Flowering Rush Seedhead, Forest Lake, September 15, 2025

Flowering Rush Delineations, Treatments, and Assessments for Forest Lake, Washington County, Minnesota, 2025

Pre-Treatment Delineation: July 11, 2025
Spot Treatment: August 13, 2025
Pre-Treatment Delineation and Assessment: September 15, 2025
Spot Treatment: September 29, 2025
Post Treatment Assessment: October 24, 2025

Prepared for:
Comfort Lake - Forest Lake Watershed District

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Flowering Rush Delineations, Treatments, and Assessments For Forest Lake, Washington County, Minnesota, 2025

Summary

Two flowering rush spot treatments occurred in 2025. On July 11, 2025, a flowering rush delineation found 67 sites of flowering rush covering about 0.14 acres. A diquat (Tribune) spot treatment of small individual patches that were closer to the shoreline were treated on August 13, 2025. Another round of spot treatment was conducted on September 29, 2025.

A flowering rush assessment and new delineation survey were conducted on September 15, 2025 and flowering rush was found at 51 sites with an estimated area of flowering rush coverage of 0.19 acres. Spot treatment using diquat (Tribune) was conducted on September 29, 2025. A flowering rush assessment was conducted on October 24, 2025. Flowering rush growth was reduced to 28 sites.

In Forest Lake, the total area of flowering rush has decreased from 7.8 acres in 2014 to 0.06 acres in October of 2025 indicating the flowering rush control program is reducing the distribution and density of flowering rush (Figure 1). Although the estimated total area of flowering rush was around 0.06 acres in October of 2025, flowering rush regrowth is expected in 2026. Continuing to control areas of flowering rush should reduce abundant regrowth but it appears eradication will be a challenge.

The steps for controlling flowering rush in the next few years include the following three methods.

1. Treat large continuous patches of flowering rush with diquat and spot treat small patches.
2. Treating small patches should occur 2 or 3 times/season.
3. Continue to remove flowerheads before seeds are produced which should help reduce new sites of flowering rush colonization.

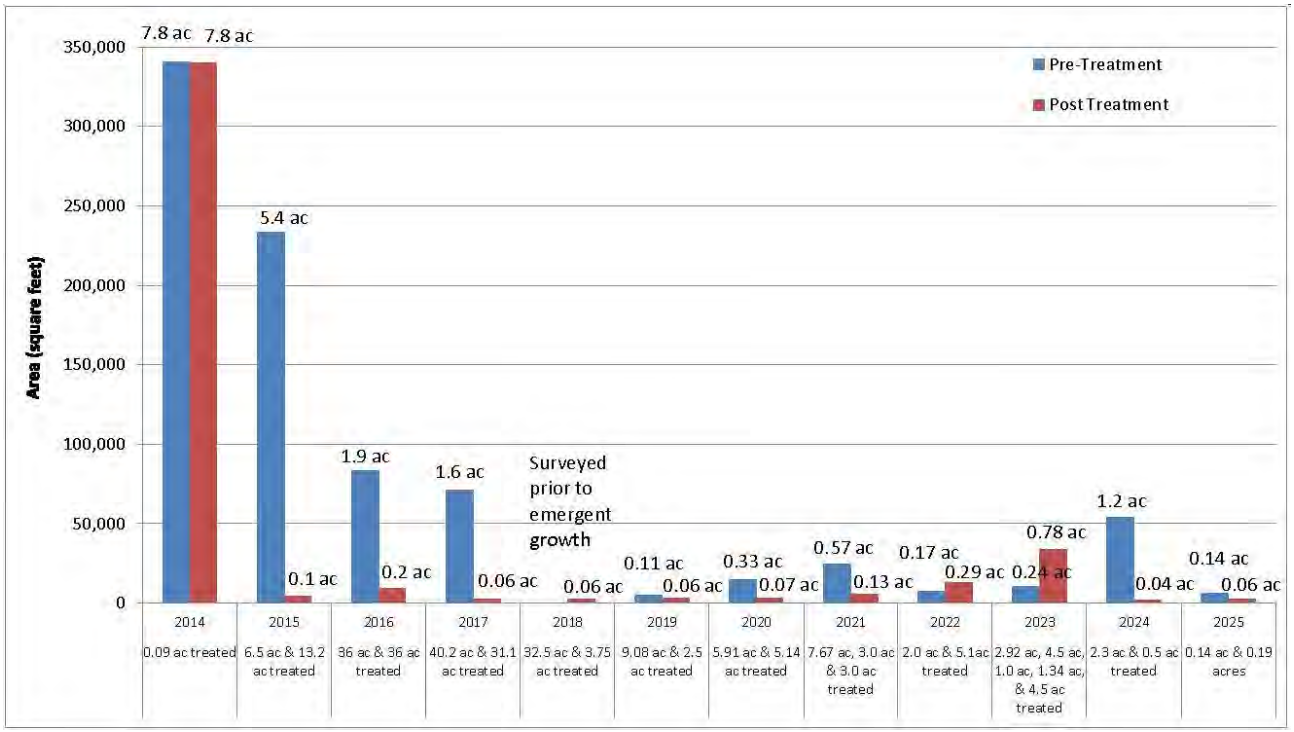
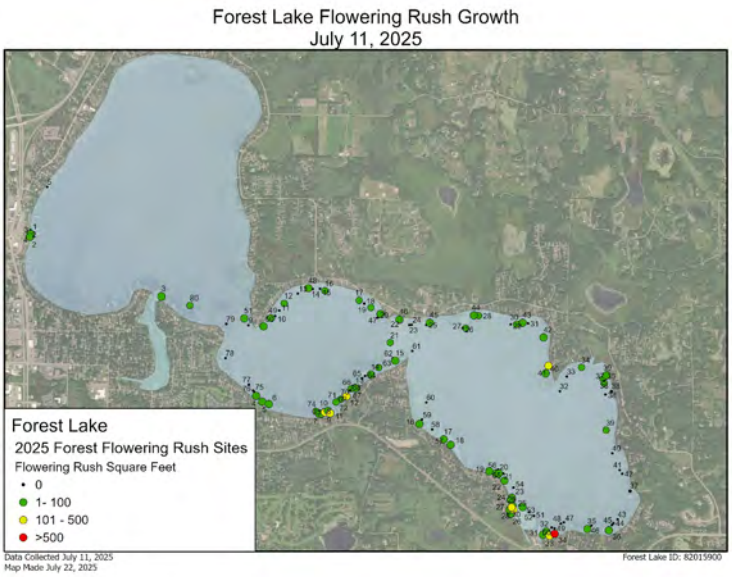


