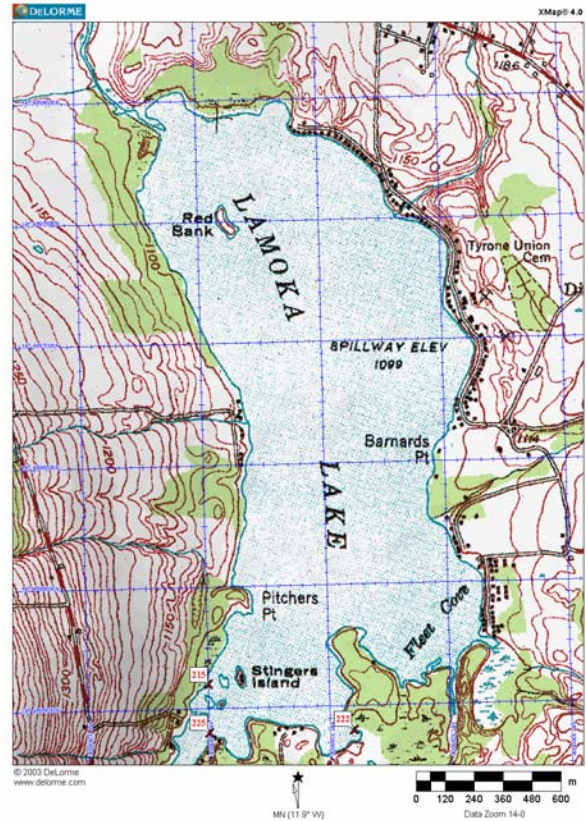
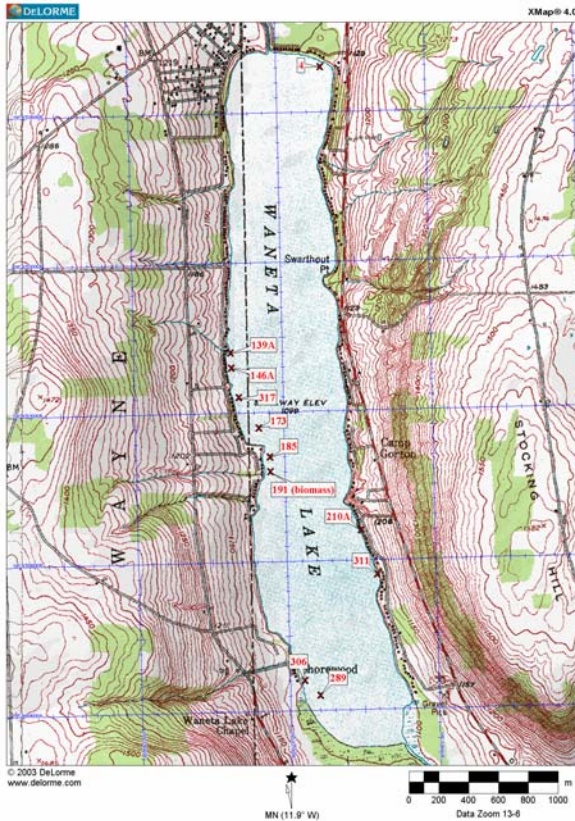


Waneta and Lamoka Lakes 2008 Plant Community Response to the Application of the Herbicide Triclopyr to Control Eurasian Watermilfoil



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Contents

Contents.....	2
List of Tables and Figures.....	3
Introduction and Executive Summary.....	4
Methods.....	7
Results	9
References.....	36
Appendix	37

Cover Map

We show on the cover maps of the locations of the 11 sample points (SPs) in Waneta Lake and the 3 SPs in Lamoka Lake where we found the presence of Eurasian watermilfoil after the herbicide treatment with triclopyr (Renovate®). We found the presence of Eurasian watermilfoil by three rake tosses and plant biomass sampling in Waneta Lake and by two rake tosses in Lamoka Lake in 2008.

Most sample points (SPs) in the two lakes are at the line intercept of 100m X 100m UTM transect grid (NAD27 datum and true north). Generally, each SP represents 1 hectare in the original littoral zone of Waneta and Lamoka Lakes as defined by Madsen *et al.* (2001). To secure additional information on the lakes plant communities the Lake's Association and the NYSDEC added and revised SPs since 2000.

Tables

Table 1. Summary of species occurrences and lake depths at 102 sample points (SPs) in Waneta Lake in August 2000, 2003, 2004, September 2, 2005, August 10, 2006 and August 6-12, 2008.....	11
Table 2. Aquatic plant species' presence in Waneta Lake from two rake tosses on August 6-12, 2008. Entries of "1" indicate species identified at that sample point (SP). Sample points are on a 100-meter UTM grid. Each sampled point is theoretically at the center of a 100m X 100m square or 1 hectare.....	12
Table 3. Recorded biomass (gDW/0.1m ²) for Waneta Lake sampled on August 21, 2008 from the 50 original sample points (SPs) and the 50 revised SPs for 2004 - 2008. SPs are on a 100-meter UTM grid. Each sampled point is theoretically the center of a 100m X 100m square or 1 hectare.....	17
Table 4. Recorded biomass (gDW/0.1m ²) on Aug. 21, 2008 for 15 additional Waneta Lake locations that the Lamoka Waneta Lakes' Association requested sampling in 2004, 2005, 2006 and 2008, because they found plants at these locations before the 2004 biomass collection.....	20
Table 5. Summary of species occurrence and lake depth at 169 sample points (SPs) recorded in Lamoka Lake from July 25 - August 1, 2006 (Johnson and Keith 2006), August 27 - September 15, 2008 and compared to August 2000 (Madsen <i>et al.</i> 2001).....	21
Table 6. Aquatic plant species' presence in Lamoka Lake recorded by summarizing two rake tosses from August 27 - September 15, 2008.....	22
Table 7. Recorded biomass (gDW/0.1m ²) for Lamoka Lake sampled on September 6, 2008 at 46 of the 50 sample points (SPs) where biomass was collected in 2000 (Madsen <i>et al.</i> 2001). Four new SPs substituted in 2006 within the littoral zone for four deep SPs measured in 2000 (see Methods, Johnson and Keith 2006), resulting in a total of 50 SPs measured in 2008.....	28

Figures

Figure 1. Sample Point (SP) Locations in Waneta Lake where rake toss measurements were taken August 27 - September 15, 2008. The red type SPs are 2008 locations added to the revised (See Methods, Johnson and Keith 2006) 2006 SPs in black type.....	30
Figure 2. Locations in Waneta Lake where we found the presence of Eurasian watermilfoil by three rake tosses at (SPs) taken from August 27 - September 15, 2008. Additionally, presence found at one regular biomass sampling point August 21, 2008.....	31
Figure 3. Sample Point (SP) Locations in Lamoka Lake where rake toss measurements were taken from August 27 - September 15, 2008. The red type SPs are locations added in 2008 to the 2006 SPs in black type.....	32
Figure 4. Locations in Lamoka Lake where we found the presence of Eurasian watermilfoil by two rake tosses from August 27 - September 15, 2008.....	33
Figure 5. Sample Point (SP) Locations in Mud channel and Mill Pond where rake toss measurements were taken from August 27 - September 15, 2008.....	34
Figure 6. Locations in Mud Channel and Mill Pond Lake where we found the presence of Eurasian watermilfoil by two rake tosses from August 27 - September 15, 2008.....	35

Introduction and Executive Summary

This report summarizes the 2008 cooperative effort between the Lamoka Waneta Lakes' Association, and the Cornell University Research Ponds, Department of Ecology and Evolutionary Biology, Cornell University, Ithaca, NY. In 2008, we continued to conduct evaluation of the aquatic plant communities in Waneta and Lamoka Lakes for the Lamoka Waneta Lakes' Association in order to understand the role and impact of the 2008 herbicide treatment of these two lakes with triclopyr (Renovate®). The triclopyr treatment dates were June 9 – June 10, 2008 for Lamoka Lake and June 10 – June 12, 2008 for Waneta Lake.

The recent herbicide treatment history is very different between the two lakes with the previous 2003 fluridone (Sonar®) whole lake herbicide application to Waneta Lake and not to Lamoka Lake. This may influence some of the observed differences seen in native plant species populations between the two lakes in 2008. We contrast 2008 results with our 2003 – 2006 studies in Waneta Lake (Johnson *et al.* 2003, Lord *et al.* 2005, Johnson *et al.* 2006, and Johnson and Keith 2006) and an earlier pretreatment study (Madsen *et al.* 2001, Madsen *et al.* 2008). In addition, we report the results of our 2008 aquatic plant community study of Lamoka Lake using a rake-toss method to determine plant species presence, location, an estimate of species abundance and the recording of plant biomass measurements. We further contrast Lamoka species occurrence in 2008 to data collected in 2006 and 2000 (Madsen *et al.* 2001, Johnson and Keith 2006).

The principal data collected in 2008 replicates the documentation of Waneta and Lamoka Lake's plant communities by methods specified in Madsen *et al.* (2001, 2008), and expanded upon by personal communication (Madsen, 2003). Further, we refined our plant measurement methods to include an estimate of abundance of each species. We depart in this report for these two lakes from the debated meaning of the term "plant or species diversity" used widely in the pre treatment report of Madsen *et al.* (2001). However, the original measures taken in 2000 and reported in Madsen *et al.* (2001), Johnson *et al.* (2003), Lord *et al.* (2005), Johnson *et al.* (2006) and Johnson and Keith (2006) remain part of this report in a similar format. For example, where Madsen *et al.* (2001) states "Change in diversity as measured by average number species per sample site", or "Waneta Lake plant diversity was lower than for Lamoka, with only 2.16 species per littoral zone point and 1.37 native species per littoral zone point"; we use, for this report, the term species occurrence [number of species per sample point (SP)]. We will use in some instances the term richness where reporting the number of species.

Our reporting of aquatic plant species presence in Waneta and Lamoka Lakes uses predetermined sampling points (SPs) located and recorded by GPS at the line intercepts of 100m X 100m UTM transect grids (NAD27 datum and true north) and additional SPs requested by the Lamoka Waneta Lakes' Association and the NYSDEC to determine presence, richness, littoral zone coverage and biomass of plant species. Each original SP is at the center of a 100m X 100m quadrant or 1 hectare of the original littoral zones of Waneta and Lamoka Lakes as defined by Madsen *et al.* (2001). We conducted our macrophyte samplings for plant species presence and biomass at locations identified by GPS to be able to identify lake-wide trends in species richness and plant community structure spatially and temporally.

Findings – Waneta Lake:

- Native plant frequency in Waneta Lake (*expressed as the number of sampling points (SPs) where we found at least one native species by two rake tosses per point*) increased to 100 SPs in 2008 up from 45, 37, 50, 54 in 2006, 2005, 2004 and 2003 respectively. Largest increases were naiads, elodea, small pondweed, coontail and chara (Tables 1, 2).
- Native plant species occurrence in Waneta Lake increased greatly in 2008 to 3.5 species per SP up from 0.9 in 2006, 0.6 in 2005 and 2004, and 1.4 in 2000 before the 2003 fluridone herbicide treatment (Table 1).
- Native plant species richness identified in Waneta Lake from the original 102 rake toss and 50 biomass sampling sites increased to 15 species, up from 12 in 2006, 10 in 2005 and 9 species in 2004, but less than the 17 in 2000 (Table 1, 3; Madsen *et al.* 2001; Lord *et al.* 2005; Johnson *et al.* 2006; and Johnson and Keith 2006).
- The native plant species richness identified by all methods and additional samplings in Waneta Lake in 2008 is 15 species, up from 12 in 2006 and 2005 (Tables 1, 4; Appendix Table A).
- Waneta Lake's all plant species frequency (*expressed as the number of sampling points (SPs) where we found at least one native or exotic species by two rake tosses per point*) increased to 100 in 2008 from 68 SPs in 2006, 58 in 2005, 53 in 2004, 55 in 2003, and 91 SPs with plants in 2000 (Table 1).
- Watermilfoil dramatically decreased lake-wide in Waneta Lake during 2008 (Tables 1 – 4; Figure 2; Appendix Table A).
- Watermilfoil's frequency in Waneta Lake (*expressed as the number of sampling points (SPs) where we found watermilfoil by two rake tosses per sample point*) decreased from 50 SPs in 2006 to 5 in 2008 for the original 102 SPs, (Tables 1, 2; Appendix Table A).
- Exotic plant species occurrence {*number of exotic species per sample point (SP)*} that includes watermilfoil, *Potamogeton crispus*, *Najas minor* and *Nitellopsis obtusa* in Waneta Lake decreased slightly to 0.64 species per SP in 2008 from 0.73 in 2006 (Table 1). This is up from 0.02, 0.20, 0.44 exotic species per SP in 2003, 2004 and 2005 respectively (Table 1).
- The non-native exotic plant species richness identified by all sampling methods at Waneta Lake in 2008 totals 4. We found 4 non-native exotic species (watermilfoil, curly-leaved pondweed, *Najas minor*, and *Nitellopsis obtusa*) in Waneta Lake in 2008 (Tables 1- 4; Appendix Table A).
- The number of all plant species combined (exotic and native) expressed as richness increased to 19 in Waneta Lake (*15 native and 4 exotic*) up from 15 in 2005 and 2006 (Tables 1- 4).
- Plant species occurrence (*native and exotic*) in Waneta Lake increased greatly to 4.1 species per SP in 2008 up from 1.6, 1.0, 0.8, and 0.8 species per SP in 2006, 2005, 2004 and 2003 respectively (Table 1).
- The biomass of all native species in Waneta Lake increased to 24 gDW/m² in 2008, up from 3.8 gDW/m² in 2006 for the 50 original SPs and equals the native species biomass in 2000 of 23 gDW/m² (Madsen *et al.* 2001). Southern naiad accounted for greater than 50% of the total species biomass. Filamentous algae not counted in the biomass was dense in the littoral zone.
- The biomass of watermilfoil in Waneta Lake in 2008 at 0.0005 gDW/m² is down dramatically from the 21.8 gDW/m² in 2006 for the 50 original SPs (Table 3). The watermilfoil biomass in 2000 was 24.3 gDW/m² from the 50 original SPs before herbicide treatment with fluridone (Madsen *et al.* 2001).
- Mean Waneta Lake water depth at the sample points measured in 2008 was at 1.9 m, up from 1.7 m in 2006, 2005, 2004 and the 1.8 in 2003 and 2002 (Table 1).

Findings – Lamoka Lake (including Mud Channel and Mill Pond):

- Native plant frequency in Lamoka Lake (*expressed as the number of sampling points (SPs) where we found at least one native species by two rake tosses per point*) is 161 SPs in 2008 up from 153 SPs in 2006. Madsen *et al.* 2001 reports native plant frequency in 2000 at 142 SPs (Tables 5, 6).
- Native plant species occurrence in Lamoka Lake is 5.4 native species per SP down slightly from 5.6 in 2006 (Table 5). Madsen *et al.* 2001 reports 2.8 native species per SP in 2000.
- Native plant species richness identified in Lamoka Lake by the two rake tosses on 169 SPs and the sampling of 50 biomass SPs was 27 species, up 1 from 26 in 2006 (Table 5, 6, 7, Appendix Table B). Madsen *et al.* 2001 reports 18 species in 2000 (Table 5).
- Lamoka Lake’s all plant species frequency (*expressed as the number of sampling points (SPs) where we found at least one native and/or exotic species by two rake tosses per point*) was 161 SPs in 2008 down from 166 SPs in 2006 (Table 5). Madsen *et al.* 2001 reports 163 SPs with plants in 2000 (Table 5).
- Water milfoil’s frequency in Lamoka Lake (*expressed as the number of sampling points (SPs) where we found watermilfoil by two rake tosses per point*) is down substantially to 67 SPs in 2008 from the 153 SPs in 2006. Madsen *et al.* 2001 reports watermilfoil frequency in 2000 at 130 SPs. (Tables 5, 6; Figures 4a, 4b).
- Exotic plant species occurrence $\{(number\ of\ exotic\ species\ per\ sample\ point\ (SP))\}$ in Lamoka Lake was 0.6 in 2008 down from 1.0 in 2006 (Table 5). Madsen *et al.* 2001 reports 0.8 exotic species per SP in 2000 (Table 5).
- The non-native exotic plant species richness identified by all sampling methods at Lamoka Lake in 2008 totals 2, the same as 2006 and 2000 (Tables 5 - 7; Appendix Table B).
- The number of all plant species in Lamoka Lake, combined (exotic and native), expressed as richness is 29 (27 native and 2 exotic) in 2008 (Tables 5- 7; Appendix Table B).
- Plant species occurrence (*native and exotic*) in Lamoka Lake is 6.0 species per SP in 2008, down from 6.6 in 2006 (Table 5). Madsen *et al.* 2001 reports 3.6 species per SP in 2000 (Table 5).
- The biomass of all plant species in Lamoka Lake “proper” is 107.2 gDW/m² recorded by sampling 29 SPs in the lake and none of the SPs in Mud Channel and Mill Pond of the 50 historical predetermined SPs (Table 7) and is down from 378 gDW/m² in 2006 for the 29 SPs (Johnson and Keith 2006).
- The biomass of all native species in Lamoka Lake “proper” is 107.1 gDW/m² recorded by sampling 29 SPs in the lake and none of the SPs in Mud Channel and Mill Pond of the 50 historical predetermined SPs (Table 7) and is down from 268 gDW/m² in 2006 for the 29 SPs (Johnson and Keith 2006).
- The biomass of watermilfoil in Lamoka Lake “proper” from the 2008 sampling of the 29 SPs in the lake and none of the SPs in Mud Channel and Mill Pond of the 50 historical predetermined SPs is 0.0 (Table 7) and is down from 110 gDW/m² in 2006 for the 29 SPs (Johnson and Keith 2006).
- Filamentous algae that exhibited heavy growth in Waneta Lake was very sparse in Lamoka Lake in 2008.
- Mean littoral zone depth on Lamoka Lake at the SPs measured in 2008 was at 1.6 m, down from 1.7m in 2006 (Table 5). Madsen *et al.* 2001 reports Lamoka’s mean littoral zone depth at 1.5 meters in 2000 (Table 5).

Methods

Plant Species Sampling

The sampling for aquatic plant species presence and abundance in Waneta and Lamoka Lakes uses predetermined sampling points (SPs) located at the line intercepts of 100m X 100m UTM transect grids (NAD27 datum and true north) supplemented with additional SPs added through the years to determine presence, richness, littoral zone coverage, relative abundance, and biomass. Each original sample point (SP) is at the center of a 100m X 100m quadrant or 1 hectare.

We conducted our macrophyte samplings to determine plant species presence and biomass at locations identified by GPS to be able to identify lake-wide trends in species richness and plant community structure spatially and temporally. The principal data accumulated replicates the Lamoka and Waneta Lakes pre-treatment methods specified by Madsen *et al.* (2001, 2008) and expanded upon in personal communication (Madsen, 2003). We used hand-held GPS equipment to guide us to and record all SPs in this study. We sampled all 102 original Madsen *et al.* (2001) littoral zone SPs, and 18 additional locations requested by the NYSDEC and the Lamoka Waneta Lakes' Association from 2003 - 2008.

