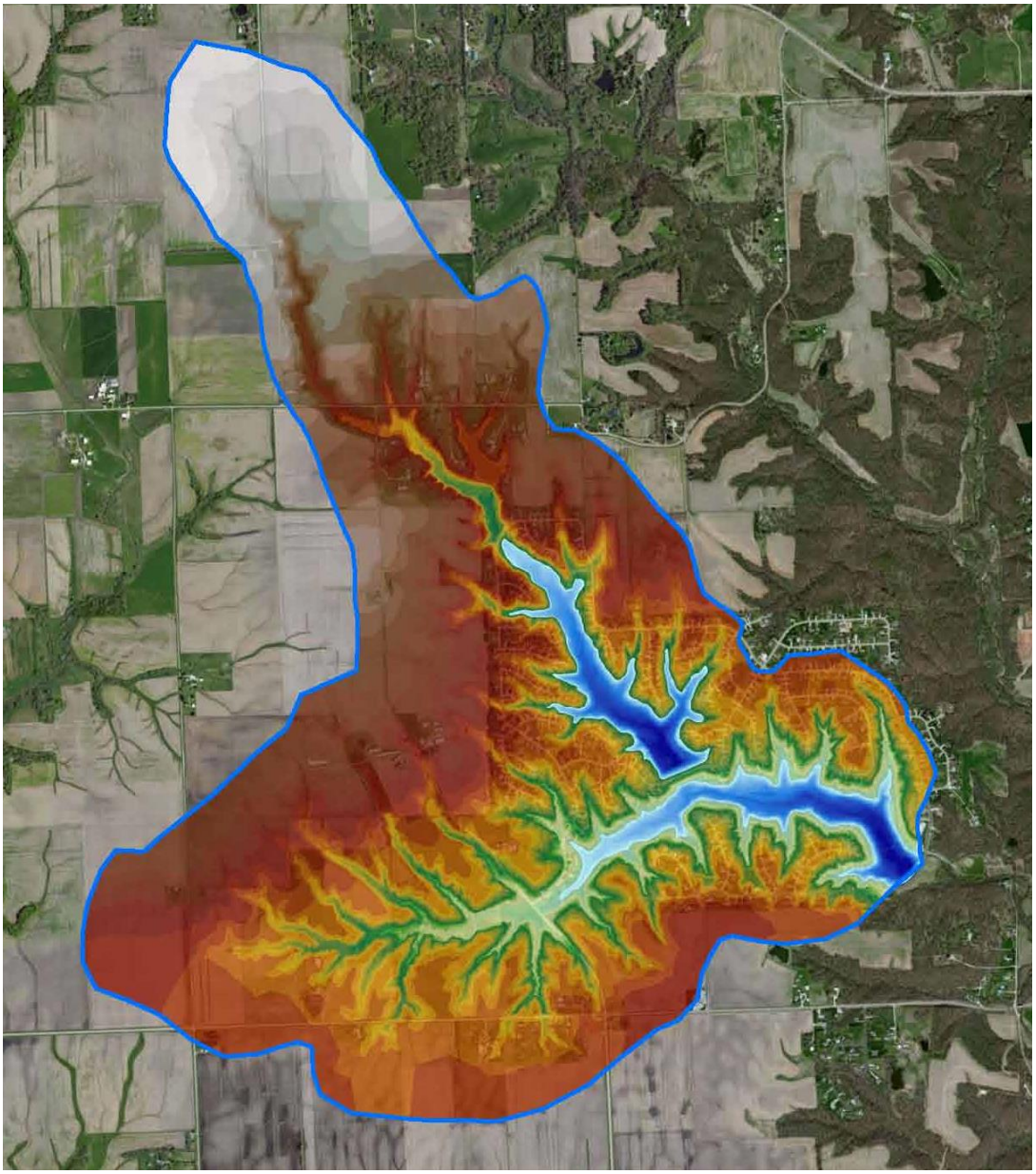
Hydrographic and Sediment Survey For Lake Camelot and Lancelot



Peoria County, IL
August 2014

the MappingNetwork

HYDROGRAPHIC AND SEDIMENT SURVEY EQUIPMENT AND PROCEDURES:

1.0 INTRODUCTION

The Mapping Network conducted a hydrographic and sediment survey on Lake Camelot and Lake Lancelot August 5th – August 6th, 2014. The surveys were conducted to create bathymetry and sediment information on each lake to assist in future management and planning activities. The survey was carried out using professional grade acoustic echo-sounding equipment linked to a global positioning system (GPS) and a sediment survey rod. The lake level or for both Camelot and Lancelot were at full pool for both days of data collection.

2.0 SURVEY METHODS

The survey and sampling operations were performed from a twenty-foot aluminum survey vessel. The vessel was equipped with over-the-side transducer mounts, 1200W power inverter, GPS antenna mount, and computer equipment. Navigation for all aspects of the survey work was accomplished using a Trimble PROXRT Differential Global Positioning System (DGPS) capable of receiving the U.S. Coast Guard corrections and the Omnistar subscription based satellite differential correction service. The DGPS system was interfaced to a ruggedized laptop showing the vessels position within 1.0 meter of transects lines generated by HYPACK.

2.1 Bathymetry Survey Collection Methods

Depth measurements on Lake Camelot and Lancelot were collected using a SyQwest, Inc Hydrobox echo-sounder (200 kHz 3-degree cone). This single frequency sonar signal processor is designed to accurately record the full-spectrum of the lake bottom in a raw *.ODC format to be later processed in SonarWiz data processing software. The accuracy of the Hydrobox data is approximately 0.5% of the water depth with a resolution of 0.1-feet. System accuracy was checked at the start and end of each day using manual measurement in shallow (less than 5 feet) and a “bar-check” method in water (greater than 5 feet) for quality control. Data collection around the perimeter and throughout the lake were based on a 50 foot grid.

2.2 Bathymetry Data Processing Methods

Bathymetry data were processed using SonarWiz Software. Components of the bathymetric processing included visually verifying the water depth is tracking the bottom of the body of water and not outlying soundings created by water column interference (e.g., vegetation, trees, debris). The conversion of soundings to elevations are then based on the recorded water level data and depth. Data is exported as xyz (latitude, longitude and depth) in UTM NAD83 projection. XYZ data is imported into ESRI ArcMap 10 where a Triangular irregular network (TIN) is created using the 3D Analyst extension to represent surface morphology. ArcGIS supports the Delaunay triangulation method. TINs are typically used for high-precision modeling because they allow calculations of planimetric area, surface area,

and volume. Contour lines at one-foot intervals are also generated from the TIN model.

