APPENDIX A – LAKE WAUBESA PLANT STATISTICS 2011

| Aquatic Plant Community Statistics | 2011 |
|---|--------|
| Number of sites sampled | 987 |
| Number of sites with vegetation | 223 |
| Number of sites shallower than maximum depth of plants | 353 |
| Frequency of occurrence at sites shallower than maximum depth of plants | 63.17% |
| Simpson Diversity Index | 0.86 |
| Maximum Depth of Plants (Feet) | 7 |
| Taxonomic Richness (Number Taxa) | 14 |
| Average Number of Species per Site (less than max depth of plant growth) | 1.41 |
| Average Number of Species per Site (sites with vegetation) | 2.24 |
| Average Number of Native Species per Site (less than max depth of plant growth) | 1.08 |
| Average Number of Native Species per Site (sites with vegetation) | 1.87 |

| Table 1: 2011 Aquatic Plant Community | y Statistics, Lake Waubesa, Dane County, WI |
|---------------------------------------|---|
|---------------------------------------|---|

| Species | Frequency of | Frequency of | Percent | Number of | Average |
|---------------------------|--------------|--------------------|--------------|------------------|---------|
| | Occurrence | Occurrence at Site | Relative | Intercept Points | Density |
| | within | Shallower Than | Frequency of | Where Detected | |
| | vegetated | Max Depth of | Occurrence | | |
| | areas | Plants | | | |
| Filamentous algae | 1.35 | 0.85 | 0.60 | 3 | 1.00 |
| River bulrush | 0.45 | 0.28 | 0.20 | 1 | 1.00 |
| Coontail | 60.99 | 38.53 | 27.25 | 136 | 1.25 |
| Muskgrass | 1.35 | 0.85 | 0.60 | 3 | 1.00 |
| Common | 9.42 | 5.95 | 4.21 | 21 | 1.00 |
| waterweed | | | | | |
| Water star-grass | 11.66 | 7.37 | 5.21 | 26 | 1.00 |
| Small duckweed | 4.48 | 2.83 | 2.00 | 10 | 1.00 |
| Eurasian watermilfoil | 47.09 | 29.75 | 21.04 | 105 | 1.05 |
| Curly-leaf pondweed | 4.93 | 3.12 | 2.20 | 11 | 1.00 |
| Clasping-leaf pondweed | 1.35 | 0.85 | 0.60 | 3 | 1.00 |
| Flat-stem pondweed | 37.22 | 23.51 | 16.63 | 83 | 1.00 |
| Large duckweed | 4.04 | 2.55 | 1.80 | 9 | 1.00 |
| Wild celery | 2.24 | 1.42 | 1.00 | 5 | 1.00 |
| Horned pondweed | 37.22 | 23.51 | 16.63 | 83 | 1.00 |

Table 3: Historical and 2011 Floristic Quality Index, Lake Waubesa, DaneCounty, WI

| | | | | Coeffecient of Conservatism | |
|---------------|---------------|-------------------------------|-------|--------------------------------|--|
| Genus | Species | Common Name | 2006 | 2011 | |
| Bolboschoenus | fluviatilis | River bulrush | | 6 | |
| Ceratophyllum | demersum | Coontail | 3 | 3 | |
| Chara | sp. | Muskgrass | | 7 | |
| Elodea | canadensis | Common waterweed | 3 | 3 | |
| Heteranthera | dubia | Water star-grass | 6 | 6 | |
| Lemna | minor | Small duckweed | 4 | 4 | |
| Myriophyllum | sibiricum | Northern watermilfoil | 6 | | |
| Potamogeton | foliosus | Leafy pondweed | 6 | | |
| Potamogeton | richardsonii | Clasping-leaf pondweed | 5 | 5 | |
| Potamogeton | zosteriformis | Flat-stem pondweed | 6 | 6 | |
| Spirodela | polyrhiza | Large duckweed | 5 | 5 | |
| Stuckenia | pectinata | Sago pondweed | 3 | | |
| Typha | angustifolia | Narrow-leaved cattail | 1 | | |
| Vallisnera | americana | Wild celery | 6 | 6 | |
| Zannichellia | palustris | Horned pondweed | 7 | 7 | |
| | | Total Species | 13 | 11 | |
| | | Mean C | 4.69 | 5.27 | |
| | | Floristic Quality Index (FQI) | 16.92 | 17.49 | |

Please note: There is no Coefficient of Conservatism for exotic species such as Eurasian Watermilfoil or for species not identified to the species level (*Sagittaria sp.*).