We used the point sampling and line intercept methods (Madsen, 1999) initiated for this study in 2000 (Madsen *et al.* 2001). At each SP we used a grapple hook (throw-rake) formed by connecting the “heads” of two garden rakes back-to-back attached to a line and tossed approximately 10 m from the boat to sample the plants on the lake bottom. At each SP our crew threw two rake tosses to record plant species presence required by this studies' criteria since the Madsen *et al.* (2001) study used two rake tosses (Madsen, 2003).

For our research purposes, not necessarily pertinent to Waneta Lake's herbicide treatment decisions, we collected and recorded the results of a third rake toss. For the three rake tosses taken in Waneta Lake, we reported all three rake tosses but recorded the first two rake-toss results for the herbicide post-treatment evaluations in Waneta Lake. In addition, for our research purposes, we made an estimate of total plant abundance on the rake as “dense”, “medium”, “sparse”, “trace”, or “zero” along with an estimate of the percentage of each individual species. We transcribed, all information onsite, onto data sheets for later entry into a data spreadsheet when back at the Research Ponds. In 2008, we recorded two rake tosses at each SP on Lamoka Lake. We include in this report all measures to evaluate the 2008 herbicide post-treatment results and additionally make available our supplemental third rake-toss results and research estimates of abundance for all three-rake tosses in Waneta Lake and the two rake tosses in 2008 in Lamoka Lake.

We sampled 138 SPs for Waneta Lake plant species presence, location, littoral zone coverage, and estimated relative abundance by rake-toss on August 6-12, 2008.

We sampled Lamoka Lake at 180 SPs for plant species presence, location, littoral zone coverage and estimated relative abundance from August 27 - September 15, 2008 by the rake-toss method.

Biomass Sampling:

On August 21, 2008, we sampled 87 Waneta Lake sample points for plant species abundance by collecting biomass samples as described in Madsen *et al.* (2001, 2008). We sampled the original 50 littoral zone SPs collected in 2000 (Madsen, *et al.* 2001, 2008), 22 additional substitute SPs authorized by the NYSDEC for 2004, 2005 and 2006 along with 15 additional locations requested by the Lamoka Waneta Lakes' Association who determined those areas had plants before our sampling in 2004.

On September 6, 2008, we sampled 29 Lamoka Lake SPs for plant species abundance by collecting biomass samples as described in Madsen *et al.* (2001). We sampled 29 original littoral zone SPs within Lamoka Lake "proper" that were collected in 2000 (Madsen, *et al.* 2001), except for SPs 124, 138, 156, and 162. These SPs were determined to be outside of the littoral zone suggested by Madsen, *et al.* 2001 from his 2000 measurements. The Lamoka Waneta Lakes' Association in consultation with the NYSDEC replaced the four deep SPs with shallower SPs 125, 139, 148, and 163. We included the new 2006 SPs in our biomass sampling in 2008.

At each SP location for biomass, we tossed a 0.1m² quadrat into the lake, from the boat. After locating the quadrat, a diver collected all plants growing within the 0.1m² frame by cutting them off at the substrate-water interface. Alternatively, plants pulled from the substrate with below sediment plant material had that material removed in plant processing before placed in a drying oven. Crew members placed the collected plant material into labeled plastic bags and stored it on ice until returned to the laboratory where samples were stored in refrigerators or freezers until processed.

We washed plant samples with tap water to remove soil, animals, weakly adhering algae, and decayed material. Plant mass was separated to individual species. We removed below sediment plant material (such as roots) and did not include it for dry weight determination. Plant turions (winter buds; vegetative plant parts), if not decayed, were included as plant material. We dried, after washing, individual species in ovens at 105°C for at least 48 hours and then weighed and recorded all species as species dry weight/0.1m².

Results

We summarize and display the results of our 2008 aquatic plant species monitoring at Waneta and Lamoka Lakes in the text, tables and figures that follow. We have listed in the Executive Summary the main results summarized from the data tables in this report. We leave the interpretation and further analysis of these results, as requested, to the Lamoka Waneta Lakes' Association, their consultants and the NYSDEC.

Waneta Lake

Table 1 (page 11) summarizes the primary results of 2008 compared with the historical results reported in previous years. Table 1 includes the pretreatment data (Madsen *et al.* 2001) before the whole lake treatment with the herbicide fluridone in April 2003 along with the post treatment data collected in 2003 – 2006 as well as the 2008 data. This table is a summary of species occurrences and lake depths at 102 sample points (SPs) in Waneta Lake for August 2000, 2003, 2004, September 2, 2005, August 10, 2006 and August 6 – 12, 2008.

Table 2 (pages 12 - 16) depicts aquatic plant species' presence at a total of 138 SPs (the 102 original pretreatment SPs from 2000 plus 5 of the 18 additional SPs chosen by the NYSDEC for 2003 – 2006 plus 31 new SPs added in 2008) in Waneta Lake from two rake tosses on August 6 - 12, 2008. Appendix Table A shows the results of three rake tosses in detail; listing species presence, location and relative abundance; and is the data that is used to complete Table 2.

Table 3 (pages 17 - 19) reports aquatic plant biomass (gDW/0.1m²) from Waneta Lake sampled on August 21, 2008 for the 50 pretreatment original littoral zone SPs and 50 alternatively revised littoral zone SPs. The 50 alternatively revised littoral zone SPs include original, and substitute SPs sampled in 2004, 2005, 2006 and 2008.

Table 4 (page 20), records biomass (gDW/0.1m²) for 15 additional Waneta Lake SPs that the Lamoka Waneta Lakes' Association requested be sampled in 2004, 2005, 2006 and 2008 after finding plants at these locations before our 2004 biomass collection.

Figure 1 shows the locations of the sampling points for Waneta Lake with the red number type indicating sampling points added in 2008.

Figure 2 shows the locations of the recorded presence of Eurasian watermilfoil from our sampling in 2008.

Our measures of the mean Waneta Lake littoral zone depth at the SPs measured in 2008 shows 1.91 meters slightly greater than previous samplings (Table 1).

Lamoka Lake

Table 5 (page 21) summarizes the primary results of 2008 contrasted to an earlier survey by Madsen *et al.* 2001 in 2000 and our 2006 report (Johnson and Keith 2006). This table is a summary of species occurrences and lake depths at 169 sample points (SPs) in Lamoka Lake from August 27 – September 15, 2008 compared to July 25 - August 1, 2006 and August 2000 (Madsen *et al.* 2001).

Table 6 (pages 22 - 27) depicts aquatic plant species' presence at 180 SPs in Lamoka Lake from two rake tosses on August 27 – September 15, 2008. For Lamoka Lake, Appendix Table B (pages 49 - 62) shows the results of the two rake tosses in detail; listing the species presence, location and relative abundance; and Table 6 uses this data.

Table 7 (pages 28, 29) reports aquatic plant biomass (gDW/0.1m²) from Lamoka Lake sampled on September 6, 2008 from 29 SPs in the lake (see Methods; Johnson and Keith 2006). The biomass of all plant species in Lamoka Lake “proper” is 107.2 gDW/m² recorded by sampling 29 SPs in the lake and none of the SPs in Mud Channel and Mill Pond of the 50 historical predetermined SPs for the lake.

Figure 3 shows the locations of the sampling points for Lamoka Lake with the red number type indicating sampling points added in 2008.

Figure 4 shows the locations of the recorded presence of Eurasian watermilfoil in Lamoka Lake from our sampling in 2008.

Figure 5 shows the locations of the sampling points for Mud Channel and Mill Pond in 2008.

Figure 6 shows the locations of the recorded presence of Eurasian watermilfoil in Mud Channel and Mill Pond from our sampling in 2008.

The mean littoral zone depth on Lamoka Lake at the SPs measured in 2008 was at 1.6 m, down from 1.7m in 2006 (Table 5). Madsen *et al.* 2001 reports Lamoka's littoral zone depth at 1.5 meters in 2000 (Table 5).

Table 1. Summary of species occurrences and lake depths at 102 sample points (SPs) in Waneta Lake in August 2000, 2003, 2004, 2005, 2006 and August 10, 2006 and August 6-12, 2008.

Scientific Name	Common Name	2000 (Madsen <i>et al.</i> 2001)		2003		2004		2005		2006		2008	
		Entire Lake		Littoral Zone (Z≤12')		Littoral Zone (in 2000)		Littoral Zone (in 2000)		Littoral Zone (in 2000)		Littoral Zone (in 2000)	
		FREQ	%	FREQ	%	FREQ	%	FREQ	%	FREQ	%	FREQ	%
<i>Ceratophyllum demersum</i>	coontail	42	13	42	41	2	2	2	2	2	12	40	39
<i>Chara</i> sp.	chara	4	1	4	4	8	8	20	20	2	13	29	28
<i>Elodea canadensis</i>	elodea	17	5	17	17	0	0	0	0	0	2	79	77
<i>Fontinalis</i> sp.	water moss	0	0	0	0	1	1	0	0	0	0	0	0
<i>Lemna minor</i>	duckweed	0	0	0	0	1	1	0	0	0	0	0	0
<i>Lemna trisulca</i>	star duckweed	0	0	0	0	0	0	0	0	0	0	4	4
<i>Myriophyllum spicatum</i>	Eurasian watermilfoil	80	25	80	78	1	1	0	5	5	50	49	5
<i>Najas flexilis</i>	bushy naiad	9	3	9	9	0	0	0	13	13	16	16	30
<i>Najas guadalupensis</i>	southern naiad	29	9	29	28	0	0	0	4	4	11	11	99
<i>Najas minor</i>	minor naiad	0	0	0	0	0	0	0	0	0	5	5	16
<i>Nitella flexilis</i>	stonewort	0	0	0	0	0	0	0	0	0	0	0	1
<i>Nitellopsis obtusa</i>	starry stonewort	0	0	0	0	0	0	0	0	0	0	0	1
<i>Niphar advena</i>	yellow water lily	2	0.6	2	2	1	1	1	2	2	0	0	0
<i>Nymphaea odorata</i>	white water lily	4	1	4	4	1	1	2	0	0	1	1	1
<i>Potamogeton amplifolius</i>	wideleaf pondweed	4	1	4	4	0	0	0	0	0	0	0	0
<i>Potamogeton crispus</i>	curly-leaf pondweed	0	0	0	0	1	1	20	40	39	19	19	43
<i>Potamogeton diversifolius</i>	water-thread pondweed	1	0.3	1	1	0	0	0	0	0	0	0	0
<i>Potamogeton foliosus</i>	leafy pondweed	0	0	0	0	14	14	28	27	27	26	10	10
<i>Potamogeton praelongus</i>	tall pondweed	2	0.6	2	2	0	0	0	0	0	0	0	0
<i>Potamogeton pusillus</i>	small pondweed	2	0.6	2	2	0	0	0	0	0	0	0	38
<i>Potamogeton robbinsii</i>	Robbin's pondweed	8	3	8	8	24	24	18	1	1	0	0	5
<i>Potamogeton zosteriformis</i>	flatstem pondweed	2	0.6	2	2	0	0	0	0	0	1	1	0
<i>Ranunculus trichophyllus</i>	water buttercup	0	0	0	0	0	0	0	0	0	0	0	3
<i>Stuckenia pectinata</i>	sago pondweed	0	0	0	0	0	0	0	1	1	1	1	0
<i>Vallisneria spiralis</i>	water celery	12	4	12	12	0	0	0	7	7	8	8	16
<i>Zosterella alabica</i>	water stargrass	2	0.6	2	2	0	0	2	1	1	1	1	1
Total occurrences, at all SP's, of all species		220		83		81		106		167		421	
Plant Species Occurrence (number species per SP)		mean	SE	mean	SE	mean	SE	mean	SE	mean	SE	mean	SE
Exotic Species Occurrence (# species per SP)		0.70	0.08	2.16	0.17	0.81	0.09	0.79	0.09	1.04	0.12	1.64	0.17
Native Plant Occurrence (number species per SP)		0.25	0.03	0.78	0.04	0.02	0.01	0.20	0.04	0.44	0.06	0.73	0.07
Native Plant Occurrence (number species per SP)		0.44	0.06	1.37	0.16	0.79	0.09	0.58	0.06	0.60	0.10	0.91	0.13
Native Plant Frequency (SP with a native plant)		FREQ	%	FREQ	%	FREQ	%	FREQ	%	FREQ	%	FREQ	%
Plant Frequency (SP with a plant, native or exotic)		64	20	64	63	54	53	50	49	37	36	45	44
Plant Frequency (SP with a plant, native or exotic)		91	29	91	89	55	54	53	52	58	57	68	67
Depth (ft)		mean	SE	mean	SE	mean	SE	mean	SE	mean	SE	mean	SE
Depth (m)		17.40	0.50	5.91	0.25	5.96	0.30	5.86	0.33	5.65	0.28	5.71	0.26
Number of Sampling Points:		5.30	0.15	1.80	0.08	1.82	0.09	1.79	0.10	1.72	0.08	1.74	0.08
		316		102		102		102		102		102	

Table 2. Aquatic plant species' presence in Waneta Lake from two rake tosses on August 6-12, 2008. Entries of "1" indicate species identified at that sample point (SP). Sample points are on a 100-meter UTM grid. Each sampled point is theoretically at the center of a 100m X 100m square or 1 hectare.

Sample Point (SP)	NAD27 X coord East 18T	NAD27 Y coord North	91 original vegetated SPs	11 original nonvegetated SPs	5 remaining DEC SPs	31 added 2008 SPs	Depth (m) on date	Depth (ft) on date	Ceratophyllum demersum	Chara vulgaris	Elodea sp.	Lemna trisulca	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Najas minor	Nitella flexilis	Nitellopsis obtusa	Nymphaea odorata	Potamogeton crispus	Potamogeton foliosus	Potamogeton pusillus	Potamogeton robinsonii	Ranunculus trichophyllus	Vallisneria americana	Zosterella dubia	Total	Number of Exotic Species	Number of Native Species	Presence of a Native or Exotic	Presence of a Native Species	Flamnetous algae												
1	327100	4703400	■				0.7	2.3	1	1	1				1	1	1	1				1			1		9	2	7	1	1	1												
2	327000	4703400	■				0.8	2.5			1				1	1	1								1		6	1	5	1	1	1	1											
3	326900	4703400	■				0.6	2.0			1				1	1	1	1								1		7	1	6	1	1	1	1										
4	327300	4703300	■				1.1	3.6			1	1	1	1	1	1	1										7	2	5	1	1	1	1	1	1									
5	327200	4703300	■				1.5	4.9	1	1	1				1	1	1			1			1			1		8	1	7	1	1	1	1	1	1								
6	327100	4703300	■				0.8	2.5	1	1	1				1	1	1						1				5	0	5	1	1	1	1	1	1	1								
7	327000	4703300	■				2.2	7.1	1	1	1				1	1	1				1					5	1	4	1	1	1	1	1	1	1	1	1							
8	326900	4703300	■				2.3	7.4	1	1	1				1	1	1				1					5	1	4	1	1	1	1	1	1	1	1	1	1						
9	326800	4703300	■				2.0	6.4	1	1	1				1	1	1				1					5	1	4	1	1	1	1	1	1	1	1	1	1	1					
10	327300	4703200	■				2.3	7.4	1	1	1				1	1	1				1					6	1	5	1	1	1	1	1	1	1	1	1	1	1	1				
11	327200	4703200	■				2.8	9.0			1				1	1	1				1					5	1	4	1	1	1	1	1	1	1	1	1	1	1	1				
12	327100	4703200	■				2.8	9.2			1				1	1	1									1	0	1	1	1	1	1	1	1	1	1	1	1	1	1				
13	327000	4703200	■				3.0	9.8			1				1	1	1									2	0	2	1	1	1	1	1	1	1	1	1	1	1	1	1			
14	326900	4703200	■	■			3.3	10.8							1	1	1									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
15	326800	4703200	■				2.5	8.2	1	1	1				1	1	1				1					7	2	5	1	1	1	1	1	1	1	1	1	1	1	1	1			
16	326700	4703200	■				0.6	2.0			1				1	1	1									3	0	3	1	1	1	1	1	1	1	1	1	1	1	1	1			
17	327300	4703100	■				2.8	9.2			1				1	1	1									4	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
18	327200	4703100	■				3.1	10.2			1				1	1	1									4	0	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
19	327100	4703100	■				4.1	13.5			1				1	1	1									2	0	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
20	327000	4703100	■				4.5	14.8							1	1	1									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
21	326900	4703100	■				4.5	14.8							1	1	1									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
22	326800	4703100	■				4.0	13.1							1	1	1									1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
23	326700	4703100	■				1.2	3.9			1				1	1	1									2	0	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
24	327300	4703000	■	■			3.1	10.2			1				1	1	1									5	0	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
24A	327343	4703000	■				1.6	5.2	1						1	1	1									2	0	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
30	326700	4703000	■				1.6	5.2	1						1	1	1									3	0	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
31	327300	4702900	■				2.3	7.4							1	1	1									1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
37	326700	4702900	■				1.5	4.9							1	1	1									1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
38	327300	4702800	■				0.8	2.5			1				1	1	1									3	0	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
44	326700	4702800	■				1.1	3.6							1	1	1									2	0	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Table 2. (continued) Aquatic plant species' presence in Waneta Lake from two rake tosses on August 6-12, 2008. Entries of "1" indicate species identified at that sample point (SP). Sample points are on a 100-meter UTM grid. Each sampled point is theoretically at the center of a 100m X 100m square or 1 hectare.

Sample Point (SP)	NAD27 X coord East 18T	NAD27 Y coord North	□ 91 original vegetated SPs	■ 11 original nonvegetated SPs	• 5 remaining DEC SPs	○ 31 added 2008 SPs	Depth (m) on date	Depth (ft) on date	Ceratophyllum demersum	Chara vulgaris	Elodea sp.	Lemna trisulca	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Najas minor	Nitella flexilis	Nitellopsis obtusa	Nymphaea odorata	Potamogeton crispus	Potamogeton foliosus	Potamogeton pusillus	Potamogeton robbinsii	Ranunculus trichophyllus	Vallisneria americana	Zosterella dubia	Total	Number of Exotic Species	Number of Native Species	Presence of a Native or Exotic	Presence of a Native Species	Filamentous algae	
45A	327274	4702700				○ 1.5	4.9				1			1	1							1					4	0	4	1	1	1	
50	326700	4702700	■			○ 0.8	2.5		1					1	1										1			4	0	4	1	1	1
51A	327269	4702600				○ 1.5	4.9							1	1	1							1					4	1	3	1	1	1
56	326700	4702600	■			○ 0.8	2.6							1	1									1				3	0	3	1	1	1
57A	327283	4702500				○ 1.4	4.6							1	1													1	0	1	1	1	1
62	326700	4702500	■			○ 0.9	3.0				1				1								1		1			4	0	4	1	1	1
63	327300	4702400	■			○ 2.2	7.2							1	1													2	0	2	1	1	1
69	326700	4702400	■			○ 1.4	4.6		1					1	1													2	0	2	1	1	1
70A	327286	4702300				○ 1.5	4.9							1	1								1					3	0	3	1	1	1
76	326700	4702300	■			○ 1.8	5.7				1				1													2	0	2	1	1	1
77A	327346	4702200				○ 1.5	4.9							1	1													2	0	2	1	1	1
83	326700	4702200	■			○ 1.4	4.4							1	1													1	0	1	1	1	1
84A	327364	4702100				○ 1.5	4.9							1	1													3	1	2	1	1	1
90	326700	4702100	■			○ 1.4	4.6							1	1													1	0	1	1	1	1
91A	327352	4702000				○ 1.5	4.9				1				1													4	1	3	1	1	1
97	326700	4702000	■			○ 1.8	5.7							1	1													2	0	2	1	1	1
98	327300	4701900		■		○ 3.2	10.5								1													5	2	3	1	1	1
98A	327304	4701900				○ 1.5	4.9								1													3	2	1	1	1	1
104	326700	4701900	■			○ 2.7	8.9																					0	0	0	0	0	0
105A	327334	4701800				○ 1.5	4.9																					2	1	1	1	1	1
111	326700	4701800	■			○ 4.0	13.1							1	1													1	0	1	1	1	1
111A	326670	4701800				○ 1.5	4.9				1				1													2	0	2	1	1	1
112A	327368	4701700				○ 1.5	4.9								1													1	0	1	1	1	1
118A	326670	4701700				○ 1.7	5.6								1													1	0	1	1	1	1
119A	327375	4701600				○ 1.5	4.9								1													3	1	2	1	1	1
125A	326655	4701600				○ 1.5	4.9								1													1	0	1	1	1	1
126A	327373	4701500				○ 1.5	4.9								1													3	2	1	1	1	1
132	326700	4701500	■			○ 1.8	5.9				1				1													3	1	2	1	1	1
133A	327356	4701400				○ 1.5	4.9								1													4	0	4	1	1	1
139A	326650	4701400				○ 1.5	4.9				1				1													4	0	4	1	1	1

Table 2. (continued) Aquatic plant species' presence in Waneta Lake from two rake tosses on August 6-12, 2008. Entries of "1" indicate species identified at that sample point (SP). Sample points are on a 100-meter UTM grid. Each sampled point is theoretically at the center of a 100m X 100m square or 1 hectare.

