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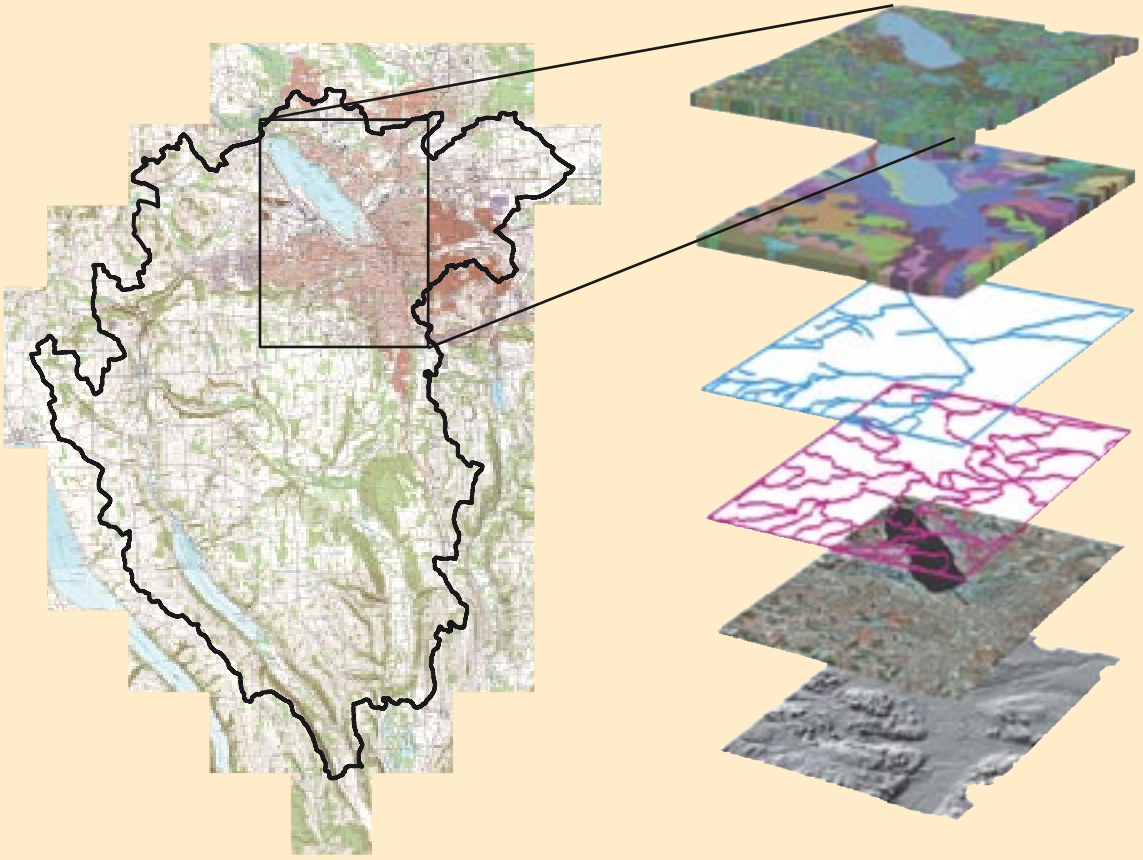
Onondaga Lake Partnership

Onondaga Lake Watershed – A Geographic Information System Project

Phase 1 - Needs Assessment and Spatial Data Framework



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Onondaga Lake Watershed – A Geographic Information System Project Phase I – Needs Assessment and Spatial Data Framework

By Douglas A. Freehafer and Oliver Pierson

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Onondaga Lake Partnership

Open-File Report 2004-1259

U.S. Department of the Interior
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Onondaga Lake Watershed — A Geographic Information System Project Phase I – Needs Assessment and Spatial Data Framework

By Douglas A. Freehafer and Oliver Pierson

Abstract

In the fall of 2002, the Onondaga Lake Partnership formed a Geographic Information System Planning Committee to begin the process of developing a comprehensive watershed geographic information system for Onondaga Lake. The goal of the Onondaga Lake Partnership geographic information system is to integrate the various types of spatial data to be used for scientific investigations, resource management, and the plan and design of improvement projects in the Onondaga Lake Watershed. A needs-assessment survey was conducted and a spatial data framework developed to support the Onondaga Lake Partnership use of geographic information system technology. The design focused on the collection, management, and distribution of spatial data, maps, and internet mapping applications. A geographic information system library of over 100 spatial datasets and metadata links was assembled on the basis of the results of the needs-assessment survey. Implementation options were presented, and the Geographic Information System Planning Committee offered recommendations for the management and distribution of spatial data belonging to Onondaga Lake Partnership members. The Onondaga Lake Partnership now has a strong foundation for building a comprehensive geographic information system for the Onondaga Lake watershed. The successful implementation of a geographic information system depends on the Onondaga Lake Partnership's determination of: (1) the design and plan for a geographic information system, including the applications and spatial data that will be provided and to whom, (2) the level of geographic information system technology to be utilized and funded, and (3) the institutional issues of operation and maintenance of the system.

Introduction

The Onondaga Lake Partnership (OLP) was established in 2000 to promote cooperation among government agencies and other parties involved in managing the environmental issues of Onondaga Lake and the Onondaga Lake watershed in central New York. The senior partners in the Partnership are the Assistant Secretary of the Army (Civil Works), Administrator of the U.S. Environmental Protection Agency, Governor of the State of New York, Attorney General of the State of New York, County Executive of Onondaga County, and the Mayor of the City of Syracuse. The U.S. Army Corps of Engineers (USACE), Buffalo District leads the Partnership on behalf of the Secretary of the Army.

In the fall of 2002, the OLP formed a Geographic Information System (GIS) Planning Committee to begin the process of developing a comprehensive watershed GIS for Onondaga Lake. A GIS is a computer system for the collection, storage, analysis and display of spatial data and associated attributes. The committee consists of representatives from all of the OLP member agencies, and received technical support from the U.S. Geological Survey (USGS). The mission for the GIS planning committee during the first phase of the project was to conduct a needs assessment and develop a design and implementation plan for the use of GIS technology by the OLP and, at a time the OLP deems appropriate, by other partner organizations and also the public.

Purpose and Scope

This report (1) describes the needs assessment process, and (2) presents a spatial data framework for the design and implementation of a comprehensive GIS for the OLP. Additionally, a library of over 100 spatial datasets and metadata links was assembled. This library is a value-added part of this project that was not requested in the original USACE Onondaga Lake GIS and Watershed Database Project Management Plan (written communication). The Project Management Plan also stipulated the following assumptions: (1) web-based access to datasets, and (2) use of Environmental Systems Research Institute (ESRI) software.

Acknowledgement

The authors thank James E. Reddy of the U.S. Geological Survey for his technical support and work on maps.

Study Area

The OLP GIS study area covers all of Onondaga County and parts of six other central New York counties (fig. 1). The prominent surface-water features in the area include Onondaga Lake, Skaneateles Lake, Cross Lake, and the confluence of the Seneca and Oneida Rivers into the Oswego River. The total area exceeds 1,400 mi^2; the major metropolitan area is the City of Syracuse (fig. 1).

Needs Assessment

The GIS planning committee's first step was the development and distribution of a Needs-Assessment questionnaire (appendix 1) to (1) identify the best available digital data, (2) prioritize the spatial data needs of the OLP members, and (3) to make recommendations about possible methods to store and provide access of these data to OLP members and to the general public. The GIS planning committee met in December of 2002 to finalize the content of the questionnaire, and the committee distributed the questionnaire in January 2003. The meeting minutes are given in appendix 2. By April 1, 2003, the USGS had received nine completed questionnaires for compilation; the results of the questionnaires and subsequent analysis are given in the Needs Assessment Questionnaire Summary Report (appendixes 3-7). The GIS Planning Committee met again in May 2003 to validate the results of this summary report as well as to designate next steps for the design and implementation of OLP GIS products. The meeting minutes are given in appendix 8.

A key element of the Needs-Assessment process was to identify potential GIS products that will be useful to OLP members for mapping, spatial analysis, modeling, planning, and monitoring project activities. A summary of the requested spatial data and applications from the needs assessment survey are presented in table 1 and 2.

Spatial Data Framework

A spatial data framework was developed to guide the design and implementation of OLP GIS information products in support of the environmental management of the Onondaga Lake watershed.

Design

The spatial data framework was designed based on the findings of the Needs Assessment, recommendations from the OLP GIS Planning Committee, and available GIS technology (fig. 2). The spatial data framework consists of three main components: (1) data collection, (2) data management, and (3) data distribution for providing OLP GIS information products (fig. 3).

Data Collection

The first component in the spatial data framework is data collection. The several types and sources of data that the OLP can assemble into a GIS library and/or present as information products include:

- Existing spatial data available from GIS clearinghouses, directly from OLP partners and members, or fee-based datasets,
- Spatial data requested in the Needs Assessment to be created specifically for the OLP if they choose to fund development (table 1), and
- Spatial data generated from current and future Onondaga Lake watershed projects (table 3).

As an additional part of the original Phase I of the GIS project, the USGS agreed to assemble existing GIS datasets to support the goals of the OLP. The benefits of creating a centralized spatial data or GIS library include (1) cost savings, (2) data consistency, and (3) the promotion of data sharing. A section of the Needs-Assessment Questionnaire asked respondents to indicate what existing spatial datasets to include in an OLP GIS library. The results of the questionnaire were used to guide the collection of over 100 spatial datasets and metadata links in 26 categories (appendix 9).

The GIS library is the keystone of the framework and a spreadsheet was designed to provide a tool for the OLP to manage and maintain the library over the life of the Partnership. The spreadsheet is also a data-discovery tool for interested parties searching for spatial data. The spreadsheet includes information on the geographic extent, scale, data source, usage policy, and contains a metadata web link if available. As new GIS datasets and metadata useful to the OLP become available, they can be incorporated into the GIS library. A DVD copy of the current OLP GIS library and accompanying spreadsheet are available by request from the U.S. Army Corps of Engineers, Buffalo District.

Emerging sources of spatial data the OLP could utilize for making information products are map services. A map service is a digital map containing a single data layer (e.g., imagery, elevation, land use) or a collection of complimentary data layers (e.g. streams, lakes, wetlands) that is published over the internet. The advantage of using a map service includes quick access to spatial data that the OLP would not have to collect and maintain.

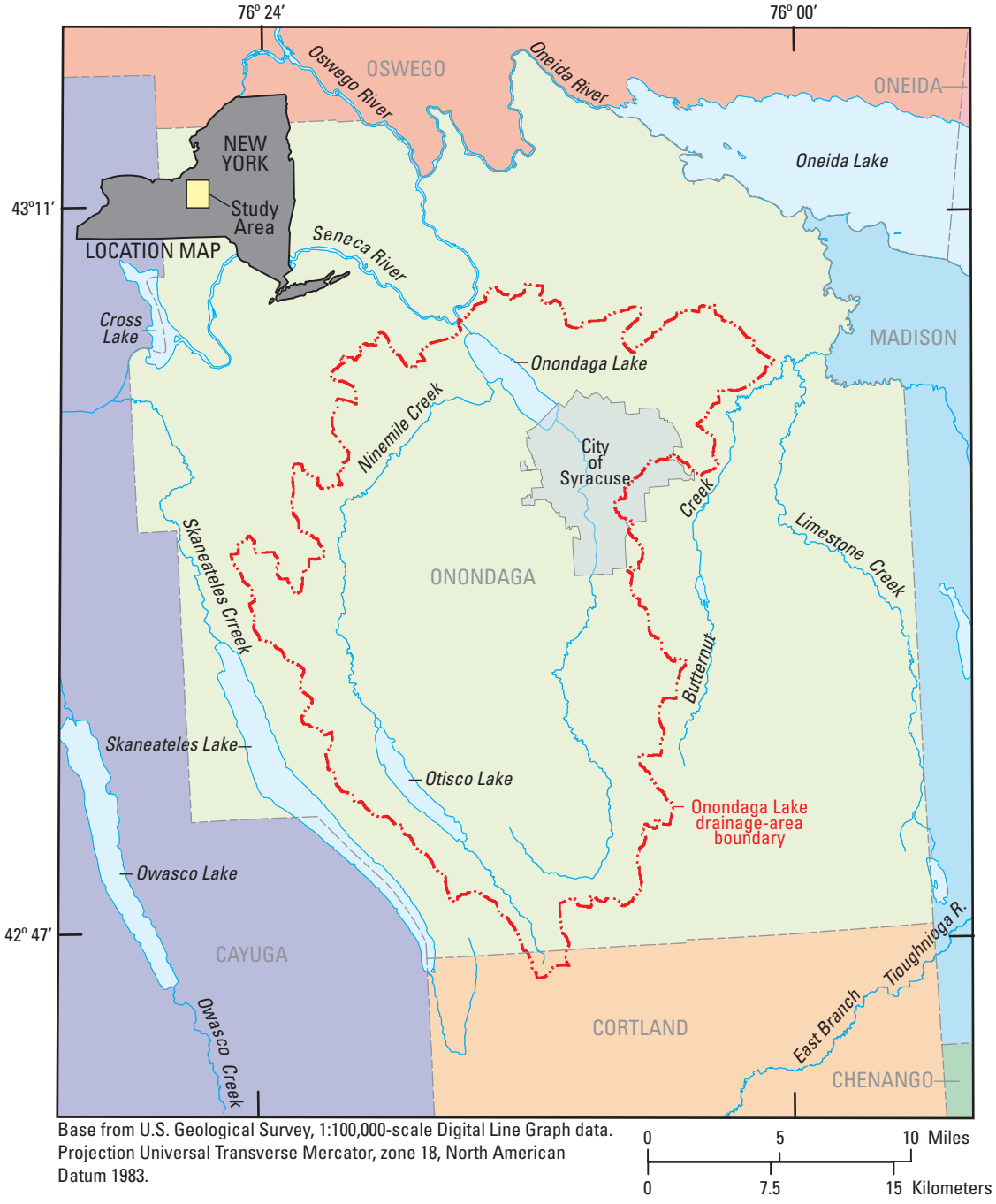

Figure 1. Location of the Onondaga Lake Watershed and Onondaga Lake Partnership (OLP) Geographic Information System (GIS) study area in central New York.

