



Data Collector
Michael Adam

Data Collection Date
8/19/2015 1:42:57 PM (UTC)

Average Water Temperature
26.41° C (79.55° F)

Location
Start: 42.35847473, -88.06196883
End: 42.36223221, -88.06604767

Survey Size
Area: 41.77 ha
(103.21 acres)
Percent: 98.85% of waterbody
Volume: 1,181,561.30 cu. m
(957.91 acre ft)

Settings
Track Buffer: 35 m
Grid Cell Size: 7 m
Min. BV Detect: 5%
Min. Veg Depth Detect: 0.73152 m

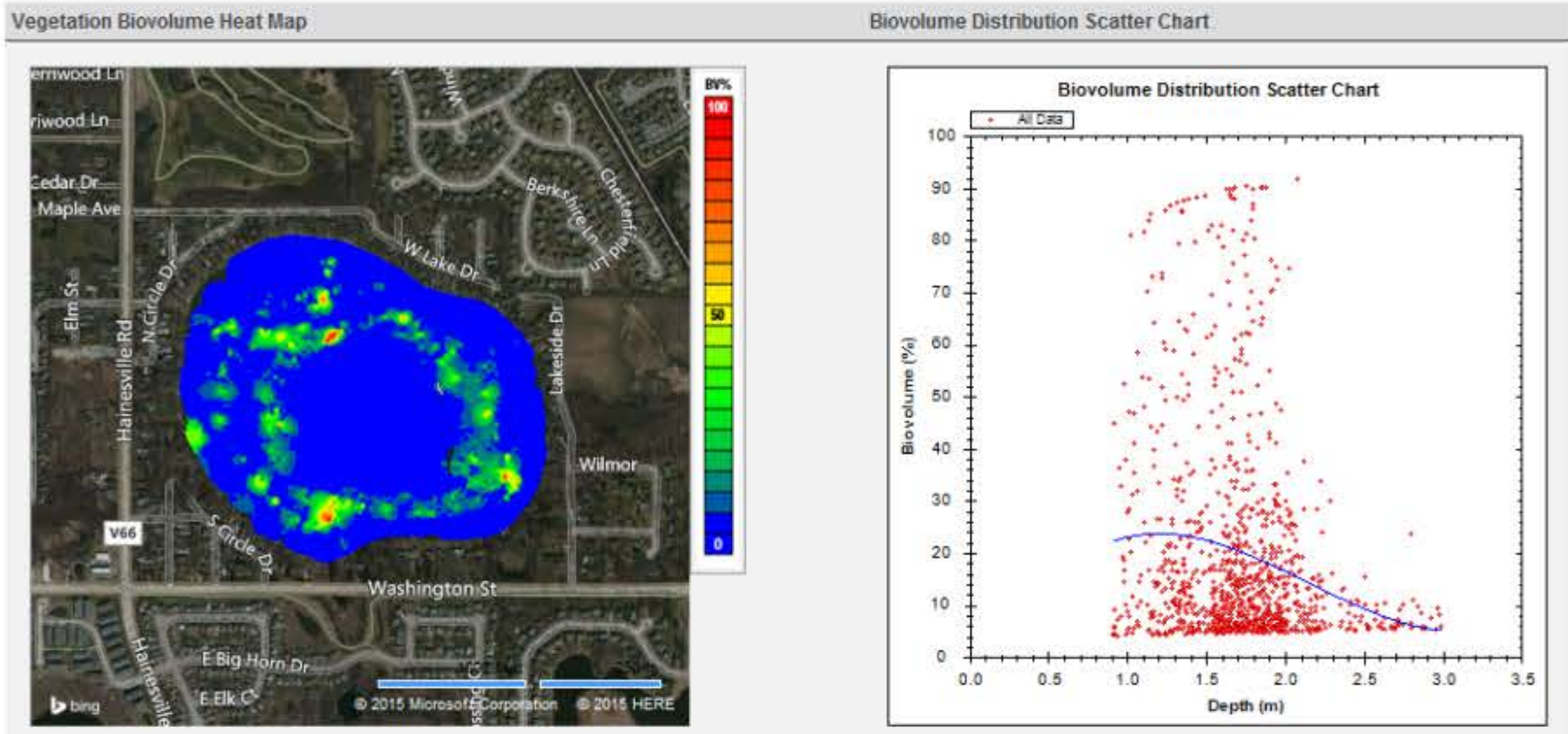
Est. Waterbody Volume
1,195,309.60 cu. m
(969.05 acre ft)