Coefficient of Conservatism C

0-3 taxa found in wide variety of plant communities and very tolerant of disturbance.

4-6 taxa typically associated with specific plant communities and tolerate moderate disturbance.

7-8 taxa found in narrow range of plant communities and tolerate minor disturbance.

9-10 taxa restricted to a narrow range of synecological conditions, with low tolerance of disturbance.

Table 4: Historical Aquatic Plant Community Statistics, Lake Waubesa, Dane County, Wisconsin.

| | 2006 | 2011 |
|--|-----------------------|--------------|
| F.o.o. at sites shallower than maximum depth of plants | 52.61 | 63.17 |
| Most Dominant Species* | Coontail | Coontail |
| | | Eurasian |
| | Small Duckweed | Watermilfoil |
| | | Flat-stem |
| | Filamentous Algae | Pondweed |
| | | Horned |
| | Leafy Pondweed | Pondweed |
| | | Water Star- |
| | Eurasian Watermilfoil | grass |
| Maximum Depth of Plants | 14 | 11 |
| Species Richness | 14 | 14 |
| Community FQI | 16.92 | 17.49 |
| Average Coefficient of Conservatism | 4.69 | 5.27 |
| * - Based on number of sample points collected at. Visual observations are | | |

* - Based on number of sample points collected at. Visual observations are included.

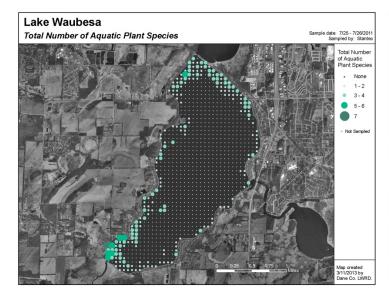
Table 5: Historical Aquatic Plant Occurrences, Lake Waubesa, Dane County, Wisconsin.

| | | | % Relative F.o.o. | |
|-----------------------------------|---------------|------------------------|-------------------|------|
| Genus | Species | Common Name | 2006 | 2011 |
| Algae | sp. | Filamentous algae | 27.5 | 0.6 |
| Bolboschoenus | fluviatilis | River bulrush | | 0.2 |
| Ceratophyllum | demersum | Coontail | 32.9 | 27.3 |
| Chara | sp. | Muskgrass | | 0.6 |
| Elodea | canadensis | Common waterweed | 0.9 | 4.2 |
| Heteranthera | dubia | Water star-grass | 2.6 | 5.2 |
| Lemna | minor | Small duckweed | 0* | 2.0 |
| Myriophyllum | sibiricum | Northern watermilfoil | 4.3 | |
| Myriophyllum | spicatum | Eurasian watermilfoil | 10.0 | 21.0 |
| Potamogeton | crispus | Curly-leaf pondweed | 1.5 | 2.2 |
| Potamogeton | foliosus | Leafy pondweed | 11.3 | |
| Potamogeton | richardsonii | Clasping-leaf pondweed | 1.1 | 0.6 |
| Potamogeton | zosteriformis | Flat-stem pondweed | 3.7 | 16.6 |
| Spirodela | polyrhiza | Large duckweed | 0.2 | 1.8 |
| Stuckenia | pectinata | Sago pondweed | 2.4 | |
| Typha | angustifolia | Narrow-leaved cattail | 0* | |
| Vallisnera | americana | Wild celery | 0.2 | 1.0 |
| Zannichellia | palustris | Horned pondweed | 1.5 | 16.6 |
| 0* - Species was sampled visually | | | | |