Table 1. Summary of the requested spatial data compiled from the needs assessment survey.

1. Location, footprint, and status of OLP and non-OLP projects including:
   - Onondaga County Amended Consent Judgments
   - NY State Department of Environmental Conservation contaminated site remediation projects
   - OLP funded USACE and USEPA projects
   - Other Partner / Member projects
   - Sampling sites, monitoring wells, buoys, & surveying benchmarks
   - Destiny USA Mall Expansion
   - Lakefront Development Corp Projects
   - City of Syracuse redevelopment
   - DOT (county, state, federal) transportation projects
2. Areas of concern to include:
   - Culturally sensitive areas
   - Burial contamination sites
   - Sensitive / protected ecosystem and habitat
   - Flood plains and wetlands
   - Property ownership rights of way
   - Major infrastructure
3. Onondaga Creek discharge and suspended sediment data.
4. GIS datasets containing watershed and receiving-waters information.
5. Confirmation of hydrologic datasets through aerial photos and field verification.

Table 2. Summary of the requested spatial applications compiled from the needs assessment survey.

1. An application for monitoring, coordinating, and promoting lake and watershed improvement efforts (using OLP & non-OLP project locations and areas of concern datasets)
2. Monitoring the progress / success of projects (linkage with Project Management Information System)
3. Internet mapping application to display results of Onondaga Lake Ambient Monitoring Program
4. Land-use planning
5. Internet mapping application for viewing and/or distribution of spatial data
6. Potential linkage to other OLP projects
7. Public relations

Table 3. List of the future Onondaga Lake watershed project spatial data sources.

Source	Description
Onondaga County	Ambient Monitoring Program Urban Non-Point Source Pollution Best Management Practices
U.S. Geological Survey	Surface-water model data Ground-water model data
Parsons Corporation	Project Management Information System Comprehensive Habitat Restoration Plan Comprehensive Non-Point Source Pollution Plan

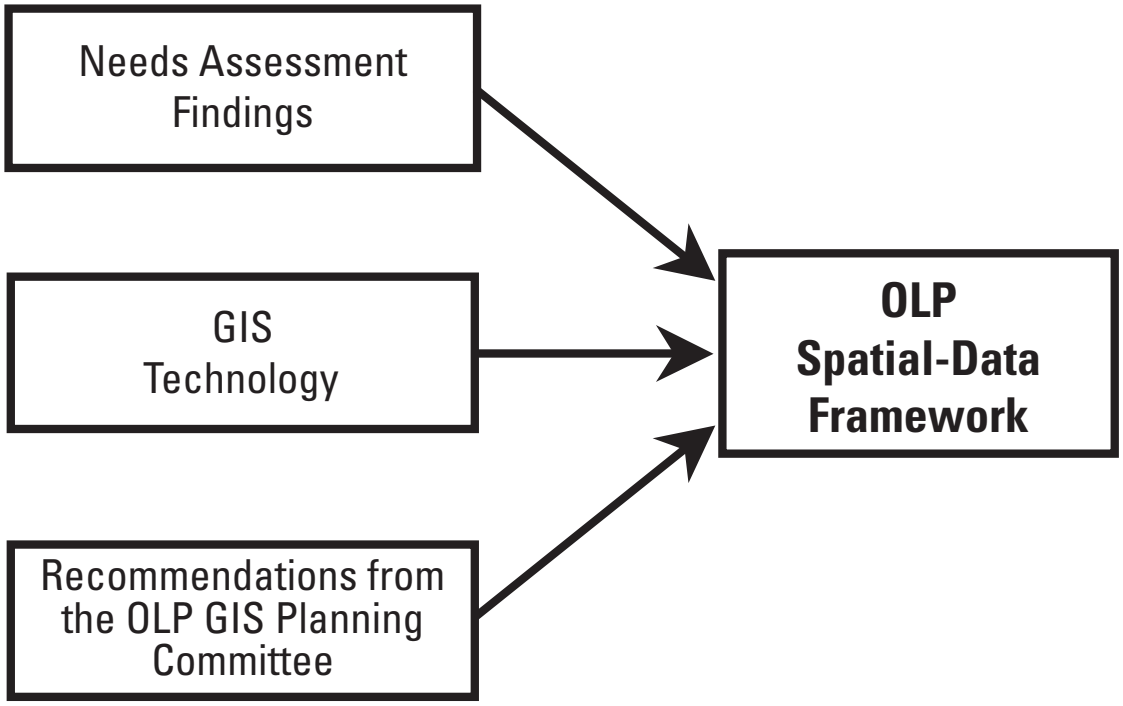

Figure 2. Design inputs for the Onondaga Lake Partnership (OLP) spatial data framework.

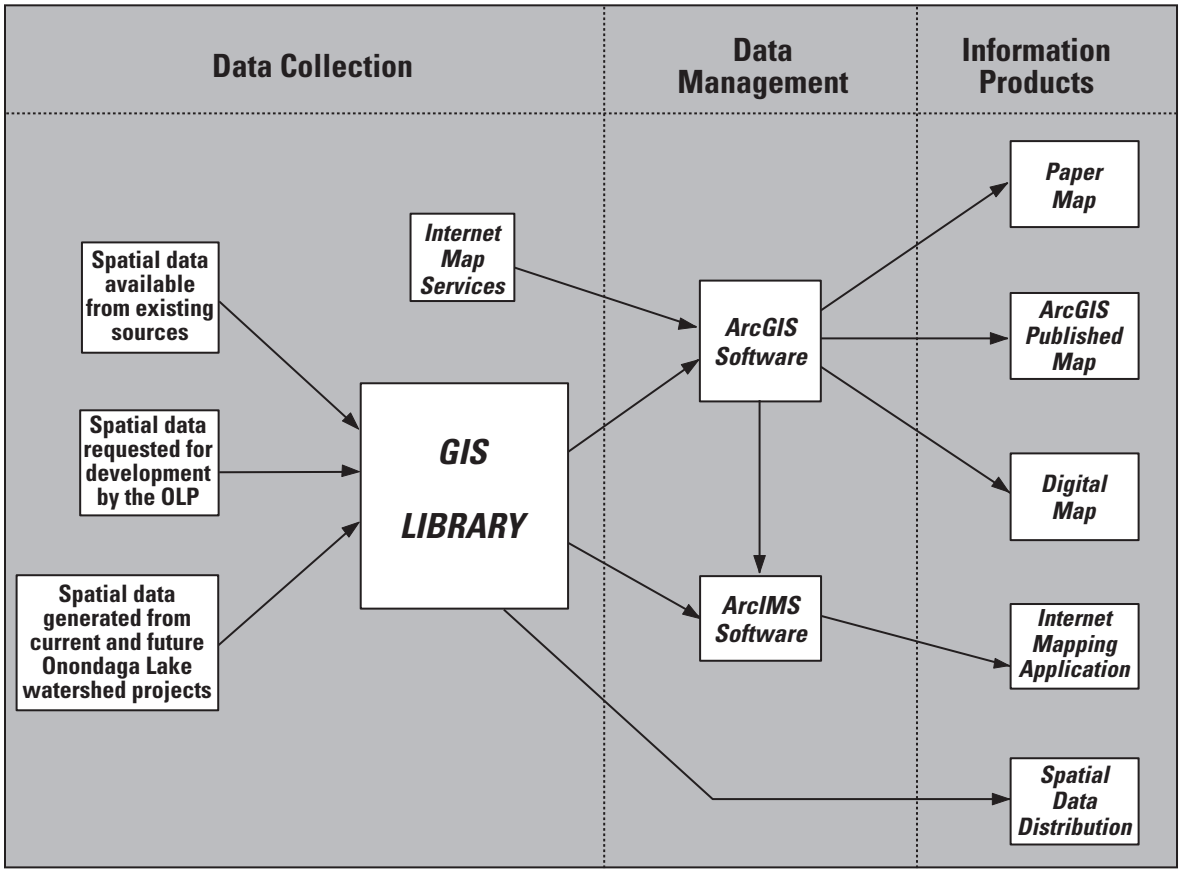

Figure 3. Flowchart for the Onondaga Lake Partnership (OLP) spatial data framework.

Data Management

The second component of the spatial data framework involves the organization and storage of GIS datasets on a computer. Also, any map documents or GIS applications the OLP chooses to build will need to be developed using ESRI software as stipulated in the USACE Project Management Plan. This includes the ESRI ArcGIS products for managing GIS data and maps and the ESRI ArcIMS product for serving internet mapping applications. Additional information about the ESRI family of software products can be found at www.esri.com.

Information Products Distribution

The third component of the spatial data framework identifies the various types of GIS products the OLP can choose to use in support of its mission. Available products range from the distribution of a simple paper map to providing an interactive mapping application via the internet (fig. 3). The choice of product allows the OLP to control the content and GIS functionality presented to the audience and relative cost of development, operation, and maintenance. Table 4 provides a summary of GIS functionality provided by selected information products. The OLP spatial data framework lists the following five spatial products:

1) Paper or hard copy map - a static map that requires no computer resources to use.
2) Digital Map - a static map in formats including GIF, JPG, and PDF that are accessible with a web browser.
3) Published Map Format (PMF) - maps authored using ArcGIS Publisher that can be interactively viewed, explored, and printed using the free viewer, ArcReader.
4) Internet Mapping Server - an interactive mapping application that allows the integration of many data sources for display, query, and analysis within a web browser.
5) Spatial Data Distribution - the sharing of data from the OLP GIS library though requests from interested parties who use GIS software.

The OLP is currently using hard-copy maps and presents digital maps on its public website (http://www.onlakepartners.org/index.cfm). The OLP has not published maps and does not have any internet mapping applications. With the completion of the GIS library, the OLP now has the capability to distribute spatial data directly to GIS software users.

Implementation

The OLP has established a number of committees composed of the partners and members as well as representatives of the community including special interest groups, businesses, and educational institutions. These committees conduct the work of overseeing the activities of agencies and groups involved in improving the lake. However, this partnership model neither provides GIS personnel nor maintains the computer resources for implementing the spatial data framework. The OLP has several options for constructing a GIS for collecting and distributing spatial data and associated applications:

1. Enter into a cooperative agreement with an OLP Partner. The OLP and Onondaga County have a similar geographic area-of-concern.
2. Contract with a private sector consultant.
3. Enter into a Phase II agreement with USGS.
4. Combination of the above.

General relative estimates of the implementation cost for various GIS tasks are provided in table 5. Cost estimates for the OLP GIS will vary depending on its complexity, and as more details become available about the GIS information products that the OLP chooses to implement, better estimates of cost can be developed.

OLP Data Distribution

The GIS Planning Committee made several recommendations for the management and distribution of spatial data belonging to OLP members. The committee stated that most partner data should be available for sharing among the OLP; however, some data are sensitive and will need to be evaluated on a case-by-case basis. The OLP could benefit from developing a distribution policy for the sharing of provisional, internal usage, copyrighted, and security-restricted data.