2.3 Sediment Depth Collection Methods

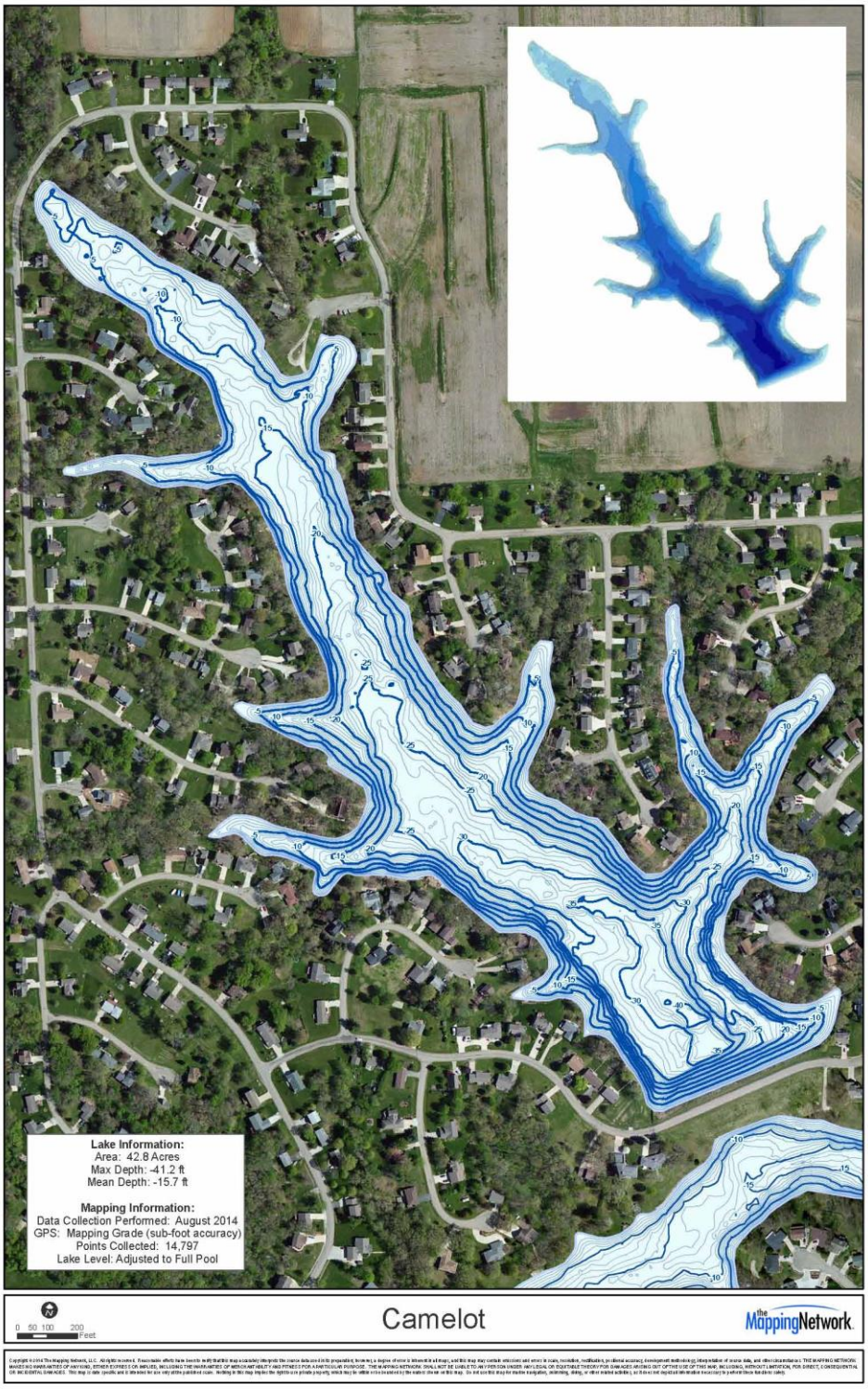
Sediment thickness information was collected using a steel survey rod with 1/10 foot markings. The location of the sediment probe locations were based off a 50-foot grid size in the majority of the coves and surveyed up to 10-foot of water depth. The depth of sediment was determined by manually driving a steel probe into the sediment until refusal. The total penetration of sediment depth are then recorded using the PROXRT GPS in TerraSync software.

2.4 Sediment Depth Data Processing

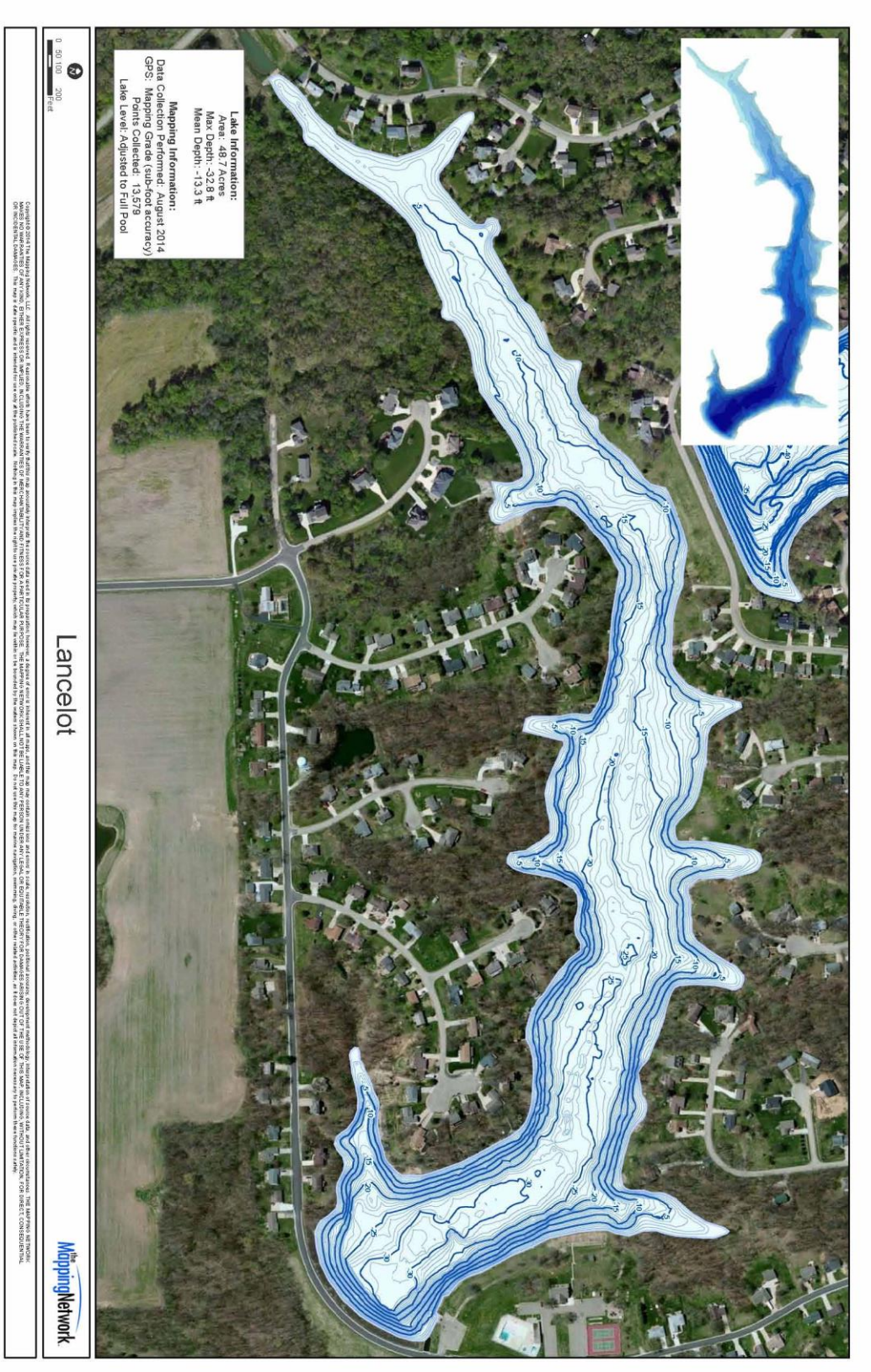
The sediment thickness data was imported as XYZ data into ESRI ArcMap 10 where a Triangular Irregular Network (TIN) is created using the 3D Analyst extension to represent the sediment thickness in feet. A predetermined sampling area is used as an extent in which the data is clipped. Within the sampling area, maximum and mean sediment thickness is calculated along with estimated volume of soft sediment in cubic yards.