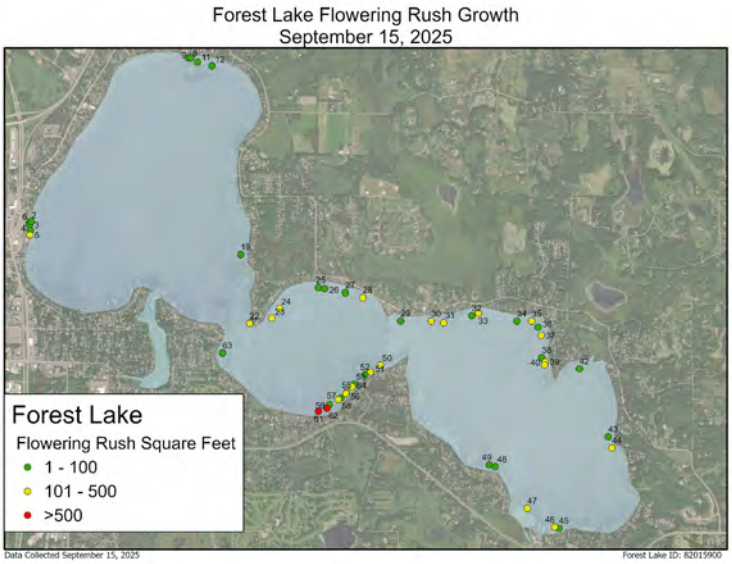
Figure 1. Flowering rush areas from 2014 through 2024 for pre-treatment and post treatment conditions.

Flowering Rush Delineation and Treatments in 2025



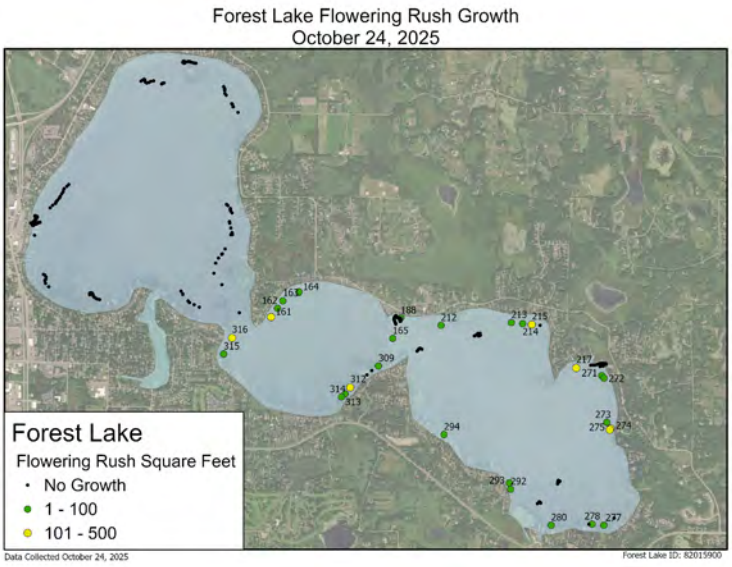
July 11: Delineation

1st Spot Treatment: August 13 (Diquat)



September 15: Delineation/Assessment

2nd Spot Treatment: September 29 (Diquat)



October 24: Assessment

Overview of Flowering Rush Delineations, Treatments, and Assessments for Forest Lake, in 2025

Project Approach: Flowering rush (*Butomus umbellatus*) is an invasive species and is actively expanding in the United States. It has spread from a limited area around the Great Lakes and the St. Lawrence river to sporadic appearances in the northern U.S. and southern Canada. Populations in the eastern U.S. produce seeds. Only one Minnesota population (Forest Lake, Washington County) produces viable seeds. Otherwise, flowering rush reproduces by vegetative spread from its rootstock in the form of rhizome buds. Both seeds and rhizome buds are dispersed by water current.

A management and control program for flowering rush in Forest Lake was initiated in 2014 and has continued through 2025.

For the delineation and assessment of Forest Lake flowering rush, 2 observers in a boat traveled the entire lake nearshore area and searched for emergent flowering rush stems. A record of the occurrence of all lowering rush sites since 2014 has been recorded by GPS and was placed on the lake map of the Lowrance HDS7 sonar unit. During the survey, a flowering rush occurrence was either associated with a previous point or was assigned a new GPS point if it had not previously been observed at that location. For each flowering rush observation site, an estimated square footage of emergent growth was recorded.