To assist the OLP with decisions regarding data distribution and mapping application accessibility for the Onondaga Lake watershed, the GIS Planning Committee proposed organizing the GIS audience into the following three tiers:

- Level 1 includes the OLP partners and agencies or contractors conducting OLP-funded projects,
- Level 2 includes agencies or contractors conducting non OLP-funded projects; educational institution; non-profit organizations, and
- Level 3 includes the public.

Non-spatial Data

A section of the needs assessment questionnaire asked respondents to indicate the types of non-spatial data they would like to see associated with the OLP GIS library. Table 6 is a summary of the non-spatial data usages listed in needs-assessment questionnaire responses. The OLP expressed interest in linking some non-spatial data to geographic data through a map interface. The companies that provide software products and business solutions for integrating electronic document management systems with a GIS include:

1. Hummingbird Enterprise™ (www.hummingbird.com),
2. General Code (www.generalcode.com), and
3. Information Builders (www.informationbuilders.com/esridva).

Table 4. Summary of the functionality provided by selected GIS information products.

GIS tool or feature	GIS information products				
	Paper Map	Digital Map	Published Map Format	Internet Mapping Server	Spatial Data Distribution*
Zoom / Pan	N	Y	Y	Y	Y
Find/Identity Features and Attributes	N	N	Y	Y	Y
Database Query	N	N	N	Y	Y
Map Assembly	N	N	Y	Y	Y
Scale Dependent Data	N	N	Y	Y	Y
Print the Map	N	Y	Y	Y	Y
Data Download	N	N	N	Y	N

* Spatial data requires the user to have GIS software to obtain the functionality.

Table 5. Cost estimates for selected geographic information system (GIS) tasks (Oral communication, Austin Fisher, President, Applied GIS, Inc., December, 2003).

Geographic Information System (GIS) task	Cost Estimate
Data and map development	$50 to $125 / hour
Web-enabled application development:	
Building an out-of-the box mapping application	$2000 to $5000
Building a custom mapping application	$10,000 to more than $30,000
Web-enabled application hosted by private company contract	$6000 / year

Note: These are estimates that are subject to change.

Table 6. Summary of the non-spatial data usages listed in needs-assessment questionnaire responses.

1. Climate and hydrologic data
2. Environmental monitoring data
3. Discharge and suspended-sediment data
4. Historical aerial photographs
5. Program executive summaries
6. Internet hyperlinks
7. Digital photographs
8. Outreach materials

Training and User Support

Since the OLP employs no GIS staff, training of personnel will not be required. User support for any planned GIS information products can be in the form of read-me files, frequently asked questions (FAQs), glossary of terms and help screens.

Industry Standards

The following industry standards are recommended for OLP data development and for the implementation of internet mapping applications:

- Standardized metadata for all information products include the Federal Geographic Data Committee (FGDC) -1998 content standard for geospatial data and the Dublin Core for non-spatial information.
- The Open GIS Consortium (OGC) Compliance for internet mapping applications.

Summary and Conclusions

The completion of Phase I of the Onondaga Lake Watershed GIS Project provides the OLP with (1) the results of a needs assessment survey, (2) an assessment of design and implementation strategies, (3) and a spatial data framework design. This framework will support the Partnership's desire to use spatial data and applications in their mission of cleaning up Onondaga Lake. Implementation options were presented and the GIS Planning Committee offered recommendations for the management and distribution of spatial data belonging to OLP members. A spatial-data library of over 100 GIS datasets and metadata links was developed, as an addition to the objectives set forth in the original USACE Onondaga Lake GIS and Watershed Database Project Management Plan (written communication). This library is available for OLP use and for sharing with interested parties.

The OLP now has a strong foundation for building a comprehensive GIS for the Onondaga Lake watershed. The successful implementation of a GIS depends on the OLP determining: (1) the design and plan for a GIS, including the applications to be used and spatial data that will be provided and to whom, (2) the level of GIS technology to be utilized and funded, and finally (3) the institutional issues of operation and maintenance of the GIS.

Appendixes

1. Needs assessment questionnaire for the Onondaga Lake Watershed Geographic Information System (GIS) Project
2. Minutes from the December 11, 2002 Onondaga Lake Partnership (OLP) Geographic Information System (GIS) Planning Committee Meeting
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11. List of spatial extent and use of policy codes, acronyms, and data types

Appendix 1. Needs assessment questionnaire for the Onondaga Lake Watershed Geographic Information System (GIS) Project

Needs Assessment Questionnaire for the Onondaga Lake Watershed Geographic Information System Project

The Onondaga Lake Partnership (OLP) has recognized the need for a comprehensive watershed Geographic Information System (GIS). This GIS will be an important tool for land use planning, management, scientific monitoring, and data presentation tasks within the Onondaga Lake Watershed. The purpose of this project is to develop a system design and implementation plan for the use of GIS technology by the OLP, and potentially other partner organizations.

A needs assessment is the first step in implementing a GIS and is vital to its long-term success. The following questionnaire will be completed by each Onondaga Lake Partner in order to survey existing and requested spatial data resources in keeping with the Partnership goals (see below). The results of this questionnaire will be used for generating a final needs assessment report. The goals of the report are to identify the best available digital data and to prioritize requested spatial data, as well as to make recommendations about viable methods to store and provide access to this data.

OLP Mission Statement: The Onondaga Lake Partnership was established to promote cooperation among Federal, State, and local governments, and other involved parties in the management of the environmental issues of Onondaga Lake and its watershed.

The Partnership will facilitate and coordinate the development and implementation of improvement projects to restore and conserve water quality, natural resources, and recreational uses for the benefit of the public. The Partnership's efforts and actions will be consistent with the Onondaga Lake Management Plan.

Please take a moment and complete the enclosed questionnaire. Your response will help us to design a GIS product that will be of use to managers, scientists, and citizens concerned about the future of Onondaga Lake and its watershed. Your response can be returned electronically via e-mail or in hardcopy via fax or mail.

To respond via mail or fax, send your completed questionnaire to:

Douglas Freehafer
USGS Water Resources / Rensselaer Technology Park
425 Jordan Road
Troy, NY 12020-8349
Fax: 518-285-5601

To respond via email, save the attached document, enter your responses directly, and email the document to: dfreehaf@usgs.gov

Please respond by February 15, 2003. If you have any questions regarding this questionnaire or the GIS needs assessment, please feel free to contact me. Thanks very much in advance for your participation.

Doug Freehafer
518 285 5620

Appendix 1. (Continued) Needs assessment questionnaire for the Onondaga Lake Watershed Geographic Information System (GIS) Project

A. Contact Information

1. **What is your name and preferred salutation (Ms. Mrs. Mr. Dr. None)?**

2. **Which agency or organization do you work for?**

3. **Which department or unit are you in?**

4. **What is your job title?**

5. **Are you a member of the Onondaga Lake Partnership GIS Planning Committee?**

_____Yes _____No

6. **If you checked *No*, please provide the name of the person who gave you the questionnaire:**

7. **Please provide the following contact information**

Your Building Name: _____

Street Address: _____

City/State/Zip Code: _____

Telephone Number: _____

Fax Number: _____

Email Address: _____

Organization Web Page: _____

8. **You are responding to this questionnaire for (check all that apply):**

_____My organization _____Other organization(s) (please name)

Appendix 1. (Continued) Needs assessment questionnaire for the Onondaga Lake Watershed Geographic Information System (GIS) Project

B. GIS and Computer Systems Information

1. **In your organization, GIS functions are:**

   _____Centrally-managed _____Distributed among different departments

2. **What type of operating systems do you use for your GIS needs?**

   _____PC _____UNIX

3. **If you checked *PC*, please check the appropriate choice below:**

   _____Macintosh _____Windows _____Other

4. **What type(s) of GIS Software do you use (please make a list)?**

5. **Do you use any other software that requires Spatial Data (if yes, please make a list)?**

6. **What CAD (Computer-Assisted Design) Software do you use (please make a list)?**

7. **What RDBMS (Relational Database Management System) Software do you use (please make a list)?**

C. Data Collection, Production, and Distribution:

I. <u>Data Collection</u>

1. **Do you yourself or your agency (please specify) collect data for use in a GIS (if *No*, skip to question 8)**

   _____ I collect data for use in a GIS

Appendix 1. (Continued) Needs assessment questionnaire for the Onondaga Lake Watershed Geographic Information System (GIS) Project

_____Other employees of my Agency collect data for use in a GIS

_____No, neither my agency nor myself collect data for use in a GIS

2. **If so, what is the primary use of the data you are collecting?**

3. **Do you collect data using a GPS (if *No*, skip to question 6)?**

_____Yes _____No

4. **If so, what is the grade of the receiver you use?**

_____Survey _____Mapping _____Recreational

5. **Do you use a differential correction to improve the accuracy of your GPS data?**

_____Yes _____No

6. **Please provide the following information about the spatial data that you or your agency collects (check all that apply):**

Coordinate System	Unit of Measure	Horizontal Datum	Vertical Datum
_____UTM	_____Meters _____Feet _____Other (please list)	_____NAD27 _____NAD83 _____other (please list)	_____NGVD29 _____NAVD88 _____none _____other (please list)
_____New York State Plane	_____Meters _____Feet _____Other (please list)	_____NAD27 _____NAD83 _____other (please list)	_____NGVD29 _____NAVD88 _____none _____other (please list)
_____Geographic	_____Meters _____Feet _____Other (please list)	_____NAD27 _____NAD83 _____other (please list)	_____NGVD29 _____NAVD88 _____none _____other (please list)
_____Other (please list)	_____Meters _____Feet _____Other (please list)	_____NAD27 _____NAD83 _____other (please list)	_____NGVD29 _____NAVD88 _____none _____other (please list)

Appendix 1. (Continued) Needs assessment questionnaire for the Onondaga Lake Watershed Geographic Information System (GIS) Project

7. How often is data collected?

II. Data Producton

8. Do you produce spatial data (if *No*, skip to question 12)?

_____Yes _____No

9. If yes, then what spatial datasets do you produce?

10. Please provide the following information about the spatial data you produce:

Name: _____

Description: _____

Source material: _____

Approximate source material scale: _____

Date of Source material: _____

Publication date: _____

Update cycle/frequency: _____

Scale of dataset: _____

Projection: _____

Type of metadata:

_____Federal Geographic Data Committee compliant

_____Data dictionary

_____Locally Defined

_____ None

If you produce more than one type of spatial data, please fill out additional responses to question 10, available in Appendix I.

11. Is your data used by others?

Appendix 1. (Continued) Needs assessment questionnaire for the Onondaga Lake Watershed Geographic Information System (GIS) Project

III. Data Distribution

12. Are there any legal or ethical issues regarding the distribution of spatial data that your agency/organization produces, collects, or maintains (copyright, licensing, fees, restricted redistribution)? If yes, please make a list.

13. Do you maintain a current listing of available data (if *No*, skip to question 15)?

_____Yes _____No

14. If, yes how is it available (check all that apply)?

_____Hardcopy _____NY State Clearinghouse

_____NSDI Clearinghouse _____Other (list:_____)

_____Website (if yes, provide URL:_____)

15. Do you distribute data in multiple formats?

_____Yes _____No

16. What are the supported data formats you use (check all that apply)?

_____Vector _____Raster _____Other

- If Vector, please check all that apply:

_____ESRI Shapefile _____ESRI Export File _____MapInfo

_____STDS Format _____Other (please list)

- If Raster, please check all that apply:

_____ESRI GRID _____TIFF/TFW _____GeoTiff

_____Mr. Sid _____STDS Format _____Other (please list)

Appendix 1. (Continued) Needs assessment questionnaire for the Onondaga Lake Watershed Geographic Information System (GIS) Project

17. What are the Distribution Media that you use?

_____CD-ROM _____FTP _____DVD

_____Internet Download _____ZIP Disk _____Other (please list)

18. Would you be able to disseminate GIS information or data to the other Onondaga Lake Partners?

_____Yes _____No

19. Would you be able to disseminate GIS information or data to other organizations or contractors performing improvement projects in the Onondaga Lake watershed?

_____Yes _____No

IV. Internet Mapping Services

20. Do you currently provide Internet Mapping Access to your data?

_____Yes _____No

21. If *Yes*, please describe the product(s) that is currently online:

22. If you answered *Yes* to question 20, is the data available for download?

_____Yes _____No

23. If you answered *No* to question 20, do you plan to provide Internet Mapping Access to your data in the future? If so, what is your approximate time frame?