Survey Summary

	Type ?	PAC ?	Avg BVp ?	SD BVp ?	Avg BVw ?	SD BVw ?	Depth Range	Avg Depth	Distance	No. Points
Full Survey	Point	21.4%	22.3%	±21.5%	4.8%	±13.5%	0.21-9.09 m	2.21 m	17.29 km	10,802
	Grid	26.8%	17.4%	±13.9%	4.7%	±10.5%	0.03-9.01 m	2.69 m	-	6,632

Area of Interest Summary

AOI ?	Type ?	PAC ?	Avg BVp ?	SD BVp ?	Avg BVw ?	SD BVw ?	Depth Range	Avg Depth	Distance	No. Points
1	Point	20.8%	19.7%	±18.7%	4.1%	±11.7%	0.52-7.78 m	1.59 m	4.03 km	2,924
	Grid	31%	16.1%	±12.3%	5%	±10.1%	0.06-8.3 m	1.64 m	-	3,070
2	Point	6.6%	30.7%	±25.2%	2%	±10%	0.21-8.56 m	1.85 m	6.39 km	4,070
	Grid	23.1%	19.1%	±15.8%	4.4%	±11.1%	0.03-8.89 m	2.11 m	-	4,126
3	Point	37.7%	21.8%	±21.5%	8.2%	±16.9%	0.56-9.09 m	3.09 m	6.87 km	3,808
	Grid	28.5%	17.4%	±14.1%	4.9%	±10.9%	0.03-9.01 m	2.96 m	-	4,887



Biovolume Analysis by Quantity

AOI ?	0-5%	5-20%	20-40%	40-60%	60-80%	>80%
1	79.21%	14.3%	3.97%	1.23%	0.65%	0.65%
2	93.39%	3.12%	1.62%	0.84%	0.52%	0.52%
3	62.34%	24.92%	6.83%	2.47%	1.79%	1.65%