Sample Point (SP)	NAD27 X coord East 18T	NAD27 Y coord North	□ 91 original vegetated SPs	■ 11 original nonvegetated SPs	• 5 remaining DEC SPs	○ 31 added 2008 SPs	Depth (m) on date	Depth (ft) on date	Ceratophyllum demersum	Chara vulgaris	Elodea sp.	Lemna trisulca	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Najas minor	Nitella flexilis	Nitellopsis obtusa	Nymphaea odorata	Potamogeton crispus	Potamogeton foliosus	Potamogeton pusillus	Potamogeton robbinsii	Ranunculus trichophyllus	Vallisneria americana	Zosterella dubia	Total	Number of Exotic Species	Number of Native Species	Presence of a Native or Exotic	Presence of a Native Species	Filamentous algae	
140A	327378	4701300				○ 1.5	4.9							1	1	1				1	1	1				5	1	4	1	1	1		
146A	326654	4701300				○ 1.5	4.9				1		1		1	1	1					1					5	2	3	1	1	1	
147A	327405	4701200				○ 1.5	4.9				1				1	1	1				1	1					4	1	3	1	1	1	
153A	327416	4701100				○ 1.5	4.9				1				1	1	1				1	1					3	1	2	1	1	1	
160A	327408	4701000				○ 1.5	4.9								1	1	1				1	1	1				4	1	3	1	1	1	
167	327400	4700900	□			1.9	6.1	1			1				1	1	1				1	1					7	1	6	1	1	1	
173	326800	4700900	□			2.0	6.6				1			1	1	1				1	1						5	2	3	1	1	1	
174	327400	4700800	□			1.8	5.9				1				1	1	1				1	1					4	1	3	1	1	1	
179	326900	4700800	□			1.1	3.6				1				1	1	1					1					6	1	5	1	1	1	
180	327400	4700700	□			1.8	5.7				1				1	1	1					1					4	0	4	1	1	1	
185	326900	4700700	□			1.1	3.6				1			1	1	1						1			1		1	5	1	4	1	1	1
186A	327422	4700600				○ 1.5	4.9				1				1	1	1				1	1					4	1	3	1	1	1	1
191	326900	4700600	□			1.9	6.2				1				1	1	1				1	1					4	0	4	1	1	1	1
192	327400	4700500	□			1.5	4.9				1				1	1	1				1	1					4	1	3	1	1	1	1
197	326900	4700500	□			2.6	8.5	1			1				1	1	1				1	1					7	1	6	1	1	1	1
198A	327371	4700400				○ 2.0	6.6	1			1				1	1	1					1		1			7	0	7	1	1	1	1
203A	326860	4700400				○ 1.3	4.3	1			1				1	1	1					1					4	0	4	1	1	1	1
204A	327437	4700300				○ 1.5	4.9	1			1				1	1	1				1	1					5	1	4	1	1	1	1
210A	327500	4700200				○ 1.5	4.9	1			1			1	1	1					1	1					6	1	5	1	1	1	1
216	327500	4700100	□			1.8	5.9				1				1	1	1				1	1					6	1	5	1	1	1	1
223A	327539	4700000				○ 1.5	4.9				1				1	1	1				1	1					3	1	2	1	1	1	1
237A	327566	4699800				○ 1.5	4.9				1				1	1	1				1	1					2	0	2	1	1	1	1
243	326900	4699800	□			2.7	8.9				1				1	1	1				1	1					5	1	4	1	1	1	1
244A	327567	4699700				○ 1.5	4.9				1				1	1	1					1					4	0	4	1	1	1	1
249	327000	4699700		■		4.5	14.8				1				1	1	1										2	0	2	1	1	1	1
250	326900	4699700	□			2.1	6.9	1			1				1	1	1				1	1					7	1	6	1	1	1	1
251	327600	4699600	□			1.5	4.9	1			1				1	1	1				1	1					6	1	5	1	1	1	1
257	327000	4699600		■		3.4	11.2				1				1	1	1					1					2	0	2	1	1	1	1
258	327600	4699500	□			2.8	9.2				1				1	1	1					1					3	0	3	1	1	1	1
263	327100	4699500		■		3.9	12.8	1			1				1	1	1										4	0	4	1	1	1	1

Table 2. (continued) Aquatic plant species' presence in Waneta Lake from two rake tosses on August 6-12, 2008. Entries of "1" indicate species identified at that sample point (SP). Sample points are on a 100-meter UTM grid. Each sampled point is theoretically at the center of a 100m X 100m square or 1 hectare.

Sample Point (SP)	NAD27 X coord East 18T	NAD27 Y coord North	91 original vegetated SPS	11 original nonvegetated SPS	5 remaining DEC SPS	31 added 2008 SPS	Depth (m) on date	Depth (ft) on date	Ceratophyllum demersum	Chara vulgaris	Elodea sp.	Lemna trisulca	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Najas minor	Nitella flexilis	Nitellopsis obtusa	Nymphaea odorata	Potamogeton crispus	Potamogeton pusillus	Potamogeton robbinsii	Ranunculus trichophyllus	Vallisneria americana	Zosterella dubia	Total	Number of Exotic Species	Number of Native Species	Presence of a Native or Exotic	Presence of a Native Species	Filamentous algae	
264	327000	4699500	■				1.9	6.2		1	1			1												4	0	4	1	1	1	
265	327600	4699400		■			3.2	10.5			1				1												2	0	2	1	1	
270	327100	4699400		■			3.0	9.8	1		1															3	0	3	1	1	1	
271	327700	4699300	■				0.9	3.0	1	1	1			1		1								1		7	1	6	1	1	1	
272	327600	4699300	■				3.2	10.5	1	1	1				1											5	0	5	1	1	1	
273	327500	4699300		■			3.5	11.5							1											1	0	1	1	1	1	
276	327200	4699300		■			3.5	11.5							1											2	0	2	1	1	1	
277	327100	4699300	■				1.8	5.7	1	1	1															4	1	3	1	1	1	
278	327700	4699200	■				1.3	4.3	1	1	1															5	1	4	1	1	1	
279	327600	4699200	■				2.8	9.0			1															3	1	2	1	1	1	
280	327500	4699200	■				2.9	9.5	1		1															4	1	3	1	1	1	
281	327400	4699200		■			3.3	10.8			1															2	0	2	1	1	1	
282	327300	4699200	■				3.2	10.5		1	1															3	0	3	1	1	1	
283	327200	4699200	■				2.5	8.2			1															2	0	2	1	1	1	
284	327700	4699100	■				1.5	4.9	1	1	1															5	1	4	1	1	1	
285	327600	4699100	■				2.1	6.9	1	1	1															5	1	4	1	1	1	
286	327500	4699100	■				2.3	7.4			1			1												4	1	3	1	1	1	
287	327400	4699100	■				2.5	8.2	1	1	1															4	1	3	1	1	1	
288	327300	4699100	■				2.4	7.9			1															3	1	2	1	1	1	
289	327200	4699100	■				1.9	6.2	1		1			1												4	2	2	1	1	1	
290	327700	4699000	■				1.3	4.3	1	1	1													1		5	1	4	1	1	1	
291	327600	4699000	■				1.8	5.9	1	1	1															4	1	3	1	1	1	
292	327500	4699000	■				1.8	5.7	1	1	1															4	1	3	1	1	1	
293	327400	4699000	■				1.8	5.9	1	1	1															5	1	4	1	1	1	
294	327300	4699000	■				1.9	6.1	1	1	1															4	1	3	1	1	1	
295	327200	4699000	■				1.5	4.9	1	1	1			1												5	1	4	1	1	1	
296	327700	4698900	■				1.2	3.9	1	1	1													1		6	1	5	1	1	1	
297	327600	4698900	■				1.5	4.9	1	1	1															5	1	4	1	1	1	
298	327500	4698900	■				1.3	4.3	1	1	1															5	1	4	1	1	1	
299	327400	4698900	■				1.5	4.9	1	1	1															4	1	3	1	1	1	

Table 2. (continued) Aquatic plant species' presence in Waneta Lake from two rake tosses on August 6-12, 2008. Entries of "1" indicate species identified at that sample point (SP). Sample points are on a 100-meter UTM grid. Each sampled point is theoretically at the center of a 100m X 100m square or 1 hectare.

Sample Point (SP)	NAD27 X coord East 18T	NAD27 Y coord North	91 original vegetated SPs	11 original nonvegetated SPs	5 remaining DEC SPs	31 added 2008 SPs	Depth (m) on date	Depth (ft) on date	Ceratophyllum demersum	Chara vulgaris	Elodea sp.	Lemna trisulca	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Najas minor	Nitella flexilis	Nitellopsis obtusa	Nymphaea odorata	Potamogeton crispus	Potamogeton foliosus	Potamogeton pusillus	Potamogeton robbinsii	Ranunculus trichophyllus	Vallisneria americana	Zosterella dubia	Total	Number of Exotic Species	Number of Native Species	Presence of a Native or Exotic	Presence of a Native Species	Filamentous algae
300	327300	4698900	■				1.5	4.9	1		1									1				1			5	1	4	1	1	
301	327700	4698800	■				1.0	3.3	1		1	1				1				1							6	2	4	1	1	1
302	327600	4698800	■				1.1	3.6	1	1	1									1			1				7	1	6	1	1	1
303	327500	4698800	■				1.1	3.6	1											1							4	1	3	1	1	
304	327400	4698800	■				1.1	3.6	1	1	1									1							7	1	6	1	1	1
305	326900	4699600	■				1.7	5.4			1																4	0	4	1	1	1
306	327100	4699200	■				1.2	3.9			1																3	0	3	1	1	1
307	327800	4699100	■				0.5	1.6	1	1	1	1								1				1	1		10	1	9	1	1	1
308	326800	4699900	■				1.2	3.9		1	1												1				4	0	4	1	1	1
309	326800	4699800	■				0.9	3.0		1	1									1		1					6	1	5	1	1	1
310	326800	4700000	■				1.0	3.3			1												1				4	0	4	1	1	1
311	327600	4699900	■				1.3	4.1	1		1																3	0	3	1	1	1
312	326800	4700200	■				1.8	5.7			1																2	0	2	1	1	1
313	326800	4700100	■				1.8	5.9			1											1					4	0	4	1	1	
314	326700	4701000	■				1.3	4.3			1														1		5	1	4	1	1	1
315	326800	4700300	■				1.9	6.1			1										1		1				5	1	4	1	1	1
316	326700	4701200	■				2.0	6.6			1										1						4	1	3	1	1	1
317	326700	4701100	■				1.8	5.9			1										1						6	2	4	1	1	1
			Totals for 138 sampling points:						45	31	97	4	7	39	131	21	1	1	1	55	20	52	5	3	17	1	531	84	447	134	134	99
			Totals for 102 sampling points:						40	29	79	4	5	30	99	16	1	1	1	43	10	38	5	3	16	1	421	65	356	100	100	75
			Totals for 91 sampling points:						38	28	72	4	5	28	90	15	1	1	1	42	9	34	5	3	16	1	393	63	330	90	90	71

■ Denotes 91 original sampling points with plants in 2000.

■ Denotes 11 original littoral zone sampling points without plants in 2000.

• Denotes 5 remaining sampling points of the 18 that were added in 2003. 13 were removed in 2008 and not sampled.

○ Denotes 31 new sampling points added in 2008. These 91+11+5+31 SP locations equal 138 total sampling points in 2008.

Table 3. Recorded biomass (gDW/0.1m²) for Waneta Lake sampled on August 21, 2008 from the 50 original sample points (SPs) and the 50 revised SPs for 2004 - 2008. SPs are on a 100-meter UTM grid. Each sampled point is theoretically the center of a 100m X 100m square or 1 hectare.

Sample Point (SP)	NAD27 X coord East 18T	NAD27 Y coord North	50 original biomass SPs	50 revised biomass SPs	Depth (m) on date	Depth (ft) on date	Ceratophyllum demersum	Chara vulgaris	Elodea spp.	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Najas minor	Nitellopsis obtusa	Nuphar Advena	Nymphaea odorata	Potamogeton crispus	Potamogeton pusillus	Potamogeton robbinsii	Ranunculus trichophyllus	Vallisneria americana	Zostera dubia	Total Biomass (gDW/0.1m ²)	Exotic Species (gDW/0.1m ²)	Native Species (gDW/0.1m ²)
1	327100	4703400		—	0.6	2.0		0.2162	0.1004		0.0195	0.0063						0.2346					2.99	0	2.991
3	326900	4703400		—	0.7	2.3		0.2162			0.0121	0.1709										2.63	0.40	0	0.399
5	327200	4703300		—	1.5	4.9	0.2451	0.0148	3.1300			5.46					0.002						8.85	0.002	8.850
7	327000	4703300	□	—	2.2	7.2	2.38		0.0357			0.6271					2.26						5.30	2.260	3.043
9	326800	4703300	□	—	1.9	6.2	0.1600					6.26											6.42	0	6.420
10	327300	4703200	□	—	2.0	6.6	0.2008		0.1217			1.6600	0.010										1.99	0.010	1.983
12	327100	4703200	□	—	2.7	8.9					0.0331	0.4298											0.46	0	0.463
16	326700	4703200	□	—	0.8	2.6						0.0758											0.08	0	0.076
17	327300	4703100	□	—	2.7	8.9	0.2438		0.0036			6.26						0.0039				0.0017	6.51	0	6.513
19	327100	4703100	□	—	4.4	14.4						0.0141											0.01	0	0.014
22	326800	4703100	□	—	3.8	12.5		No plants															0.00	0	0
23	326700	4703100	□	—	0.9	3.0						6.30											6.30	0	6.300
24	327300	4703000	□	—	2.7	8.9						3.69											3.69	0	3.690
37	326700	4702900	□	—	1.5	4.9						21.21											21.21	0.0046	21.210
38	327300	4702800	□	—	0.2	0.7						0.7976						0.0017				4.77	5.57	0	5.569
44	326700	4702800	□	—	0.9	3.0		0.0377	0.0036			3.60										1.95	5.59	0	5.591
56	326700	4702600	□	—	0.8	2.6						0.3278										2.60	2.93	0	2.928
63	327300	4702400	□	—	2.0	6.6						0.0296						0.0093					0.04	0	0.039
76	326700	4702300	□	—	1.6	5.2						0.2532											0.25	0	0.253
77	327300	4702200	□	—	8.2	26.9		No plants															0.00	0	0
97	326700	4702000	□	—	1.7	5.6		0.0390				1.07			20.75								21.86	0	21.859
125	326700	4701600	□	—	5.5	18.0			No plants														0.00	0	0.000
132	326700	4701500	□	—	2.4	7.9						0.4471											0.45	0	0.447
138	326800	4701400	□	—	7.1	23.3			No plants														0.00	0	0
146	326700	4701300	□	—	5.3	17.4			No plants														0.00	0	0
152	326800	4701200	□	—	7.7	25.3			No plants														0.00	0	0
159	327400	4701100	□	—	6.5	21.3			No plants														0.00	0	0
160	327400	4701000	□	—	1.9	6.2												0.1044					0.10	0	0.104
167	327400	4700900	□	—	2.2	7.2			0.0408			0.2317											0.27	0	0.273
173	326800	4700900	□	—	2.0	6.6			0.9450			4.48											6.45	1.020	5.435
179	326900	4700800	□	—	1.2	3.9		1.95	0.1958			0.6314						0.0060					4.41	0.079	4.333

Table 3. (Continued) Recorded biomass (gDW/0.1m²) for Waneta Lake sampled on August 21, 2008 from the 50 original sample points (SPs) and the 50 revised SPs for 2004 - 2008. SPs are on a 100-meter UTM grid. Each sampled point is theoretically the center of a 100m X 100m square or 1 hectare.