24. What Internet mapping software do you use, or anticipate using, if any?

Appendix 1. (Continued) Needs assessment questionnaire for the Onondaga Lake Watershed Geographic Information System (GIS) Project

D. Spatial Data Usage

1. **What is the source of the spatial data you use (check all that apply)?**

_____Hard Copy Maps _____New York State GIS Clearinghouse
_____CUGIR _____In-House GIS Library
_____Field Data Collection _____Fee-based GIS Data Providers
_____USGS _____Other Federal Agency
_____DEC _____Other State Agency
_____SUNY ESF GIS Data _____Other University Data
_____Other (please list): _____

2. **For what general purposes do you or your organization use your GIS?**

3. **From the following list in Appendix II, the Excel spreadsheet entitled *OLP Existing Spatial Data*, check the spatial datasets that your organization currently has, or if not, are planning to use. Please use the Current Data Usage column with the following codes:**
1 = Used Continually, 2 = Used Frequently, 3 = Used, 4 = Plan to Use,

For datasets that you would recommend including in an OLP GIS Library please place a Y in the OLP GIS Library column.

4. **GIS Application types: What Existing/Planned applications do you have for your current spatial datasets?**

_____Browse _____Query
_____Display _____Analysis
_____Modeling _____Other (please list)

5. **Do you currently use any GIS Data specifically related to the Onondaga Lake Watershed? If so, for what purpose?**

Appendix 1. (Continued) Needs assessment questionnaire for the Onondaga Lake Watershed Geographic Information System (GIS) Project

6. **Approximately how many employees in your organization use GIS?**

E. Requested Spatial Data Product

1. **Are there any digital GIS products or applications, currently unavailable in your organization that would be useful to you? This could include data that requires geo-referencing or paper map products to scan.**

2. **What type of GIS products would contribute or enhance your organization's management or science activities within the Onondaga Lake Watershed?**

3. **Are there any particular features or attributes you would like to see built into the proposed GIS product listed in Question 2?**

4. **At what scale would you like to see this data produced.**

5. **When would you need a potential GIS data product to be available?**

6. **Would this potential product be linked to a current or future project that your agency is involved in (please specify)?**

Appendix 1. (Continued) Needs assessment questionnaire for the Onondaga Lake Watershed Geographic Information System (GIS) Project

F. Use of Non-Spatial Data

1. **Is there any data that is not spatially-referenced that you would like to see included into an Onondaga Lake Watershed GIS Product. This data could include status reports, photographs, etc. that are in either electronic or paper format?**

_____Yes _____No

2. **If you answered *Yes,* could you provide one or two examples of what sort of data you had in mind?**

3. **If you answered *Yes* to question 1, would it be necessary for this data to be accessible via an electronic search inorder to be used?**

_____Yes _____No

4. **If you answered *No* to question 1, do you think non spatially-referenced data should be included in this GIS product?**

_____Yes _____No

5. **Please include any other comments about non-spatial data below.**

Appendix 1. (Continued) Needs assessment questionnaire for the Onondaga Lake Watershed Geographic Information System (GIS) Project

Miscellaneous Comments

Please include any additional comments or recommendations you might have about the future use of GIS and spatial data by the Onondaga Lake Partnership.

Completion Signature and Date

1. **Would you like to know when the Information Needs Assessment is complete and available for download?**

2. **If you are not a member of the GIS Planning Committee, would you like to participate in future OLP-GIS activities?**

Please sign your name to indicate you have completed the questionnaire.

_____ _____

Signature Date

Appendix 1. (Continued) Needs assessment questionnaire for the Onondaga Lake Watershed Geographic Information System (GIS) Project

Appendix I – Section C Question 10 Continued:

10a. Please provide the following information about the spatial data you produce:

Name: _____

Description: _____

Source material: _____

Approximate source material scale: _____

Date of Source material: _____

Publication date: _____

Update cycle/frequency: _____

Scale of dataset: _____

Projection: _____

Type of metadata:

_____Federal Geographic Data Committee compliant

_____Data dictionary

_____Locally Defined _____ None

10b. Please provide the following information about the spatial data you produce:

Name: _____

Description: _____

Source material: _____

Approximate source material scale: _____

Date of Source material: _____

Publication date: _____

Update cycle/frequency: _____

Scale of dataset: _____

Projection: _____

Type of metadata:

_____Federal Geographic Data Committee compliant

_____Data dictionary

_____Locally Defined _____ None

Appendix 2. Minutes from the December 11, 2002 Onondaga Lake Partnership (OLP) Geographic Information System (GIS) Planning Committee Meeting

Minutes from the Onondaga Lake Partnership
GIS Planning Committee Meeting

December 11, 2002, Onondaga County Metro Plant Offices, Syracuse NY

Present: Marc Graham, USACE
Bill Kowalewski, USACE,
Elizabeth Coyle, DEC
Carrie VanDerhoof, Onondaga County Water and Environment Protection
Glen Mihal, City of Syracuse, sitting in for Martin Davis
Ed Bugliosi, USGS
Doug Freehafer, USGS
Oliver Pierson, USGS

Absent: Larry Rinaldo, EPA

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1. Discussion Points:

- The committee discussed the question of who will have access to any data shared by the partner agencies for a future GIS / Spatial Data product. The Committee decided that initially, access to this data will be limited to members of the Onondaga Lake Partnership (OLP). Each agency is therefore responsible for deciding what data they would like to make available on a limited basis to the OLP for a future OLP GIS product.

- It is possible that some data will eventually become accessible to the public via a website or another method in a read-only format. The decision to make some data available to the public will take place on a case-by-case basis, requiring consent from the agency supplying the dataset(s) in question.

- No decisions were made about how spatial data will be presented or used in a future GIS product. These subjects will be discussed once the needs assessment questionnaires have been completed and compiled.

- The maintenance of a spatial-data product (GIS), once created in a later phase of this project, was identified as an important topic for future consideration.

- A parallel project that is commencing with funding from the USACE is the development of an Online Project Database, detailing the activities of Corps of Engineers (COE) related projects in and around the Onondaga Lake Watershed. The primary audience for this database will be OLP member agencies, with possible limited public access. The OLP GIS project team will contact the COE contractor that is implementing this activity in January 2003 to pursue opportunities for collaboration.

Appendix 2. (Continued) Minutes from the December 11, 2002 Onondaga Lake Partnership (OLP) Geographic Information System (GIS) Planning Committee Meeting

• Carrie stated that the Syracuse-Onondaga County Planning Agency is responsible for the development of GIS data layers for the county. All agreed that having representation from the Planning Agency would be useful, and Carrie volunteered to contact them about providing a committee member.

2. Questionnaire Review and Finalization

- The GIS Planning Committee reviewed the draft questionnaire presented by the USGS. Comments given during the meeting will be incorporated into the final version of the questionnaire. Additional comments should be sent to Doug Freehafer (dfreehaf@usgs.gov) by Friday, January 3, 2003 so that they can be incorporated into the final draft of the questionnaire.
- The finalized questionnaire will be sent to the GIS Committee members by January, 15, 2003. Each committee member will be responsible for distributing a copy of the questionnaire to the relevant members of their agency and any other federal, state, or local agencies who they believe may have relevant datasets related to the Onondaga Lake Watershed.
- Completed questionnaires should be submitted to Doug Freehafer (via e-mail if possible) by February 15, 2003. Each committee member will be responsible for collecting the various questionnaires that members of their agency are filling out and submitting them.
- The results of the questionnaire will be complied and analyzed in late February and early March, and the GIS committee will meet in Mid-March to discuss the results and discuss the next step of the needs assessment phase of this project. The GIS Project team will contact the committee members in February 2003 to set up the next meeting.

3. Project Study Area

- The GIS Planning Committee accepted the Study-Area polygon presented during the meeting. The boundaries of the polygon, including an approximately one-mile buffer on each side, are as follows:

- North: **43 17 00.** Onondaga County Boundary
- East: **75 52 00**. Onondaga County Boundary
- South: **42 41 00.** Includes the Towns of Scott and Preble in Cortland County, since the headwaters of Otisco Lake (Spafford Creek) begin there.
- West: **76 33 00.** Includes the Skaneateles Lake Watershed (City of Syracuse water supply) and drainage area to Cross Lake.

The area defined by this polygon, referred to as the OLP GIS Study Area, will be the boundary for all spatial data included in any future products that result from the needs assessment process.

Appendix 3. Needs assessment questionnaire summary report

Onondaga Lake Partnership: Geographic Information System Planning Committee

Summary Report on Needs Assessment Survey

I. INTRODUCTION

In the fall of 2002, the Onondaga Lake Partnership (OLP) formed a Geographic Information System (GIS) Planning Committee to begin the process of developing a comprehensive GIS for the Onondaga Lake watershed. The committee consisted of representatives from all OLP member agencies, and received technical support from the U.S. Geological Survey (USGS). The mission for the GIS committee during the first phase of the project is to develop a system design and implementation plan for the use of GIS technology by the OLP and, at a time the OLP deems appropriate, by other partner organizations and also the public. The committee's first step was the development and distribution a Needs Assessment questionnaire to identify the best-available digital data and prioritize the spatial-data needs of the OLP members, and to make recommendations about viable methods to store and provide access to these data to OLP members and the general public. The GIS committee met in December of 2002 to finalize the content of the questionnaire, and the committee distributed the questionnaire in January. By April 1, 2003, the USGS had received nine completed questionnaires for compilation. The results of the questionnaires and subsequent analysis are presented in this report. The OLP GIS Committee met again on May 28, 2003 to validate the results of this report as well as designate next steps for the design and implementation of an OLP GIS Product.

II. RESULTS

The following section presents only the questionnaire responses that have implications for the future development of the GIS design and implementation plan. Complete questionnaire results are given in appendix 4. 5, 6, and 7.

Questionnaire Respondents

The nine questionnaire respondents represent the following organizations:
- Onondaga County Department of Water Environment Protection
- Syracuse-Onondaga County GIS Planning Agency
- New York State Department of Environmental Conservation (NYSDEC), Division of Water

Appendix 3. (Continued) Needs assessment questionnaire summary report

- City of Syracuse, Department of Engineering, Mapping, & Surveying
- TAMS Consultants (Working with NYSDEC)
- US Army Corps of Engineers (USACE), Technical Services Division and Project Management Team

Of the nine respondents, four were members of the OLP GIS Committee. The New York State Attorney General's Office was represented by the NYSDEC, and that EPA Region 2 is acting as an observer only.

Computer Systems Information

All respondents use ESRI ArcView or ArcGIS software, and seven of eight use Windows operating systems. Only one respondent represented an organization with centrally managed GIS functions and one respondent uses a UNIX operating system, although they intend to switch to the Window operating system by the end of the year. Questionnaire respondents use a variety of relational-database-management systems and computer-assisted design software; respectively Microsoft Access and AutoCAD are the most prevalent software listed.

Data Collection, Production, and Distribution

All questionnaire respondents indicated that either they, or others in their agency, collect GIS Data. These data are used for a host of purposes, from map production, to monitoring, and modeling. The primary use by many respondents is well-summarized by the following statement from a questionnaire response:

> *"The primary purpose of spatial data use is answering inquiries, research, monitoring, and preparing management and outreach documents based upon various project data fields."*

Some examples of how the questionnaire respondents use spatial data are listed below. One respondent noted that his/her agency hopes to integrate all spatial information into a GIS for spatial analysis needs.

- Land-use planning
- Ambient monitoring program for Onondaga Lake, non-point and point source control
- Hazardous-waste site assessment and remediation
- Municipal engineering and surveying
- Environmental-contamination analyses
- Hydrologic modeling and design
- Archeology and wetland mapping
- Environmental analysis of sensitive areas and regulated facilities
- Spatial data analysis and map production
- Agency-jurisdiction boundaries and land ownership

All questionnaire respondents but one indicated that they used a GPS to collect location data, from daily to annually. Spatial data are stored in either Universal Transverse Mercator or New York State Plane coordinate systems (evenly split), and the majority of respondents used the NAD83 horizontal datum and the NGVD29 vertical datum.

Four respondents indicated that they currently produce spatial data. These types of data are used for delineating streets and municipal boundaries, identifying contaminant distributions, locating sampling sites, and locations of stream-bank stabilization and water-quality monitoring. All but one respondent indicated that parties other than the source agency use the data.

No respondents indicated that their data were uniformly unavailable in terms of legal or ethical issues surrounding data distribution to OLP members. Two respondents noted that sensitivities with some of their data, but also indicated that such data could be made available to the OLP on a case-by-case basis,

Appendix 3. (Continued) Needs assessment questionnaire summary report

depending on the partnership's needs. Other respondents noted that their data were releasable by Freedom of Information Act request. The release of data to the general public will require a more careful sensitivity evaluation.