July 11, 2025 - Delineation
- A total of 67 flowering rush sites were observed.
- A total area of flowering rush was estimated at 5,970 square feet (0.14 acres)

August 13 (spot treatment)

September 15, 2025
- A total of 51 flowering rush sites were observed.
- A total area of flowering rush was estimated at 8,070 square feet (0.19 acres)

September 29 (spot treatment)

October 24, 2025
- A total of 28 flowering rush sites were observed.
- A total area of flowering rush was estimated at 2,670 square feet (0.06 acres)

Table 1. Summary of delineations and herbicide treatments for flowering rush in 2025

	Delineations		Treatment
	Flowering Rush Sites	Total Area	Diquat* (acres)
July 11	67	5,970 sq ft (0.14 ac)	
August 13			0.14 spot
September 15	51	8,070 sq ft (0.19 ac)	
September 29			0.19 spot
October 24	28	2,670 sq ft (0.06 ac)	

*Diquat - brand name was Tribune

Review of Flowering Rush Treatments and Results for 2014-2025

A summary of flowering rush treatments and results over the previous 12 years are shown in Table 2. Flowering rush has decreased from 7.8 acres in 2014 to 0.06 acres in October of 2025 roughly, a decrease of about 99% from 2014. Regrowth has occurred at a number of persistent areas located in 2nd and 3rd lakes since 2014.

At the end October of 2025, there were a total of 28 flowering rush sites identified after the September treatment. Often a flowering rush site is only 10 stems or less. Although large beds of flowering rush of over 1,000 square feet occur, they are rarely found after the second treatment.

Although a total of 475 flowering rush sites have been identified over the last 12 years, only 6% of the sites had flowering rush growth on the October 24, 2025 assessment survey.

It appears flowering rush does not sprout every year at every site, however, it apparently continues to produce new growth at new and former sites as the summer progresses. Therefore a delineation in July will not delineate all the flowering rush for the summer. Additional growth will occur in August and September.

Although new flowering rush sites are found annually, the number of new flowering rush sites per year has averaged 37 sites per year for 2015-2024 (new sites were not noted in 2025). The number of new sites found annually have decreased since flowering rush flowerheads have been removed from 2017-2024. Prior to flower and seedhead removal, new flowering rush sites averaged 52 new sites per year in 2015 and 2016.

Table 2. Summary of flowering rush sites and areas for 2014-2025.

	All Known Flowering Rush Sites at Start of the Year	New Sites	Total Known Flowering Rush Sites	Flowering Rush Sites with Plants		Flowering Rush (acres)		Average Size of Flowering Rush Patch (square feet)		Percent of All Previously Recorded Sites with Flowering Rush		Acres of Flowering Rush Treated per Application	Total Acres Treated
				start	end	start	end	start	end	start	end		
2014	--	--	142	--	142	7.8	7.8	--	2393	--	100%	0.9 ac	0.9
2015	142	72	214	107	120	5.4	0.1	2198	36	75%	56%	13.2 ac (2 times)	26.4
2016	214	32	246	182	81	1.9	0.2	455	107	87%	33%	36 ac (2 times)	72.0
2017	246	4	250	159	15	1.6	0.06	438	174	65%	1%	40.2 ac and 30.1 ac	70.3
2018	250	ND	250	ND	108	ND	0.06	ND	24	ND	43%	32.5 ac and 3.8 ac	36.3
2019	250	37	287	83	76	0.11	0.06	58	34	33%	27%	9.1 ac and 2.5 ac	11.6
2020	287	24	311	145	53	0.33	0.07	100	53	47%	17%	5.91 ac and 5.14 ac	11.1
2021	311	62	373	75	65	0.57	0.13	329	88	20%	17%	7.67 ac, 3.0 ac, 3.0 ac	13.7
2022	373	36	409	35	25	0.17	0.29	206	530	9%	3%	2.0 ac, 5.1 ac	7.1
2023	409	50	459	84	160*	0.24	0.78*	132	297*	20%	35%	8.4 ac, 5.8 ac	14.26
2024	458	16	475	124	19	1.2	0.04	204	138	27%	4%	1.2 ac, 0.47 ac	1.67
2025	475			67	28	0.14	0.06	89	95			0.14 ac, 0.19 ac	0.33

*160 flowering rush sites and average from September 27, 2023, prior to the last October 10, 2023 treatment.

Flowering Rush Response to Treatments from 2014-2025

Summary of flowering rush areas before and after treatments for 2014 through 2025 are shown in Tables 3 and 4.

Table 3. Summary of flowering rush treatments and resulting flowering rush remaining at the end of the summer from 2014-2025.

	Initial Flowering Rush Area (acres)	TREATMENTS						End of Season		
		1st Treatment (ac)	2nd Treatment (ac)	3rd Treatment (ac)	4th Treatmetn (ac)	5th Treatment (ac)	Total Acres Treated	Flowering Rush Area (acres)	Flowering Rush Sites	Flowering Rush Average Individual Size (sf)
2014	7.8	0.09	--				0.09	7.8*	142	2,392
2015	5.4	6.5	13.2				19.7	0.1	120	37
2016	1.9	36	36				72	0.2	81	113
2017	1.6	40.2	31.1				71.3	0.06**	15	177**
2018	no emergent FR	32.5	3.75				36.25	0.06	108	25
2019	0.11	9.08	2.5				11.58	0.06	76	37
2020	0.33	5.91	5.14				11.05	0.07	53	60
2021	0.57	7.67	3.0	3.0			13.67	0.13	65	87
2022	0.17	2.0	5.1				7.1	0.29	25	530
2023	0.24	2.92	4.5	1.0	1.34	4.50	14.26	0.78	160	297
2024	1.2	1.2		0.47			1.67	0.04	19	138
2025	0.14	0.14	0.19				0.33	0.06	28	95

*Treatment was a trial on a small area to test herbicide effectiveness.
**One flowering rush bed in 3rd lake was 2,000 sf (0.05 ac) which accounted for much of the FR acreage in 2017.

