

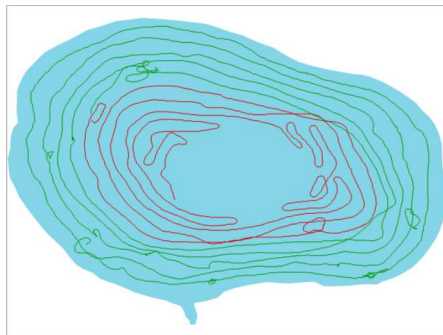


VEGETATION ANALYSIS REPORT

Highland Lake, Lake County Illinois

Generated: 9/2/2015 11:30:29 PM (UTC)

Waterbody Size: 42.25 ha (104.40 acres)

**Data Collector**

Jeremy Stoltzner

Survey SizeArea: 40.41 ha
(99.86 acres)**Settings**Track Buffer: 50 m
Grid Cell Size: 10 m
Min. BV Detect: 5%
Min. Veg Depth: 0.73152
Detect: m**Data Collection Date**

9/1/2015 2:34:14 PM (UTC)

Percent: 95.64% of
waterbody**Average Water Temperature**

23.84° C (74.92° F)

Volume: 863,081.20 cu. m
(699.71 acre ft)**Location**Start: 42.36161804,
-88.06481934End: 42.35988617,
-88.06299591**Est. Waterbody Volume**902,392.00 cu. m
(731.58 acre ft)

Survey Summary

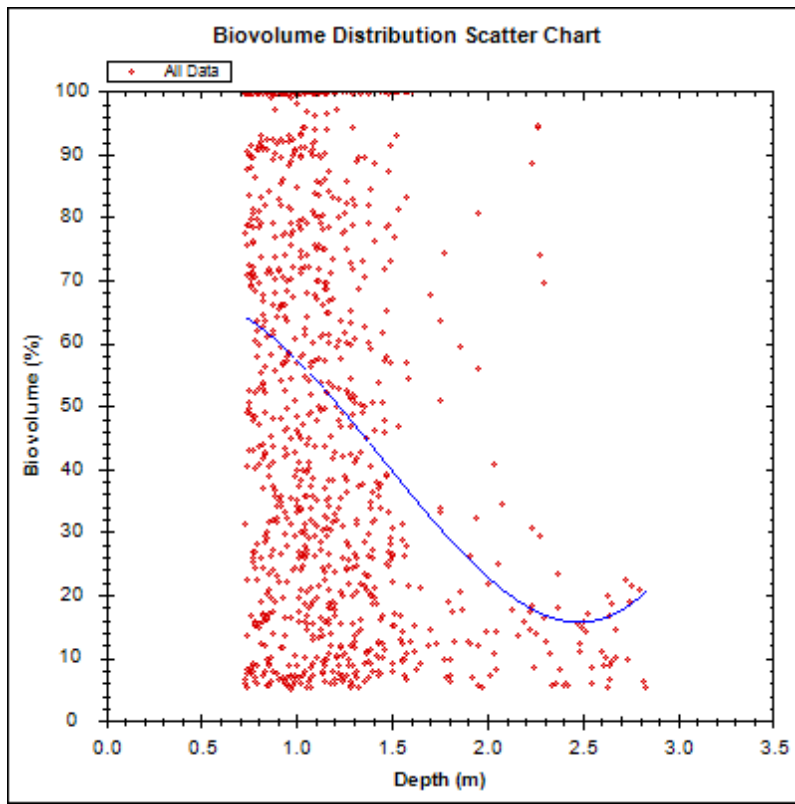
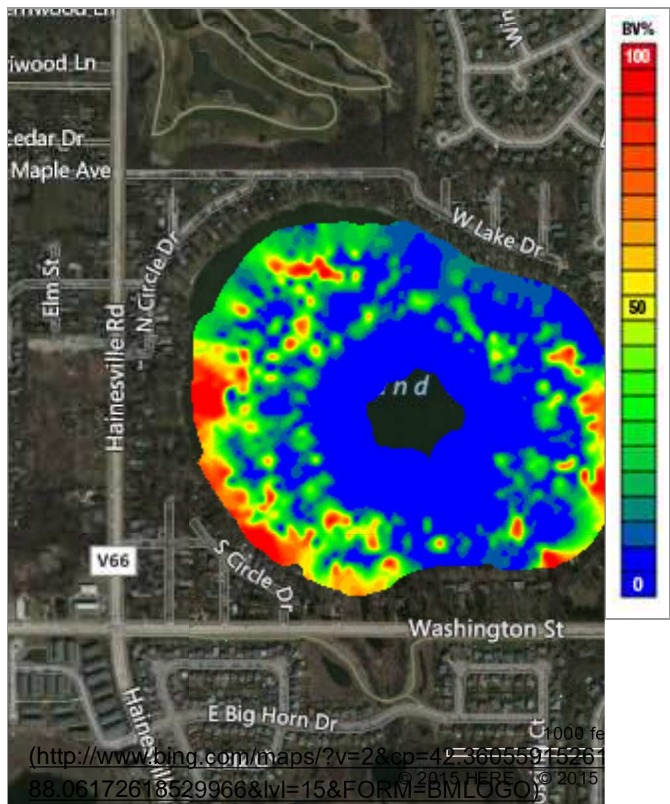
	Type	PAC	Avg BVp	SD BVp	Avg BVw	SD BVw	Depth Range	Avg Depth	Distance	No. Points
Full Survey	Point	36.4%	51.6%	±33.9%	18.8%	±32.2%	0.33-7.96 m	2.13 m	16.58 km	2,901
	Grid	57.4%	33.5%	±25.8%	19.2%	±25.6%	0-8.35 m	2.06 m	-	2,637