Sample Point (SP)	NAD27 X coord East 18T	NAD27 Y coord North	50 original biomass SPs	DEC substitute SPs	50 revised biomass SPs	Depth (m) on date	Depth (ft) on date	Ceratophyllum demersum	Chara vulgaris	Elodea spp.	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Najas minor	Nitellopsis obtusa	Nuphar Advena	Nymphaea odorata	Potamogeton crispus	Potamogeton pusillus	Potamogeton robbinsii	Ranunculus trichophyllus	Vallisneria americana	Zostera dubia	Total Biomass (gDW/0.1m ²)	Exotic Species (gDW/0.1m ²)	Native Species (gDW/0.1m ²)
180	327400	4700700	□	□	□	1.5	4.9			0.2630			1.75	0.1731				0.2758	0.6886					3.15	0.449	2.702
191	326900	4700600	□	□	□	2.0	6.6			0.5434	0.0025	0.0738	6.35						0.0993					7.07	0.003	7.067
203	326900	4700400	□	□	□	5.0	16.4		No plants	No plants														0.00	0	0
209	326900	4700300	□	□	□	5.1	16.7		No plants	No plants														0.00	0	0
210	327400	4700200	□	□	□	5.5	18.0																	0.02	0.016	0
223	327500	4700000	□	□	□	2.1	6.9			0.0293		0.3236							0.1426	0.0027				0.50	0.143	0.356
229	326900	4700000	□	□	□	4.2	13.8		No plants	No plants														0.00	0	0
236	326900	4699900	□	□	□	3.9	12.8		No plants	No plants														0.00	0	0
250	326900	4699700	□	□	□	1.9	6.2			0.3215		0.0041												0.46	0.053	0.403
251	327600	4699600	□	□	□	1.8	5.9		0.0324			1.67												1.70	0	1.702
257	327000	4699600	□	□	□	3.3	10.8		No plants	No plants														0.00	0	0
264	327000	4699500	□	□	□	2.5	8.2			0.8451		0.0170												1.58	0.687	0.894
265	327600	4699400	□	□	□	3.3	10.8	0.0296		0.3578		2.07												2.46	0	2.457
270	327100	4699400	□	□	□	2.9	9.5			0.0043														0.00	0	0.004
271	327700	4699300	□	□	□	0.8	2.6		0.0731	0.1258		1.60	1.40	0.0161										3.22	0.016	3.199
272	327600	4699300	□	□	□	3.3	10.8		No plants	No plants														0.00	0	0
277	327100	4699300	□	◆	□	1.9	6.2	1.03		0.2083		0.0040												1.51	0.267	1.242
278	327700	4699200	□	◆	□	1.6	5.2	2.05		1.50		0.3944	1.28											5.85	0.622	5.224
280	327500	4699200	□	□	□	3.0	9.8		No plants	No plants														0.00	0	0
282	327300	4699200	□	□	□	3.0	9.8					0.0023											0.0236	0.09	0.063	0.026
283	327200	4699200	□	□	□	2.7	8.9					1.35												1.38	0.031	1.350
284	327700	4699100	□	□	□	1.7	5.6	0.0791		0.3239		4.93												6.14	0.803	5.333
286	327500	4699100	□	□	□	2.2	7.2			0.0344		0.0381												0.96	0.891	0.073
287	327400	4699100	□	◆	□	2.4	7.9					0.0043												0.29	0.290	0.004
290	327700	4699000	□	□	□	1.5	4.9	0.0370		2.10		1.53												7.29	3.620	3.667
291	327600	4699000	□	□	□	1.9	6.2	0.0185		1.14		7.76												10.33	1.410	8.919
294	327300	4699000	□	□	□	1.7	5.6			0.0184														1.67	1.650	0.018
295	327200	4699000	□	◆	□	1.4	4.6			4.01		2.04												8.44	2.390	6.050
297	327600	4698900	□	□	□	1.5	4.9	1.56		0.0344		0.0058	2.40											5.60	1.600	4.000
298	327500	4698900	□	□	□	1.6	5.2	0.1251		0.0199		0.0549												3.88	3.680	0.200
300	327300	4698900	□	◆	□	1.5	4.9			0.6071		0.6928												3.81	2.500	1.314

Table 3. (Continued) Recorded biomass (gDW/0.1m²) for Waneta Lake sampled on August 21, 2008 from the 50 original sample points (SPs) and the 50 revised SPs for 2004 - 2008. SPs are on a 100-meter UTM grid. Each sampled point is theoretically the center of a 100m X 100m square or 1 hectare.

Sample Point (SP)	NAD27 X coord East 18T	NAD27 Y coord North	50 original biomass SPs	DEC substitute SPs	50 revised biomass SPs	Depth (m) on date	Depth (ft) on date	Ceratophyllum demersum	Chara vulgaris	Elodea spp.	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Najas minor	Nitellopsis obtusa	Nuphar Advena	Nymphaea odorata	Potamogeton crispus	Potamogeton pusillus	Potamogeton robbinsii	Ranunculus trichophyllus	Vallisneria americana	Zostera dubia	Total Biomass (gDW/0.1m ²)	Exotic Species (gDW/0.1m ²)	Native Species (gDW/0.1m ²)		
301	327700	4698800		◆	◆	1.0	3.3	0.0744					0.0247											0.10	0	0.099		
303	327500	4698800	■	◆	◆	1.1	3.6	1.58					0.5084					0.5236		0.0424				2.65	0.524	2.131		
307	327800	4699100		◆	◆	0.6	2.0	2.77	0.0193	2.59		0.5252	6.19	0.0692			0.2306		0.4081		0.0920	3.08	0.0067	17.53	1.619	15.912		
308	326800	4699900		◆	◆	1.0	3.3			No plants														0.00	0	0		
310	326800	4700000		◆	◆	1.2	3.9			0.2348														0.23	0	0.235		
311	327600	4699900		◆	◆	1.2	3.9						17.27											17.27	0	17.270		
312	326800	4700200		◆	◆	1.6	5.2			0.1640			0.0873						0.0072					0.26	0	0.259		
315	326800	4700300		◆	◆	1.6	5.2			2.30		0.0117	3.01					0.0252	0.0041					5.35	0.025	5.326		
316	326700	4701200		◆	◆	2.2	7.2						0.0945											0.09	0	0.095		
317	326700	4701100		◆	◆	1.6	5.2						2.82											3.06	0.237	2.820		
Total (gDW) 50 original SPs								6.17	2.09	7.50	0.0025	2.35	77.56	0.20	0.06	20.75	0.00	18.75	1.02	0.04	0.00	1.95	0.02	138.47	19.01	119.46		
Total (gDW) 50 revised SPs								12.58	2.34	22.32	0.0025	3.32	126.56	0.50	0.00	20.75	0.23	25.34	1.59	25.34	1.59	0.04	0.09	15.03	0.01	230.71	25.85	204.86

◆ Denotes 50 original (Madsen, *et al.*, 2001) biomass sampling points (SPs) reported in 2000.

◆ Denotes 22 substitute biomass sampling points (SPs) authorized by NYSDEC for 2004 - 2008 sampling.

◆ Denotes 50 revised biomass sampling points (SPs) authorized by NYSDEC for 2004 - 2008 sampling.

Sample Point (SP)	NAD27 X coord East 18T	NAD27 Y coord North	50 original biomass SPs	DEC substitute SPs	50 revised biomass SPs	Depth (m) on date	Depth (ft) on date	Ceratophyllum demersum	Chara vulgaris	Elodea spp.	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Najas minor	Nitellopsis obtusa	Nuphar Advena	Nymphaea odorata	Potamogeton crispus	Potamogeton pusillus	Potamogeton robbinsii	Ranunculus trichophyllus	Vallisneria americana	Zostera dubia	Total Biomass (gDW/0.1m ²)	Exotic Species (gDW/0.1m ²)	Native Species (gDW/0.1m ²)
Mean (gDW/0.1m ²) for 50 original SPs			0.12	0.04	0.15	0.0001	0.0471	1.5511	0.004	0.0013	0.4150	0.0000	0.3749	0.0204	0.0008	0.0000	0.0000	0.0390	0.0005	0.0000	0.0000	0.0390	0.0005	2.7694	0.3802	2.3892
Mean (gDW/0.1m ²) for 50 revised SPs			0.25	0.05	0.45	0.0001	0.0663	2.5312	0.010	0.0000	0.4150	0.0046	0.5069	0.0317	0.0008	0.0018	0.3006	0.0018	0.0008	0.0008	0.0018	0.3006	0.0001	4.6143	0.5170	4.0973
Mean (gDW/m ²) for 50 original SPs			1.23	0.42	1.50	0.0005	0.47	15.51	0.04	0.01	4.15	0.00	3.75	0.20	0.01	0.00	0.39	0.020	0.01	0.00	0.02	0.39	0.00	27.69	3.80	23.89
Mean (gDW/m ²) for 50 revised SPs			2.52	0.47	4.46	0.0005	0.66	25.31	0.10	0.00	4.15	0.05	5.07	0.32	0.01	0.00	3.01	0.02	0.01	0.02	0.02	3.01	0.00	46.14	5.17	40.97

Table 4. Recorded biomass (gDW/0.1m²) on August 21, 2008 for 15 additional Waneta Lake locations that the Lamoka Waneta Lakes' Association requested sampling in 2004, 2005, 2006 and 2008, because they found plants at these locations before the 2004 biomass collection.

Additional Biomass Locations	NAD27 X coord East 18T	NAD27 Y coord North	Depth (m) on date	Depth (ft) on date	Ceratophyllum demersum	Chara vulgaris	Elodea spp.	Najas flexilis	Najas guadalupensis	Najas minor	Nymphaea odorata	Potamogeton crispus	Potamogeton pusillus	Potamogeton robinsii	Stuckenia pectinata	Vallisneria americana	Zosterella dubia	Total Biomass (gDW/0.1m ²)	Exotic Species (gDW/0.1m ²)	Native Species (gDW/0.1m ²)
S1	327608	4699876	1.2	3.94	0.0415		0.4871		27.34									27.87	0	27.869
S2	327717	4699256	0.7	2.30				21.80										21.80	0	21.800
S2a	327707	4699263	0.9	2.95	0.0788		0.0895	4.50	0.0157							1.56		6.24	0.016	6.228
S3	327534	4698816	1.2	3.94	1.92			0.4622				1.62	0.0965					4.10	1.620	2.482
S4	327470	4698835	1.3	4.27	4.79		0.0155	0.0935				0.6688				3.92		9.49	0.669	8.819
S5	327193	4698952	1.0	3.28	0.6758	0.1431	0.1465	0.8768	0.4955			0.5303	0.0035			5.54		8.41	0.530	7.881
S6	327058	4699250	0.9	2.95				11.1600										11.16	0	11.160
S7	326702	4700933	0.8	2.62			0.0296	0.0196	13.99							3.08	0.0085	17.13	0	17.131
S8	326677	4702302	0.8	2.62				0.1614	0.1614							0.6277		0.79	0	0.789
S9	326684	4702925	1.1	3.61		0.0238		5.2200										5.24	0	5.244
S9a	326681	4702949	1.0	3.28		0.0555		0.7337										0.79	0	0.789
S10	327275	4703338	0.7	2.30		0.0934	1.65	0.9549	0.0853				0.0015			1.12		3.91	0	3.905
S10a	327264	4703353	0.6	1.97		0.0021	0.1130	0.0131							0.0133	1.78		1.92	0	1.922
S11	327384	4703239	0.6	1.97	0.0300			0.9870	16.47	0.0184						1.65		19.16	0.018	19.137
S12	327684	4699397	0.9	2.95			0.2676	0.0204								2.36		2.65	0	2.648
Total (gDW) for 15 locations					7.54	0.32	2.80	1.96	102.93	0.0341	0.50	2.82	0.01	0.10	0.01	21.64	0.01	140.66	2.85	137.80
Mean (gDW/m²) for 15 locations					5.02	0.21	1.87	1.31	68.62	0.0227	0.33	1.88	0.00	0.07	0.01	14.43	0.01	93.77	1.90	91.87

Table 5. Summary of species occurrence and lake depth at 169 sample points (SPs) recorded in Lamoka Lake from July 25 - August 1, 2006 (Johnson and Keith 2006), August 27 – September 15, 2008 and compared to August 2000 (Madsen *et al.* 2001).

Scientific Name	Common Name	2000		2006		2008	
		Littoral Zone (in 2000)		Littoral Zone (in 2000)		Littoral Zone (in 2000)	
		FREQ	%	FREQ	%	FREQ	%
<i>Azolla caroliniana</i>	Carolina mosquito fern	0	0	0	0	4	2
<i>Brasenia schreberi</i>	water shield	0	0	2	1	2	1
<i>Ceratophyllum demersum</i>	coontail, hornwort	108	64	140	83	152	90
<i>Chara vulgaris</i>	chara, muskgrass	2	1	16	9	10	6
<i>Elodea canadensis</i>	elodea	89	53	106	63	107	63
<i>Lemna minor</i>	small duckweed	0	0	77	46	20	12
<i>Lemna trisulca</i>	star duckweed	3	2	52	31	65	38
<i>Megalodonta beckii</i>	water marigold	0	0	8	5	6	4
<i>Myriophyllum spicatum</i>	Eurasian watermilfoil	130	77	153	91	67	40
<i>Najas flexilis</i>	bushy naiad	4	2	7	4	3	2
<i>Najas guadalupensis</i>	southern naiad	41	24	66	39	79	47
<i>Nitella flexilis</i>	nitella, stonewort	0	0	0	0	9	5
<i>Nuphar advena</i>	yellow water lily	24	14	23	14	31	18
<i>Nymphaea odorata</i>	white water lily	40	24	28	17	12	7
<i>Potamogeton amplifolius</i>	large-leaf pondweed	13	8	20	12	37	22
<i>Potamogeton crispus</i>	curly-leaf pondweed	1	1	18	11	41	24
<i>Potamogeton foliosus</i>	leafy pondweed	0	0	2	1	0	0
<i>Potamogeton hillii</i>	Hill's pondweed	0	0	3	2	0	0
<i>Potamogeton</i> ????	? hybrid ?	0	0	0	0	1	1
<i>Potamogeton nodosus</i>	long-leaf pondweed	0	0	0	0	1	1
<i>Potamogeton pusillus</i>	small pondweed	0	0	1	1	3	2
<i>Potamogeton praelongus</i>	white-stem pondweed	8	5	0	0	0	0
<i>Potamogeton robbinsii</i>	Robbin's pondweed	36	21	81	48	107	63
<i>Potamogeton zosteriformis</i>	flat-stem pondweed	18	11	55	33	53	31
<i>Polygonum amphibium</i>	water smartweed	0	0	3	2	4	2
<i>Ranunculus trichophyllus</i>	water buttercup	4	2	50	30	48	28
<i>Stuckenia pectinata</i>	sago pondweed	0	0	1	1	1	1
<i>Spirodela polyrhiza</i>	great duckweed	0	0	48	28	22	13
<i>Typha latifolia</i>	broad-leaved cattail	3	2	4	2	1	1
<i>Utricularia sp.</i>	bladderwort	16	9	11	7	34	20
<i>Vallisneria americana</i>	eel grass, wild celery	27	16	52	31	51	30
<i>Wolffia columbiana</i>	common watermeal	0	0	33	20	10	6
<i>Zanichellia palustris</i>	horned pondweed	2	1	0	0	0	0
<i>Zosterella dubia</i>	water stargrass	33	20	50	30	32	19
Total species occurrence for all SPs		602		1110		1013	
		mean	SE	mean	SE	mean	SE
Plant Species Occurrence (# species per SP)		3.56	0.16	6.57	0.24	5.99	0.25
Exotic Species Occurrence (# species per SP)		0.78	0.03	1.01	0.03	0.64	0.06
Native Plant Occurrence (# species per SP)		2.79	0.15	5.56	0.25	5.36	0.22
		FREQ	%	FREQ	%	FREQ	%
Native Plant Frequency (SP with a native plant)		142	84	153	91	161	95
Plant Frequency (SP with a plant, native or exotic)		163	96	166	98	161	95
		mean	SE	mean	SE	mean	SE
Depth (ft)		5.02	0.20	5.48	0.23	5.09	0.20
Depth (m)		1.53	0.06	1.67	0.07	1.55	0.06
Number of Sapling Points		169		169		169	

The unknown *Potamogeton* above maybe a hybrid according to C. Barrie Helquist the *Potamogeton* plant taxonomist

Table 6. (Continued) Aquatic plant species' presence in Lamoka Lake recorded by summarizing two rake tosses from August 27 - September 15, 2008. Entries of "1" indicate species identified at that sample point (SP). Points are on a UTM 100-meter grid. Each sampled point is theoretically at the center of a 100m X 100m square or 1 hectare.

Sample Point (SP)	NAD27 X coord East 18T	NAD27 Y coord North 18T	169 original SPs	11 added SPs	Depth (m) on date	Depth (ft) on date	Azolla caroliniana	Brasenia schreberi	Ceratophyllum demersum	Chara vulgaris	Elodea sp.	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Nitella flexilis	Nuphar advena	Nymphaea odorata	Potamogeton amplifolius	Potamogeton crispus	Potamogeton hillii	Potamogeton hybrid	Potamogeton nodosus	Potamogeton pusillus	Potamogeton robbinsii	Potamogeton zosteriformis	Polygonum amphibium	Ranunculus trichophyllus	Stuckenia pectinata	Spirodela polytriza	Typha latifolia	Utricularia sp.	Vallisneria americana	Wolffia columbiana	Zosterella dubia	Total	Number of Exotic Species	Number of Native Species	Presence of a Native or Exotic	Presence of a Native Species	filamentous algae															
55	328600	4697400	0	0	1.7	5.6	1		1												1																		3	0	3	1	1															
56	328500	4697400	0	0	1.1	3.6	1		1																																		5	0	5	1	1											
57	328400	467400	0	0	1.1	3.6	1		1		1										1																							7	0	7	1	1										
58A	329510	4697300	0	0	1.6	5.1	1		1		1																																		4	0	4	1	1									
99	66	328600	4697300	0	0	2.0	6.6	1																																					3	0	3	1	1									
67	328500	4697300	0	0	1.4	4.6	1		1		1																																				5	0	5	1	1							
68A	329510	4697200	0	0	1.6	5.1	1																																								1	0	1	1	1							
76	328600	4697200	0	0	2.3	7.5	1		1																																							3	0	3	1	1						
77	328500	4697200	0	0	1.3	4.3	1		1		1																																					3	0	3	1	1						
78	329500	4697100	0	0	3.4	11.2	1																																								0	0	0	0	0							
87	328600	4697100	0	0	2.1	6.9	1		1																																							4	0	4	1	1						
88	329600	4697000	0	0	2.1	6.9	1		1																																							3	0	3	1	1						
97	328700	4697000	0	0	3.8	12.5	1																																										0	0	0	0	0					
98	328600	4697000	0	0	1.9	6.2	1		1																																								4	0	4	1	1					
99A	329620	4696900	0	0	1.5	4.9	1		1		1																																						5	0	5	1	1					
107	328700	4696900	0	0	4.2	13.8	1																																										0	0	0	0	0					
107A	328650	4696900	0	0	1.5	4.9	1		1																																									5	0	5	1	1				
108A	329567	4696800	0	0	1.6	5.1	1		1																																									5	0	5	1	1				
116	328700	4696800	0	0	2.6	8.5	1		1																																									4	0	4	1	1				
117	329500	4696700	0	0	1.4	4.6	1		1		1																																								5	0	5	1	1			
125	329400	4696600	0	0	2.2	7.2	1		1																																									3	0	3	1	1				
132	329400	4696500	0	0	1.8	5.7	1		1		1																																								4	0	4	1	1			
139	328700	4696500	0	0	2.0	6.6	1		1																																										2	0	2	1	1			
140	329400	4696400	0	0	0.8	2.6	1		1		1																																							6	0	6	1	1				
147	328700	4696400	0	0	1.8	5.9	1		1		1																																							6	0	6	1	1				
148	329400	4696300	0	0	0.9	3.0	1		1		1																																							6	0	6	1	1				
155	328700	4696300	0	0	0.9	3.0	1		1		1																																								5	0	5	1	1			
156A	329490	4696200	0	0	1.5	4.9	1		1		1																																								9	0	9	1	1			
163	328700	4696200	0	0	2.0	6.6	1		1																																											4	0	4	1	1		
164	329500	4696100	0	0	2.0	6.6	1		1																																												4	0	4	1	1	

Table 6. (Continued) Aquatic plant species' presence in Lamoka Lake recorded by summarizing two rake tosses from August 27 - September 15, 2008. Entries of "1" indicate species identified at that sample point (SP). Points are on a UTM 100-meter grid. Each sampled point is theoretically at the center of a 100m X 100m square or 1 hectare.