Table 4. Summary of flowering rush sites and areas for 2014 through 2025.

Total Sites	1st Lake		2nd Lake		3rd Lake		Total	
	Number of sites with plants	Area (sf)	Number of sites with plants	Area (sf)	Number of sites with plants	Area (sf)	Number of sites with plants	Area (sf)
July 22, 2014 (Delineation)	0	0	34	3,750	--	336,990 (estimated based on Oct 8 survey)	34+ (not including 3rd lake)	340,740 (estimated) (7.8 ac)
2nd Lake was treated with diquat on 0.09 ac on September 9, 2014								
October 8, 2014 (Assessment)	0	0	26	3,135	116	336,990	142	340,125 (7.8 ac)
July 17, 2015 (Delineation)	0	0	22	2,360	85	230,939	107	233,299 (5.4 ac)
2nd and 3rd Lakes were treated by cutting in July and August; 3rd Lake treated with diquat twice in August, 2015 (13.2 ac)								
September 28, 2015 (Assessment)	11	170	20	237	88	4,004	120	4,411 (0.1 ac)
(new sites compared to 2014)	(11)	--	(13)	--	(25)	--	(49)	--
July 14 and 15, 2016 (Delineation)	4	100	46	33,000	132	50,000	182	83,189 (1.9 ac)
2nd and 3rd Lakes were treated with diquat twice in August, 2016 (36 ac)								
September 21, 2016 (Assessment)	0	0	21	305	60	8,818	81	9,183 (0.2 ac)
(new sites compared to 2015)	(0)	--	(0)	--	(3)	--	(3)	--
August 1, 2017 (Delineation)	4	170	37	1,735	118	69,190	159	71,095 (1.6 ac)
2nd and 3rd Lakes were treated with diquat twice, once in August (40.2) and once in September, 2017 (30.1 ac)								
October 23, 2017 (Assessment)	1	20	4	150	10	2,485	15	2,655 (0.06 ac)
(new sites compared to 2016)	(1)	--	(1)	--	(5)	--	(7)	--
July 5, 2018 (Pre-treatment survey)	no emergent plants observed	--	no emergent plants observed	--	no emergent plants observed	--	no emergent plants observed	--
12 areas, delineated in 2017 totaling 32.5 acres were treated with diquat on July 13, 2018.								
July 25, 2018 (Survey)	0	0	73	2,540	54	1,280	127	3,820 (0.09 ac)
Spot treatment of 125 patches totaling 3.75 acres on August 21, 2018.								
September 19, 2018 (Post treatment assessment)	0	0	54	1,160	54	1,566	108	2,726 (0.06 ac)
July 9, 2019 (Pre-treatment survey)	4		34		43		83 (13 new)	4,990 (0.11 ac)
9.1 acres plus spot treatments on July 31, 2019								
August 12, 2019 (Survey)	11		26				105 (17 new)	18,505 (0.42 ac)
Spot treatment of 105 patches totaling 2.5 acres on August 30, 2019.								
September 30, 2019 (Post treatment assessment)	1		21		54		76 (7 new)	2,790 (0.06 ac)
(new sites compared to 2018)	(5)	--	(22)	--	(10)	--	(37)	--
July 21, 2020 (Pre-treatment survey)	7		44		94		145 (21 new)	14,562 (0.33 ac)
5.91 acres plus spot treatments on August 6, 2020.								
August 26, 2020 (Survey)	5		43		83		131 (0 new)	26,330 (0.60 ac)
5.14 ac spot treatments on September 2, 2020								
October 12, 2020 (Post treatment assessment)	0		7		46		53 (3 new)	3,200 (0.07 ac)
(new sites compared to 2019)	(3)	--	(10)	--	(11)	--	(24)	--
7.67 acres plus spot treatments on July 26, 2021.								

Table 4. Summary of flowering rush sites and areas for 2014 through 2025.

Total Sites	1st Lake		2nd Lake		3rd Lake		Total	
	Number of sites with plants	Area (sf)	Number of sites with plants	Area (sf)	Number of sites with plants	Area (sf)	Number of sites with plants	Area (sf)
July 27, 2021 (Pre-treatment survey)	4	1,640	20	1,295	53	2,190	75 (14 new)	24,695 (0.57 ac)
3.0 acres of spot treatments on August 13, 2021.								
September 9, 2021 (Survey)	26	1,923	26	4,540	51	14,169	98 (46 new)	19,082 (0.44 ac)
3.0 ac of spot treatments on September 13, 2021.								
October 18, 2021 (Post treatment assessment)	11	825	19	1,490	35	3,415	65 (2 new)	5,695 (0.13 ac)
(new sites compared to 2020)	(18)	--	(29 less)	--	(84 less)	--	(62)	--
July 12, 2022 (Pre-treatment survey)	3	240	8	920	24	6,065	35 (4 new)	7,225 (0.17 ac)
0.17 acres of spot treatments on July 29, 2022.								
August 9, 2022 (Survey)							157 (32 new)	24,868 (0.57 ac)
0.57 ac of spot treatments I September, 2022.								
October 18, 2022 (Post treatment assessment)							25 (0 new)	12,720 (0.29 ac)
(new sites compared to 2021)							(36)	--
July 11, 2023 (Pre-treatment survey)							84	10,470 (0.24 ac)
2.92 ac of spot treatments on July 26, 2023.								
4.5 ac of spot treatments on August 15, 2023.								
1.0 ac of spot treatments on August 29, 2023.								
September 20, 2023 (Post treatment assessment)							160	33,895 (0.78 ac)
1.34 ac of spot treatments on September 27, 2023.								
4.50 ac of spot treatments on October 10, 2023.								
(new sites compared to 2022)							(50)	--
July 19, 2024 (Pre-treatment survey)							124	54,127 (1.2 ac)
1.2 ac of treatments on July 29, 2024								
Shoreline treatments on August 7 and 8, 2024								
0.47 ac of treatments on October 3, 2024								
October 25, 2024 (Post treatment assessment)							19	1,930 (0.04 ac)
(new sites compared to 2023)							(16)	--
July 11, 2025 (Pre-treatment survey)							67	5,970 (0.14 ac)
0.14 ac of treatments on August 13, 2025								
0.19 ac of treatments on September 29, 2025								
October 24, 2025 (Post treatment assessment)							28	2,670 (0.06 ac)

