7
Bishops' goutweed	*	1
Colt's foot	*	4
Common mullein	*	2
Common St. John's wort	*	4
Crabapple	*	1
Creeping buttercup	*	1
Eastern heliborne	*	1
Garlic mustard	*	5
Mugwort	*	4
Orange daylily	*	1

* Species is not currently tier ranked

NO NEW TIER 1 OR TIER 2 SPECIES WERE DETECTED IN 2021

Delta Lake

Delta Lake PCA was surveyed in August 2021 by Brittney Rogers and Robert Smith. SLELO staff examined 12 HPA's for aquatic invasive species (Map 8) using visual surveys and rake tosses. Data was recorded using iMapInvasive's SAS Pro mobile monitoring tool.



Map 8. Map of Delta Lake HPAs examined by SLELO staff in 2021.

The following **Invasive Species** were found:

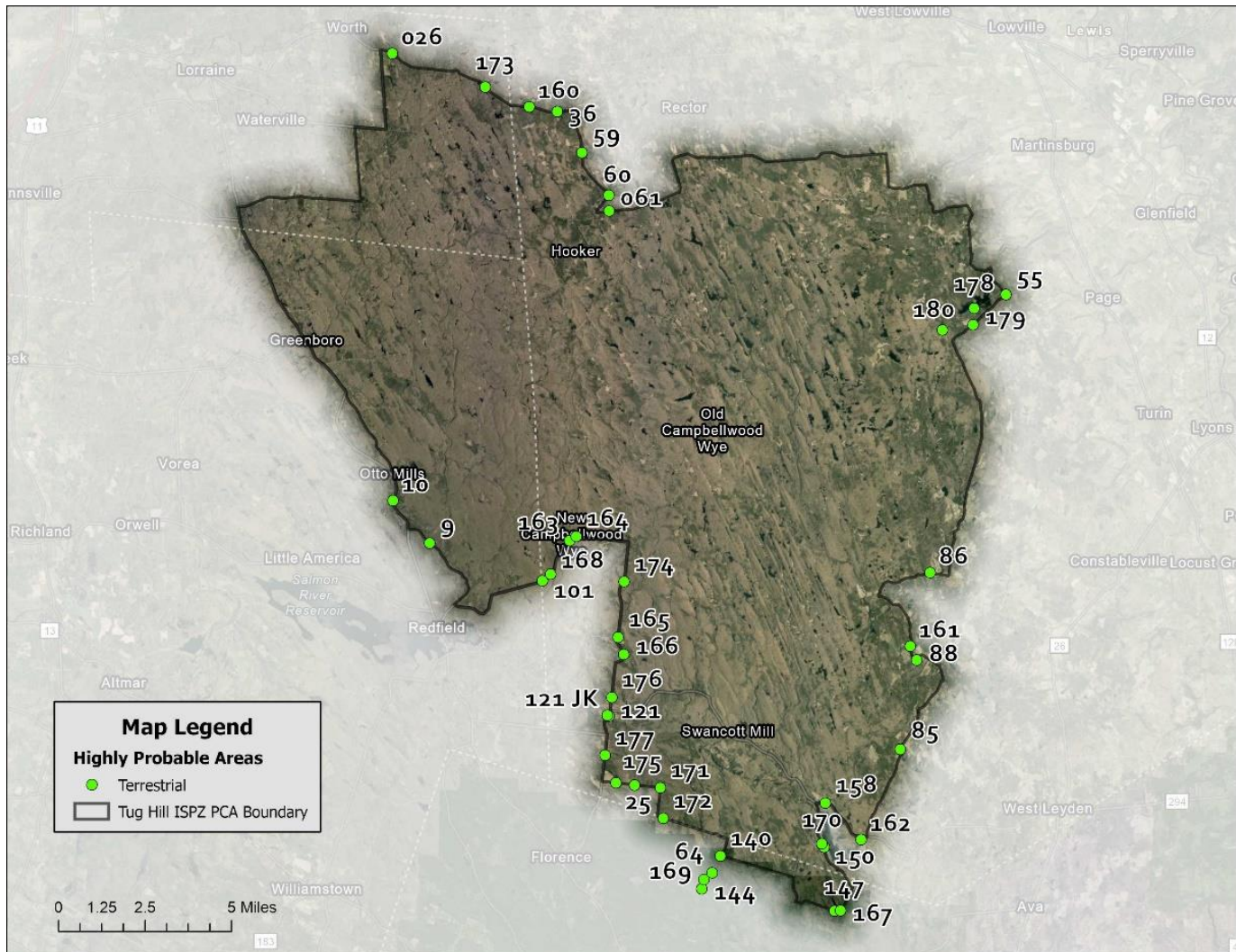
Invasive Species	Tier Ranking	HPA's Affected
Common reed grass	3	2
Eurasian watermilfoil	4	5
Purple loosestrife	4	1
Brittle naiad	*	8

* Species is not currently tier ranked

NO NEW TIER 1 OR TIER 2 SPECIES WERE DETECTED IN 2021

Tug Hill Invasive Species Prevention Zone (ISPZ)

Tug Hill ISPZ PCA was surveyed in September and October 2021 by Brittney Rogers and Robert Smith. SLELO staff performed visual surveys at ~27.34 acres of 42 terrestrial HPAs throughout the PCA (Map 9). Data was recorded using iMapInvasives iMMA application.