3.0 HYDROGRAPHIC SURVEY RESULTS

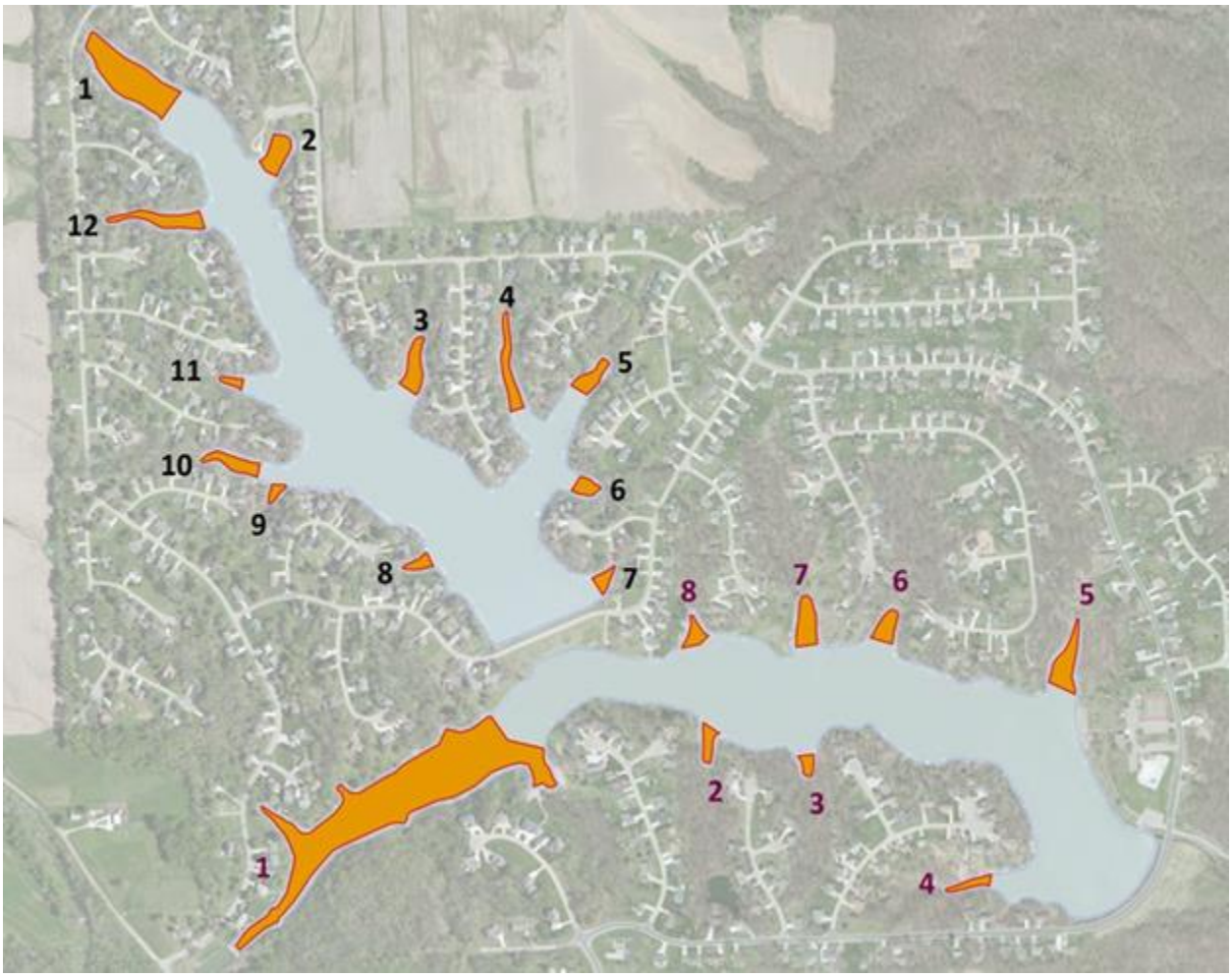
3.1 Lake Camelot (see larger 11”x17” hardcopies for details)



3.2 Lake Lancelot (see larger 11”x17” hardcopies for details)



4.0 SEDIMENT SURVEY RESULTS



Area 1:	
Manual Measurement Points Collected	28
Area:	1.8 Acres
Estimated Avg Depth of Sediment	1.1 Feet
Estimated Max Depth of Sediment	3.9 Feet
Estimated Sediment Volume	3,370 Cubic Yards

Sediment Probe Locations
Lake Camelot - Area 1

Target Name	Latitude	Longitude	Date	Sample Type	Penetration (ft)
Point 1	40.6409823	-89.7603152	8/5/2014	Probe	1.1
Point 2	40.6408692	-89.7601966	8/5/2014	Probe	1.7