Sample Point (SP)	NAD27 X coord East 18T	NAD27 Y coord North 18T	169 original SPs	11 added SPs	Depth (m) on date	Depth (ft) on date	Azolla caroliniana	Brasenia schreberi	Ceratophyllum demersum	Chara vulgaris	Elodea sp.	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Nitella flexilis	Nuphar advena	Nymphaea odorata	Potamogeton amplifolius	Potamogeton crispus	Potamogeton hillii	Potamogeton hybrid	Potamogeton nodosus	Potamogeton pusillus	Potamogeton robbinsii	Potamogeton zosteriformis	Polygonum amphibium	Ranunculus trichophyllus	Stuckenia pectinata	Spirodela polyrrhiza	Typha latifolia	Utricularia sp.	Vallisneria americana	Wolffia columbiana	Zosterella dubia	Total	Number of Exotic Species	Number of Native Species	Presence of a Native or Exotic	Presence of a Native Species	Filamentous algae						
214	328600	4695600	█	█	1.3	4.1			1		1						1		1																	1			4	0	4	1	1						
215	328500	4695600	█	█	0.7	2.3			1		1		1			1																					1			1			1	1	1				
216	329000	4695500	█	█	1.3	4.3			1		1																										1			6	0	6	1	1					
217A	328895	4695441		█	1.5	4.9			1		1																										1			5	0	5	1	1					
218	328800	4695500	█	█	4.0	13.1					1																											1	0	1	1	1							
218A	328806	4695442		█	1.5	4.9			1		1																										1			6	0	6	1	1					
219	328700	4695500	█	█	2.2	7.2			1		1																										1			4	0	4	1	1					
220	328600	4695500	█	█	1.6	5.2			1		1																											1			7	0	7	1	1	1			
221	328500	4695500	█	█	0.8	2.5			1		1																											1			12	0	12	1	1				
222	329100	4695400	█	█	1.0	3.3			1		1																											1			6	1	5	1	1	1			
223	329000	4695400	█	█	1.1	3.6			1		1																											1			8	0	8	1	1				
224	328600	4695400	█	█	1.2	3.9			1		1																										1			7	0	7	1	1					
225	328500	4695400	█	█	0.8	2.6			1		1																											1			7	1	6	1	1				
226	328400	4695400	█	█	0.8	2.5			1		1																												1			10	0	10	1	1	1		
227	328400	4695300	█	█	1.8	5.9			1		1																												5	1	4	1	1	1	1				
228	328400	4695200	█	█	0.7	2.1			1		1																														9	1	8	1	1	1			
229	328300	4695200	█	█	1.3	4.1			1		1																														7	0	7	1	1	1			
230	328300	4695100	█	█	2.0	6.6			1		1																														7	2	5	1	1	1			
231	328400	4695000	█	█	1.0	3.3			1		1																															14	1	13	1	1			
232	328300	4695000	█	█	1.2	3.9			1		1																															9	2	7	1	1	1		
233	328300	4694900	█	█	1.3	4.1			1		1																																11	2	9	1	1	1	
234	328200	4694900	█	█	1.1	3.6			1		1																																6	1	5	1	1	1	
237	328300	4694900	█	█	1.3	4.3			1		1																																1		10	1	1	1	
238	328200	4694800	█	█	1.7	5.6			1		1																																7	1	6	1	1	1	
241	328200	4694700	█	█	1.1	3.6			1		1																																	12	1	11	1	1	
242	328100	4694700	█	█	1.3	4.3			1		1																																	7	0	7	1	1	
243	328100	4694600	█	█	1.6	5.2			1		1																																9	2	7	1	1	1	
244	328100	4694500	█	█	0.5	1.6			1		1																																9	1	8	1	1		
245	328000	4694500	█	█	1.1	3.6			1		1																																	9	1	8	1	1	
246	328000	4694400	█	█	1.5	4.9			1		1																																	9	2	7	1	1	
247	328000	4694300	█	█	1.0	3.3			1		1																																	10	0	10	1	1	

Table 6. (Continued) Aquatic plant species' presence in Lamoka Lake recorded by summarizing two rake tosses from August 27 - September 15, 2008. Entries of "1" indicate species identified at that sample point (SP). Points are on a UTM 100-meter grid. Each sampled point is theoretically at the center of a 100m X 100m square or 1 hectare.

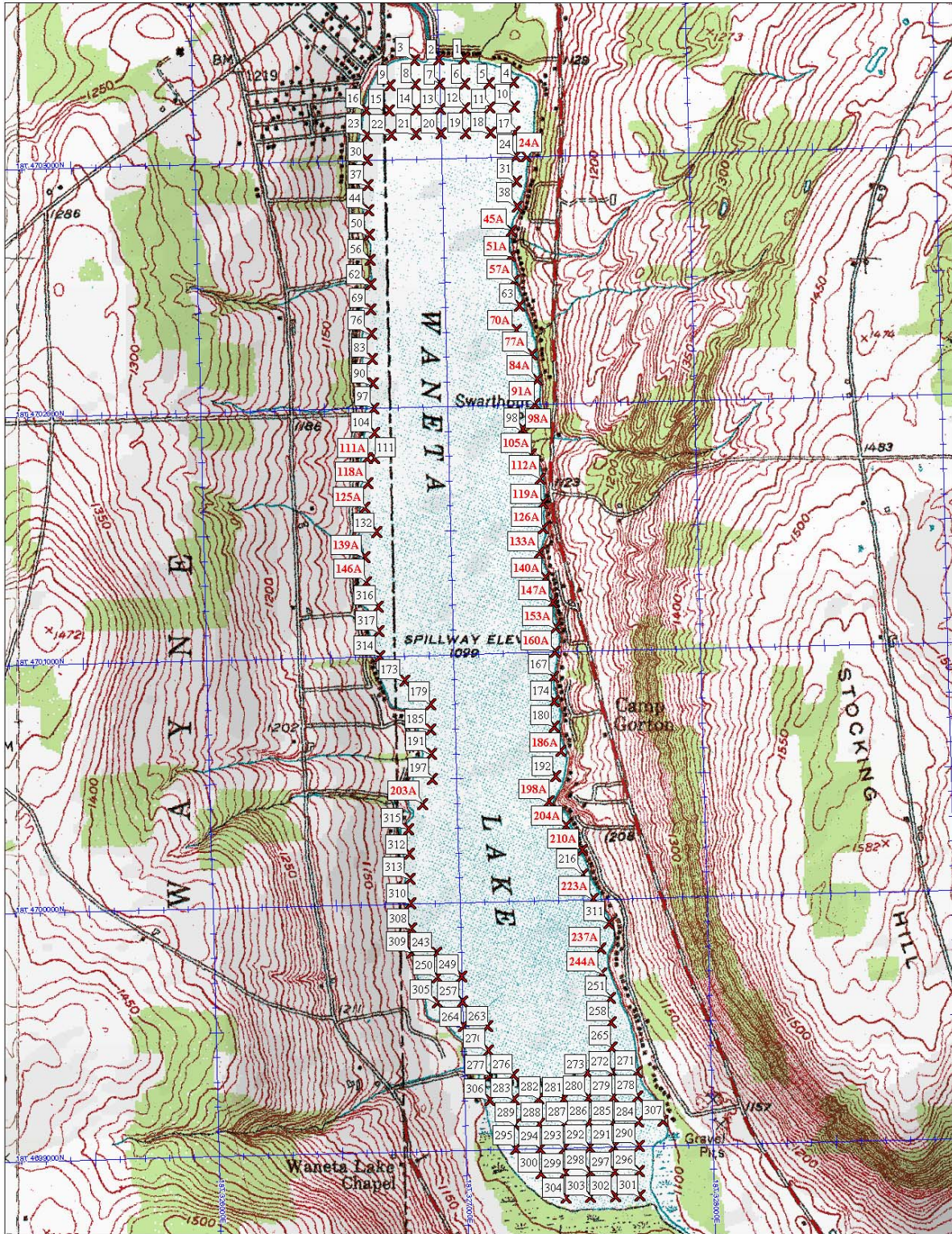
Sample Point (SP)	NAD27 X coord East 18T	NAD27 Y coord North 18T	? 169 original SPs	? 11 added SPs	Depth (m) on date	Depth (ft) on date	Azolla caroliniana	Brasenia schreberi	Ceratophyllum demersum	Chara vulgaris	Elodea sp.	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Nitella flexilis	Nuphar advena	Nymphaea odorata	Potamogeton amplifolius	Potamogeton crispus	Potamogeton hillii	Potamogeton hybrid	Potamogeton nodosus	Potamogeton pusillus	Potamogeton robbinsii	Potamogeton zosterifolius	Potamogeton amphibioides	Ranunculus trichophyllus	Stuckenia pectinata	Spirodela polytricha	Typha latifolia	Utricularia sp.	Vallisneria americana	Wolffia columbiana	Zostera dubia	Total	Number of Exotic Species	Number of Native Species	Presence of a Native or Exotic	Presence of a Native Species	filamentous algae		
287	327400	4693400	?	?	1.4	4.6			1		1	1	1	1	1							1					1												5	1	4	1	1		
288	327300	4693400	?	?	1.6	5.2			1		1	1	1	1	1							1																		6	2	4	1	1	
289	327200	4693400	?	?	1.5	4.9			1		1	1	1	1	1							1																		8	2	6	1	1	
290	327100	4693400	?	?	1.3	4.1			1		1	1	1	1	1							1																		8	2	6	1	1	
291	327000	4693400	?	?	1.3	4.1			1		1	1	1	1	1																									6	1	5	1	1	
292	327500	4693300	?	?	1.0	3.3			1		1	1	1	1	1							1																		6	1	5	1	1	1
293	327400	4693300	?	?	1.6	5.1			1		1	1	1	1	1							1																	8	2	6	1	1	1	
294	327300	4693300	?	?	1.8	5.7			1		1	1	1	1	1							1																	6	2	4	1	1	1	
295	327200	4693300	?	?	2.0	6.6			1		1	1	1	1	1							1																	7	2	5	1	1		
296	327100	4693300	?	?	1.5	4.9			1		1	1	1	1	1							1																	7	2	5	1	1		
297	327000	4693300	?	?	1.5	4.9			1		1	1	1	1	1							1																	8	2	6	1	1		
298	326900	4693300	?	?	1.0	3.3			1		1	1	1	1	1																								9	2	7	1	1		
299	327500	4693200	?	?	0.7	2.3			1		1	1	1	1	1							1																		5	0	5	1	1	1
300	327400	4693200	?	?	1.0	3.3			1		1	1	1	1	1							1																		8	1	7	1	1	1
301	327300	4693200	?	?	1.7	5.6			1		1	1	1	1	1							1																		7	1	6	1	1	1
302	327200	4693200	?	?	1.0	3.3			1		1	1	1	1	1							1																		5	0	5	1	1	
303	327100	4693200	?	?	1.1	3.6			1		1	1	1	1	1							1																		6	1	5	1	1	
304	327000	4693200	?	?	1.3	4.1			1		1	1	1	1	1							1																		7	2	5	1	1	
305	326900	4693200	?	?	2.8	9.0			1		1	1	1	1	1							1																		6	2	4	1	1	
306	326800	4693200	?	?	1.3	4.1			1		1	1	1	1	1							1																		6	1	5	1	1	
307	327000	4693100	?	?	0.7	2.3			1		1	1	1	1	1							1																		10	1	9	1	1	
308	326900	4693100	?	?	1.4	4.6			1		1	1	1	1	1							1																		9	1	8	1	1	
309	326800	4693100	?	?	1.1	3.6			1		1	1	1	1	1							1																		7	1	6	1	1	
310	327000	4693000	?	?					no sample because sample point is on shore																															0	0	0	0	0	
311	326900	4693000	?	?	1.1	3.6			1		1	1	1	1	1							1																		10	1	9	1	1	
312	326800	4693000	?	?	0.4	1.3			1		1	1	1	1	1							1																		10	2	8	1	1	
313	326900	4692900	?	?	0.4	1.3			1		1	1	1	1	1							1																		3	0	3	1	1	
Totals for 180 sampling points:							4	2	161	12	113	20	65	6	67	3	87	9	31	12	39	42	1	1	1	1	5	115	55	4	49	1	22	1	34	58	10	33	1063	109	954	171	171	30	
Totals for 169 original sampling points:							4	2	152	10	107	20	65	6	67	3	79	9	31	12	37	41	0	1	1	1	3	107	53	4	48	1	22	1	34	51	10	32	1013	108	905	161	161	30	
Totals for 11 new sampling points:							0	0	9	2	6	0	0	0	0	0	8	0	0	0	2	1	1	0	0	2	8	2	0	1	0	0	0	0	7	0	1	50	1	49	10	10	0		

Table 7. Recorded biomass (gDW/0.1m²) for Lamoka Lake sampled on September 6, 2008 at 46 of the 50 sample points (SPs) where biomass was collected in 2000 (Madsen et al. 2001). Four new SPs substituted in 2006 within the littoral zone for four deep SPs measured in 2000 (see Methods, Johnson and Keith 2006), resulting in 50 revised biomass SPs measured in 2008.

Sample Point (SP)	NAD27 X coord East 18T	NAD27 Y coord North	Depth (m) on date 2008	Depth (ft) on date 2008	Ceratophyllum demersum	Chara vulgaris	Elodea canadensis	Lemna trisulca	Megalodonta beckii	Myriophyllum spicatum	Najas guadalupensis	Nymphaea odorata	Potamogeton amplifolius	Potamogeton crispus	Potamogeton pusillus	Potamogeton robinsii	Potamogeton zosteriformis	Ranunculus trichophyllus	Utricularia sp.	Vallisneria americana	Wolffia columbiana	Zostera dubia	Total Biomass (gDW/0.1m ²)	Exotic Species (gDW/0.1m ²)	Native Species (gDW/0.1m ²)																				
2	328400	4698000	0.8	2.6	1.43											16.73							1.43	0	1.43																				
7	328500	4697900	1.2	3.9	1.98						0.0059		3.77											22.49	0	22.49																			
11	328900	4697800	2.5	8.2	No Plants																		0	0	0																				
14	328600	4697800	2.2	7.2	0.0395						0.0052												0.04	0	0.04																				
25	328400	4697700	1.1	3.6										0.2855									0.29	0.29	0.00																				
45	328500	4697500	1.3	4.3			0.0131				1.3			0.0117							5.13		0.085	6.54	0.01	6.53																			
76	328600	4697500	2.2	7.2	0.739																0.0117			0.75	0	0.75																			
86	328700	4697100	4.1	13.5	No Plants																		0	0	0	0																			
89	329500	4697000	8.4	27.6	No Plants																		0	0	0	0																			
116	328700	4696800	2.3	7.5	0.3205						0.1782													0.50	0	0.50																			
117	329500	4696700	1.4	4.6	0.1295	0.9021					2.71										1.99		0.0542	5.80	0	5.80																			
125	329400	4696600	2.2	7.2	0.411						0.0103					0.1044							0.53	0	0.53																				
139	328700	4696500	2	6.6	6.73		0.0148				0.1139			0.024							1.63		8.51	0.02	8.49																				
148	329400	4696300	1.5	4.9	2.16						0.729					0.0176					6.69		9.60	0	9.60																				
163	328700	4696200	1.5	4.9	0.3655		0.0507				1.64												2.06	0	2.06																				
175	329400	4696000	3.9	12.8	No Plants																		0	0	0	0																			
177	329200	4696000	2.6	8.5	No Plants																		0	0	0	0																			
183	329600	4695900	1.2	3.9	1.64		0.2635				19.22		10.18			0.0127	2.06				2.1		35.48	0	35.48																				
187	329200	4695900	2.5	8.2	0.0373						0.0159												0.05	0	0.05																				
192	328700	4695900	1.5	4.9			0.0742				0.3561												0.43	0	0.43																				
195	329300	4695800	2.2	7.2	0.1978		0.0218						6.7			4.2							11.12	0	11.12																				
196	329200	4695800	1.5	4.9	0.6014											0.1357	0.0511						0.79	0	0.79																				
204	329300	4695700	1.2	3.9							50.33					77.3							77.30	0	77.30																				
219	328600	4695700	1	3.3	0.81		16.4				3.78		9.79				0.0243				1.23		67.56	0	67.56																				
216	329000	4695500	1.2	3.9	1.13		0.0402																15.99	0	15.99																				
218	328800	4695500	4	13.1	No Plants																		0	0	0	0																			
219	328700	4695500	2.2	7.2	No Plants																		0	0	0	0																			
224	328600	4695400	1.2	3.9	2.3900	0.0325	1.4300	0.0037	0.2645		0.8191		1.0600	0.0482		0.4275	0.1246	0.0751		0.0309		0.0285	6.73	0.05	6.69																				
226	328400	4695400	0.8	2.6	6.7200		28.430	0.0059			0.0519			0.1074		0.8800	0.2020	0.6164		0.0051			37.02	0.11	36.91																				
Total (gDW)																									27.83	0.93	46.74	0.01	0.26	0	81.27	0	31.50	0.48	0.01	101.75	0.51	0.72	0	18.82	0	0.17	311.00	0.48	310.52
g/0.1m ²																									0.96	0.03	1.61	0.00	0.01	0	2.80	0	1.09	0.02	0.0004	3.51	0.02	0.02	0	0.65	0	0.01	10.72	0.016	10.71
gDW/m ²																									9.5971	0.3223	16.117	0.0033	0.0912	0	28.023	0	10.862	0.1644	0.0044	35.086	0.1746	0.2488	0	6.4889	0	0.0578	107.24	0.16	107.08
% of total																									6.7717	0.227	11.372	0.002	0.064	0	19.773	0	7.664	0.116	0.003	24.757	0.123	0.176	0	4.579	0	0.041	75.7	0.12	75.6

Table 7. (Continued) Recorded biomass (gdW/0.1m²) for Lamoka Lake sampled on September 6, 2008 at 46 of the 50 sample points (SPs) where biomass was collected in 2000 (Madsen et al. 2001). Four new SPs substituted in 2006 within the littoral zone for four deep SPs measured in 2000 (see Methods, Johnson and Keith 2006), resulting in 50 revised biomass SPs measured in 2008.