Eight respondents noted that they maintain an up-to-date list of the data they possess, that are available as hard copy, by e-mail, or on CD-ROM. No respondents have yet made this list available over the Internet. Most respondents store spatial data in vector and raster formats; the most prevalent data storage formats are ESRI shapefiles and ESRI grids, respectively. The most common method for data exchange is via CD-ROM (7 respondents); two respondents each listed Zip-Disks and FTP. All respondents indicated that they would be willing to share their data with other OLP members, and all but one indicated willingness to distribute their data to the general public as long as it does not contain sensitive information.

Internet Mapping

No respondents currently provide Internet mapping access to their data. One respondent indicated that Onondaga County plans to provide this service within the next year, and a second indicated that their agency is considering this option for data sharing. The respondent from the Onondaga County Planning Department noted that the County plans to outsource development and hosting of internet-based access to county GIS data. The primary goal of this data-sharing initiative would be to support other county agencies, and eventually provide limited public access to the data. Four respondents stated that they anticipated using ARCIMS software to provide this service.

Spatial Data Usage

Seven of the nine respondents named hard-copy maps as the most frequently used spatial-data sources. Six respondents mentioned they use each of the following data sources: Cornell's CUGIR site, New York State Geospatial Clearinghouse, the USGS, in-house GIS data libraries, and field data collection. Only one respondent obtains spatial data from a fee-based private source.

Seven respondents indicated that they use spatial data for display purposes; six respondents stated that they use their data for query and analysis purposes, and five respondents use data for browsing and modeling purposes. Additionally, five respondents are using data for purposes specific to Onondaga Lake, including modeling contaminant loadings to the lake, developing rural Best Management Practices (BMPs) for the watershed, and doing remedial investigations and feasibility studies of the lake and its tributaries.

The number of employees per agency who actively use GIS varies greatly, from 3 to 30, with a mean of 15.

Respondents were asked to indicate which spatial datasets from 26 categories are either currently being used or will be used in the future. They also were asked which datasets they would recommend including in an OLP GIS library. Six respondents submitted information on spatial data usage, and three of those respondents included recommendations for the OLP GIS Library. One agency incorrectly filled out a draft version and ultimately decided not to revise it. Their data therefore could not be included in the spatial dataset summaries.

Datasets with the highest usage (indicated as either used continuously or frequently) were from 11 categories--the administrative, base map, biological, cadastral, elevation, hydrologic, geologic, imagery, transportation, watersheds, and wetlands categories (appendix 5). In their draft response the City of Syracuse listed administrative, cultural, transportation, and watershed spatial data usage.

Categories of data that respondents marked for future use included agricultural, biological, cultural, demographics, elevation, monitoring, regulated facilities, and soils. Also, eight of the already high-use categories showed increased planned usage; these were the administrative, biological, elevation, hydrologic, geologic, imagery, watersheds, and wetlands categories.

Appendix 3. (Continued) Needs assessment questionnaire summary report

Recommendations for data sets to be stored in the OLP GIS library included spatial datasets from all 26 categories. Generally, the most frequently requested datasets are in categories that have current and planned usage. Of the 256 datasets identified as publicly available, 63 were recommended by all three respondents for inclusion in an OLP GIS library. Two respondents and a single respondent requested an additional 66 and 60 datasets, respectively (appendix 6).

Requested Spatial-Data Products

Questionnaire respondents provided clear ideas regarding spatial data needs and potential products that could enhance their agency's management or science activities. Some of the data needs listed include:

- National Resources Conservation Service (NRCS) certified SSURGO soils data for Onondaga County
- Watershed boundaries
- GIS datasets containing watershed and receiving-waters information
- Onondaga Creek discharge information and suspended-sediment data
- Confirmation of hydrologic datasets through aerial photos and field verification
- State Pollutant Discharge Elimination System (SPDES) Sites

Most ideas for broad and multidiscipline spatial-data products came primarily from one respondent (appendix 7) and included the following elements:

1. Location, footprint, and status of projects (within the scope of the Onondaga Lake Partnership) that are being conducted by OLP partners and member agencies.
2. Location, footprint, and status of major projects in and around Onondaga Lake and its watershed that are being conducted by others and have a potential for some interrelationship with OLP projects
3. Areas of concern (such as sensitive or protected ecosystems and habitat, wetlands)

The above respondent suggested that such a product would "greatly help in one of the partnership's major functions--to monitor, facilitate, coordinate, and promote lake and watershed improvement projects," as well as aid in communication and planning. Access to this data product would be via the Internet; the primary audience (OLP members) would receive initial use rights, and the public could later receive limited use rights, once the needs of the primary audience are met. This internet-based GIS product ideally would allow users to perform simple data manipulations, would be accompanied by a FAQ and GIS Glossary, and would provide point locations with linkable data tables.

Most respondents indicated that they would like a spatial data product to be available during FY 2003 or as soon thereafter as possible. Several respondents suggested links of the GIS Spatial Data product to current or future projects implemented by their agency, including:

- Ambient Monitoring Program (Onondaga Lake)
- USACE - OLP Rural BMPs Project
- USACE Online Database of Projects and Funding Information for OLP

Use of Non -Spatial Data

Six respondents indicated that some non-spatially referenced data are available that could be included in an OLP GIS product. Examples of include climate and hydrologic data, historical aerial photographs, program executive summaries, Internet hyperlinks, digital photographs, and outreach materials. The respondents indicated that these types of data should be available via an electronic search.

Appendix 3. (Continued) Needs assessment questionnaire summary report

III. SUMMARY AND RECOMMENDATIONS

The results of this questionnaire indicate that spatial data and GIS software is extensively used by OLP member organizations, and that these organizations have also much interest in the development of a product that would facilitate access and use of spatial data concerning Onondaga Lake. The following is a summary of the key points generated by the questionnaire survey:

- The majority of respondents use ESRI software for GIS functions within their agency.
- All OLP members' data are stored in UTM, State Plane, or both.
- OLP member agencies have strong GIS skills and technical capability, as shown by the large number of agency personnel who use GIS software, the numerous agencies that produce spatial data, and the sophisticated ways in which GIS is used (querying, modeling, planning, etc.).
- Most of the data produced and maintained by member organizations are available for sharing to other OLP members, although some data are sensitive and will need to be evaluated on a case-by-case basis. Certain legal issues would prevent or limit sharing some data with the general public. All respondents indicated a willingness to share data with other OLP members.
- OLP members indicated an interest in developing Internet mapping application or spatial-data storage in the near future. The questionnaire did not ask about the availability of funding or the technical capacity of OLP members to undertake such a project.
- More than half of the respondents are using GIS for Onondaga Lake-specific purposes.
- Certain types of non-spatial data have a role in any proposed Spatial Data product.
- The development of a GIS-based spatial data product that would allow users to perform simple map manipulations and download Onondaga Lake Watershed Data is one possible next step for this effort. The OLP GIS committee discussed this possibility during the May meeting, and decided that a two-tiered approach, with some data available to all via the web and more sensitive data distributed by CD is an option worth further investigation. A standard procedure for updating data could be developed (See "*Minutes from the Onondaga Lake Partnership GIS Planning Committee Meeting, May 28, 2003*" for more details).

Appendix 4. Needs assessment questionnaire response tables

Respondants

FullName	Agency	Department
Carrie VanDerhoof	Onondaga County	Water Environment Protection
Don Jordan	Syracuse-Onondaga County Planning Agency	GIS
Elizabeth E. Coyle	NY State DEC	Water Division
Joseph J. Mastriano	Onondaga County	Water Environment Protection
Martin Davis, L.S.	City of Syracuse	Dept. of Engineering, Mapping & Surveying Division
Michael L. Spera, PE	TAMS Consultants, Inc.	NYSDEC Consultant
Paul Murawski	US Army Corps of Engineers Buffalo District	Technical Services Division
William E.Kowalewski	US Army Corps of Engineers Buffalo District	Project Management Team
William T. Frederick	US Army Corps of Engineers Buffalo District	Technical Services Division, Environmental Analysis

Appendix 4. (Continued) Needs assessment questionnaire response tables

Contact Information

Web Page	FullName	Agency	Department	Job Title	Street Address1	City	State	Zip	Telephone	Fax	Email	Questionnaire Giver
www.ongov.net	Carrie VanDerhoof	Onondaga County	Water & Environment Protection	Sanitary Engineer II	650 Hiawatha Boulevard	Syracuse	NY	13204	315-435-2260	315-435-5023	cvand@lake.onondaga.ny.us	
http://www.co.onondaga.ny.us	Don Jordan	Syracuse-Onondaga County Planning Agency	GIS	GIS Program Manager	421 Montgomery St.	Syracuse	NY	13202	315-435-2631	315-435-2439	DonJordan@ongov.net	Carrie VanDerhoof, OCDWEP
http://www.dec.state.ny.us	Elizabeth E. Coyle	NY State DEC	Water Division	Environmental Engineer	615 Erie Blvd. West	Syracuse	NY	13204-2400	315-426-7500	315-426-7459	eecoyle@gw.dec.state.ny.us	
www.ongov.net	Joseph J. Mastriano	Onondaga County	Water & Environment Protection	Operations Manager	50 Hiawatha Boulevard	Syracuse	NY	13204	315-435-2260	315-435-5023	jmast@lake.onondaga.ny.us	Carrie VanDerhoof, OCDWEP
http://www.syracuse.ny.us	Martin Davis, L.S.	City of Syracuse	Dept. of Engineering, Mapping & Surveying Division	Deputy City Engineer	233 E. Washington St	Syracuse	NY	13202	315-488-8211	315-448-8488	mdavis@ci.syracuse.ny.us	
http://www.consultants.com	Michael L. Spera, PE	TAMS Consultants, Inc.	NYSDEC Consultant	Project Manager - NPL Site	655 Third Avenue	New York City	NY	10017	212-867-1777 Ext 354	212-697-6354	michael.spera@earthtech.com	Susan L. Benjamin, PE
	Paul Murawski	US Army Corps of Engineers Buffalo District	Technical Services Division	Hydraulic Engineer	1776 Niagara Street	Buffalo	NY	14207	716-879-4157	716-879-4347	Paul.E.Murawski@usace.army.mil	Marc Grahm, USACE
http://www.lrb.usace.army.mil	William E.Kowalewski	US Army Corps of Engineers Buffalo District	Project Management Team	Project Manager	1776 Niagara Street	Buffalo	NY	14207-3199	716-879-4418	716-879-4195	william.e.Kowalewski@usace.army.mil	
http://www.lrb.usace.army.mil	William T. Frederick	US Army Corps of Engineers Buffalo District	Technical Services Division, Environmental Analysis	Physical Scientist	1176 Niagara Street	Buffalo	NY	14207-3199	717-879-4243	716-879-4357	william.t.Frederick@usace.army.mil	Marc Grahm, USACE

OLP Membership Status

FullName	Questionnaire Giver	OLP GPC Member
Carrie VanDerhoof		Yes
Don Jordan	Carrie VanDerhoof, OCDWEP	Yes
Elizabeth E. Coyle		Yes
Joseph J. Mastriano	Carrie VanDerhoof, OCDWEP	No
Martin Davis, L.S.		Yes
Michael L. Spera, PE	Susan L. Benjamin, PE	No
Paul Murawski	Marc Grahm, USACE	No
William E.Kowalewski		Yes
William T. Frederick	Marc Grahm, USACE	No

System Information

FullName	GIS Functions	OS Type	PC Type	GIS Software	Other Software	CAD Software	RDBMS Software
Carrie VanDerhoof	Distributed	PC	Windows	ArcView 3.2	Maximo 4i. 4.1	AutCad Lt 2002	Access
Don Jordan	Central	Unix		ESRI ArcInfo, ArcView		AutoCAD by other departments	
Elizabeth E. Coyle	Distributed	PC	Windows	ESRI ArcView		TurboCAD	
Joseph J. Mastriano	Distributed	PC	Windows	ESRI ArcView GIS 3.2			Access
Martin Davis, L.S.	Distributed	PC	Windows	ESRI ArcGIS and ArcVIEW		AutoDESK, Survey & Raster Design, Civil Engineering	Sequel
Michael L Spera, PE	Distributed	PC	Windows	ESRI ArcInfo, ArcView, ArcIMS, AutoCAD Map	GeoEas, GSPlus, Surfer, KaleidaGraph	AutoCAD 2000, Microstation	Access, FoxPro, EQuIS
Paul Murawski	Distributed	PC and Unix	Windows	ESRI ArcInfo, ArcView		Microstation	Oracle
William E. Kowalewski	Distributed	PC	Windows	ESRI ArcView	None	Intergraph Microstation 7	
William T. Frederick	Distributed	PC	Windows	ESRI ArcView 3.2, ArcGIS 8.2	Microstation, Groundwater Modeling System	Microstation	SDE in FY03