Point 3	40.6409229	-89.7604052	8/5/2014	Probe	2.0
Point 4	40.6408499	-89.7604162	8/5/2014	Probe	2.2
Point 5	40.6407705	-89.7602790	8/5/2014	Probe	2.8
Point 6	40.6406270	-89.7602851	8/5/2014	Probe	0.7
Point 7	40.6405321	-89.7602052	8/5/2014	Probe	0.5
Point 8	40.6405733	-89.7601013	8/5/2014	Probe	2.8
Point 9	40.6406682	-89.7600592	8/5/2014	Probe	1.2
Point 10	40.6406997	-89.7599762	8/5/2014	Probe	0.4
Point 11	40.6405797	-89.7599537	8/5/2014	Probe	1.7
Point 12	40.6404173	-89.7601175	8/5/2014	Probe	1.1
Point 13	40.6403751	-89.7599395	8/5/2014	Probe	1.7
Point 14	40.6405367	-89.7596350	8/5/2014	Probe	1.6
Point 15	40.6403923	-89.7596806	8/5/2014	Probe	1.0
Point 16	40.6402565	-89.7596893	8/5/2014	Probe	1.0
Point 17	40.6401496	-89.7597843	8/5/2014	Probe	0.1
Point 18	40.6400898	-89.7595562	8/5/2014	Probe	0.7
Point 19	40.6402420	-89.7594264	8/5/2014	Probe	0.9
Point 20	40.6403398	-89.7593397	8/5/2014	Probe	0.9
Point 21	40.6401594	-89.7591636	8/5/2014	Probe	0.6
Point 22	40.6400974	-89.7594352	8/5/2014	Probe	1.3
Point 23	40.6399523	-89.7593837	8/5/2014	Probe	3.9
Point 24	40.6400445	-89.7592562	8/5/2014	Probe	1.3
Point 25	40.6401589	-89.7590095	8/5/2014	Probe	1.3
Point 26	40.6400340	-89.7590195	8/5/2014	Probe	1.7
Point 27	40.6399678	-89.7590492	8/5/2014	Probe	0.8
Point 28	40.6398665	-89.7591003	8/5/2014	Probe	0.7

Area 2:	
Manual Measurement Points Collected	6
Area:	0.4 Acres
Estimated Avg Depth of Sediment	2.4 Feet
Estimated Max Depth of Sediment	4.8 Feet
Estimated Sediment Volume	1,730 Cubic Yards

Sediment Probe Locations
Lake Camelot - Area 2

Target Name	Latitude	Longitude	Date	Sample Type	Penetration (ft)
Point 1	40.6391122	-89.7572689	8/5/2014	Probe	4.8
Point 2	40.6392934	-89.7571488	8/5/2014	Probe	3.7
Point 3	40.6394251	-89.7571034	8/5/2014	Probe	2.6
Point 4	40.6393153	-89.7569765	8/5/2014	Probe	1.5

Point 5	40.6391688	-89.7570949	8/5/2014	Probe	3.5
Point 6	40.6390060	-89.7571487	8/5/2014	Probe	2.5

Area 3:	
Manual Measurement Points Collected	11
Area:	0.4 Acres
Estimated Avg Depth of Sediment	1.5 Feet
Estimated Max Depth of Sediment	3.4 Feet
Estimated Sediment Volume	1,047 Cubic Yards

Sediment Probe Locations
Lake Camelot - Area 3

Target Name	Latitude	Longitude	Date	Sample Type	Penetration (ft)
Point 1	40.6365797	-89.7546732	8/5/2014	Probe	1.8
Point 2	40.6364592	-89.7546966	8/5/2014	Probe	3.4
Point 3	40.6362708	-89.7547126	8/5/2014	Probe	1.8
Point 4	40.6360614	-89.7547343	8/5/2014	Probe	2.9
Point 5	40.6359132	-89.7548299	8/5/2014	Probe	1.7
Point 6	40.6359044	-89.7547599	8/5/2014	Probe	1.8
Point 7	40.6360232	-89.7549305	8/5/2014	Probe	1.2
Point 8	40.6363692	-89.7547366	8/5/2014	Probe	1.9
Point 9	40.6361788	-89.7547660	8/5/2014	Probe	2.2
Point 10	40.6359951	-89.7547951	8/5/2014	Probe	2.3
Point 11	40.6365479	-89.7546039	8/5/2014	Probe	1.0

Area 4:	
Manual Measurement Points Collected	21
Area:	0.5 Acres
Estimated Avg Depth of Sediment	1.4 Feet
Estimated Max Depth of Sediment	3.7 Feet
Estimated Sediment Volume	1,335 Cubic Yards

Sediment Probe Locations
Lake Camelot - Area 4

Target Name	Latitude	Longitude	Date	Sample Type	Penetration (ft)
Point 1	40.6369287	-89.7530140	8/5/2014	Probe	2.1
Point 2	40.6368686	-89.7530401	8/5/2014	Probe	2.6
Point 3	40.6367692	-89.7530287	8/5/2014	Probe	2.5
Point 4	40.6366272	-89.7530139	8/5/2014	Probe	1.6
Point 5	40.6365130	-89.7530113	8/5/2014	Probe	1.7

Point 6	40.6364365	-89.7530041	8/5/2014	Probe	3.2
Point 7	40.6363537	-89.7530750	8/5/2014	Probe	1.9
Point 8	40.6362666	-89.7530464	8/5/2014	Probe	3.7
Point 9	40.6360955	-89.7530240	8/5/2014	Probe	1.2
Point 10	40.6358995	-89.7529550	8/5/2014	Probe	1.9
Point 11	40.6356983	-89.7529973	8/5/2014	Probe	2.4
Point 12	40.6356489	-89.7528252	8/5/2014	Probe	1.3
Point 13	40.6355849	-89.7529318	8/5/2014	Probe	2.6
Point 14	40.6360092	-89.7530488	8/5/2014	Probe	1.4
Point 15	40.6358017	-89.7529028	8/5/2014	Probe	1.8
Point 16	40.6362584	-89.7530975	8/5/2014	Probe	2.7
Point 17	40.6366996	-89.7530285	8/5/2014	Probe	2.0
Point 18	40.6368347	-89.7530325	8/5/2014	Probe	2.5
Point 19	40.6361673	-89.7530834	8/5/2014	Probe	1.8
Point 20	40.6359871	-89.7529784	8/5/2014	Probe	1.4
Point 21	40.6358078	-89.7529792	8/5/2014	Probe	1.8

Area 5:	
Manual Measurement Points Collected	10
Area:	0.3 Acres
Estimated Avg Depth of Sediment	1.8 Feet
Estimated Max Depth of Sediment	3.8 Feet
Estimated Sediment Volume	804 Cubic Yards