Area of Interest Summary

AOI	Type	PAC	Avg BVp	SD BVp	Avg BVw	SD BVw	Depth Range	Avg Depth	Distance	No. Points
1	Point	18.4%	31.6%	±25.7%	5.8%	±16.5%	0.75-7.96 m	3.6 m	6.43 km	1,540
	Grid	42.1%	24.7%	±18.7%	10.4%	±17.2%	0.66-8.35 m	3 m	-	1,564
2	Point	56.8%	58.9%	±33.6%	33.4%	±38.6%	0.33-3.54 m	0.99 m	10.15 km	1,361
	Grid	69.5%	34.8%	±26.3%	24.1%	±27.1%	0-7.54 m	1.15 m	-	1,974

Vegetation Biovolume Heat Map

Biovolume Distribution Scatter Chart



Biovolume Analysis by Quantity

AOI	0-5%	5-20%	20-40%	40-60%	60-80%	>80%
1	81.62%	8.44%	4.87%	1.88%	1.75%	1.43%
2	43.2%	11.02%	8.82%	7.94%	8.74%	20.28%

Biovolume Analysis by Depth

AOI	Depth	Type	Count	PAC	Avg BVp	SD BVp	Avg BVw	SD BVw
1	0-1m	Point	45	66.7%	63.1%	±29.5%	42.1%	±38.3%
	1-2m		473	40.4%	30.4%	±22.5%	12.3%	±20.7%
	2-3m		290	21.4%	20%	±20.6%	4.3%	±12.5%
	3-4m		86	0%	-	-	0%	±0%
	4-5m		155	0%	-	-	0%	±0%
	5-6m		195	0%	-	-	0%	±0%
	6-7m		194	0%	-	-	0%	±0%
	7-8m		102	0%	-	-	0%	±0%
	8-9m		0	-	-	-	-	-
	>9m		0	-	-	-	-	-
2	0-1m	Grid	175	86.3%	35%	±21%	30.2%	±22.9%
	1-2m		767	62.3%	22.1%	±17.1%	13.8%	±17.2%
	2-3m		93	23.7%	15%	±8.7%	3.5%	±7.7%
	3-4m		52	11.5%	11.6%	±5.4%	1.3%	±4.1%
	4-5m		59	1.7%	5.6%	±0%	0.1%	±0.7%

5-6m	95	0%	-	-	0%	±0%
6-7m	145	0%	-	-	0%	±0%
7-8m	151	0%	-	-	0%	±0%
8-9m	27	0%	-	-	0%	±0%
>9m	0	-	-	-	-	-

AOI	Depth	Type	Count	PAC	Avg BVp	SD BVp	Avg BVw	SD BVw
2	0-1m	Point	553	67.5%	61.8%	±34%	41.7%	±40.2%
	1-2m		780	51.3%	56.2%	±33%	28.8%	±36.7%
	2-3m		9	0%	-	-	0%	±0%
	3-4m		19	0%	-	-	0%	±0%
	4-5m		0	-	-	-	-	-
	5-6m		0	-	-	-	-	-
	6-7m		0	-	-	-	-	-
	7-8m		0	-	-	-	-	-
	8-9m		0	-	-	-	-	-
	>9m		0	-	-	-	-	-
	0-1m	Grid	1088	82%	40.5%	±27.9%	33.2%	±29.7%
	1-2m		762	61.8%	24.1%	±18.8%	14.9%	±18.9%
	2-3m		37	13.5%	18.5%	±7.9%	2.5%	±7%
	3-4m		8	25%	13.6%	±0.9%	3.4%	±5.9%
	4-5m		18	5.6%	5.6%	±0%	0.3%	±1.3%
	5-6m		26	0%	-	-	0%	±0%
	6-7m		22	0%	-	-	0%	±0%
	7-8m		13	0%	-	-	0%	±0%
	8-9m		0	-	-	-	-	-
>9m		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

Report URL: <http://files3.digitalmarine.com/s5/ReportOutput/196ae1a1-a806-47de-97c2-00953e27e40c/report.htm> (<http://files3.digitalmarine.com/s5/ReportOutput/196ae1a1-a806-47de-97c2-00953e27e40c/report.htm>)

Contour Innovations is not liable to you for any indirect, exemplary, consequential, incidental or punitive damages, including lost profits, related to use of this report even if Contour Innovations has been advised of the possibility of such damages. The gathering party shall be solely responsible for their own user uploads, manual data point inserts, ancillary research data, and submissions and the consequences of posting or publishing them. This report has been created for research purposes only. Not for commercial use or resale.