Biovolume Analysis by Depth

AOI ?	Depth	Type ?	Count	PAC ?	Avg BVp ?	SD BVp ?	Avg BVw ?	SD BVw ?
1	0-1m	Point	267	4.5%	23.4%	±11.5%	1%	±5.4%
	1-2m	Point	2356	24.7%	19.5%	±18.7%	4.8%	±12.5%
	2-3m	Point	139	10.1%	26.6%	±23.4%	2.7%	±10.9%
	3-4m	Point	49	0%	-	-	0%	±0%
	4-5m	Point	27	0%	-	-	0%	±0%
	5-6m	Point	29	0%	-	-	0%	±0%
	6-7m	Point	28	0%	-	-	0%	±0%
	7-8m	Point	29	0%	-	-	0%	±0%
	8-9m	Point	0	-	-	-	-	-
	>9m	Point	0	-	-	-	-	-
	0-1m	Grid	619	17.3%	17.7%	±13.7%	3.1%	±8.8%
	1-2m	Grid	2000	35.2%	16.9%	±12.7%	6%	±11.1%
	2-3m	Grid	212	57.1%	11.1%	±5.9%	6.3%	±7.1%
	3-4m	Grid	62	27.4%	8.7%	±3.6%	2.4%	±4.3%
	4-5m	Grid	47	4.3%	6%	±0.6%	0.3%	±1.2%
	5-6m	Grid	30	0%	-	-	0%	±0%
	6-7m	Grid	34	0%	-	-	0%	±0%
	7-8m	Grid	47	0%	-	-	0%	±0%
2	0-1m	Point	503	0.2%	44.8%	±0%	0.1%	±2%
	1-2m	Point	2776	9.7%	30.7%	±25.3%	3%	±12%
	2-3m	Point	250	0%	-	-	0%	±0%
	3-4m	Point	64	0%	-	-	0%	±0%
	4-5m	Point	73	0%	-	-	0%	±0%
	5-6m	Point	124	0%	-	-	0%	±0%
	6-7m	Point	111	0%	-	-	0%	±0%
	7-8m	Point	80	0%	-	-	0%	±0%
	8-9m	Point	89	0%	-	-	0%	±0%
	>9m	Point	0	-	-	-	-	-
	0-1m	Grid	978	3.9%	9.5%	±7%	0.4%	±2.3%
	1-2m	Grid	2220	36.4%	20.5%	±16.5%	7.5%	±14%
	2-3m	Grid	232	39.2%	12.3%	±7.6%	4.8%	±7.7%
	3-4m	Grid	106	13.2%	9.7%	±3.5%	1.3%	±3.5%
	4-5m	Grid	98	4.1%	5.9%	±0.5%	0.2%	±1.2%
	5-6m	Grid	85	0%	-	-	0%	±0%
	6-7m	Grid	114	0%	-	-	0%	±0%
	7-8m	Grid	128	0%	-	-	0%	±0%
3	0-1m	Point	133	14.3%	16.4%	±16.6%	2.3%	±8.5%
	1-2m	Point	1949	53.3%	25.4%	±23.6%	13.5%	±21.4%
	2-3m	Point	550	68.5%	12.1%	±9%	8.3%	±9.3%
	3-4m	Point	65	0%	-	-	0%	±0%
	4-5m	Point	114	0%	-	-	0%	±0%
	5-6m	Point	211	0%	-	-	0%	±0%
	6-7m	Point	198	0%	-	-	0%	±0%
	7-8m	Point	168	0%	-	-	0%	±0%
	8-9m	Point	419	0%	-	-	0%	±0%
	>9m	Point	1	0%	-	-	0%	±0%
	0-1m	Grid	687	6%	10.5%	±8.2%	0.6%	±3.2%
	1-2m	Grid	2395	43.8%	19.2%	±15.3%	8.4%	±13.9%
	2-3m	Grid	439	64.9%	12.1%	±6.8%	7.9%	±8%
	3-4m	Grid	107	13.1%	6.8%	±2.2%	0.9%	±2.4%
	4-5m	Grid	111	0.9%	5.4%	±0%	0%	±0.5%
	5-6m	Grid	140	0%	-	-	0%	±0%
	6-7m	Grid	197	0%	-	-	0%	±0%
	7-8m	Grid	260	0%	-	-	0%	±0%
	8-9m	Grid	548	0%	-	-	0%	±0%
	>9m	Grid	3	0%	-	-	0%	±0%