Sediment Probe Locations
Lake Camelot - Area 5

Target Name	Latitude	Longitude	Date	Sample Type	Penetration (ft)
Point 1	40.6362014	-89.7512987	8/5/2014	Probe	2.4
Point 2	40.6361193	-89.7513463	8/5/2014	Probe	2.4
Point 3	40.6360689	-89.7513968	8/5/2014	Probe	3.0
Point 4	40.6360715	-89.7513131	8/5/2014	Probe	3.0
Point 5	40.6359865	-89.7514391	8/5/2014	Probe	3.8
Point 6	40.6360000	-89.7514832	8/5/2014	Probe	1.3
Point 7	40.6359079	-89.7514709	8/5/2014	Probe	1.7
Point 8	40.6359323	-89.7516689	8/5/2014	Probe	1.5
Point 9	40.6358720	-89.7516228	8/5/2014	Probe	2.2
Point 10	40.6358522	-89.7517922	8/5/2014	Probe	1.0

Area 6:	
Manual Measurement Points Collected	10
Area:	0.2 Acres

Estimated Avg Depth of Sediment	1.7 Feet
Estimated Max Depth of Sediment	3.1 Feet
Estimated Sediment Volume	546 Cubic Yards

Sediment Probe Locations
Lake Camelot - Area 6

Target Name	Latitude	Longitude	Date	Sample Type	Penetration (ft)
Point 1	40.6344516	-89.7514466	8/5/2014	Probe	1.6
Point 2	40.6344201	-89.7515020	8/5/2014	Probe	1.7
Point 3	40.6344303	-89.7515586	8/5/2014	Probe	3.1
Point 4	40.6345115	-89.7516045	8/5/2014	Probe	0.8
Point 5	40.6344837	-89.7517312	8/5/2014	Probe	2.9
Point 6	40.6344375	-89.7518011	8/5/2014	Probe	1.3
Point 7	40.6345411	-89.7519749	8/5/2014	Probe	2.7
Point 8	40.6343841	-89.7516779	8/5/2014	Probe	1.9
Point 9	40.6345727	-89.7517640	8/5/2014	Probe	0.8
Point 10	40.6344588	-89.7516397	8/5/2014	Probe	2.5

Area 7:	
Manual Measurement Points Collected	10
Area:	0.2 Acres
Estimated Avg Depth of Sediment	2.7 Feet
Estimated Max Depth of Sediment	7.1 Feet
Estimated Sediment Volume	698 Cubic Yards

Sediment Probe Locations
Lake Camelot - Area 7

Target Name	Latitude	Longitude	Date	Sample Type	Penetration (ft)
Point 1	40.6333119	-89.7512700	8/5/2014	Probe	7.1
Point 2	40.6332625	-89.7513276	8/5/2014	Probe	6.0
Point 3	40.6332203	-89.7513729	8/5/2014	Probe	3.5
Point 4	40.6332313	-89.7514370	8/5/2014	Probe	2.4
Point 5	40.6331423	-89.7514210	8/5/2014	Probe	2.6
Point 6	40.6330879	-89.7515851	8/5/2014	Probe	3.3
Point 7	40.6331670	-89.7514794	8/5/2014	Probe	2.7
Point 8	40.6331758	-89.7513396	8/5/2014	Probe	2.4
Point 9	40.6330432	-89.7514397	8/5/2014	Probe	1.2
Point 10	40.6331999	-89.7515451	8/5/2014	Probe	1.4

Area 8:	
Manual Measurement Points Collected	12
Area:	0.2 Acres
Estimated Avg Depth of Sediment	1.3 Feet
Estimated Max Depth of Sediment	2.7 Feet
Estimated Sediment Volume	315 Cubic Yards

Sediment Probe Locations
Lake Camelot - Area 8

Target Name	Latitude	Longitude	Date	Sample Type	Penetration (ft)
Point 1	40.6334562	-89.7549326	8/5/2014	Probe	2.3
Point 2	40.6334636	-89.7548700	8/5/2014	Probe	2.3
Point 3	40.6334540	-89.7548030	8/5/2014	Probe	2.7
Point 4	40.6334624	-89.7546878	8/5/2014	Probe	1.5
Point 5	40.6334426	-89.7550622	8/5/2014	Probe	1.8
Point 6	40.6334718	-89.7549894	8/5/2014	Probe	2.0
Point 7	40.6334383	-89.7549694	8/5/2014	Probe	2.1
Point 8	40.6335315	-89.7547680	8/5/2014	Probe	1.2
Point 9	40.6335840	-89.7546400	8/5/2014	Probe	0.7
Point 10	40.6335183	-89.7545913	8/5/2014	Probe	0.8
Point 11	40.6334569	-89.7545748	8/5/2014	Probe	0.5
Point 12	40.6335069	-89.7548298	8/5/2014	Probe	1.9

Area 9:	
Manual Measurement Points Collected	8
Area:	0.1 Acres
Estimated Avg Depth of Sediment	1.0 Feet
Estimated Max Depth of Sediment	3.2 Feet
Estimated Sediment Volume	172 Cubic Yards

Sediment Probe Locations
Lake Camelot - Area 9

Target Name	Latitude	Longitude	Date	Sample Type	Penetration (ft)
Point 1	40.6344233	-89.7574517	8/5/2014	Probe	3.2
Point 2	40.6344623	-89.7573947	8/5/2014	Probe	1.9
Point 3	40.6345246	-89.7573853	8/5/2014	Probe	1.9
Point 4	40.6345787	-89.7573387	8/5/2014	Probe	1.9
Point 5	40.6346481	-89.7573160	8/5/2014	Probe	1.1
Point 6	40.6346160	-89.7572157	8/5/2014	Probe	0.8
Point 7	40.6344892	-89.7574487	8/5/2014	Probe	1.2

Point 8	40.6345977	-89.7573973	8/5/2014	Probe	1.4

Area 10:	
Manual Measurement Points Collected	23
Area:	0.4 Acres
Estimated Avg Depth of Sediment	1.6 Feet
Estimated Max Depth of Sediment	3.7 Feet
Estimated Sediment Volume	942 Cubic Yards