Map 9. Map of Tug Hill ISPZ HPAs examined by SLELO staff in 2021.

The following **Invasive Species** were found:

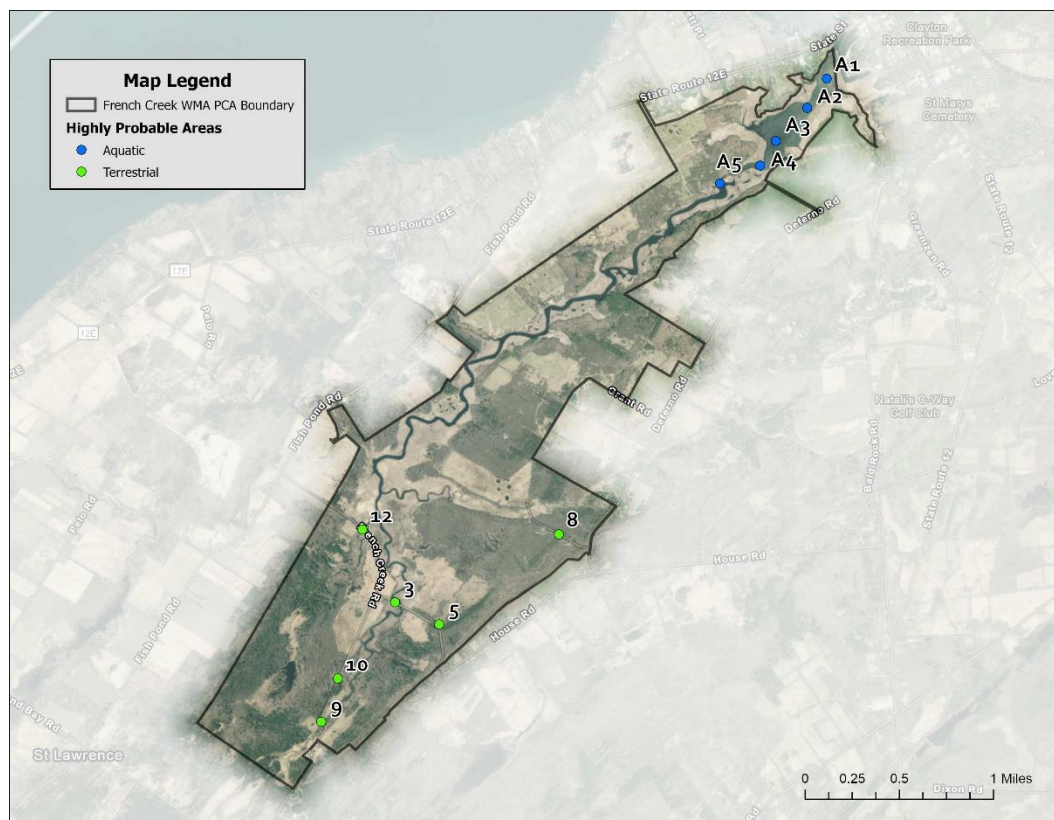
Invasive Species	Tier Ranking	HPA's Affected
Giant hogweed	2	1
Common reed grass	3	10
Japanese knotweed	3	11
Pale swallow-wort	3	1
Honeysuckle spp.	4	6
Purple loosestrife	4	2
Wild parsnip	4	6
Bishops' goutweed	*	4
Bittersweet nightshade	*	1
Black locust	*	1
Colt's foot	*	12
Common St. John's wort	*	3
Creeping jenny	*	1
European lily-of-the-valley	*	1
Garden stonecrop	*	1
Garlic mustard	*	3
Mugwort	*	3
Reed canary grass	*	1
Tufted vetch	*	1

* Species is not currently tier ranked

NO NEW TIER 1 OR TIER 2 SPECIES WERE DETECTED IN 2021

French Creek WMA

French Creek WMA PCA was surveyed in October 2021 by Brittney Rogers and Robert Smith. SLELO staff performed visual surveys at ~7.10 acres of six terrestrial HPAs throughout the PCA. Five aquatic HPAs were examined by visual survey and rake toss (Map 10). Data was recorded using iMapInvasives SAS Pro and iMMA applications.