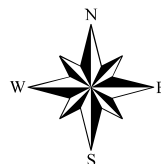
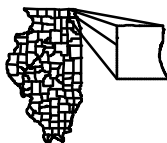
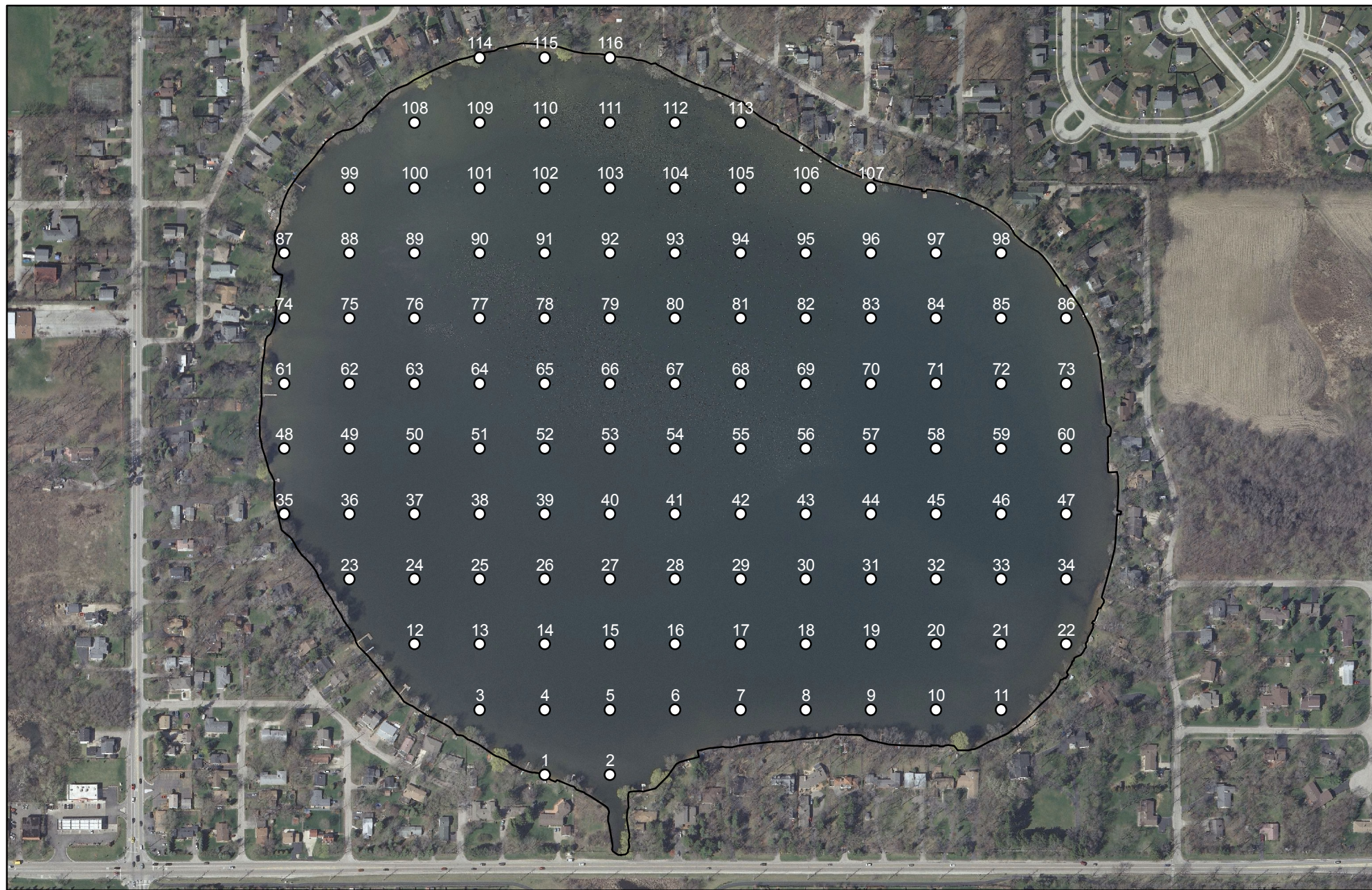
Glossary

- AOI**
Area of Interest: Defines the individual transects or contiguous data samples as depicted by the color coding of each trip line. Separate areas of interest can be generated through merging of multiple trips, appending data to a single sonar log or lapses in time (greater than five minutes) within a sonar log.
- BVp**
Biovolume (Plant): Refers to the percentage of the water column taken up by vegetation when vegetation exists. Areas that do not have any vegetation are not taken into consideration for this calculation.
- BVw**
Biovolume (All water): Refers to the average percentage of the water column taken up by vegetation regardless of whether vegetation exists. In areas where no vegetation exists, a zero value is entered into the calculation, thus reducing the overall biovolume of the entire area covered by the survey.
- PAC**
Percent Area Covered: Refers to the overall surface area that has vegetation growing.
- Grid**
Geostatistical Interpolated Grid: Interpolated and evenly spaced values representing kriged (smoothed) output of aggregated data points. The gridded data is most accurate summary of individual survey areas.
- Point**
Individual Coordinate Point: A single point represents a summary of sonar pings and the derived bottom and canopy depths. Individual point data create an irregularly spaced dataset that may have overlaps and/or gaps in the data resulting in a increased potential for error.