Sediment Probe Locations
Lake Camelot - Area 10

Target Name	Latitude	Longitude	Date	Sample Type	Penetration (ft)
Point 1	40.6350344	-89.7585982	8/5/2014	Probe	2.4
Point 2	40.6350629	-89.7584689	8/5/2014	Probe	2.4
Point 3	40.6350651	-89.7583698	8/5/2014	Probe	3.7
Point 4	40.6350840	-89.7583143	8/5/2014	Probe	2.8
Point 5	40.6350337	-89.7582867	8/5/2014	Probe	3.4
Point 6	40.6349509	-89.7581680	8/5/2014	Probe	2.1
Point 7	40.6349835	-89.7580931	8/5/2014	Probe	2.3
Point 8	40.6349082	-89.7580518	8/5/2014	Probe	1.0
Point 9	40.6349207	-89.7579187	8/5/2014	Probe	2.2
Point 10	40.6349735	-89.7577829	8/5/2014	Probe	2.7
Point 11	40.6348633	-89.7576749	8/5/2014	Probe	2.4
Point 12	40.6349050	-89.7577964	8/5/2014	Probe	2.0
Point 13	40.6348528	-89.7578907	8/5/2014	Probe	0.9
Point 14	40.6350203	-89.7579579	8/5/2014	Probe	1.3
Point 15	40.6350742	-89.7581607	8/5/2014	Probe	1.5
Point 16	40.6350076	-89.7582186	8/5/2014	Probe	2.5
Point 17	40.6350923	-89.7584199	8/5/2014	Probe	2.5
Point 18	40.6350530	-89.7585288	8/5/2014	Probe	1.4
Point 19	40.6349621	-89.7579597	8/5/2014	Probe	1.8
Point 20	40.6350979	-89.7585277	8/5/2014	Probe	1.1
Point 21	40.6349346	-89.7576354	8/5/2014	Probe	1.6
Point 22	40.6348038	-89.7576898	8/5/2014	Probe	1.1
Point 23	40.6350303	-89.7586625	8/5/2014	Probe	0.7

Area 11:	
Manual Measurement Points Collected	10
Area:	0.1 Acres
Estimated Avg Depth of Sediment	1.4 Feet
Estimated Max Depth of Sediment	2.7 Feet

Estimated Sediment Volume	212 Cubic Yards

Sediment Probe Locations
Lake Camelot - Area 11

Target Name	Latitude	Longitude	Date	Sample Type	Penetration (ft)
Point 1	40.6361313	-89.7581294	8/5/2014	Probe	1.3
Point 2	40.6361252	-89.7581016	8/5/2014	Probe	1.1
Point 3	40.6361151	-89.7579952	8/5/2014	Probe	2.7
Point 4	40.6360321	-89.7579108	8/5/2014	Probe	0.8
Point 5	40.6360825	-89.7578817	8/5/2014	Probe	1.6
Point 6	40.6360251	-89.7578347	8/5/2014	Probe	2.0
Point 7	40.6361535	-89.7582260	8/5/2014	Probe	1.0
Point 8	40.6361141	-89.7581798	8/5/2014	Probe	1.1
Point 9	40.6360789	-89.7580738	8/5/2014	Probe	1.2
Point 10	40.6361307	-89.7578848	8/5/2014	Probe	1.5

Area 12:	
Manual Measurement Points Collected	23
Area:	0.6 Acres
Estimated Avg Depth of Sediment	4.4 Feet
Estimated Max Depth of Sediment	9.5 Feet
Estimated Sediment Volume	5,805 Cubic Yards

Sediment Probe Locations
Lake Camelot - Area 12

Target Name	Latitude	Longitude	Date	Sample Type	Penetration (ft)
Point 1	40.6384075	-89.7601113	8/5/2014	Probe	2.4
Point 2	40.6384339	-89.7599954	8/5/2014	Probe	2.3
Point 3	40.6384640	-89.7598290	8/5/2014	Probe	1.8
Point 4	40.6384813	-89.7596927	8/5/2014	Probe	2.9
Point 5	40.6384407	-89.7595153	8/5/2014	Probe	1.7
Point 6	40.6384211	-89.7593473	8/5/2014	Probe	2.0
Point 7	40.6383400	-89.7592992	8/5/2014	Probe	1.3
Point 8	40.6384062	-89.7591501	8/5/2014	Probe	1.3
Point 9	40.6383419	-89.7590468	8/5/2014	Probe	1.4
Point 10	40.6383402	-89.7589087	8/5/2014	Probe	1.6
Point 11	40.6383904	-89.7588041	8/5/2014	Probe	2.5
Point 12	40.6383070	-89.7587668	8/5/2014	Probe	0.7
Point 13	40.6384027	-89.7585782	8/5/2014	Probe	1.8
Point 14	40.6382964	-89.7585765	8/5/2014	Probe	1.1

Point 15	40.6383756	-89.7584080	8/5/2014	Probe	1.2
Point 16	40.6383830	-89.7586883	8/5/2014	Probe	2.3
Point 17	40.6383343	-89.7591767	8/5/2014	Probe	1.5
Point 18	40.6384986	-89.7594983	8/5/2014	Probe	1.0
Point 19	40.6384571	-89.7596004	8/5/2014	Probe	2.2
Point 20	40.6384808	-89.7597504	8/5/2014	Probe	2.4
Point 21	40.6384540	-89.7598938	8/5/2014	Probe	1.7
Point 22	40.6384278	-89.7601887	8/5/2014	Probe	1.3
Point 23	40.6382921	-89.7590931	8/5/2014	Probe	1.3

Lake Lancelot Sediment Results:

Area 1:	
Manual Measurement Points Collected	50
Area:	7.8 Acres
Estimated Avg Depth of Sediment	2.3 Feet
Estimated Max Depth of Sediment	5.2 Feet
Estimated Sediment Volume	28,877 Cubic Yards

Sediment Probe Locations
Lake Lancelot - Area 1

Target Name	Latitude	Longitude	Date	Sample Type	Penetration (ft)
Point 1	40.6282960	-89.7582871	8/5/2014	Probe	0.4
Point 2	40.6283664	-89.7581639	8/5/2014	Probe	3.7
Point 3	40.6284778	-89.7580449	8/5/2014	Probe	4.0
Point 4	40.6285346	-89.7578950	8/5/2014	Probe	3.9
Point 5	40.6285809	-89.7577296	8/5/2014	Probe	4.5
Point 6	40.6285783	-89.7576710	8/5/2014	Probe	5.0
Point 7	40.6287276	-89.7575702	8/5/2014	Probe	4.0
Point 8	40.6288392	-89.7574435	8/5/2014	Probe	3.1
Point 9	40.6290495	-89.7572473	8/5/2014	Probe	4.1
Point 10	40.6292726	-89.7570845	8/5/2014	Probe	3.8
Point 11	40.6295314	-89.7567694	8/5/2014	Probe	4.1
Point 12	40.6297309	-89.7564184	8/5/2014	Probe	3.3
Point 13	40.6298929	-89.7560429	8/5/2014	Probe	3.7
Point 14	40.6299753	-89.7556627	8/5/2014	Probe	1.7
Point 15	40.6301578	-89.7553169	8/5/2014	Probe	3.6
Point 16	40.6302979	-89.7547401	8/5/2014	Probe	1.7
Point 17	40.6303843	-89.7542694	8/5/2014	Probe	0.8
Point 18	40.6305685	-89.7538417	8/5/2014	Probe	1.2
Point 19	40.6307665	-89.7534587	8/5/2014	Probe	2.8