Flowering Rush Status After Final Treatments from 2014-2025

At the middle of October 2025, the area of flowering rush was about 90% less compared to 2014. The number of sites, usually less than XX square feet per site, also declined slightly compared to 2014. Maps of flowering rush assessments for 2014-2025 are shown in Figure 2.

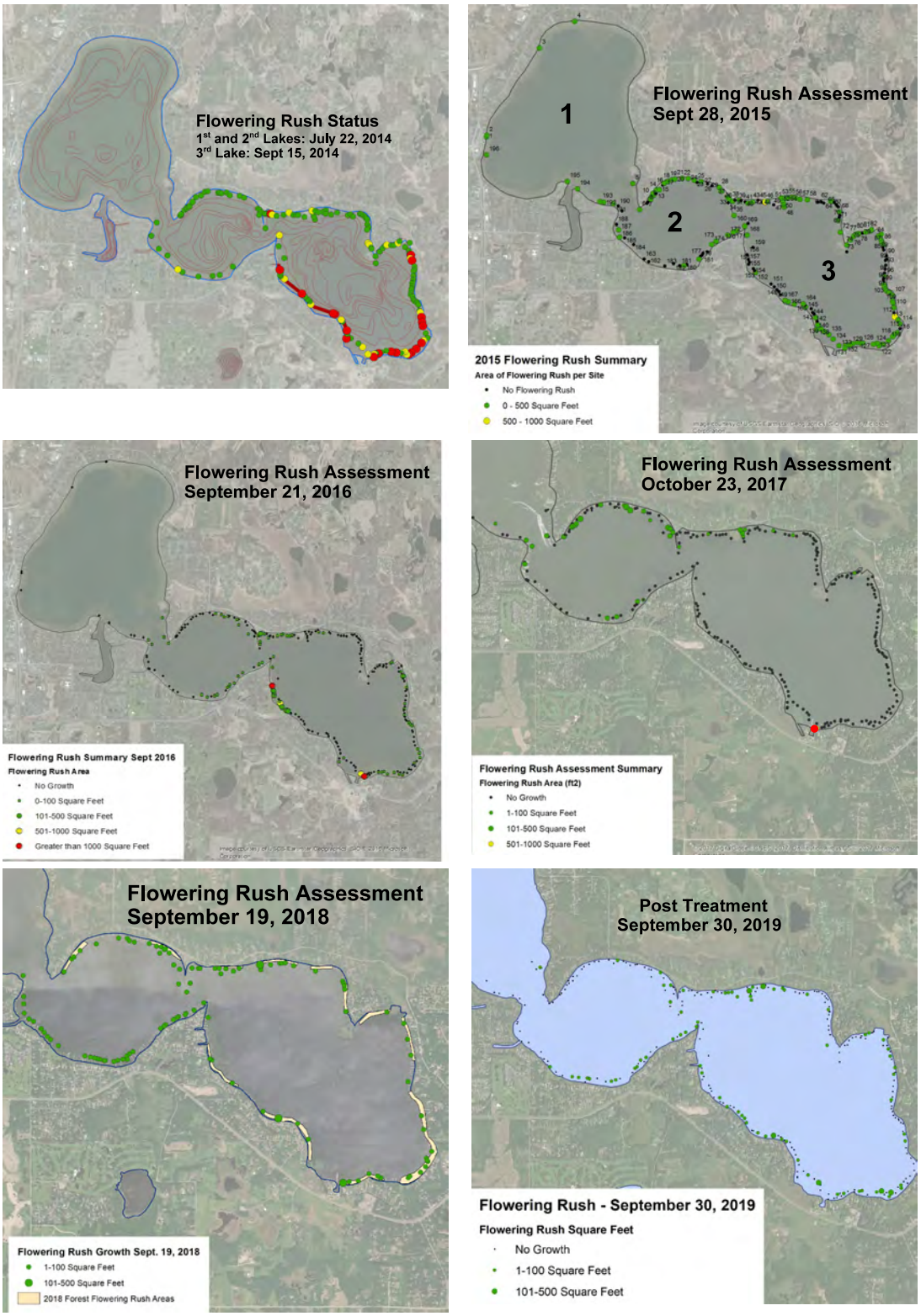
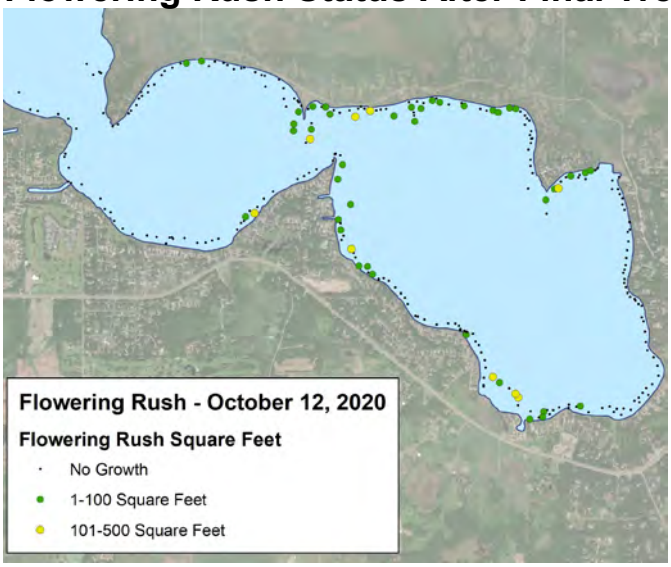
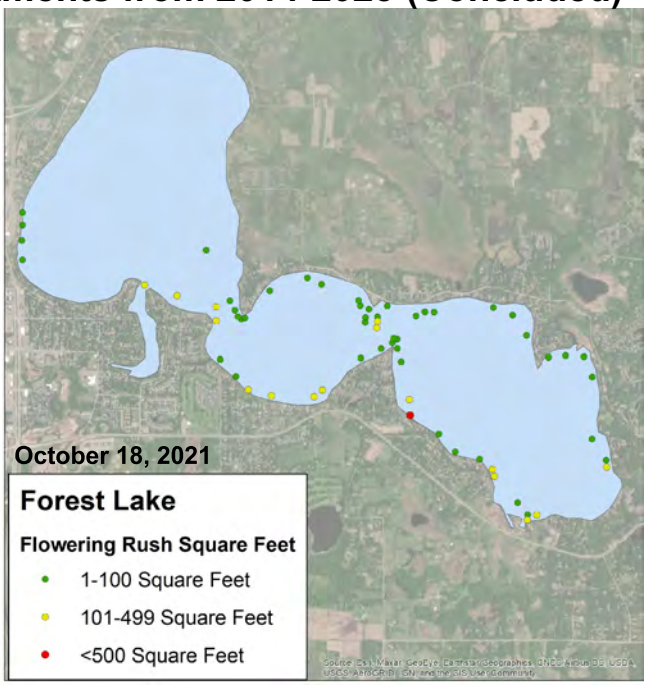
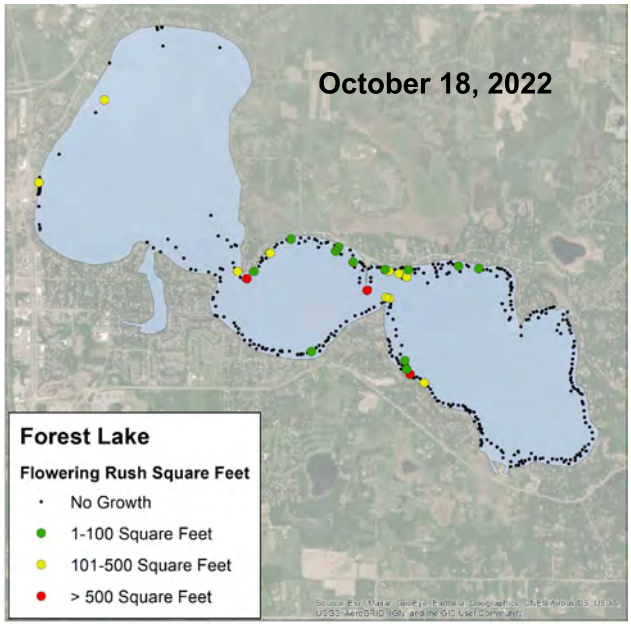


