

Phragmites Control Project

Wymbolwood Beach, Tiny Township
Spring/Summer 2016 – 2018

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The Site

Drone Photo taken by
Kurtis McBride, Aug 2018



Close-Up of Site

Drone Photo taken by
Kurtis McBride, Aug 2018

1. Control – no removals

2. Removal in July

3. Removal in July & August

4. Removal in June, July & August



Phragmites Removal Technique



- Identify Phragmites
- Use leg muscles on spade
- Cut below soil surface
- Remove plant stalk
- Leave soil undisturbed



Wymbolwood Beach Site Background

- Control project started in 2016, continued 2017 and 2018
- Site divided into 4 sections with 4 test plots (1 m²) in each section
- Data collected from within each test plot throughout the summer, removals done at scheduled times
- Individual stalks removed using the 'Spading Technique' from each test section (inside and outside the test plots), care is taken not to step into test plots
- All effort is made to minimize disturbance in the control section but there is unavoidable disturbance due to walking around the test plots and by removing dead stalks during early spring maintenance
- In the last two seasons, an additional removal was done in October in test sections (*see next slide)

Interesting End of Season Findings

- new shoot growth observed on mature stalks in October 2017

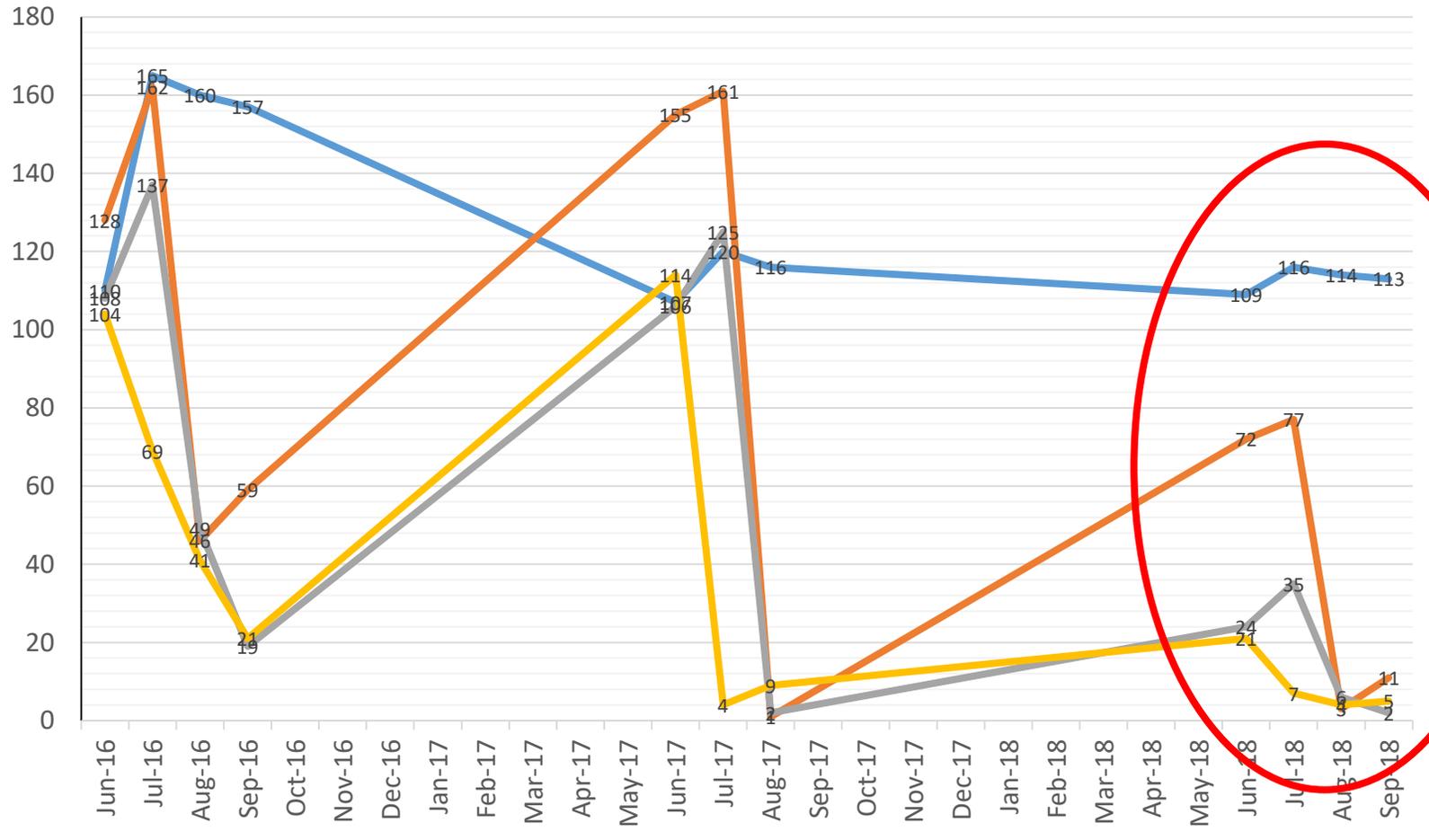


Average Densities/m² of Phragmites stalks from 2016 to 2018

Date	Control (No Removal)	July Removal	July, August Removal	June, July, August Removal
June 2016	110	128	108	104
July 2016	165	162	137	69
Aug 2016	160	46	49	41
Sept 2016	157	59	19	21
June 2017	107	155	106	114
July 2017	120	161	125	4
Aug 2017	116	1	2	9
June 2018	109	72	24	21
July 2018	116	77	35	7
Aug 2018	114	3	6	4
Sept 2018	113	11	2	5

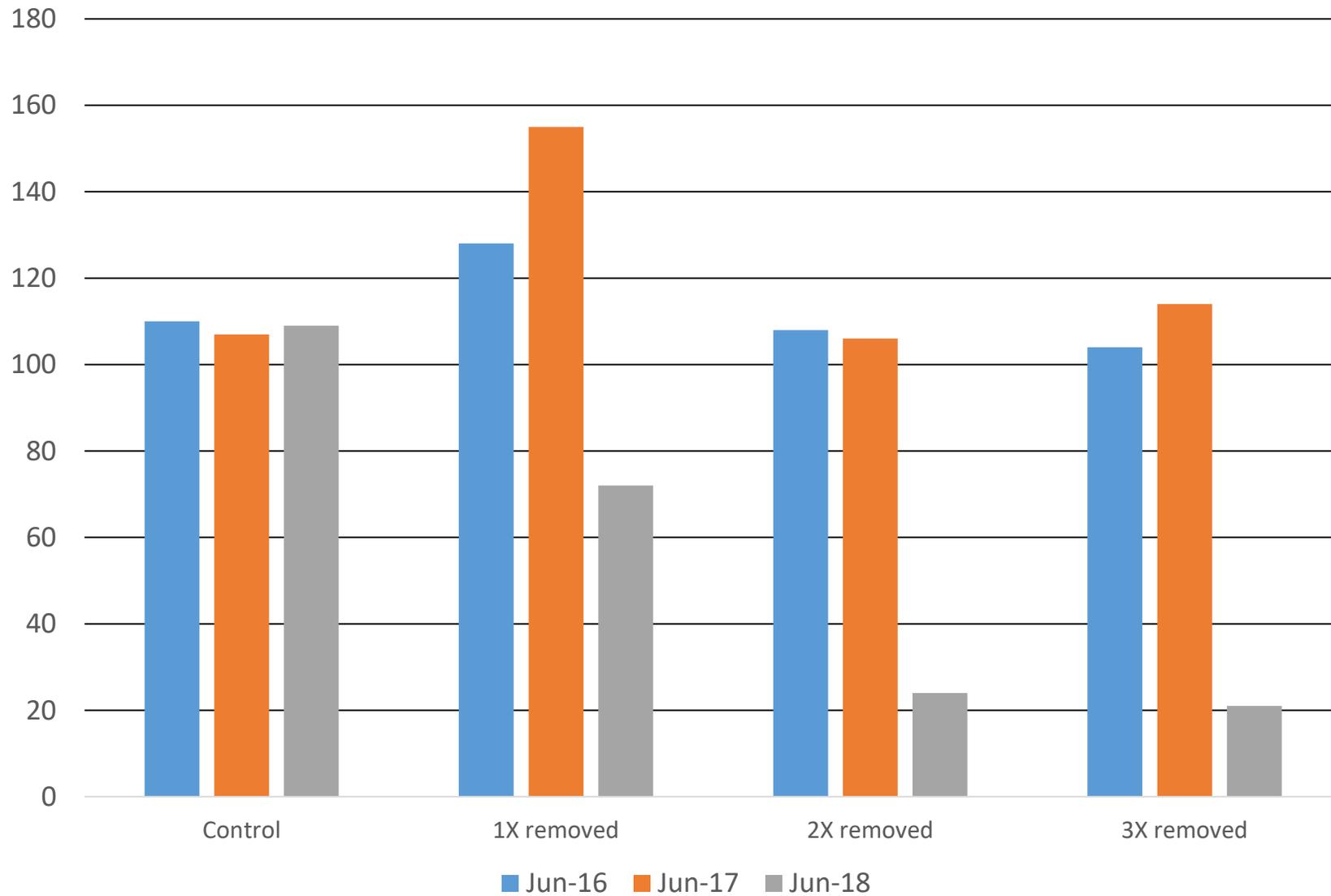
Average Stalk Densities per square metre

Control 1X removed 2X removed 3X removed



Note Data for 2018 – Regrowth of all test sections less than control at beginning of third season