Appendix 4. (Continued) Needs assessment questionnaire response tables

Data Use and GPS Information

FullName	Who Collects Data	Data Collection Frequency	Primary Use of Data	GPS Receiver Grade	GPS	Differential Correction
Carrie VanDerhoof	No collection of GIS data				No	No
Don Jordan	I collect GIS data	When needed	Spatial data analysis & map production	Mapping	Yes	No
Elizabeth E. Coyle	Others collect GIS data		Regulated facilities & sensitive areas environmental analysis		Yes	No
Joseph J. Mastriano	Other collect GIS data		Ambient Monitoring Program for Onondaga Lake, Non-Point & Source Control Monitoring		Yes	No
Martin Davis, L.S.	I and others collect GIS data	Daily	Municipal Engineering	Survey	Yes	Yes
Michael L. Spera, PE	I collect GIS data	3-5 times a year	Hazardous waste site assessment & remediation, archaeology & wetland mapping	Mapping	Yes	No
Paul Murawski	Others collect GIS data	Annually	Survey	Survey	Yes	Yes
William E.Kowalewski	Others collect GIS data	Project Specific	Answering inquiries, research, preparing mgmt and outreach docs, i.e. USACE Project info. Goal is to integrate this info into		Yes	No
William T. Frederick	I and others collect GIS data	Project Specific, commonly once	Environmental contamination analyses, hydrologic modeling and design	Mapping	Yes	Yes

Data Collection Information

FullName	Coordinate System	Unit of Measure	Horizontal Datum	Vertical Datum
Carrie VanDerhoof				
Don Jordan	NY State Plane	Feet	NAD27	None
Elizabeth E. Coyle	UTM	Meters	NAD83	NGVD29
Joseph J. Mastriano				
Martin Davis, L.S.	NY State Plane	Feet	NAD27	NGVD29
Martin Davis, L.S.	UTM	Meters	NAD27, NAD83	NGVD29
Michael L. Spera, PE	UTM	Meters	NAD83	NGVD29
Paul Murawski	NY State Plane	Feet	NAD83	NAVD88
William E.Kowalewski	None			
William T. Frederick	NY State Plane	Feet	NAD83	NAVD88
William T. Frederick	UTM	Meters	NAD83	NAVD88

Appendix 4. (Continued) Needs assessment questionnaire response tables

Spatial Data Production

FullName	Spatial Data Produced	Name	Description	Source Material	Source Material Scale	Date	Pub Date	Update Freq	Dataset Scale	Projection	Meta-data Type	Data Used By Others
Carrie VanDerhoof												No
Don Jordan		Onondaga County Street Common Place File	Points of Interset & other Structures in Onondaga County	Parcel data, Air photos, etc.	Varies	Varies	Proposed	Daily		Stateplane Zone 4826, NAD 1927, feet	Locally Defined	Yes
Don Jordan		Onondaga County Street Centerline w/ Address Range File	Centerline/Address Ranges adjusted to Pacel Data	Conflated NYSDOT roads & TIGER street data	Varies	Varies	Proposed	Daily		Stateplane Zone 4826, NAD 1927, feet	Locally Defined	Yes
Don Jordan	Parcel data, street centerline file with address ranges, common places	Parcel boundaries by town (owned by County Water Authority)	Town wide parcel data created from tax maps	Tax maps scanned, geopositioned using NYSDOT planimetrics	Varies	1996	Varies by town	Daily, published annually		Stateplane Zone 4826, NAD 1927, feet	Locally Defined	Yes
Joseph J. Mastriano	Pertinent to water quality, w/ Sampling and buoy locations set by GPS, operate in tandem with USGS gauging sites											Yes
Martin Davis, L.S.	None											No
Michael L. Spera, PE	Environmental sample locations, contaminant contours, and others	NYSDEC/TAMS Onondaga Lake Database/GIS CD										Yes
Paul Murawski	None	None										No
William E.Kowalewski	None	None										No
William T. Frederick	Contaminent distributions in environmental media, streambank stabilization designs, watershed analysis	Varies										No

Data Distribution Issues

FullName	Legal Ethical Issue 1	Legal Ethical Issue 2	Legal Ethical Issue 3
Carrie VanDerhoof	Sensitivities with some county data. Data can be mada available on a case-by-case basis for OLP. .	Sewerages spatial data will be available to OLP	
Don Jordan	County projects-generally free of charge	Municipalities-fee and agreement to enter into a data sharing cooperative	Private entities-fee
Elizabeh E. Coyle	Releasable by FOIA	Draft data released after review	
Joseph J. Mastriano	Sensitivities with some county data, could be made available on a case-by-case basis	Finalized data used within the Ambient Monitoring Program and report is available, as it is part of public domain.	
Martin Davis, L.S.			
Michael L. Spera, PE	Releasable by FOIA		
Paul Murawski	Some data is subject to Copyright	Some data is restricted distribution due to security	
William E.Kowalewski			
William T. Frederick	None at this time, although some data require placement on public record before distribution.		

Appendix 4. (Continued) Needs assessment questionnaire response tables

Data Distribution Techniques

FullName	Current List	How Current List Available	Website	Supported formats	Vector Formats	Raster Formats	Distribution Media	Distribution to OLP	Distribution to others
Carrie VanDerhoof	No							Yes	Yes
Don Jordan	Yes	Hardcopy		Vector	ESRI Shapefile		CD-ROM, FTP	Yes	Yes
Elizabeh E. Coyle	Yes	Email		Vector, Raster, Other	ESRI Shapefile	ESRI GRID	CD-ROM, ZIP Disk	Yes	Yes
Joseph J. Mastriano	Yes	Hardcopy					CD-ROM, ZIP Disk	Yes	Yes
Martin Davis, L.S.	Yes	Hardcopy and Electronically		Vector, Raster	ESRI Shapefile	ESRI GRID, TIFF	CD-ROM	Yes	No
Michael L. Spera, PE	Yes	CDROM		Vector, Raster	ALL	ALL	CD-ROM, FTP	Yes	Yes
Paul Murawski	Yes	Hardcopy		Vector, Raster	ESRI Shapefile	ESRI GRID, TIFF	CD-ROM	Yes	Yes
William E.Kowalewski	No							No	No
William T. Frederick	No				ESRI Shapefile	ESRI GRID, TIFF, Mr. Sid	CD-ROM, Internet	Yes	Yes

Internet Mapping Services

FullName	Internet Map Access	Online Product 1	Download Available	Future Internet Mapping Access	When	Inet Map Software
Carrie VanDerhoof	No		No	No		
Don Jordan	No		No	Yes	Within the next year	Hire consultant to host and develop site
Elizabeth Coyle	No		No	No		
Joseph J. Mastriano	No		No	No		
Martin Davis, L.S.	No		No	Yes	Would Like to but no time frame	ArcIMS
Michael L. Spera	No	Only restricted access data for US Navy	No	No		ArcIMS
Paul Murawski	No		No	No		
William E.Kowalewski	No		No	No		
William T. Frederick	No		No	No		ArcIMS

Appendix 4. (Continued) Needs assessment questionnaire response tables

Spatial Data Sources

FullName	Hard Copy Map	CUGIR	Field Data Collection	USGS	NYSDEC	SUNY ESF	NYS GIS	In House GIS Library	Fee Based	Other Fed Agency	Other State Agency	Other University Data
Carrie VanDerhoof	Yes	No	No	No	No	No	No	Yes	No	No	No	No
Don Jordan	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	No	No
Elizabeth Coyle	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No
Joseph J. Mastriano	Yes	No	Yes	Yes	No	No	No	Yes	No	No	No	No
Martin Davis, L.S.	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No	No	No
Michael L. Spera, PE	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	No	No
Paul Murawski	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes
William E. Kowalewski	No	No	No	No	No	No	No	No	No	No	No	No
William T. Frederick	No	Yes	No	No	Yes	No	Yes	No	No	Yes	No	No

Appendix 4. (Continued) Needs assessment questionnaire response tables

Spatial Data Usage

Full Name	General Purpose	App Browse	App Display	App Modeling	App Query	App Analysis	OLP Watershed GIS Use	OL Watershed GIS Purpose	GIS employees
Carrie VanDerhoof	Managing sewer infrastructure - maintenance mgmt.	Yes	Yes	No	Yes	No	No		About 30
Don Jordan	Spatial Data Anlysis and Map Production	Yes	Yes	No	Yes	Yes	Yes	Created Onon. Lake Watershed datasets upon request	Planning Dept.: 3 hands on users
Elizabeth Coyle	Environmental Resource Management and assistance	No	Yes	Yes	Yes	Yes	Yes	Watershed Modeling of Pollutant Loads to Lake	10 Statewide
Joseph J. Mastriano	Ambient Monitoring Prog, Source, Non-Point Source	Yes	Yes	Yes	Yes	Yes	No		20 people
Martin Davis, L.S.	In House Map Production	Yes	Yes	No	Yes	Yes	No		5 or 6
Michael L. Spera, PE	Environmental Reports and Engineering (RI/FSs)	No	Yes	Yes	Yes	Yes	Yes	RI/FSs of Onon. Lake, Geddes Br., Ninemile Cr. And other sites	7 in NY City, Albany NY and Bloomfield NJ Offices
Paul Murawski	Water Resource Projects	No	No	Yes	No	No	No		10-20
William E. Kowalewski	Env. Data analysis/research & Proj. management	No	No	No	No	No	Yes	Basic Project Management Data (maps of USACE Projects, Congressional Districts)	20 people use software, 6 experienced users
William T. Frederick	Project Planning & Spatial Analysis of Point Data	Yes	Yes	Yes	Yes	Yes	Yes	Onon. Creek Rural BMPs: data used to pinpoint streambanks requiring stabilization, plan for site access	About 20

Appendix 4. (Continued) Needs assessment questionnaire response tables

Requested Spatial Data Products

Full Name	Digital GIS Request	Feature Request	Scale Required	Date Needed By	Linked to Agency Project
Carrie VanDerhoof	OCDWEP would be able to contribute the GIS mapping we have completed for the county sewerages.	Not at this time. Need more experience with program		No timeframe for this Department.	Link with Ambient Monitoring Program
Don Jordan	NRCS Certified soils (SSURGO) data for Onondaga County	Data created to NRCS SSURGO Standards	Data created to NRCS SSURGO Standards	As soon as it is completed	It would be used for a variety of planning applications
Elizabeth Coyle	Watershed boundaries and soils				
Joseph J. Mastriano	GIS datasets and products containing watershed and receiving waters info would be of benefit. Same data type.	Need more info	Need more info	Need more info	Need more info
Martin Davis, L.S.					
Michael L. Spera, PE	No				
Paul Murawski					
William E. Kowalewski	SEE APPENDIX 7	SEE APPENDIX 7		Before the End of FY05 (30 Sep 04)	Link to USACE on-line database of OLP projects and funding info.
William T. Frederick	Onondaga Creek discharge information and suspended sediment data	Point locations with linkable data tables	Medium scale to 100K	FY 2003	USACE-OLP Rural BMP's project

Appendix 4. (Continued) Needs assessment questionnaire response tables

Non-spatial Data

FullName	Non-Spatial Data Request	Non-Spat Data Example	Electronically Available	Include Non-Spatial Data	Comments
Carrie VanDerhoof	Yes	CSO Abatement project locations, i.e. County Floatable Control Facilities, related pictures	Yes	Yes	Some information as to the flow that is treated at these particular CSO facilities
Don Jordan	No		No	Yes	
Elizabeth Coyle	Yes	Climatologic (precipitation), hydrologic (stream flow) & regulated facility discharge data	Yes	Yes	
Joseph J. Mastriano	Yes	Historical Aerial Photographs of Onondaga Lake, AMP Program Executive Summaries	No	Yes	
Martin Davis, L.S.	Yes	Digital Elevation Model	Yes	Yes	
Michael L. Spera, PE	No		No	No	
Paul Murawski	No		No	No	
William E. Kowalewski	Yes	Appropriate internet hyperlinks, digital photographs, press releases & outreach materials	No	Yes	
William T. Frederick	Yes	Watershed and sub-basin delineations, land-use distributions, hydrologic soil group delineation	Yes	No	

Appendix 5. Needs assessment questionnaire summary report, current spatial data usage