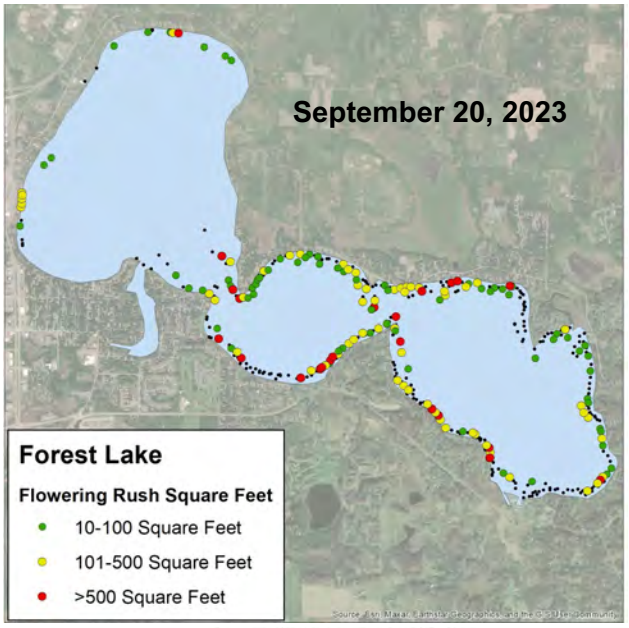
Figure 2. Estimated flowering rush coverage. [top-left] Sept 2014: 340,125 square feet (sf)(only 0.09 acres were treated). [top-right] Sept 2015: 4,411 sf. [middle-left] Sept 2016: 9,183 sf. [middle-right] October 2017: 2,655 sf. [bottom-left] Sept 2018: 2,726 sf. [bottom-right] Sept 2019: 2,790 sf.