Sample Point (SP)	NAD27 X coord East 18T	NAD27 Y coord North	Depth (m) on date 2008	Depth (ft) on date 2008	Ceratophyllum demersum	Chara vulgaris	Elodea canadensis	Lemna trisulca	Megalodontia beckii	Myriophyllum spicatum	Najas guadalupensis	Nymphaea odorata	Potamogeton amplifolius	Potamogeton crispus	Potamogeton pusillus	Potamogeton robinsii	Potamogeton zosteriformis	Ranunculus trichophyllus	Utricularia sp.	Vallisneria americana	Wolffia columbiana	Zostera dubia	Total Biomass (gdW/0.1m ²)	Exotic Species (gdW/0.1m ²)	Native Species (gdW/0.1m ²)	
232	328300	4695000			Not sampled																		0	0	0	
239	328200	4694700			Not sampled																			0	0	0
240	328300	4694700			Not sampled																			0	0	0
247	328000	4694300			Not sampled																			0	0	0
248	327900	4694300			Not sampled																			0	0	0
254	327700	4693900			Not sampled																			0	0	0
258	327600	4693800	0.5	1.6	0.0228	0.9400	0.0042			0.4313	0.0105	11.920						0.0423	0.1278		0.0004		13.50	0.43	13.07	
259	327900	4693700			Not sampled																		0	0	0	
271	327600	4693600	1.75	5.7	35.320	0.2932	0.1472			5.0900	0.0037			1.0000			1.30						43.15	6.09	37.06	
274	327300	4693600	1.5	4.9						0.1274	0.0330			0.0705			0.4174						0.62	0.20	0.42	
281	327400	4693500	1.75	5.7	7.0600	1.8300	0.1070							0.3905			58.390	0.0615				0.0159	67.89	0.39	67.50	
287	327400	4693400			Not sampled																		0	0	0	
288	327300	4693400			Not sampled																		0	0	0	
290	327100	4693400			Not sampled																		0	0	0	
301	327300	4693200			Not sampled																		0	0	0	
303	327100	4693200			Not sampled																		0	0	0	
305	326900	4693200			Not sampled																		0	0	0	
306	326800	4693200			Not sampled																		0	0	0	
308	326900	4693100			Not sampled																		0	0	0	
312	326800	4693000			Not sampled																		0	0	0	
313	326900	4692900			Not sampled																		0	0	0	
Total (gdW)					42.40	0.00	3.06	0.26	0.00	5.65	0.05	11.92	0.00	1.46	0.00	60.11	0.00	0.10	0.13	0.00	0.00	0.02	125.16	7.11	118.05	
g/0.1m ²					10.60	0.00	0.77	0.06	0.00	1.41	0.01	2.98	0.00	0.37	0.00	15.03	0.00	0.03	0.03	0.00	0.00	0.00	31.29	1.78	29.51	
gdW/m ²					106.01	0.0000	7.66	0.65	0.00	14.12	0.12	29.80	0.00	3.65	0.00	150.27	0.00	0.26	0.32	0.00	0.00	0.04	312.89	17.77	295.12	
% of total					33.880	0.000	2.448	0.206	0.000	4.513	0.038	9.524	0.000	1.167	0.000	48.026	0.000	0.083	0.102	0.000	0.000	0.013	100	5.68	94	

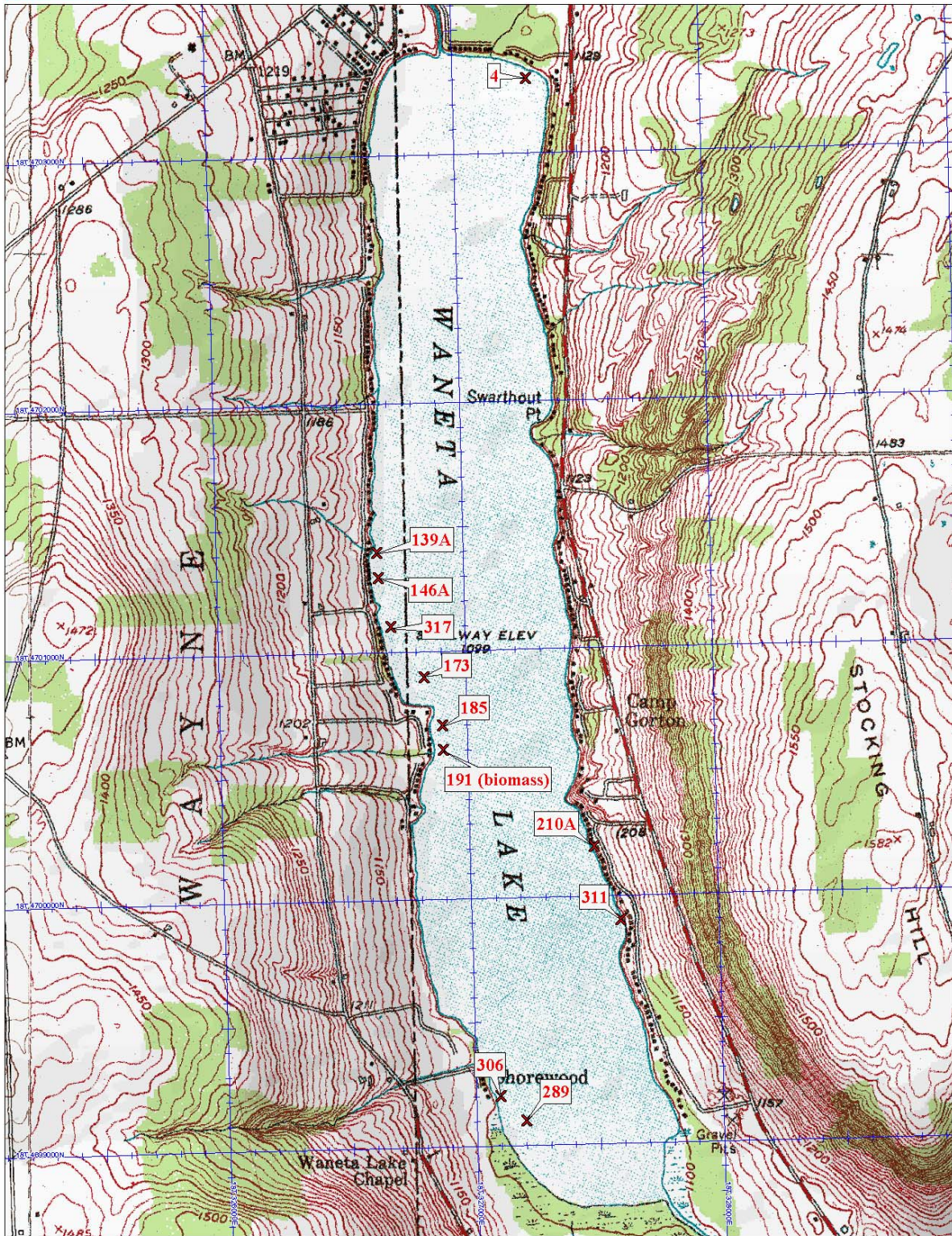


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MN (11.9° W)

0 200 400 600 800 1000 m
Data Zoom 13-6

Figure 1. Sample Point (SP) Locations in Waneta Lake where rake toss measurements were taken from August 27 - September 15, 2008. The red type SPs are locations added in 2008 to the revised 2006 SPs in black type (See Methods, Johnson and Keith 2006).

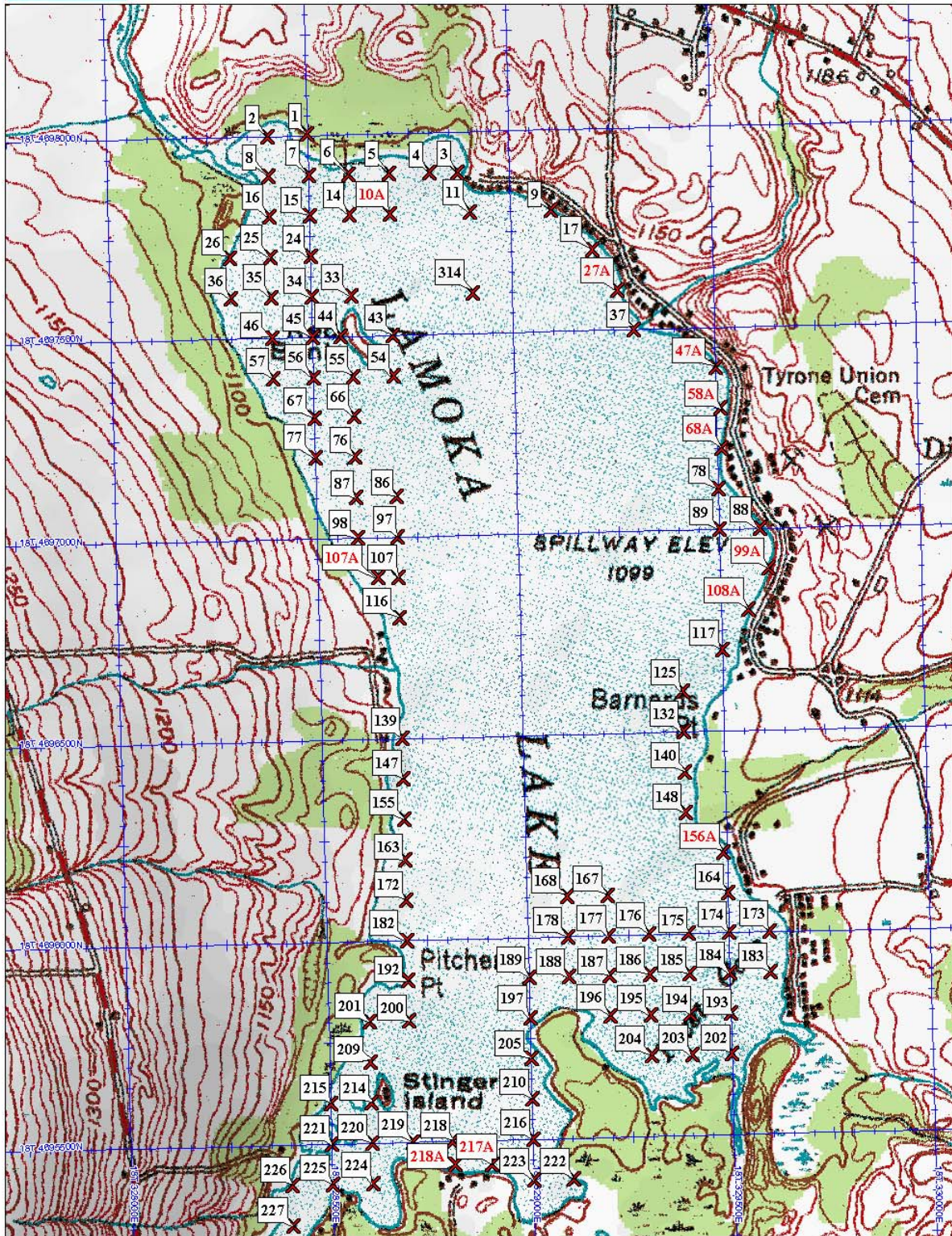


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MN (11.9° W)

0 200 400 600 800 1000 m
Data Zoom 13-6

Figure 2. Locations in Waneta Lake where we found the presence of Eurasian watermilfoil by three rake tosses at (SPs) taken from August 27 - September 15, 2008. Additionally, another presence found at one regular biomass sampling point August 21, 2008.



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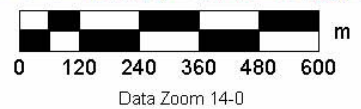
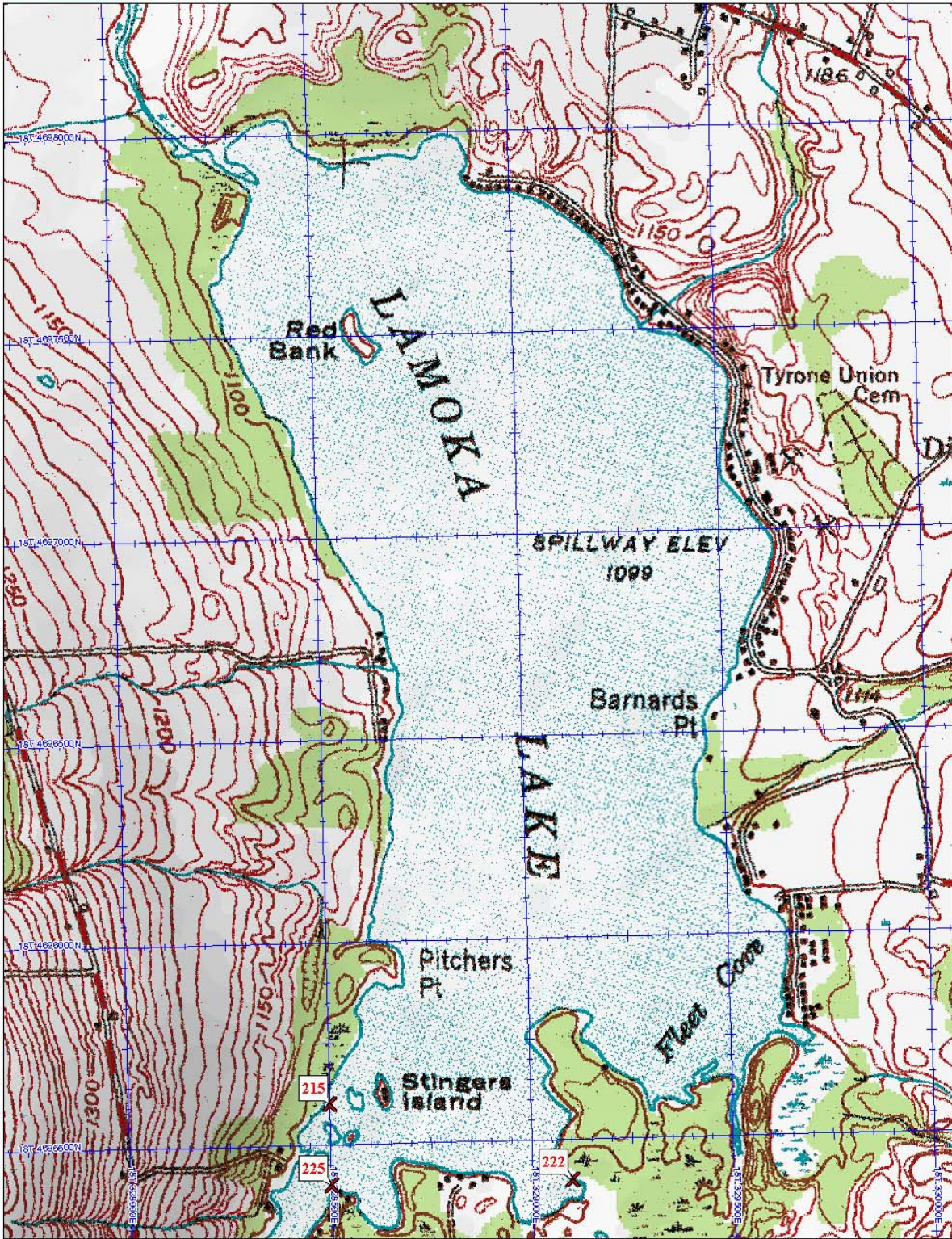


Figure 3. Sample Point (SP) Locations in Lamoka Lake where rake toss measurements were taken from August 27 - September 15, 2008. The red type SPs are locations added in 2008 to the 2006 SPs in black type.



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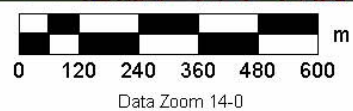
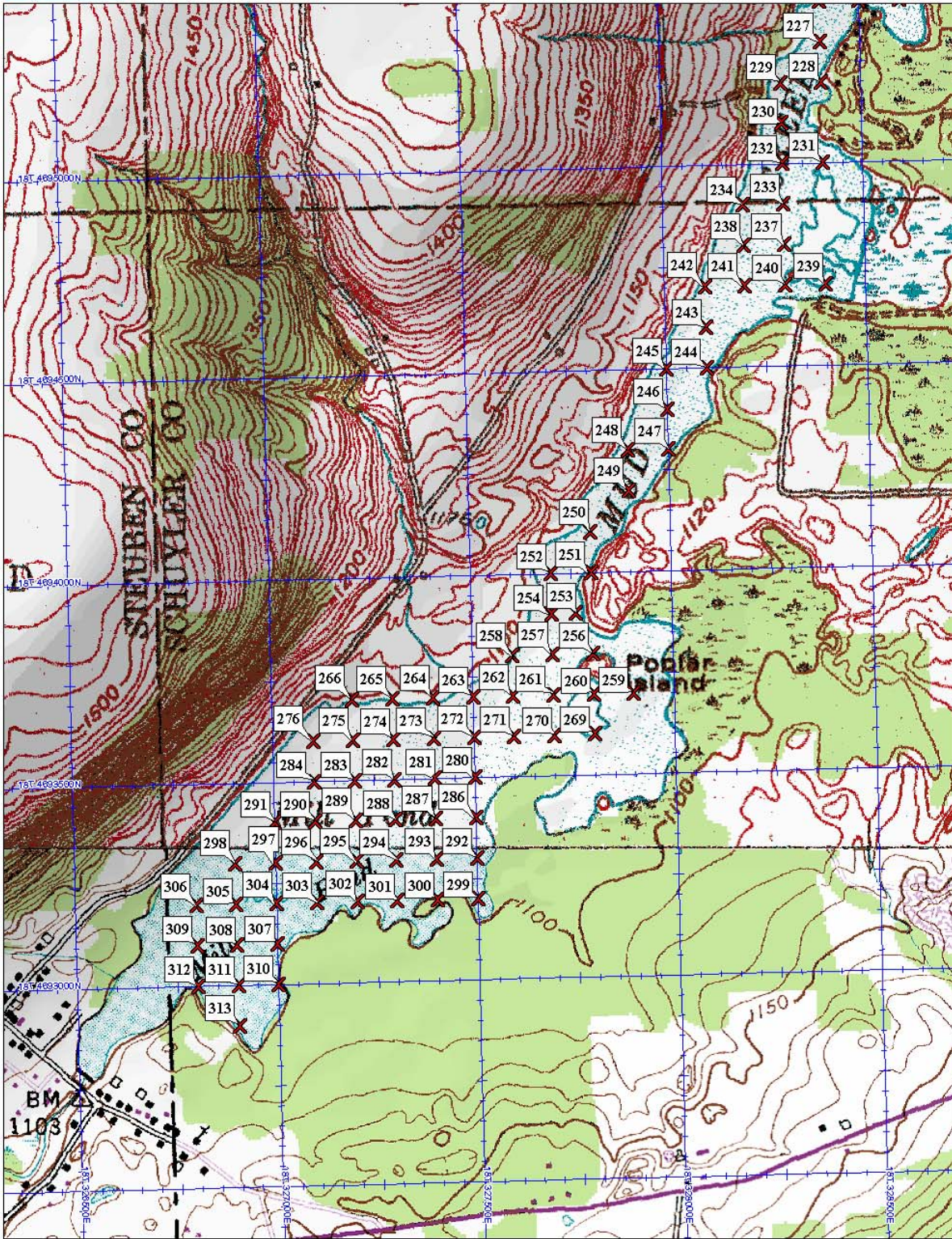


Figure 4. Locations in Lamoka Lake where we found the presence of Eurasian watermilfoil by two rake tosses from August 27 - September 15, 2008.