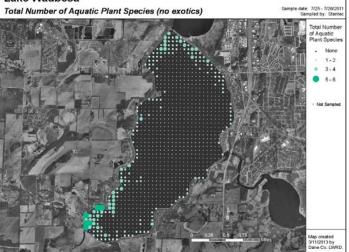
0* - Species was sampled visually only, statistical data was not

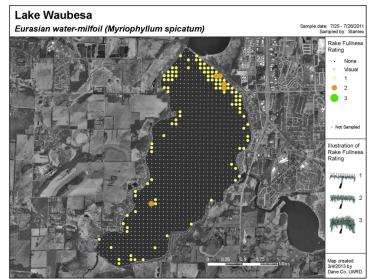
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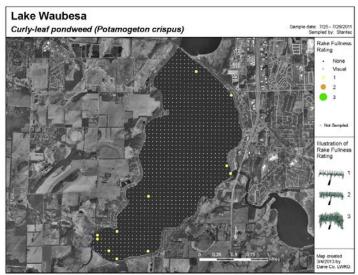
APPENDIX B – AQUATIC PLANT DISTRIBUTIONS LAKE WAUBESA (2011)

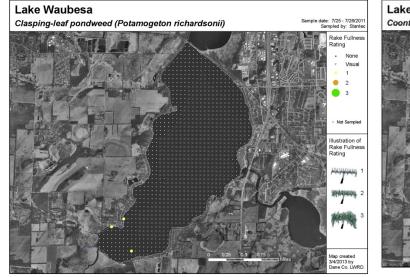


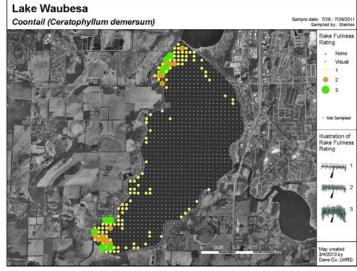
Lake Waubesa

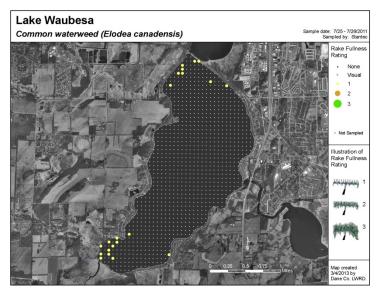


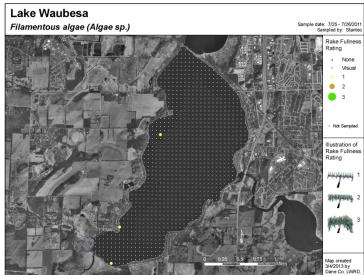


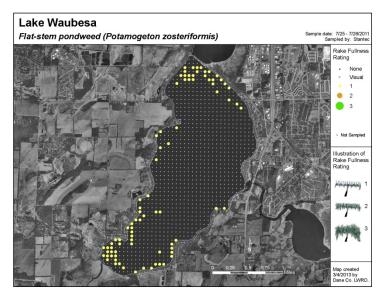


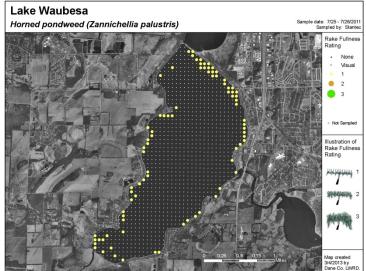


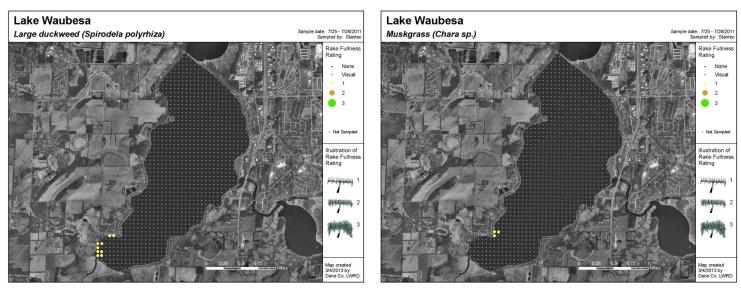












Appendices to 2013 Lake Waubesa Aquatic Plant Management Plan Amendment