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Administrative								
County Boundaries - NYS Shoreline Version	1:24,000	NYSOFT	3	1		4		3
County Boundaries from 1990 TIGER Precensus Files	1:100,000	USGS		3				1
County Boundaries from 1995 TIGER Census Files	1:100,000	USEPA		3		3		2
County Boundaries (DLG)	1:2,000,000	USGS		2	2			2
Individual County Boundaries from 1995 TIGER Census F	1:100,000	CUGIR		3				1
Individual 1998 County Boundaries - no metadata	N/A	CUGIR						
Cayuga County Municipalities	1:600-4,800	NYSOFT		3				1
Congressional Districts	1:100,000	NYSOFT		3	2	4		3
Cortland County Election Districts (1990)	N/A	NYSOFT		3				1
Cortland County Legislative Districts (1990)	N/A	NYSOFT		3				1
Cortland County Zoning	Varies	NYSOFT		3	3			2
Individual 1998 County Wide Election Districts- no metada	N/A	CUGIR		3				1
Emergency Operation Centers	N/A	NYSOFT		3				1
Native American Land Boundaries	1:100,000	USEPA		2	3		4	3
NYSDEC Regions	N/A	NYSDEC		1	4			2
NYSDOT Regions	1:2,000,000	NYSDOT		3				1
NYS Boundary from 1995 TIGER Census Files	1:100,000	USEPA		3				1
NYS Civil and Public Land Boundaries	1:24,000	NYSOFT	2	2	4			3
NYS County Seats	1:24,000	NYSOFT		3				1
NYS DOT Residency Boundaries	1:24,000	NYSOFT		3				1
NYS Executive - Local Government Officials	N/A	NYSOFT		3				1
NYS Federal-Aid Urban Area Boundaries	1:24,000	NYSOFT	3	2	4			3
NYS Local Laws	N/A	NYSOFT		2				1
NYS Political and Administrative Boundaries (DLG)	1:2,000,000	CUGIR		2	3			2
NYS Small Public Land Sites	1:24,000	NYSOFT		2	4			2
NYS Unincorporated Place Points	1:24,000	NYSOFT		3				1
Onondaga County Fire Districts	1" = 1 mile	NYSOFT	3	3				2
Onondaga County Legislative Districts	1" = 1 mile	NYSOFT	2	3	4			3
State Land Unit Boundaries	1:24,000	NYSDEC		2	3			2

Appendix 5. (continued) Needs assessment questionnaire summary report, current spatial data usage

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City of Syracuse Common Council Districts	1" = 1/4 mile	NYSOFT	2	3				2
Zip Code Boundaries	N/A	USEPA	3	3				2
Zip Code Boundaries - ESRI data and maps	N/A	ESRI	3	3		3		3
Zip Code Points - ESRI data and maps	N/A	ESRI	3	3				2
Water and Sewer Districts	N/A	UK	3	2			4	3
Agricultural								
Agricultural Chemical Use & Cropping Practices	1:2,000,000	USGS		3	4			2
Agricultural Pesticide Use by Agricultural Land Classes	1:2,000,000	USDCCA		3	4			2
Agricultural Pesticide Use by Crop	1:2,000,000	USDCCA		3	4			2
Animal Population and Manure by County	1:2,000,000	NASS		3	4			2
Crops Harvested & Planted, Cropping Practices, & Ag Inf	1:2,000,000	NASS		3				1
Major, Minor, or Specialty Crop Group by County	1:2,000,000	USDCCA		3				1
Harvested Cropland, Orchard, Vineyard & Pasture Acreag	1:2,000,000	USDCCA		3				1
Fertilizer Sales by County	1:2,000,000	USDABC		3				1
Nitrogen & Phosphorus Fertilizer Use by County	1:2,000,000	USGS		3				1
Individual County Agricultural Districts	1:24,000	CUGIR	2	3				2
NY Agricultural Boundaries	1:24,000	NYSOFT		3		3		2
Basemaps								
7.5 Minute Quadrangle Boundaries	1:24,000	NYSOFT		3		2		2
7.5 Minute Quadrangle Boundaries	1:24,000	USGS	3	3	3	2	2	5
30 x 60 Minute Quadrangle Boundaries	1:100,000	USGS		3				1
Digital Raster Graphics Quadrangles	1:24,000	CUGIR		2	2	2	2	4
Digital Raster Graphics Quadrangles	1:24,000	NYSOFT	3	2		2		3
Digital Raster Graphics - Image Catalog	1:24,000	NYSDEC		2		3		2
Digital Raster Graphics Quadrangles	1:100,000	NYSOFT		2	3			2
Digital Raster Graphics - Image Catalog	1:100,000	NYSDEC		2				1
Digital Raster Graphics Quadrangles	1:250,000	NYSOFT		2				1
Digital Raster Graphics - Image Catalog	1:250,000	NYSDEC		2				1

Appendix 5. (continued) Needs assessment questionnaire summary report, current spatial data usage

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National Geographic Society Digital Maps	Varies	NGS		3				1
NYS County Images	1:250,000	NYSOFT	3	2				2
NYS DOT Quadrangle Index	N/A	NYSOFT		3				1
NYS Raster Quadrangles - Color & BW	1:24,000	NYSOFT	3	3		2		3
Onondaga County Base Map (Infrastructure, Hydro, Parks	1" = 1 mile	NYSOFT	1	2			4	3
Biological								
Breeding Bird Atlas	5km blocks	NYSDEC		2			4	2
NYDEC Master Habitat Database Server	N/A	NYSDEC		2			4	2
NY GAP Analysis Program - Biodiversity Protection	N/A	CORNELL		2			4	2
Wildlife Management Units	1:100,000	NYSDEC		2			4	2
Zebra Mussels - Onondaga Lake Restoration	N/A	USGSBRD		2			4	2
Business								
Community Services Block Grants	N/A	NYSOFT		3				1
Corporations	N/A	NYSOFT		3				1
Wood Using Industries (Mills)	1:100,000	NYSOFT		3				1
Cadastral								
Madison County Tax Assessment Maps	1:4,800	NYSOFT		3				1
Real Property Data (2000,1999,1998,1996)	1:600-9,600	NYSOFT	1	3		3		3
Town Tax Parcel Data	1:100,000	NYSOFT		3	3	3		3
Climate								
Current & Historical Weather Records & Summaries	N/A	NOAA		2		3	3	3
Mean Annual Runoff for the Northeast US, 1951-80	1:1,000,000	USGS		2		3		2
Mean Annual Precip. & Evapotranspiration NE US, 1951-	1:1,000,000	USGS		2		3		2
PRISM Climate Data	0.020833 Lat	OSUSCAS		2		3		2

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Cultural								
Archeological Sites	1:24,000	NYSOFT	3	3		3	4	4
Armories	N/A	NYSOFT		3				1
College and University Locations	1:24,000	NYSOFT	3	3				2
Geographic Landmarks from GNIS	1:24,000	USEPA		3			4	2
Geographic Names Information System (GNIS)	1:24,000	USGS		3		3	4	3
Government Buildings, Churches, and Hospitals from GN	1:24,000	USEPA		3			4	2
Historic Sites	1:24,000	NYSOFT	3	3			4	3
Hospital Locations	N/A	NYSOFT		3				1
Individual County Landmarks from 1995 TIGER Census F	1:100,000	CUGIR		3				1
Individual 1998 County Wide Landmarks - no metadata	N/A	CUGIR						
Individual County Minor Civil Divisions from 1995 TIGER I	1:100,000	CUGIR		3				1
Individual 1998 County Wide Minor Civil Divisions-no met	N/A	CUGIR		3				1
National Register Sites	1:24,000	NYSOFT	3	3			4	3
Nursing Home Locations	N/A	NYSOFT		3				1
Public Library Locations	N/A	NYSOFT		3				1
Public School Locations	N/A	NYSOFT		3				1
Scenic Areas of Statewide Significance - Draft	1:24,000	NYSOFT		3			4	2
School District Boundaries from TIGER Census	1:100,000	USEPA		3				1
School District Boundaries (2000)	1:600-9,600	NYSOFT	3	3				2
School Features from GNIS	1:24,000	USEPA		3				1
Individual County Unified School Districts -1995 TIGER Fi	1:100,000	CUGIR		3				1
Individual 1998 County Wide Unified School Dist.-no meta	N/A	CUGIR		3				1
State-funded Snowmobile Trails	1:24,000	NYSOFT		3				1
State Park Boundaries	1:24,000	NYSOFT	2	3				2
Veteran Hospital Locations	N/A	NYSOFT		3				1
Voting Districts	1:100,000	USEPA		3				1

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Demographics								
Individual County Census Blocks & Block Groups - TIGER	1:100,000	CUGIR		3	4			2
Individual County Wide Blocks & Block Groups - no metad	N/A	CUGIR		3				1
Individual County Census Places & Tracts	1:100,000	CUGIR		3	4			2
Individual County Wide Census Places & Tracts-no metad	N/A	CUGIR		3				1
Census Blocks with 1990 Population	1:100,000	USEPA		3				1
Census Blocks (1995) with selected Demographic Attribut	1:100,000	USEPA		3				1
Census Block 2000	N/A	CENSUS		3			3	2
Census Block Groups w/attributes 2000	N/A	CENSUS		3				1
Census Data 1990	N/A	CENSUS	3	3				2
Census Data 1980	N/A	CENSUS		3				1
Onondaga County Census Tracts (source date unknown)	1" = 1 mile	NYSOFT	2	3			4	3
Populated Places from GNIS	1:24,000	USEPA		3				1
City of Syracuse Census Tracts (source date unknown)	1" = 1/4 mile	NYSOFT	2	3			4	3
Elevation								
7.5-Minute Digital Elevation Model (DEM) - Large Scale	10 meter	CUGIR	3	2	3	1	4	5
30 x 60 Minute Digital Elevation Model - Intermediate Sca	2 arc second	USGS		3	3	3		3
1 x 2 Degree Digital Elevation Model - Small Scale	3 arc second	USGS		2		3		2
National Elevation Dataset (NED)	10 meter	USGS	4	3		3		3
National Elevation Dataset (NED)	30 meter	USGS		3		3		2
Elevation Derivatives (EDNA)	10 meter	USGS		3		4		2
Elevation Derivatives (EDNA)	30 meter	USGS		3		4		2
Geodetic Control Layers								
NYS Plane Coordinate Zones	N/A	NYSOFT		3	3	3		3
NYS Survey Monument Database (includes HARN)	N/A	NYSOFT	3	3		3	4	4

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Geologic								
NYS Bedrock Geology	1:250,000	NYSOFT	3	2	3	4	3	5
Bedrock Geology for Southern Onondaga County	N/A	USGS		2	4			2
Geology (no metadata)	N/A	CUGIR						
Landslide Susceptibility Mapping for Southern Onondaga	N/A	USGS	4	3	4			3
Seismic Hazard Assessment for Onondaga County, NY	N/A	NYSED		3				1
Surficial Geology	1:250,000	NYSOFT	3	2	4		3	4
Surficial Geology for Southern Onondaga County	N/A	USGS		2	4	4		3
Oswego County Surficial Geology	1:24,000	NYSOFT		3	4			2
Ground Water								
Ground Water Atlas of the United States - Principal Aquife	1:2,500,000	USGS		3				1
NYS Aquifers prepared by USGS OFR 82-553	N/A	NYSOFT		3				1
NYS Primary and Sole Source Aquifers	1:24,000	USGSNY		2			4	2
NYS Primary and Sole Source Aquifers	1:250,000	NYSDEC	3	2				2
Public Water Supply Wells	N/A	NYSDOH		2			4	2
Well Logs, Records or Databases - County	N/A	UK		3			4	2
Well Logs, Records or Databases - NYSDOH	N/A	NYSDOH	3	3				2
Hydrography - Surface Water								
Cayuga County Lakes	1:24,000	NYSOFT		2				1
Cayuga County Streams	1:24,000	NYSOFT		2				1
Digital Q3 Flood Zone Datasets by County	Varies	NYSOFT	2	3		3		3
Enhanced River Reach File 1.2	1:500,000	USGS		4				1
Enhanced River Reach File 2.0	1:500,000	USGS		4	3	3		3
National Hydrography Dataset (NHD) - Medium Resolutio	1:100,000	USGS		2		3		2
National Hydrography Dataset (NHD) - High Resolution	1:24,000	USGS		2	2			2
Individual County Hydrography from 1995 TIGER Census	1:100,000	CUGIR		3				1

Appendix 5. (continued) Needs assessment questionnaire summary report, current spatial data usage