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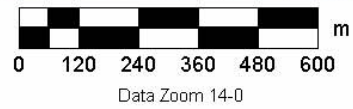
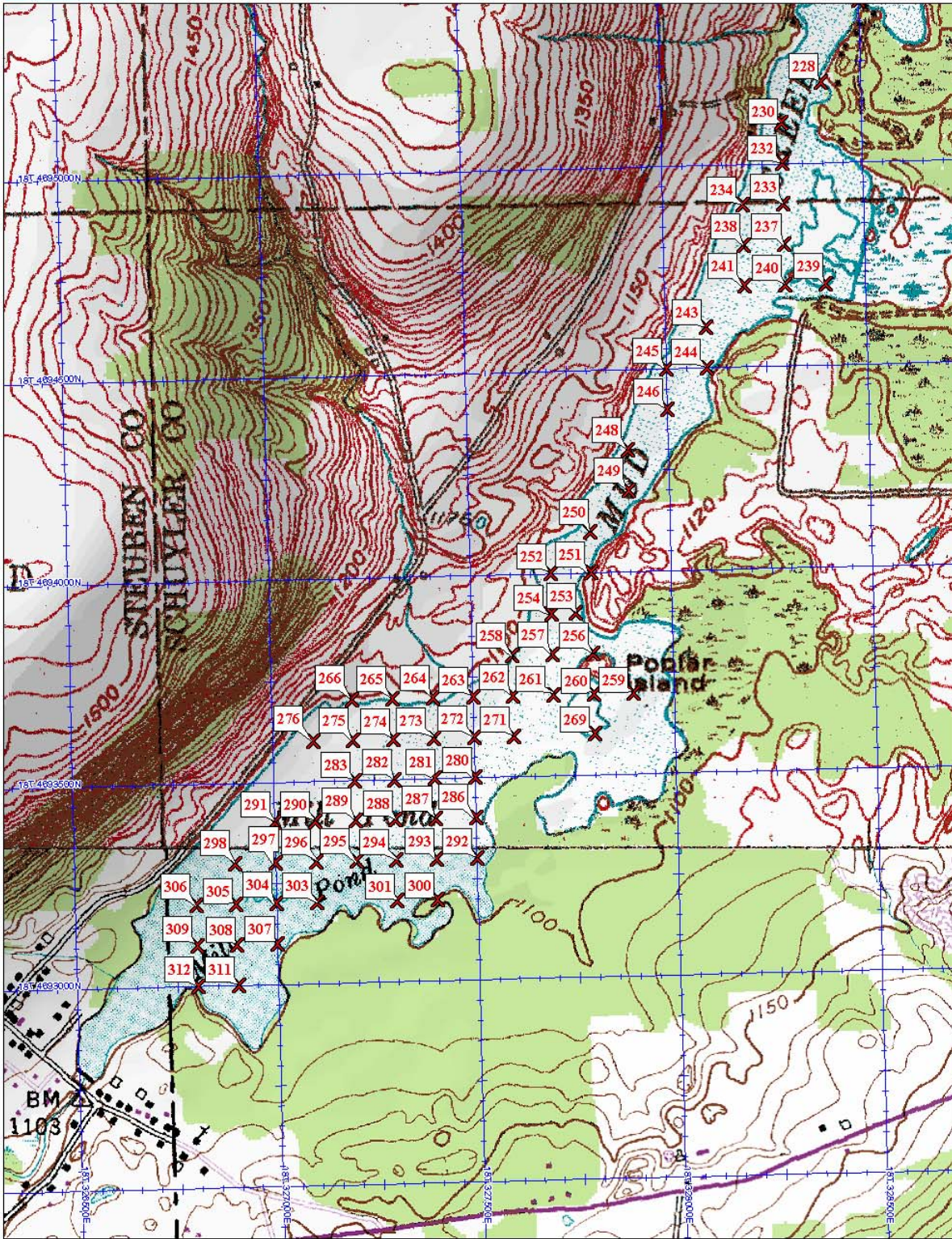


Figure 5. Sample Point (SP) Locations in Mud Channel and Mill Pond where rake toss measurements were taken from August 27 - September 15, 2008.



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MN (11.8° W)

0 120 240 360 480 600 m
Data Zoom 14-0

Figure 6. Locations in Mud Channel and Mill Pond Lake where we found the presence of Eurasian watermilfoil by two rake tosses from August 27 - September 15, 2008.

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Appendix

**Table A. Rake toss data for Waneta Lake sampled on
August 6 - 12, 2008 at 138 sample points (SPs)**

Pages 38 – 48

**Table B. Rake toss data for Lamoka Lake sampled from
August 27 – September 15, 2008 at 180 sample points (SPs)**

Pages 49 – 62

Table A. Results of the three rake-toss sampling of Waneta Lake on August 6 - 12, 2008 at 138 sample points (SPs).

Sample Point (SP)	Rake toss #	NAD27 X coord East 18T	NAD27 Y coord North	91 original vegetated SPs	11 original nonvegetated SPs	5 remaining DEC SPs	31 added 2008 SPs	Depth (m) on date	Rake Abundance	Ceratophyllum demersum	Chara vulgaris	Elodea sp.	Lemna trisulca	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Najas minor	Nitella flexilis	Nitellopsis obtusa	Nymphaea odorata	Potamogeton crispus	Potamogeton foliosus	Potamogeton pusillus	Potamogeton robbinsii	Ranunculus trichophyllus	Stuckenia pectinata	Vallisneria americana	Zosterella dubia	filamentous algae
1	1	327100	4703400	□			0.7 S	35	10						20												35		X
	2						0.7 S	5	1	20					5	15	5		2			2					45		X
	3						0.7 T	20							5	50						5					20		X
2	1	327000	4703400	□			0.8 S	60	15						10	15													X
	2						0.8 S	45	1						5	20	9										20		X
	3						0.8 S	15	15						5	60	5					2					3		X
3	1	326900	4703400	□			0.6 S	25	2							72		1				0.01							X
	2						0.6 S	20	30							30	5										15		X
	3						0.6 T	80	5							15													X
4	1	327300	4703300	□			1.1 M					1			1	98													X
	2						1.1 S	1	2					0.01	2	93	2												X
	3						1.1 M	20	6	2					1	70							1						X
5	1	327200	4703300	□			1.5 M				2	15				80													X
	2						1.5 S	15	2	10					2	60	2												X
	3						1.5 S	0.01	12						12	60	12						1						X
6	1	327100	4703300	□			0.8 M	40	55						2	3													X
	2						0.8 S	30	10						25	25													X
	3						0.8 M	17	60							17													X
7	1	327000	4703300	□			2.2 S	44	10							44					1								X
	2						2.2 S	45								45					5								X
	3						2.2 S	25	25							50													X
8	1	326900	4703300	□			2.3 M	12	30							45					7								X
	2						2.3 S	15	15							65					5								X
	3						2.3 S	15								80					5								X
9	1	326800	4703300	□			2.0 S		7							93					5								X
	2						2.0 M	30	4						3	55	8												X
	3						2.0 S		6						4	90													X
10	1	327300	4703200	□			2.3 S		6							93					1								X
	2						2.3 M	1	1						2	95													X
	3						2.3 M		2						20	70					7								X
11	1	327200	4703200	□			2.8 S									98													X
	2						2.8 S		15						3	70					2								X
	3						2.8 S	13	1	15					5	60					1								X
12	1	327100	4703200	□			2.8 T									100													
	2						2.8 T									100													
	3						2.8 T									100													
13	1	327000	4703200	□			3.0 T									100													
	2						3.0 T		95							5													
	3						3.0 T	65								25													

Table A. Results of the three rake-toss sampling of Waneta Lake on August 6 - 12, 2008 at 138 sample points (SPs).

Sample Point (SP)	Rake toss #	NAD27 X coord East 18T	NAD27 Y coord North	91 original vegetated SPs	11 original nonvegetated SPs	5 remaining DEC SPs	31 added 2008 SPs	Depth (m) on date	Rake Abundance	Ceratophyllum demersum	Chara vulgaris	Elodea sp.	Lemna trisulca	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Najas minor	Nitella flexilis	Nitellopsis obtusa	Nymphaea odorata	Potamogeton crispus	Potamogeton foliosus	Potamogeton pusillus	Potamogeton robinisii	Ranunculus trichophyllus	Stuckenia pectinata	Vallisneria americana	Zosterella dubia	filamentous algae											
14	1	326900	4703200	■			3.3 O																																	
	2						3.3 O																																	
	3						3.3 T	5																																
15	1	326800	4703200	□			2.5 T	2													1		2																	
	2						2.5 M														0.01																			
	3						2.5 S	28													0.01														X					
16	1	326700	4703200	□			0.6 T																																	
	2						0.6 S	T																																
	3						0.6 S	1																																
17	1	327300	4703100	□			2.8 S																																	
	2						2.8 S	5																																
	3						2.8 S	2																																
18	1	327200	4703100			•	3.1 M																																	
	2						3.1 S	2																																
	3						3.1 S	10																																
19	1	327100	4703100			•	4.1 T																																	
	2						4.1 T	100																																
	3						4.1 O																																	
20	1	327000	4703100			•	4.5 O																																	
	2						4.5 O																																	
	3						4.5 O																																	
21	1	326900	4703100			•	4.5 O																																	
	2						4.5 O																																	
	3						4.5 T																																	
22	1	326800	4703100			•	4.0 O																																	
	2						4.0 T																																	
	3						4.0 T																																	
23	1	326700	4703100	□			1.2 D																																	
	2						1.2 M	2																																
	3						1.2 M																																	
24	1	327300	4703000			■	3.1 T														0.01																			
	2						3.1 S	1																																
	3						3.1 M	0.01																																
24A	1	327343	4703000			○	1.6 D																																	
	2						1.6 M	3																																
	3						1.6 D	1																																
30	1	326700	4703000	□			1.6 D	1																																
	2						1.6 D																																	
	3						1.6 D																																	

Table A. Results of the three rake-toss sampling of Waneta Lake on August 6 - 12, 2008 at 138 sample points (SPs).

Sample Point (SP)	Rake toss #	NAD27 X coord East 18T	NAD27 Y coord North	91 original vegetated SPs	11 original nonvegetated SPs	5 remaining DEC SPs	31 added 2008 SPs	Depth (m) on date	Rake Abundance	Ceratophyllum demersum	Chara vulgaris	Elodea sp.	Lemna trisulca	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Najas minor	Nitella flexilis	Nitellopsis obtusa	Nymphaea odorata	Potamogeton crispus	Potamogeton foliosus	Potamogeton pusillus	Potamogeton robinsonii	Ranunculus trichophyllus	Stuckenia pectinata	Vallisneria americana	Zosterella dubia	Filamentous algae	
31	1	327300	4702900	□				2.3 D							100															X
	2							2.3 M							100															X
	3							2.3 D							100															X
37	1	326700	4702900	□				1.5 M							100															X
	2							1.5 M							100															X
	3							1.5 D							100															X
38	1	327300	4702800	□				0.8 D				10			90															X
	2							0.8 D							99							1								X
	3							0.8 M			2				95															X
44	1	326700	4702800	□				1.1 S							100															X
	2							1.1 S							90															X
	3							1.1 S							95															X
45A	1	327274	4702700					1.5 D				5			40							0.01								X
	2							1.5 M				30			10															X
	3							1.5 M							10															X
50	1	326700	4702700	□				0.8 M							5								0.01							X
	2							0.8 M							20															X
	3							0.8 M				20			0.01								0.01							X
51A	1	327269	4702600					1.5 T							100															
	2							1.5 S							90							0.01								X
	3							1.5 S							40							0.01								
56	1	326700	4702600	□				0.8 M							30															X
	2							0.8 M							0.01															X
	3							0.8 M							40															X
57A	1	327283	4702500					1.4 M							100															X
	2							1.4 M							100															X
	3							1.4 S							96								4							X
62	1	326700	4702500	□				0.9 M							100															X
	2							0.9 M				10			70								0.01							X
	3							0.9 D							80															X
63	1	327300	4702400	□				2.2 T							100															X
	2							2.2 T							50															X
	3							2.2 S				5			3															X
69	1	326700	4702400	□				1.4 D							100															X
	2							1.4 M			2				98															X
	3							1.4 M							100															X
70A	1	327286	4702300					1.5 T							90															X
	2							1.5 T							80								2							X
	3							1.5 S				70			20															X

Table A. Results of the three rake-toss sampling of Waneta Lake on August 6 - 12, 2008 at 138 sample points (SPs).

Sample Point (SP)	Rake toss #	NAD27 X coord East 18T	NAD27 Y coord North	91 original vegetated SPs	11 original nonvegetated SPs	5 remaining DEC SPs	31 added 2008 SPs	Depth (m) on date	Rake Abundance	Ceratophyllum demersum	Chara vulgaris	Elodea sp.	Lemna trisulca	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Najas minor	Nitella flexilis	Nitellopsis obtusa	Nymphaea odorata	Potamogeton crispus	Potamogeton foliosus	Potamogeton pusillus	Potamogeton robinisii	Ranunculus trichophyllus	Stuckenia pectinata	Vallisneria americana	Zosterella dubia	Filamentous algae		
76	1	326700	4702300	□				1.8 D				0.01			100															X	
	2							1.8 D							100															X	
	3							1.8 D			0.01				100															X	
77A	1	327346	4702200				○	1.5 S							95							5								X	
	2							1.5 S							20							80								X	
	3							1.5 M							100															X	
83	1	326700	4702200	□				1.4 D							100															X	
	2							1.4 D							100															X	
	3							1.4 S							90							10								X	
84A	1	327364	4702100				○	1.5 T							10															X	
	2							1.5 T							15							60									
	3							1.5 S							100															X	
90	1	326700	4702100	□				1.4 T							100															X	
	2							1.4 S							100															X	
	3							1.4 T							100															X	
91A	1	327352	4702000				○	1.5 S							30							70								X	
	2							1.5 M							85							5								X	
	3							1.5 D							95							0.01								X	
97	1	326700	4702000	□				1.8 D							100															X	
	2							1.8 D							98															X	
	3							1.8 D							100							0.01								X	
98	1	327300	4701900		■			3.2 T							1							80	15							X	
	2							3.2 S							60							0.01	40							X	
	3							3.2 T							100															X	
98A	1	327304	4701900				○	1.5 D							100															X	
	2							1.5 D							95							1								X	
	3							1.5 D							100															X	
104	1	326700	4701900	□				2.7 O																						X	
	2							2.7 O																							
	3							2.7 D							100																
105A	1	327334	4701800				○	1.5 T														100									
	2							1.5 T														100									
	3							1.5 T														45	55								
111	1	326700	4701800	□				4.0 Z																							X
	2							4.0 T							100																
	3							4.0 T							100																X
111A	1	326670	4701800				○	1.5 D				0.01			100															X	
	2							1.5 D							100															X	
	3							1.5 D							100															X	

Table A. Results of the three rake-toss sampling of Waneta Lake on August 6 - 12, 2008 at 138 sample points (SPs).

Sample Point (SP)	Rake toss #	NAD27 X coord East 18T	NAD27 Y coord North	□ 91 original vegetated SPs	■ 11 original nonvegetated SPs	• 5 remaining DEC SPs	○ 31 added 2008 SPs	Depth (m) on date	Rake Abundance	Ceratophyllum demersum	Chara vulgaris	Elodea sp.	Lemna trisulca	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Najas minor	Nitella flexilis	Nitellopsis obtusa	Nymphaea odorata	Potamogeton crispus	Potamogeton foliosus	Potamogeton pusillus	Potamogeton robinisii	Ranunculus trichophyllus	Stuckenia pectinata	Vallisneria americana	Zosterella dubia	filamentous algae					
112A	1	327368	4701700				○	1.5 O								100																		
	2							1.5 T																										
	3							1.5 S				5				55						40										X		
118A	1	326670	4701700				○	1.7 D								100																X		
	2							1.7 D								100																X		
	3							1.7 M								100																X		
119A	1	327375	4701600				○	1.5 S							5						55	40										X		
	2							1.5 O																										
	3							1.5 S														50	50									X		
125A	1	326655	4701600				○	1.5 D								100																X		
	2							1.5 D								100																X		
	3							1.5 D								100																X		
126A	1	327373	4701500				○	1.5 S								100					0.01											X		
	2							1.5 S																										
	3							1.5 S								24					3	70	3									X		
132	1	326700	4701500	□				1.8 M			2																					X		
	2							1.8 D								100																X		
	3							1.8 D							2	98																X		
133A	1	327356	4701400				○	1.5 S			1					90						4	5									X		
	2							1.5 S														100										X		
	3							1.5 S														100										X		
139A	1	326650	4701400				○	1.5 S							4	95							1									X		
	2							1.5 M			5					95																X		
	3							1.5 M						5		95																		
140A	1	327378	4701300				○	1.5 S													20	80										X		
	2							1.5 M							5	10						65	20									X		
	3							1.5 S				1				10					9	80	0.01									X		
146A	1	326654	4701300				○	1.5 D						0.01		100	0.01															X		
	2							1.5 M						5		85						8										X		
	3							1.5 D			4					95							1									X		
147A	1	327405	4701200				○	1.5 O																									X	
	2							1.5 M			50					5					0.01	45										X		
	3							1.5 O																										
153A	1	327416	4701100				○	1.5 O																										
	2							1.5 S			70											10	20										X	
	3							1.5 S								25					50	25										X		
160A	1	327408	4701000				○	1.5 T								50																	X	
	2							1.5 S								15						15	70									X		
	3							1.5 T			20					10					10	10	50										X	

Table A. Results of the three rake-toss sampling of Waneta Lake on August 6 - 12, 2008 at 138 sample points (SPs).

Sample Point (SP)	Rake toss #	NAD27 X coord East 18T	NAD27 Y coord North	91 original vegetated SPs	11 original nonvegetated SPs	5 remaining DEC SPs	31 added 2008 SPs	Depth (m) on date	Rake Abundance	Ceratophyllum demersum	Chara vulgaris	Elodea sp.	Lemna trisulca	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Najas minor	Nitella flexilis	Nitellopsis obtusa	Nymphaea odorata	Potamogeton crispus	Potamogeton foliosus	Potamogeton pusillus	Potamogeton robinisii	Ranunculus trichophyllus	Stuckenia pectinata	Vallisneria americana	Zosterella dubia	Filamentous algae	
167	1	327400	4700900	□			1.9 T		4		2				3	3	10					100	18	60					X	
	2						1.9 S					5										90							X	
	3						1.9 S															7							X	
173	1	326800	4700900	□			2.0 M				2		3								8								X	
	2						2.0 M				5										5								X	
	3						2.0 M				10											5				35			X	
174	1	327400	4700800	□			1.8 S				0.01										0.01	20		70					X	
	2						1.8 M				5																		X	
	3						1.8 M				15																		X	
179	1	326900	4700800	□			1.1 S			30		30			30	40							1							X
	2						1.1 M			30	30	30			19	19	1													X
	3						1.1 S			10	5	5			40	45							0.01							X
180	1	327400	4700700	□			1.8 D				90					10						0								X
	2						1.8 D				20					75						5	0.01							X
	3						1.8 M				35					41						7	14							X
185	1	326900	4700700	□			1.1 D				10			7	80								2					1		X
	2						1.1 D				0.01					100														X
	3						1.1 D				1					99														X
186A	1	327422	4700600			o	1.5 M									1					0.01	99								X
	2						1.5 M				0.01					99						1								X
	3						1.5 S								22	50					7	0	21							X
191	1	326900	4700600	□			1.9 M				8					92						0.01								X
	2						1.9 D				17				2	80							1							X
	3						1.9 M			5	35					60						0								X
192	1	327400	4700500	□			1.5 S				25					35					5		35							X
	2						1.5 M				3					45					2		50							X
	3						1.5 S				13					13						12	62							X
197	1	326900	4700500	□			2.6 T								30	70														
	2						2.6 S			0.01	1	20				70					0.01		9							
	3						2.6 S				10					70						20								
198A	1	327371	4700400			o	2.0 T				20				30															X
	2						2.0 S			3					2	8						25	2					48		X
	3						2.0 M				5	55			2	11						11	11					5		X
203A	1	326860	4700400			o	1.3 T				10					85							5							X
	2						1.3 M			18		45				35						2								X
	3						1.3 O																							X
204A	1	327437	4700300			o	1.5 M				80					5					5		0.01							X
	2						1.5 S			7		30				60							3							X
	3						1.5 S			20	50					20					3		4					3		X

Table A. Results of the three rake-toss sampling of Waneta Lake on August 6 - 12, 2008 at 138 sample points (SPs).