Initial Stalk Densities /m²

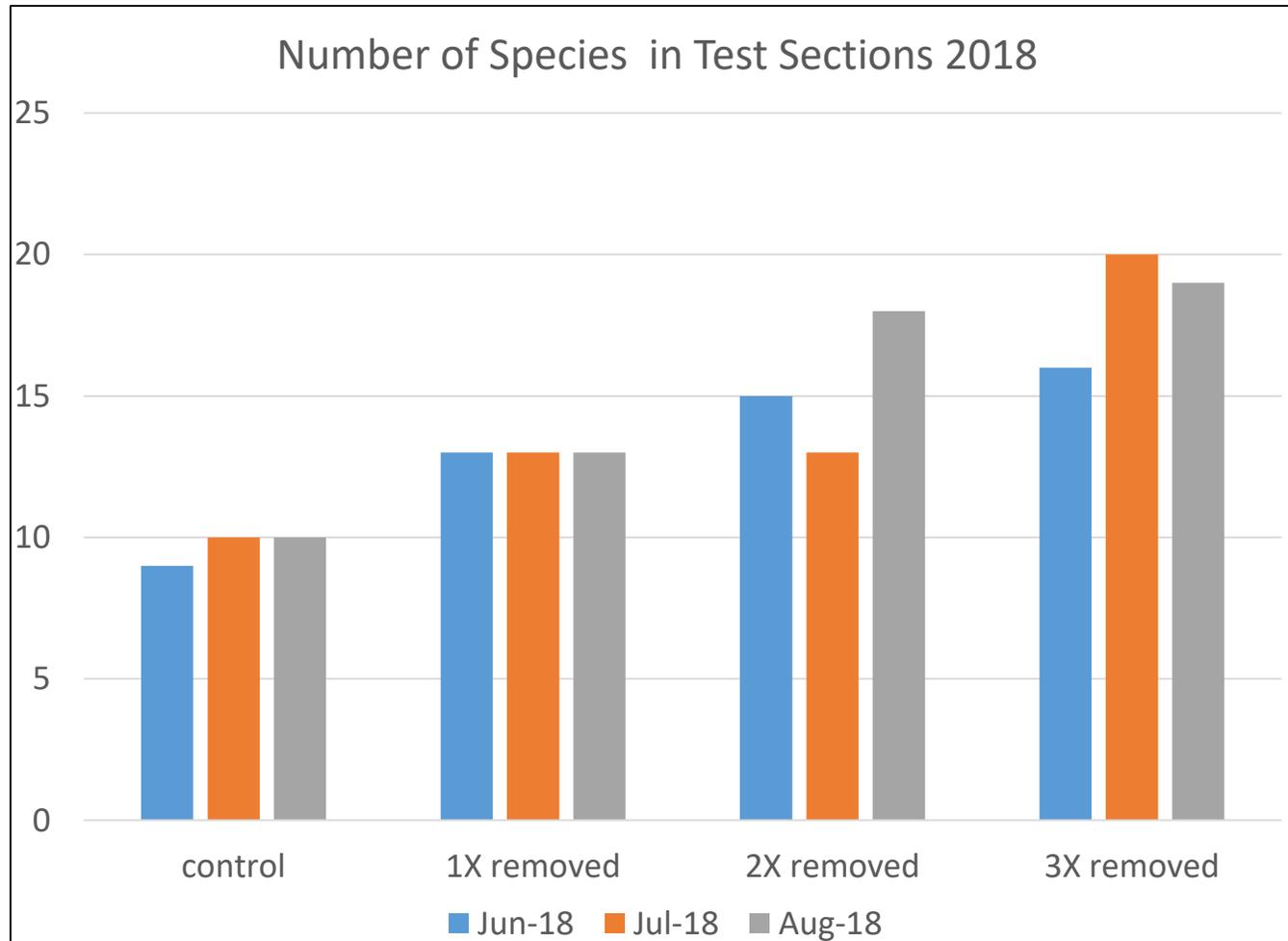


Note
June 2018
Densities!

Number of Plant Species Present in Test Sections

Date	Control	July Removal	July, August Removal	June, July, August Removal
June 2018	9	13	15	16
July 2018	10	13	13	20
August 2018	10	13	18	19

Biodiversity of Test Sections in Third Season of Control



Note that individual plants within the Control section are quite small and sparse.

Rhizome Samples

Upper Row – 3X removed X 3 seasons

Lower Row – Control, no removals X 3 seasons



Movement of Sand Inland Due to Fall Storms – October 2018



Control Section - Phragmites blocking natural sand movement

Conclusions and Next Steps

- Phragmites removals over 3 seasons is resulting in decreased stalk density of Phragmites and increased biodiversity of other plants.
- Repeated removals per season for 3 years is resulting in greater reductions in stalk density and appears to be reducing the vigor of the plant in its ability to regrow in the spring.
- Removal of the Phragmites stalks on the beach is allowing for the natural movement of sand during fall storms.
- I am hoping to collect one more season of data next summer!