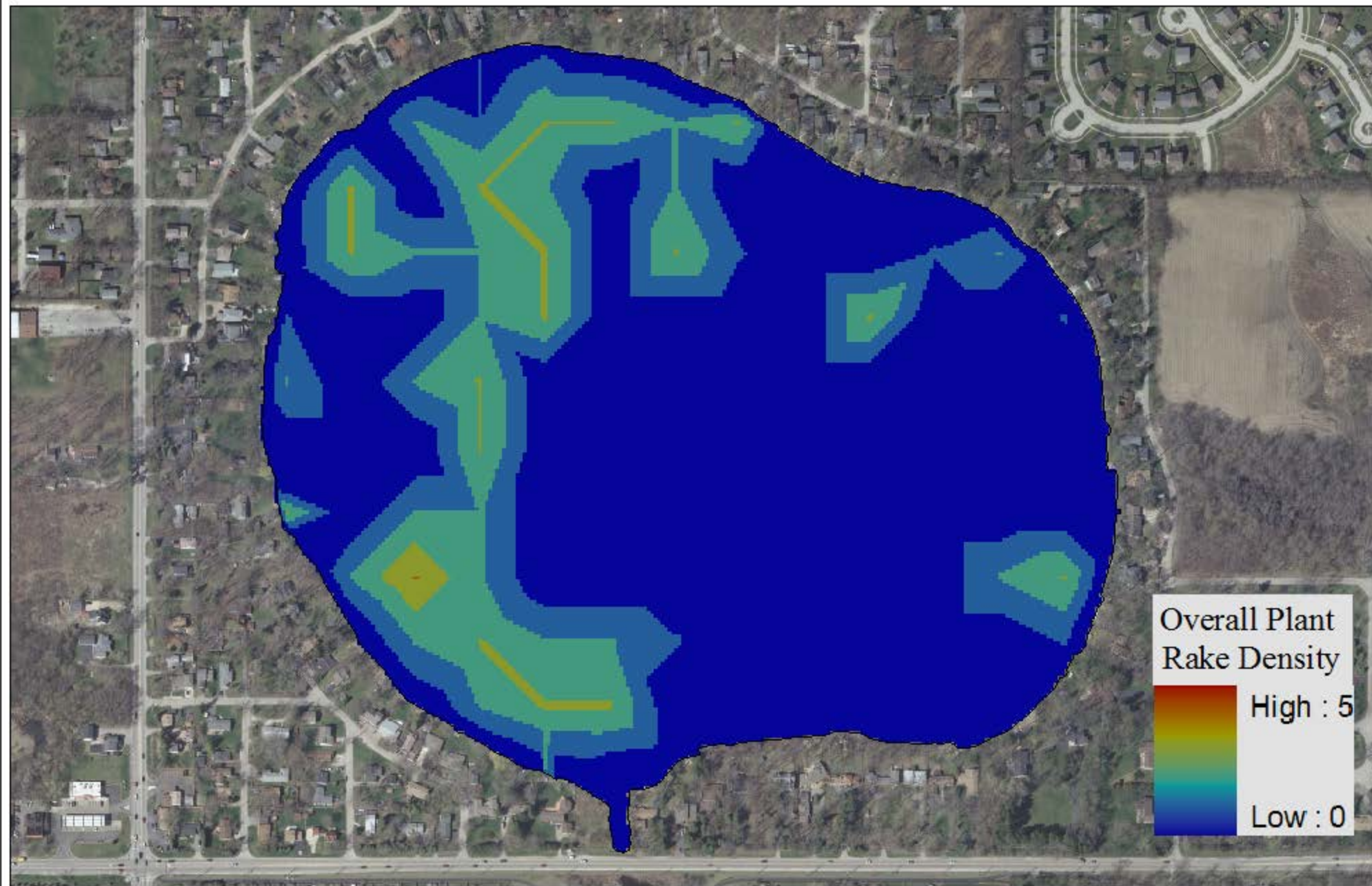
Additional Information

No additional information

Highland Lake Plant Grid August 2015



Highland Lake Plant Rake Density August 2015



Highland Lake EWM Plant Rake Density Aug 2015