Sample Point (SP)	Rake toss #	NAD27 X coord East 18T	NAD27 Y coord North	91 original vegetated SPs	11 original nonvegetated SPs	5 remaining DEC SPs	31 added 2008 SPs	Depth (m) on date	Rake Abundance	Ceratophyllum demersum	Chara vulgaris	Elodea sp.	Lemna trisulca	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Najas minor	Nitella flexilis	Nitellopsis obtusa	Nymphaea odorata	Potamogeton crispus	Potamogeton foliosus	Potamogeton pusillus	Potamogeton robinsii	Ranunculus trichophyllus	Stuckenia pectinata	Valisneria americana	Zosterella dubia	filamentous algae				
210A	1	327500	4700200				o	1.5 M	13		0.01	15				70						2								X			
	2							1.5 M				80		3		15						2											
	3							1.5 M				30		5		30						0.01									X		
216	1	327500	4700100	□				1.8 M				5			2	90					2	1	35							X			
	2							1.8 M				30				50							20							X			
	3							1.8 M				13				85						2								X			
223A	1	327539	4700000				o	1.5 T				1				94					5									X			
	2							1.5 T				5				50					45												
	3							1.5 T				40				60																	
237A	1	327566	4699800				o	1.5 S				30				70																	
	2							1.5 M				30				100																	
	3							1.5 M				14				85							1										
243	1	326900	4699800	□				2.7 S				5									15		80										
	2							2.7 S				3				10					7	40	40										
	3							2.7 S				3				35					22	40	40								X		
244A	1	327567	4699700				o	1.5 M				5			3	87																	
	2							1.5 M				2				98																	
	3							1.5 S				2				90																	
249	1	327000	4699700		■			4.5 O				8																					
	2							4.5 T				25				75																	
	3							4.5 T				30				70																	
250	1	326900	4699700	□				2.1 S	1		6	22			22	39					10												
	2							2.1 T								90						10											
	3							2.1 M			10	4			6	70						10											
251	1	327600	4699600	□				1.5 S			3	4				90						3										X	
	2							1.5 M	2			5				90					3										X		
	3							1.5 M				8			2	90																X	
257	1	327000	4699600		■			3.4 O																									
	2							3.4 T								99						1											
	3							3.4 O																									
258	1	327600	4699500	□				2.8 T								100																	
	2							2.8 T				10				85						5											
	3							2.8 S	30							70																	
263	1	327100	4699500		■			3.9 T				20			10	70																	
	2							3.9 S	100																								
	3							3.9 O																									
264	1	327000	4699500	□				1.9 S			2	8			5	85																X	
	2							1.9 S				30				70																X	
	3							1.9 M	5	5	10				10	70																X	

Table A. Results of the three rake-toss sampling of Waneta Lake on August 6 - 12, 2008 at 138 sample points (SPs).

Sample Point (SP)	Rake toss #	NAD27 X coord East 18T	NAD27 Y coord North	91 original vegetated SPs	11 original nonvegetated SPs	5 remaining DEC SPs	31 added 2008 SPs	Depth (m) on date	Rake Abundance	Ceratophyllum demersum	Chara vulgaris	Elodea sp.	Lemna trisulca	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Najas minor	Nitella flexilis	Nitellopsis obtusa	Nymphaea odorata	Potamogeton crispus	Potamogeton foliosus	Potamogeton pusillus	Potamogeton robinisii	Ranunculus trichophyllus	Stuckenia pectinata	Vallisneria americana	Zosterella dubia	filamentous algae						
295	1	327600	4699400		■		3.2 T					40				100																			
	2						3.2 S									60																			
	3						3.2 O																												
270	1	327100	4699400		■		3.0 T					90				10																X			
	2						3.0 T			20		70				10																X			
	3						3.0 S					20				80																X			
271	1	327700	4699300	□			0.9 S			20						35	35	5			5											X			
	2						0.9 S		10	10		20				0.01	50	10														X			
	3						0.9 S		15	40	8					15	15	7														X			
272	1	327600	4699300	□			3.2 O																									X			
	2						3.2 S		2	1	10						85					2										X			
	3						3.2 O																									X			
273	1	327500	4699300		■		3.5 O																										X		
	2						3.5 T																												
	3						3.5 O																												
276	1	327200	4699300		■		3.5 T				50											50													
	2						3.5 O																												
	3						3.5 T					25																							
277	1	327100	4699300	□			1.8 S					90																						X	
	2						1.8 T		40			10																						X	
	3						1.8 S		25		10																							X	
278	1	327700	4699200	□			1.3 S					10																						X	
	2						1.3 D		60		15																							X	
	3						1.3 M		20	0.01	30																								
279	1	327600	4699200	□			2.8 T					20																							
	2						1.3 T				15																								X
	3						2.8 T				70																							X	
280	1	327500	4699200	□			2.9 O																												
	2						1.3 S		5		30																								
	3						2.9 O																												
281	1	327400	4699200		■		3.3 T					100																							X
	2						3.3 T																											X	
	3						3.3 O																												
282	1	327300	4699200	□			3.2 O																												
	2						3.2 T			25	50																								X
	3						3.2 S		20	40																									X
283	1	327200	4699200	□			2.5 T				100																								X
	2						2.5 S				40																								X
	3						2.5 T				100																								X

Table A. Results of the three rake-toss sampling of Waneta Lake on August 6 - 12, 2008 at 138 sample points (SPs).

Sample Point (SP)	Rake toss #	NAD27 X coord East 18T	NAD27 Y coord North	91 original vegetated SPs	11 original nonvegetated SPs	5 remaining DEC SPs	31 added 2008 SPs	Depth (m) on date	Rake Abundance	Ceratophyllum demersum	Chara vulgaris	Elodea sp.	Lemna trisulca	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Najas minor	Nitella flexilis	Nitellopsis obtusa	Nymphaea odorata	Potamogeton crispus	Potamogeton foliosus	Potamogeton pusillus	Potamogeton robinisii	Ranunculus trichophyllus	Stuckenia pectinata	Vallisneria americana	Zosterella dubia	Filamentous algae				
284	1	327700	4699100	□				1.5 M			30	30				50					20												
	2							1.5 M		30	0.01	30				30					10												
	3							1.5 M		35		15				40					10										X		
285	1	327600	4699100	□				2.1 M		40		20				20					20										X		
	2							2.1 S		18		20				30					30		2								X		
	3							2.1 S		40		5				50							1	4							X		
286	1	327500	4699100	□				2.3 S				4				85					7										X		
	2							2.3 S				30				20					50										X		
	3							2.3 S								80					20										X		
287	1	327400	4699100	□				2.5 T		80						20															X		
	2							2.5 S				20				50					30										X		
	3							2.5 S								50					50										X		
288	1	327300	4699100	□				2.4 T				40				60															X		
	2							2.4 T								40					60										X		
	3							2.4 S		90						9					1										X		
289	1	327200	4699100	□				1.9 S		96						1					3										X		
	2							1.9 S		30						60					2										X		
	3							1.9 M		5	0.01					85					5										X		
290	1	327700	4699000	□				1.3 S		12						10					3												
	2							1.3 S		25		20				25					30												
	3							1.3 M		25		25				25					25												
291	1	327600	4699000	□				1.8 M		94						2					4												
	2							1.8 M		20		2				20					58												
	3							1.8 M		40		7				40					13												
292	1	327500	4699000	□				1.8 M		2		1				17					80											X	
	2							1.8 M		60		5				10					25												
	3							1.8 M		85											15												
293	1	327400	4699000	□				1.8 S		40		10				10					40		0.01									X	
	2							1.8 S		30		20									50											X	
	3							1.8 M		80		5				5					10											X	
294	1	327300	4699000	□				1.9 M		99						0.01					1											X	
	2							1.9 S		10						30					60											X	
	3							1.9 S				0.01				90					10											X	
295	1	327200	4699000	□				1.5 S				30				40					30												
	2							1.5 S		10		20				0.01					20												
	3							1.5 S		2		50				18					30												
296	1	327700	4698900	□				1.2 M		95			0.01			2					3											X	
	2							1.2 S		55		5				0.01					20											X	
	3							1.2 S		47	0.01	2	0.01			2					2		0.01									X	

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Sample Point (SP)	Rake toss #	NAD27 X coord East 18T	NAD27 Y coord North	91 original vegetated SPs	11 original nonvegetated SPs	5 remaining DEC SPs	31 added 2008 SPs	Depth (m) on date	Rake Abundance	Ceratophyllum demersum	Chara vulgaris	Elodea sp.	Lemna trisulca	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Najas minor	Nitella flexilis	Nitellopsis obtusa	Nymphaea odorata	Potamogeton crispus	Potamogeton foliosus	Potamogeton pusillus	Potamogeton robinisii	Ranunculus trichophyllus	Stuckenia pectinata	Vallisneria americana	Zosterella dubia	Filamentous algae	
297	1	327600	4698900	□			1.5 M 30					2			60						10									
	2						1.5 M 84								10						3		1							
	3						1.5 S 20								30						50									
298	1	327500	4698900	□			1.3 S 30								25						45									
	2						1.3 M 40				3				16						40		1							
	3						1.3 M 50				10				0.01 20						20									
299	1	327400	4698900	□			1.5 M 100				0.01				0.01						0.01									
	2						1.5 M 99								1						1									
	3						1.5 D 98								0.01						2									
300	1	327300	4698900	□			1.5 S 50				10				10						27			3						
	2						1.5 S 5				28				22						45									
	3						1.5 M 15				15				5 20						20			5						
301	1	327700	4698800	□			1.0 S 96				0.01				1						3									
	2						1.0 S 50				20				10 0.01						20									
	3						1.0 S 95				2				3															
302	1	327600	4698800	□			1.1 S 70				15				0.01						15									
	2						1.1 S 50				1				1 4						41		2							
	3						1.1 T 30				1				17						50		2							
303	1	327500	4698800	□			1.1 M 90								0.01						10									
	2						1.1 M 80								5						10		5							
	3						1.1 M 85								10						5									
304	1	327400	4698800	□			1.1 S 45				15				7						26									
	2						1.1 M 30				10				15						15									
	3						1.1 S 50				5				0.01						45									
305	1	326900	4699600	□							97				1 1															
	2						1.7 M				87				3 10															
	3						1.7 M				60				15 20								5							
306	1	327100	4699200	□			1.2 T							100																
	2						1.2 M				1				98 1															
	3						1.2 M				15			5	10 25															
307	1	327800	4699100	□			0.5 D 90				2 1 0.01				2						0.01									
	2						0.5 D 50				20 5 0.01				3 5						5									
	3						0.5 M 60				15 0.01				15						1									
308	1	326800	4699900	□			1.2 T				10				20															
	2						1.2 T				0.01 5				80															
	3						1.2 T								100						0.01									
309	1	326800	4699800	□			0.9 S				0.01 13				40						2									
	2						0.9 S				2 4				90															
	3						0.9 T				1				10 59															

Table A. Results of the three rake-toss sampling of Waneta Lake on August 6 - 12, 2008 at 138 sample points (SPs).

Sample Point (SP)	Rake toss #	NAD27 X coord East 18T	NAD27 Y coord North	91 original vegetated SPs	11 original nonvegetated SPs	5 remaining DEC SPs	31 added 2008 SPs	Depth (m) on date	Rake Abundance	Ceratophyllum demersum	Chara vulgaris	Elodea sp.	Lemna trisulca	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Najas minor	Nitella flexilis	Nitellopsis obtusa	Nymphaea odorata	Potamogeton crispus	Potamogeton foliosus	Potamogeton pusillus	Potamogeton robinisii	Ranunculus trichophyllus	Stuckenia pectinata	Vallisneria americana	Zosterella dubia	filamentous algae	
310	1	326800	4700000	□			1.0 S	80							15							5							X	
	2						1.0 M	60							30	5						5							X	
	3						1.0 S	45							35	15						2.5							X	
311	1	327600	4699900	□			1.3 D								100														X	
	2						1.3 D	1							98														X	
	3						1.3 D							5	95												0.01		X	
312	1	326800	4700200	□			1.8 S	5							95														X	
	2						1.8 M	20							80														X	
	3						1.8 S	8							2	40							50						X	
313	1	326800	4700100	□			1.8 S	95							4								1							X
	2						1.8 D	45							50							5								
	3						1.8 M	5							20	5							40							
314	1	326700	4701000	□			1.3 D	8							90															X
	2						1.3 M	5							1	90	4													X
	3						1.3 D	1							1	96	1						1							X
315	1	326800	4700300	□			1.9 M	10							5	85														X
	2						1.9 M	30							17	18						5	30							X
	3						1.9 M	9							30	60						1								X
316	1	326700	4701200	□			2.0 S	1							97															X
	2						2.0 S								98							2								X
	3						2.0 S	3							95							2								X
317	1	326700	4701100	□			1.8 M								100	0.01														X
	2						1.8 S	15							60								5							X
	3						1.8 M	5						30	50	10							5							X

Table B. Results of a two rake-toss sampling of Lamoka Lake from August 27 – September 15, 2008 at 180 sample points (SPs).

Sample Point (SP)	Rake toss #	NAD27 X coord East 18T	NAD27 Y coord North 18T	Depth (m) on date	Rake Abundance	Azolla caroliniana	Brasenia schreberi	Ceratophyllum demersum	Chara vulgaris	Elodea sp.	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Nitella flexilis	Nuphar advena	Nymphaea odorata	Potamogeton amplifolius	Potamogeton crispus	Potamogeton hillii	Potamogeton hybrid	Potamogeton nodosus	Potamogeton pusillus	Potamogeton robinsonii	Potamogeton zosteriformis	Polygonum amphibium	Ranunculus trichophyllus	Stuckenia pectinata	Spirodela polytriza	Typha latifolia	Utricularia sp.	Vallisneria americana	Wolffia columbiana	Zosterella dubia	filamentous algae						
214	1	328600	4695600	1.3	M			20		20					40																			20									
	2				D			5		30					50																			15									
215	1	328500	4695600	0.7	M			20		40	0.01				5	7	5																										
	2				M			35		20	1			1		7	0.01																										
216	1	329000	4695500	1.3	M			7		6					50					30						7																	
	2				M			10		1					10					40					9																		
217A	1	328895	4695441	1.5	D			32		2					32										2																		
	2				D			25		0.01					35									5																			
218	1	328800	4695500	4.0	T					100																																	
	2				O																																						
218A	1	328806	4695442	1.5	M			4							2									0.01		3																	
	2				M			35		5					25																												
219	1	328700	4695500	2.2	T			80		19																																	
	2				T			80		10					10																												
220	1	328600	4695500	1.6	S			10		10										10						50	15																
	2				M					20					10													70															
221	1	328500	4695500	0.8	M			13	3	23					13	2																											
	2				M			20	3	15	2				14	8									3																		
222	1	329100	4695400	1.0	D			97		1																																	
	2				D			85		3	2			5																													
223	1	329000	4695400	1.1	M			83												10	5																						
	2				M			40		6					1				1							50	1																
224	1	328600	4695400	1.2	M			10		60			20		3					3																							
	2				S			13		25					45																												
225	1	328500	4695400	0.8	S					10				10	7																												
	2				M			1		8				2																													

Table B. Results of a two rake-toss sampling of Lamoka Lake from August 27 – September 15, 2008 at 180 sample points (SPs).

Sample Point (SP)	Rake toss #	NAD27 X coord East 18T	NAD27 Y coord North 18T	Depth (m) on date	Rake Abundance	Azolla caroliniana	Brasenia schreberi	Ceratophyllum demersum	Chara vulgaris	Elodea sp.	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Nitella flexilis	Nuphar advena	Nymphaea odorata	Potamogeton amplifolius	Potamogeton crispus	Potamogeton hillii	Potamogeton hybrid	Potamogeton nodosus	Potamogeton pusillus	Potamogeton robinsonii	Potamogeton zosteriformis	Polygonum amphibium	Ranunculus trichophyllus	Stuckenia pectinata	Spirodela polyrrhiza	Typha latifolia	Utricularia sp.	Vallisneria americana	Wolffia columbiana	Zosterella dubia	filamentous algae					
226	1	328400	4695400	0.8	M			30	20	20																	8	8	1						26	3		4	S			
	2				M			30	30	30																	3	3							4	30		1				
227	1	328400	4695300	1.8	T			20							40						10							30												M		
	2				S			50	10																			40												M		
228	1	328400	4695200	0.7	M			25	25	25	0.01	0.01		6				10	25									2								7				M		
	2				M			30	20	20	10	10						2	3								5								30							
229	1	328300	4695200	1.3	M			10	20	20						50											7								7	6			S			
	2				M			60	20	20						10										10								10	0.01		0.01			M		
230	1	328300	4695100	2.0	S			40	8	8				2		20					15					15	2													D		
	2				M			95	3	3																																
231	1	328400	4695000	1.0	M			10	4	4	0.01	0.01	10					5									65															
	2				M			25	11	11	0.01	0.01				5		20								14	4							10								
232	1	328300	4695000	1.2	M			20	60	60				8													25	3														
	2				D			10	45	45	0.01	0.01		3												2	3							10								
233	1	328300	4694900	1.3	D			38	15	15	2	2		10												25	5															
	2				D			3	3	3				3		1										85	2															
234	1	328200	4694900	1.1	D			2	90	90				4												2																
	2				D			10	73	73				5												2																
237	1	328300	4694900	1.3	D			10	10	10	0.01	0.01		5												60																
	2				D			30	20	20	0.01	0.01		0.01											4																	
238	1	328200	4694800	1.7	M			50	5	5						5										40																
	2				D			63	20	20	0.01	0.01		5												10	2															
241	1	328200	4694700	1.1	M			4	20	20	0.01	0.01		3		20										50																
	2				D			2	2	2	0.01	0.01		2				40								50																
242	1	328100	4694700	1.3	D			10	4	4						5										81																
	2				D			5	5	5						5										80	4															

Table B. Results of a two rake-toss sampling of Lamoka Lake from August 27 – September 15, 2008 at 180 sample points (SPs).

Sample Point (SP)	Rake toss #	NAD27 X coord East 18T	NAD27 Y coord North 18T	Depth (m) on date	Rake Abundance	Azolla caroliniana	Brasenia schreberi	Ceratophyllum demersum	Chara vulgaris	Elodea sp.	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum spicatum	Najas flexilis	Najas guadalupensis	Nitella flexilis	Nuphar advena	Nymphaea odorata	Potamogeton amplifolius	Potamogeton crispus	Potamogeton hillii	Potamogeton hybrid	Potamogeton nodosus	Potamogeton pusillus	Potamogeton robinisii	Potamogeton zosteriformis	Polygonum amphibium	Ranunculus trichophyllus	Stuckenia pectinata	Spirodela polyrrhiza	Typha latifolia	Utricularia sp.	Vallisneria americana	Wolffia columbiana	Zosterella dubia	filamentous algae										
303	1	327100	4693200	1.1	D			65		15	2	2		15													3																				
	2				D			50		2	0.01			45													2	1																			
304	1	327000	4693200	1.3	D			40		20	0.01			15							0.01					25	0.01																				
	2				D			70		20				5												3	2																				
305	1	326900	4693200	2.8	T			70													30																										
	2				M			20		0.01	0.01			50							0.01					30																					
306	1	326800	4693200	1.3	D			30		20				15												35																					
	2				D			20		20				10												40	5																				
307	1	327000	4693100	0.7	D			35		2	3			0.01												0.01	0.01																				
	2				D			20		6	10			0.01												6	1																				
308	1	326900	4693100	1.4	D			45		0.01	0.01			13												7																					
	2				D			20		3	2			2												70	2																				
309	1	326800	4693100	1.1	D			20		30				50												0.01																					
	2				D			60		20	0.01			15												0.01	3																				
310	1	327000	4693000																																												
	2																																														
311	1	326900	4693000	1.1	D			10		0.01	0.01			5												15	0.01																				
	2				D			20		5	0.01	3		5												30	2																				
312	1	326800	4693000	0.4	M			80		10	0.01			1							1																										
	2				M			20		25	1			13																																	
313	1	326900	4692900	0.4	S			100																																							
	2				M			10					0.01																																		