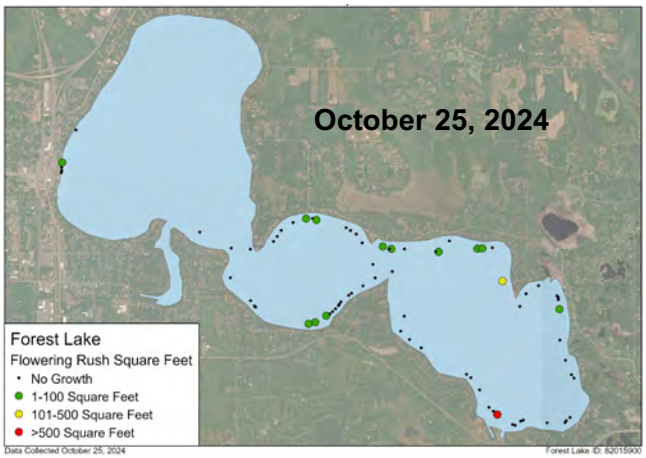
Flowering Rush Status After Final Treatments from 2014-2025 (Concluded)











Forest Lake Flowering Rush Growth
October 24, 2025

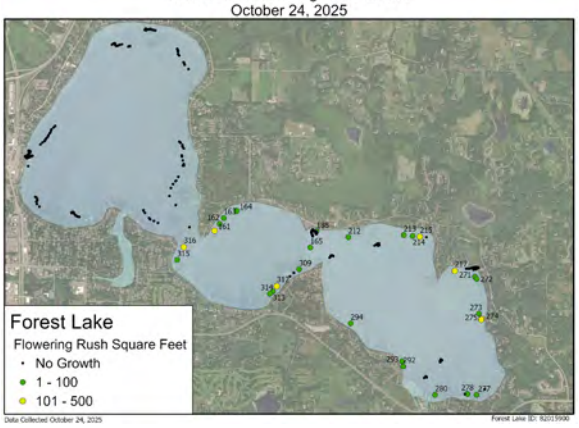


Figure 2 concluded. Estimated flowering rush coverage. [top-left] October 2020, 3,200 square feet (sf). [top-right] October 2021, 5,695 sf. [middle-left] October 2022, 12,720 sf. [middle-right] September 2023, 33,895 sf. [bottom-left] October 2024, 1,930 sf. [bottom-right] October 2025, 2,670 sf.

Table 5. Surveys and treatments in 2014 through 2025.

2014 - Year 1
Delineation of 1st and 2nd Lakes: July 22, 2014
Delineation of 3rd Lake: September 15, 2014
Herbicide Treatment in 2nd Lake: September 9, 2014 (0.09 ac)
Assessment of 2nd Lake: September 28, 2014

2015 - Year 2
Delineation of 1st, 2nd, and 3rd Lakes: July 17, 2015
Cutting in 2nd and 3rd Lakes: July and August, 2015
Herbicide Treatments in 3rd Lake: Aug 4 (6.5 ac) and 26 (13.2 ac), 2015
Assessment of 1st, 2nd, and 3rd Lakes: September 28, 2015

2016 - Year 3
Delineation of 1st, 2nd, and 3rd Lakes: July 14 and 15, 2016
Herbicide Treatments in 3rd Lake: August 3 (36 ac) and 31 (36 ac), 2016
Assessment of 1st, 2nd, and 3rd Lakes: September 21, 2016

2017 - Year 4
Delineation of 1st, 2nd, and 3rd Lakes: August 1,2017
Herbicide Treatments in 2nd and 3rd Lake: August 14 (40.2 ac) and September 27 (31.1 ac), 2017
Assessment of 1st, 2nd, and 3rd Lakes: October 23, 2017

2018 - Year 5
Pre-treatment point intercept survey: July 5, 2018
Treatment: July 13, 2018 (32.5 ac)
Point Intercept Survey Combined with a Meandering Survey: July 25, 2018
Spot Treatments in 2nd and 3rd Lake: August 21, 2018 (3.75 ac)
Post Treatment Assessment: September 19, 2018

2019 - Year 6
Delineation of 1st, 2nd, and 3rd Lakes: July 9, 2019
Spot Herbicide Treatments in 2nd and 3rd Lake: July 31, 2019 (9.08 ac)
Assessment of 1st, 2nd, and 3rd Lakes: August 12, 2019
Spot Herbicide Treatments in 2nd and 3rd Lake: August 30, 2019 (2.5 ac)
Assessment of 1st, 2nd, and 3rd Lakes: September 30, 2019

2020 - Year 7
Delineation of 1st, 2nd, and 3rd Lakes: July 21, 2020
Spot Herbicide Treatments in 2nd and 3rd Lake: August 2, 2020 (5.91 ac)
Assessment of 1st, 2nd, and 3rd Lakes: August 26, 2020
Spot Herbicide Treatments in 2nd and 3rd Lake: September 2, 2020 (5.14 ac)
Assessment of 1st, 2nd, and 3rd Lakes: October 12, 2020

2021 - Year 8
Delineation of 1st, 2nd, and 3rd Lakes: Based on areas of heavy growth from 2020
Spot Herbicide Treatments: July 26, 2021 (7.67 ac)
Assessment and Delineation of 1st, 2nd, and 3rd Lakes: July 27, 2021
Spot Herbicide Treatments in 2nd and 3rd Lake: August 13, 2021 (3.0 ac)
Assessment of 1st, 2nd, and 3rd Lakes: September 9, 2021
Spot Herbicide Treatments in 2nd and 3rd Lake: September 13, 2021 (3.0 ac)
Assessment of 1st, 2nd, and 3rd Lakes: October 18, 2021

2022 - Year 9
Delineation of 1st, 2nd, and 3rd Lakes: July 12, 2022
Spot Herbicide Treatments: July 29, 2022
Assessment and Delineation of 1st, 2nd, and 3rd Lakes: August 9, 2022
Spot Herbicide Treatments in 2nd and 3rd Lake: September 19, 2022
Assessment of 1st, 2nd, and 3rd Lakes: October 18, 2022