Point 20	40.6311377	-89.7536888	8/5/2014	Probe	0.5
Point 21	40.6310354	-89.7541424	8/5/2014	Probe	0.7
Point 22	40.6308497	-89.7544896	8/5/2014	Probe	2.5
Point 23	40.6307556	-89.7548260	8/5/2014	Probe	2.2
Point 24	40.6305898	-89.7551633	8/5/2014	Probe	1.6
Point 25	40.6304324	-89.7555542	8/5/2014	Probe	1.9
Point 26	40.6302376	-89.7558717	8/5/2014	Probe	2.2
Point 27	40.6302786	-89.7562223	8/5/2014	Probe	3.9
Point 28	40.6303815	-89.7563366	8/5/2014	Probe	4.5
Point 29	40.6304250	-89.7564194	8/5/2014	Probe	4.5
Point 30	40.6300152	-89.7563481	8/5/2014	Probe	5.2
Point 31	40.6298516	-89.7566634	8/5/2014	Probe	3.0
Point 32	40.6296929	-89.7569078	8/5/2014	Probe	3.2
Point 33	40.6298198	-89.7572309	8/5/2014	Probe	2.6
Point 34	40.6298914	-89.7573984	8/5/2014	Probe	1.7
Point 35	40.6296617	-89.7572045	8/5/2014	Probe	2.2
Point 36	40.6295017	-89.7570734	8/5/2014	Probe	3.4
Point 37	40.6297047	-89.7566515	8/5/2014	Probe	4.5
Point 38	40.6298819	-89.7562972	8/5/2014	Probe	3.7
Point 39	40.6300658	-89.7559732	8/5/2014	Probe	4.0
Point 40	40.6301828	-89.7555654	8/5/2014	Probe	2.5
Point 41	40.6303655	-89.7551617	8/5/2014	Probe	3.9
Point 42	40.6304704	-89.7548050	8/5/2014	Probe	3.9
Point 43	40.6306277	-89.7544206	8/5/2014	Probe	3.3
Point 44	40.6308334	-89.7538501	8/5/2014	Probe	3.6
Point 45	40.6299978	-89.7552098	8/5/2014	Probe	2.4
Point 46	40.6303709	-89.7524969	8/5/2014	Probe	3.7
Point 47	40.6304473	-89.7526128	8/5/2014	Probe	3.2
Point 48	40.6305162	-89.7527583	8/5/2014	Probe	5.1
Point 49	40.6306770	-89.7527358	8/5/2014	Probe	3.4
Point 50	40.6307517	-89.7528640	8/5/2014	Probe	4.2

Area 2:	
Manual Measurement Points Collected	9
Area:	0.2 Acres
Estimated Avg Depth of Sediment	1.2 Feet
Estimated Max Depth of Sediment	4.4 Feet
Estimated Sediment Volume	411 Cubic Yards

Sediment Probe Locations
Lake Lancelot - Area 2

Target Name	Latitude	Longitude	Date	Sample Type	Penetration (ft)
Point 1	40.6306344	-89.7496561	8/5/2014	Probe	4.4
Point 2	40.6307208	-89.7496770	8/5/2014	Probe	3.1
Point 3	40.6308556	-89.7495914	8/5/2014	Probe	1.5
Point 4	40.6309547	-89.7495689	8/5/2014	Probe	1.4
Point 5	40.6310280	-89.7495708	8/5/2014	Probe	0.9
Point 6	40.6310435	-89.7496662	8/5/2014	Probe	1.1
Point 7	40.6309318	-89.7496644	8/5/2014	Probe	1.3
Point 8	40.6307052	-89.7496154	8/5/2014	Probe	2.1
Point 9	40.6308252	-89.7496504	8/5/2014	Probe	1.5

Area 3:	
Manual Measurement Points Collected	10
Area:	0.1 Acres
Estimated Avg Depth of Sediment	2.2 Feet
Estimated Max Depth of Sediment	5.2 Feet
Estimated Sediment Volume	474 Cubic Yards

Sediment Probe Locations
Lake Lancelot - Area 3

Target Name	Latitude	Longitude	Date	Sample Type	Penetration (ft)
Point 1	40.6303604	-89.7477969	8/5/2014	Probe	5.2
Point 2	40.6304472	-89.7478147	8/5/2014	Probe	3.7
Point 3	40.6305081	-89.7478473	8/5/2014	Probe	3.0
Point 4	40.6306298	-89.7478310	8/5/2014	Probe	2.7
Point 5	40.6306142	-89.7479203	8/5/2014	Probe	2.0
Point 6	40.6305564	-89.7477977	8/5/2014	Probe	2.5
Point 7	40.6304498	-89.7478764	8/5/2014	Probe	3.1
Point 8	40.6303885	-89.7478664	8/5/2014	Probe	3.5
Point 9	40.6305140	-89.7477565	8/5/2014	Probe	1.1
Point 10	40.6305529	-89.7479082	8/5/2014	Probe	1.9

Area 4:	
Manual Measurement Points Collected	18
Area:	0.2 Acres
Estimated Avg Depth of Sediment	2.1 Feet
Estimated Max Depth of Sediment	4.6 Feet
Estimated Sediment Volume	602 Cubic Yards

Sediment Probe Locations
Lake Lancelot - Area 4

Target Name	Latitude	Longitude	Date	Sample Type	Penetration (ft)
Point 1	40.6287402	-89.7450843	8/5/2014	Probe	4.6
Point 2	40.6287483	-89.7450095	8/5/2014	Probe	3.3
Point 3	40.6287672	-89.7448812	8/5/2014	Probe	3.1
Point 4	40.6287819	-89.7446965	8/5/2014	Probe	2.7
Point 5	40.6287931	-89.7445751	8/5/2014	Probe	2.8
Point 6	40.6287502	-89.7446248	8/5/2014	Probe	1.1
Point 7	40.6288534	-89.7446086	8/5/2014	Probe	1.2
Point 8	40.6287924	-89.7449531	8/5/2014	Probe	3.0
Point 9	40.6287917	-89.7447767	8/5/2014	Probe	2.8
Point 10	40.6288471	-89.7447130	8/5/2014	Probe	1.3
Point 11	40.6287259	-89.7451825	8/5/2014	Probe	3.7
Point 12	40.6286852	-89.7452604	8/5/2014	Probe	2.1
Point 13	40.6286886	-89.7453532	8/5/2014	Probe	3.0
Point 14	40.6287761	-89.7450331	8/5/2014	Probe	2.6
Point 15	40.6287142	-89.7451338	8/5/2014	Probe	3.0
Point 16	40.6287068	-89.7453111	8/5/2014	Probe	1.9
Point 17	40.6287218	-89.7452173	8/5/2014	Probe	3.5
Point 18	40.6287032	-89.7452787	8/5/2014	Probe	3.4