Map 10. Map of French Creek WMA HPAs examined by SLELO staff in 2021.

The following **Invasive Species** were found:

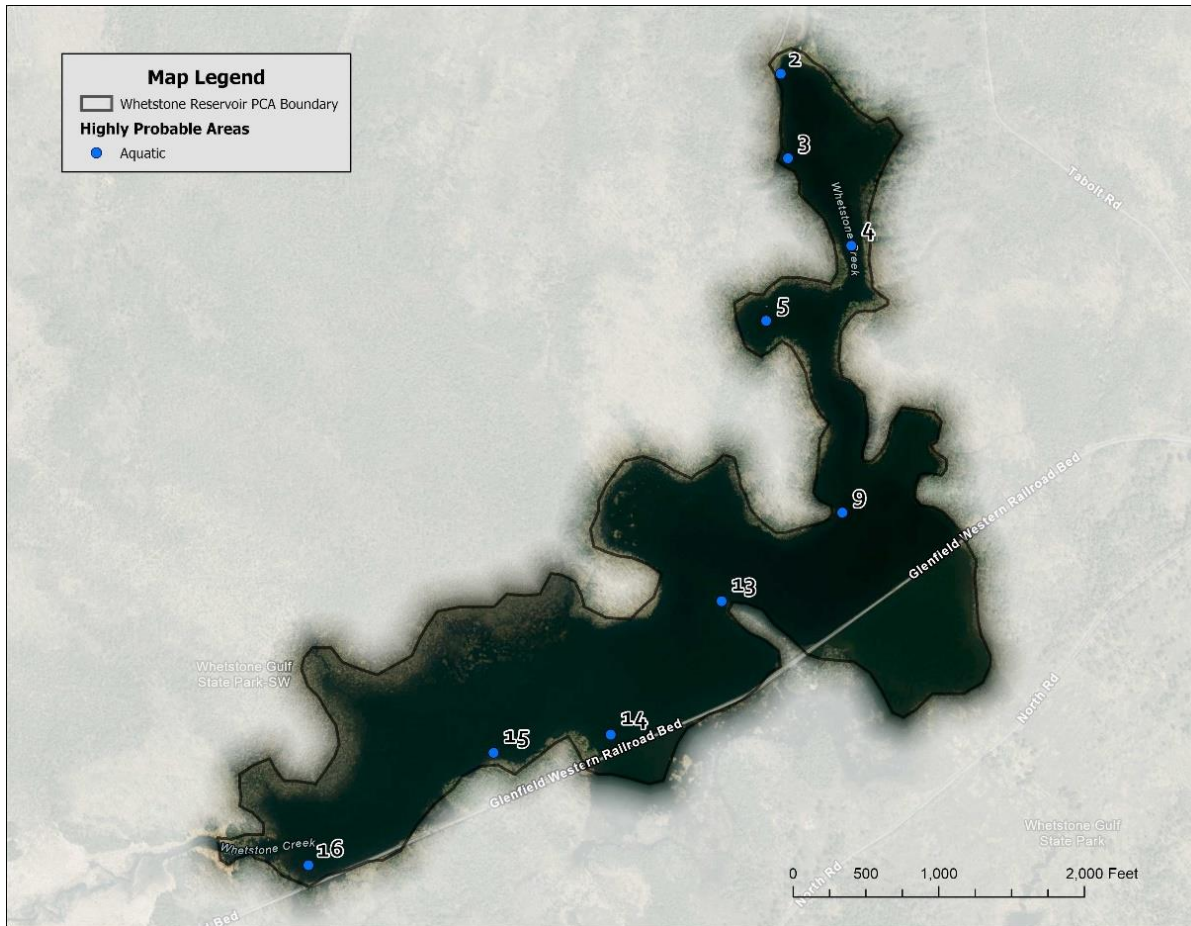
Invasive Species	Tier Ranking	HPA's Affected
Common buckthorn	3	4
Curly pondweed	4	1
Eurasian watermilfoil	4	3
European frog-bit	4	4
Honeysuckle spp.	4	6
Wild parsnip	4	3
Colt's foot	*	1
Ground ivy	*	1

* Species is not currently tier ranked

NO NEW TIER 1 OR TIER 2 SPECIES WERE DETECTED IN 2021

Whetstone Reservoir

Whetstone Reservoir PCA was surveyed in October 2021 by Brittney Rogers and Robert Smith. SLELO staff examined nine HPA's for aquatic invasive species (Map 11) using visual surveys and rake tosses. Data was recorded using iMapInvasive's SAS Pro mobile monitoring tool.



Map 11. Map of Whetstone Reservoir HPAs examined by SLELO staff in 2021.

NO INVASIVE SPECIES WERE DETECTED IN 2021