2023 - Year 10
Delineation of 1st, 2nd, and 3rd Lakes: July 11, 2023
Spot Herbicide Treatments: July 26, August 15, and August 29, 2023
Assessment and Delineation of 1st, 2nd, and 3rd Lakes: September 20, 2023
Spot Herbicide Treatments in 2nd and 3rd Lake: September 27 and October 10, 2023

2024 - Year 11
Delineation of 1st, 2nd, and 3rd Lakes: July 19, 2024
Full and Spot Herbicide Treatments: July 29, August 7 & 8, 2024
Assessment and Delineation of 1st, 2nd, and 3rd Lakes: September 16, 2024
Herbicide Treatments in 2nd and 3rd Lake: October 3, 2024
Assessment: October 25, 2024

2025 - Year 12
Delineation of 1st, 2nd, and 3rd Lakes: July 11, 2025
Spot Herbicide Treatments: August 13, 2025
Assessment and Delineation of 1st, 2nd, and 3rd Lakes: Sept 15, 2025
Spot Herbicide Treatments: September 29, 2025
Assessment: October 24, 2025

The 3 basins in Forest Lake.

APPENDIX

Individual flowering rush sites on July 11, 2025.

NEW GPS Site	GPS Site	FR (sq ft)	FR clumps	FR on shore	FR near shore	FR off shore	FR continuous	Sites with flowers	Notes
1		20	1		1				
2		20	1		1				
3		10	1			1			
4		40	1			1			
5		60	3			1			
6		30	3			1			
7		20	1			1			
8		40	2			1			
9		160	10			1			
10		60	3			1			
11		120	6		1				
12		160	4			1			
13		50	2			1			
14		20	2			1			
15		30	3			1			
16		50	3	1				3	
17		40	4			1			
18		90	3			1			
19		60	6			1			
20		90	3			1			
21		100	2			1			
22		60	2			1			
23		40	2			1			
24		40	2		1				
25		40	2		1				
26		40	2	1				1	
27		60	2	1				8	
28		200	10			1			
29		180	1	1				5	
30		100	9			1			
31		60	4			1			
32		40	4			1			
33		200	10+	1			1	15	
34		2000		1		1	1		
35		30	3		1				
36		20	2			1			
37				1					Sagittaria?
38				1					Sagittaria?
39		40	2	1					
40		60	2			1			
41		400	10		1				
42		20	2			1			
43		20	2			1			
44		50	5			1			
45		80	2			1			
46		10	1			1			
47		80	2	1					
48		20	2		1				
49		100	3			1			
50		10	1	1					
51		10	1			1			
	12	10	1			1			
	16	10	1			1			
	17	10	1			1			
	19	20	2			1			
	21	40	2			1			
	27	100	2			1			
	28	60	2			1			
	30	10	1			1			
	34	20	1		1				
	35	20	2			1			
	37	80	5		1				
	39	10	1			1			
	63	60	3			1			
	67	40	2			1			
	71	40	2			1			
	72	60	2			1			
	74	60	3			1			
	80	40	2			1			
Average		89.1	2.8	1.0	1.0	1.0	1.0	6.4	
Occur		67	65	11	10	49	2	5	
Total		5970	179	11	10	49	2	32	

Individual flowering rush sites on September 15, 2025.

NEW GPS Site	July 11 FR Site	FR (sq ft)	FR patches	FR on shore	FR off shore	Sites with flowers	Depth (ft)	EWM	Notes
1		700		1					
2		50		1					
3		50		1					
4		50		1					
5		150		1					
6		100		1					
7								1	
8		100		1		2		1	
9		50		1		1		1	Flowerhead went to seed already
10									
11		50		1					
12		20		1					
13							6	3	
14							6	3	
15								2	
16								2	
17								2	
18									
19		100		1					
20								1	
21								2	
22		200	20	1				1	
23		200	10	1					
24		150	10	1					
25		20		1					
26	64	10							
27		100		1					
28		150	6	1	1				
29	59	20	1						
30	58	400	10		1				
31		300	10	1					
32	56	20	2		1				
33	55	200							
34	54	100	4						
35		300	10		1				
36		20	2						
37	52	300	2						
38		20			1				
39	51	400	10						
40		150	10		1				
41							4	1	
42		80	5	1					
43		10		1					
44		150	10						
45		100		1	1				
46		200	20		1				
47	37	200	20						
48	28	10		1					
49	26	10		1					
50	21	200	10		1				
51		200	10		1		5	1	
52		10			1				
53	19	100		1					
54	18	200	6						
55		200		1					
56	17	200	10						
57	16	100	5						
58	15	300	15						
59		20			1				
60									
61	10	600	20		1				
62	13	600	30		1				
63		100			1				
Average		158.2	10.3	1.0	1.0	1.5	5.3	1.6	
Occur		51	26	25	15	2	4	13	
Total		8070	268	25	15	3	21	21	

Individual flowering rush sites on October 24, 2025.

GPS Site	FR (sq ft)	FR patches	FR on shore	FR off shore
161	200	10		1
162	100	5		1
163	50	5		1
164	50	1	1	
165	100	5		1
188	20	2	1	
212	50	3		1
213	30	3		1
214	10	1		1
215	200	20		1
217	150	6		1
271	40	2		1
272	20	2		1
273	10	1		1
274	400	1		1
275	150	1		1
277	80	4		1
278	60	3		1
280	100	10		1
292	60	3	1	
293	10	1	1	
294	20	2		1
309	100	4		1
312	200	5		1
313	100	10	1	
314	60	2		1
315	100	1		1
316	200	5	1	
Average	95.4	4.2	1.0	1.0
Occur	28	28	6	22
Total	2670	118	6	22