Area 5:	
Manual Measurement Points Collected	22
Area:	0.6 Acres
Estimated Avg Depth of Sediment	1.5 Feet
Estimated Max Depth of Sediment	2.9 Feet
Estimated Sediment Volume	1,352 Cubic Yards

Sediment Probe Locations
Lake Lancelot - Area 5

Target Name	Latitude	Longitude	Date	Sample Type	Penetration (ft)
Point 1	40.6316107	-89.7432160	8/5/2014	Probe	1.6
Point 2	40.6317800	-89.7431552	8/5/2014	Probe	2.0
Point 3	40.6319286	-89.7430354	8/5/2014	Probe	2.5
Point 4	40.6319887	-89.7430111	8/5/2014	Probe	2.9
Point 5	40.6318715	-89.7429317	8/5/2014	Probe	2.9
Point 6	40.6317877	-89.7430405	8/5/2014	Probe	2.2
Point 7	40.6316458	-89.7431198	8/5/2014	Probe	2.1
Point 8	40.6314522	-89.7431278	8/5/2014	Probe	0.7
Point 9	40.6314044	-89.7429707	8/5/2014	Probe	0.6

Point 10	40.6316904	-89.7429832	8/5/2014	Probe	1.6
Point 11	40.6317261	-89.7432748	8/5/2014	Probe	1.5
Point 12	40.6318768	-89.7431016	8/5/2014	Probe	1.8
Point 13	40.6320573	-89.7429414	8/5/2014	Probe	2.2
Point 14	40.6323505	-89.7428213	8/5/2014	Probe	0.2
Point 15	40.6322870	-89.7428412	8/5/2014	Probe	2.0
Point 16	40.6322506	-89.7428478	8/5/2014	Probe	1.6
Point 17	40.6322013	-89.7428550	8/5/2014	Probe	2.2
Point 18	40.6321181	-89.7428903	8/5/2014	Probe	2.5
Point 19	40.6320390	-89.7428774	8/5/2014	Probe	2.4
Point 20	40.6319402	-89.7428798	8/5/2014	Probe	1.8
Point 21	40.6315519	-89.7430068	8/5/2014	Probe	1.1
Point 22	40.6315274	-89.7433060	8/5/2014	Probe	1.2

Area 6:	
Manual Measurement Points Collected	12
Area:	0.3 Acres
Estimated Avg Depth of Sediment	1.8 Feet
Estimated Max Depth of Sediment	4.4 Feet
Estimated Sediment Volume	887 Cubic Yards

Sediment Probe Locations
Lake Lancelot - Area 6

Target Name	Latitude	Longitude	Date	Sample Type	Penetration (ft)
Point 1	40.6321322	-89.7462828	8/5/2014	Probe	1.1
Point 2	40.6322665	-89.7462936	8/5/2014	Probe	1.3
Point 3	40.6324344	-89.7462609	8/5/2014	Probe	3.2
Point 4	40.6325583	-89.7461643	8/5/2014	Probe	4.4
Point 5	40.6323637	-89.7463926	8/5/2014	Probe	1.8
Point 6	40.6321862	-89.7465040	8/5/2014	Probe	2.7
Point 7	40.6324578	-89.7463534	8/5/2014	Probe	0.9
Point 8	40.6323641	-89.7462002	8/5/2014	Probe	1.2
Point 9	40.6322015	-89.7463581	8/5/2014	Probe	1.8
Point 10	40.6323056	-89.7464127	8/5/2014	Probe	1.8
Point 11	40.6324968	-89.7461784	8/5/2014	Probe	3.3
Point 12	40.6325291	-89.7462864	8/5/2014	Probe	2.0

Area 7:	
Manual Measurement Points Collected	10
Area:	0.5 Acres

Estimated Avg Depth of Sediment	1.4 Feet
Estimated Max Depth of Sediment	2.8 Feet
Estimated Sediment Volume	1,092 Cubic Yards

Sediment Probe Locations
Lake Lancelot - Area 7

Target Name	Latitude	Longitude	Date	Sample Type	Penetration (ft)
Point 1	40.6321843	-89.7476992	8/5/2014	Probe	1.4
Point 2	40.6323674	-89.7477000	8/5/2014	Probe	1.8
Point 3	40.6325313	-89.7476753	8/5/2014	Probe	1.4
Point 4	40.6326767	-89.7476947	8/5/2014	Probe	1.0
Point 5	40.6327974	-89.7477454	8/5/2014	Probe	2.2
Point 6	40.6327203	-89.7478249	8/5/2014	Probe	1.0
Point 7	40.6326117	-89.7477756	8/5/2014	Probe	2.8
Point 8	40.6324948	-89.7477722	8/5/2014	Probe	2.6
Point 9	40.6323309	-89.7478371	8/5/2014	Probe	1.6
Point 10	40.6321696	-89.7478225	8/5/2014	Probe	1.7

Area 8:	
Manual Measurement Points Collected	13
Area:	0.2 Acres
Estimated Avg Depth of Sediment	2.0 Feet
Estimated Max Depth of Sediment	4.8 Feet
Estimated Sediment Volume	694 Cubic Yards

Sediment Probe Locations
Lake Lancelot - Area 8

Target Name	Latitude	Longitude	Date	Sample Type	Penetration (ft)
Point 1	40.6325404	-89.7498289	8/5/2014	Probe	4.8
Point 2	40.6324268	-89.7498275	8/5/2014	Probe	2.9
Point 3	40.6323043	-89.7498999	8/5/2014	Probe	1.3
Point 4	40.6323513	-89.7497245	8/5/2014	Probe	0.7
Point 5	40.6322435	-89.7498574	8/5/2014	Probe	2.2
Point 6	40.6323400	-89.7495983	8/5/2014	Probe	0.7
Point 7	40.6322788	-89.7496841	8/5/2014	Probe	1.0
Point 8	40.6322194	-89.7499820	8/5/2014	Probe	0.6
Point 9	40.6322929	-89.7497765	8/5/2014	Probe	1.2
Point 10	40.6323633	-89.7498703	8/5/2014	Probe	1.7
Point 11	40.6324185	-89.7497033	8/5/2014	Probe	1.0
Point 12	40.6324867	-89.7498102	8/5/2014	Probe	3.6
Point 13	40.6326096	-89.7498432	8/5/2014	Probe	3.3