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Individual 1998 County Wide Hydrography - no metadata	N/A	CUGIR						
NYS Hydrography	1:100,000	NYSOFT	2	2	3			3
NYS Hydrography	1:250,000	NYSOFT		2				1
NYS Hydrography	1:3,000,000	NYSOFT		2				1
NYS Hydrography (DLG) by Quadrangle	1:24,000	CUGIR		2	2	2		3
NYS Hydrography (DLG) by Hydrologic Unit	1:24,000	NYSDEC		2	2	2	2	4
Hydrology Data (DLG)	1:100,000	USGS		2				1
NYS Hydrography (DLG)	1:2,000,000	CUGIR		2				1
Streams (DLG)	1:2,000,000	USGS		2				1
Onondaga County Flood Plains (FEMA)	1" = 1 mile	NYSOFT	2	2	4		3	4
Onondaga Creek Channel (Historical)	N/A	NYSOFT		2	3			2
Oswego County Flood Hazard Areas (FEMA)	1:24,000	NYSOFT		3				1
Oswego County Principal Aquifers and Public Well Fields	1:24,000	NYSOFT		3				1
River Reach 1	1:250,000	USEPA		4				1
River Reach 3 (Alpha)	1:100,000	USEPA		4				1
USGS Hydrologic Features	1:100,000	NYSOFT		3				1
Imagery								
Digital Orthophoto Quadrangles (DOQ)	1:12,000	USGS		4	2	2	1	4
Miscellaneous Aerial Photos from Federal Agencies	Varies	USGS		4		3		2
National Aerial Photography Program - Color Infrared & B	1:40,000	USGS		4	2	4		3
National High Altitude Aerial Photography Program - CI	1:50,000	USGS		4		4		2
National High Altitude Aerial Photography Program - BW	1:80,000	USGS		4		4		2
Project Specific Imagery (Power Authority)	N/A	NYSOFT				4		1
Statewide Digital Orthoimagery (DOQQs 1994-1999)	1 meter	NYSOFT	2	4	2	2	1	5
Statewide Digital Orthoimagery (DOQQs 2003 Annual Lot	Varies	NYSOFT		4	2	4		3

Appendix 5. (continued) Needs assessment questionnaire summary report, current spatial data usage

Notes: 1) For a list of organizations and key to codes used, see Appendices 10 and 11.
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Usage: 1 = Used continually, 2 = Used frequently, 3 = Used, 4 = Plan to use **Theme Name**	**Scale**	**Available At**	**Onondaga County Current Usage**	**NYSDEC Current Usage**	**USACE - 1 Current Usage**	**USACE - 2 Current Usage**	**TAMS Current Usage**	**Total Number of Users**
Land Use / Land Cover								
Forest Disturbance - 1995 Blowdown	1:24,000	NYSDEC		2				1
Forest Plan Management for Finger Lakes National Fores	1:15,840	NYSOFT		4				1
GIRAS Land Use and Land Cover - Mid 1970's to Mid 198	1:250,000	USGS		3		3		2
National Land Cover Data (NLCD) 1992	30 meter	CUGIR	3	2		3		3
National Land Cover Data (NLCD) 1992	30 meter	NYSOFT		2		3		2
National Land Cover Data 2000 (in process)	30 meter	NYA		4		4		2
Onondaga County Land Use Vision	1" = 1 mile	NYSOFT	3	4			4	3
Oswego County Surface Vegetation	1:24,000	NYSOFT		4				1
Monitoring								
Air Monitoring Stations	N/A	NYSDEC		3				1
IFLOWS Rain Gage Network	N/A	NYSOFT		3				1
National Atmospheric Deposition Program	N/A	USGS		4			3	2
National Water Information System (NWIS) - Ground Wat	1:24,000	USGS		4		3		2
National Water Information System (NWIS) - Surface Wat	1:24,000	USGS		4		3		2
National Water Information System (NWIS) - Water Qualit	1:24,000	USGS		4		3		2
STORET Water Quality Monitoring Locations	N/A	USEPA		4	3		4	3
Suspended Sediment Database	N/A	USGS		4	4	3	4	4
Physiography / Ecoregions								
Ecological Land Type for the Finger Lakes National Fores	1:15,840	NYSOFT		4				1
Level III Ecoregions of the United States	1:250,000	USGS		4				1
NYS Ecozones	N/A	NYSDEC		2			3	2
NYS Physiographic Provinces	N/A	NYSDEC	3	3			3	3
Physical Divisions of United States	1:7,000,000	USGS		4				1

Appendix 5. (continued) Needs assessment questionnaire summary report, current spatial data usage

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Recreation								
NYS Public Boat Launch Sites	1:24,000	NYSOFT	3	3			4	3
Recreational Trails for the Finger Lakes National Forest	N/A	NYSOFT		4				1
Regulated Facilities								
Air Facility Subsystem (AFS) Facilities	N/A	USEPA		3				1
AIR Quality Subsystem (AQS) Monitoring Locations	N/A	USEPA		3				1
EPA Regulated Facilities	Varies	NYSOFT		3	4		4	3
Inactive Hazardous Waste Sites	N/A	NYSOFT	3	2	4		3	4
National Priority List (NPL) - Superfund subset	N/A	USEPA		3	4		3	3
Permit & Compliance System (PCS) Facilities	N/A	USEPA		3			4	2
Resource Conservation & Recovery Act	N/A	USEPA		3			4	2
Superfund (CERCLIS) Facilities	N/A	USEPA		3	4		4	3
Toxic Release Inventory (TRI) Facilities	N/A	USEPA		3			4	2
Soils								
Cayuga County SURGO	1:24,000	NRCS		3		4		2
Cortland County SURGO (uncertified)	1:24,000	CORCNTY		3	3	4		3
Madison County SURGO	1:24,000	NRCS		3		4		2
Madison County SURGO	1:24,000	CUGIR		3		4		2
Onondaga County SURGO (in process)	1:24,000	NRCS	4	4	3	4	4	5
Oswego County SURGO (uncertified)	1:24,000	NYSOFT		3		4		2
STATSGO Soils Data	1:250,000	NRCS		3	3	2		3
STATSGO Derivative Soil Characteristics	1:250,000	USGS		3		2		2
Transportation								
Cayuga County Roads	1:600-4,800	NYSOFT		2				1
Madison County E911 Road Center Lines	1:4,800	NYSOFT		3				1

Appendix 5. (continued) Needs assessment questionnaire summary report, current spatial data usage

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NYS Bridges	1:24,000	NYSOFT	3	3				2
NYS DOT Facilities	1:24,000	NYSOFT		3				1
NYS DOT Towers	1:24,000	NYSOFT		3				1
NYS Multi-use Trails	1:24,000	NYSOFT		3				1
NYS Primary Route System	1:24,000	NYSOFT		3	2			2
NYS Public Airports	1:24,000	NYSOFT	3	3				2
NYS Public Roads: CLASS (n/a if County Base Map exist	1:24,000	NYSOFT		3		3		2
NYS Public Roads: County Base Map	1:24,000	NYSOFT	1	2				2
Individual County Roads from 1995 TIGER Census Files	1:100,000	CUGIR		2				1
Individual 1998 County Wide Roads - no metadata	N/A	CUGIR						
NYS Railroad Lines and Stations	1:100,000	NYSOFT	1	3	3			3
Individual County Railroads from 1995 TIGER Census Fil	1:100,000	CUGIR		3				1
Individual 1998 County Wide Railroads - no metadata	N/A	CUGIR						
NYS Rest Areas	1:24,000	NYSOFT		3				1
NYS Route Shields and Numbers	1:250,000	NYSOFT		3				1
NYS Statewide Names	1:250,000	NYSOFT		3				1
NYS Thruway Route System	1:8,000	NYSOFT		3				1
NYS Thruway Toll Plazas	1:24,000	NYSOFT		3				1
NYS Thruway Bridges	1:24,000	NYSOFT		3				1
NYS Thruway Exits	1:24,000	NYSOFT		3				1
NYS Thruway Services Areas	1:24,000	NYSOFT		3				1
NYS Transportation (DLG)	1:2,000,000	CUGIR		3			1	2
Onondaga County Highway Functional & Jurisdictional Cl	1" = 1 mile	NYSOFT	3	3				2
Rail Lines from USGS Maps	1:100,000	NYSOFT		3			1	2
Railroads from 1990 TIGER Files	1:100,000	USEPA		3				1
Roads Data from 1995 TIGER Files	1:100,000	USEPA		3				1
Utilities								
Electric Company Franchise Areas	N/A	NYSOFT						
Electric Transmission Lines	N/A	NYSOFT	3					1

Appendix 5. (continued) Needs assessment questionnaire summary report, current spatial data usage

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Empire and Iroquois Lines	N/A	NYSOFT						
Gas Company Franchise Areas	N/A	NYSOFT						
Gas Transmission Lines	N/A	NYSOFT	3					1
Nuclear Power Plants, etc.	1:100,000	NYSOFT						
Oswego County Sewer Districts	1:24,000	NYSOFT						
Oswego County Water Districts	1:24,000	NYSOFT						
Watersheds								
Hydrologic Unit Boundaries - 11-digit	1:24,000	NRCS		2	2	4		3
Hydrologic Unit Boundaries - 11-digit	1:24,000	NYSDEC		2	2	4	3	4
NY Basin Polygons	1:24,000	USGS		4	3	4		3
Watershed Boundary Dataset (WBD) - proposed	1:24,000	NYA		4				1
Hydrologic Unit Boundaries - 8-digit	1:250,000	USGS		2		3		2
Water Use								
Water Use	N/A	USGS		4			4	2
Wetlands								
Individual County NYSDEC Regulatory Freshwater Wetla	1:24,000	CUGIR	2	2		3		3
NYS DEC Regulatory Freshwater Wetlands	1:24,000	NYSDEC		2	3	3	2	4
National Wetlands Inventory	1:24,000	USFWS	3	3	3	3	2	5
Oswego County State Regulated Wetlands	1:24,000	NYSOFT		3				1

Appendix 6. Needs Assessment Questionnaire Summary Report, Requested Spatial Data for the Onondaga Lake Partnership (OLP) Geographic Information System (GIS) library

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Theme Name	Scale	OLP Spatial Extent	Originator	Available At	Use Policy	Onondaga County OLP GIS Library	NYSDEC OLP GIS Library	USACE - 1 OLP GIS Library	Total Number of Requests
Administrative									
County Boundaries - NYS Shoreline Version	1:24,000	C	NYSDOT	NYSOFT	CP	Y	Y	Y	3
County Boundaries from 1990 TIGER Precensus Files	1:100,000	C	USGS	USGS	PA				
County Boundaries from 1995 TIGER Census Files	1:100,000	C	CENSUS	USEPA	PA			Y	1
County Boundaries (DLG)	1:2,000,000	C	USGS	USGS	PA		Y		1
Individual County Boundaries from 1995 TIGER Census Files	1:100,000	C	CENSUS	CUGIR	PA			Y	1
Individual 1998 County Boundaries - no metadata	N/A	C	N/A	CUGIR	PA				
Cayuga County Municipalities	1:600-4,800	P	CAYCNTY	NYSOFT	PA				
Congressional Districts	1:100,000	C	NYSESD	NYSOFT	NYA			Y	1
Cortland County Election Districts (1990)	N/A	P	CORCNTY	NYSOFT	PA				
Cortland County Legislative Districts (1990)	N/A	P	CORCNTY	NYSOFT	PA				
Cortland County Zoning	Varies	P	CORCNTY	NYSOFT	PA			Y	1
Individual 1998 County Wide Election Districts- no metadata	N/A	C	N/A	CUGIR	PA				
Emergency Operation Centers	N/A	C	NYSEMO	NYSOFT	PA				
Native American Land Boundaries	1:100,000	C	CENSUS	USEPA	PA		Y	Y	2
NYSDEC Regions	N/A	C	NYSDEC	NYSDEC	PA		Y	Y	2
NYSDOT Regions	1:2,000,000	C	NYSDOT	NYSDOT	PA				
NYS Boundary from 1995 TIGER Census Files	1:100,000	C	CENSUS	USEPA	PA				
NYS Civil and Public Land Boundaries	1:24,000	C	NYSDOT	NYSOFT	CP	Y	Y	Y	3
NYS County Seats	1:24,000	C	NYSDOT	NYSOFT	CP				
NYS DOT Residency Boundaries	1:24,000	C	NYSDOT	NYSOFT	CP				
NYS Executive - Local Government Officials	N/A	C	NYSDOS	NYSOFT	PA				
NYS Federal-Aid Urban Area Boundaries	1:24,000	C	NYSDOT	NYSOFT	CP	Y	Y	Y	3
NYS Local Laws	N/A	C	NYSDOS	NYSOFT	PA		Y		1
NYS Political and Administrative Boundaries (DLG)	1:2,000,000	C	USGS	CUGIR	PA		Y	Y	2
NYS Small Public Land Sites	1:24,000	C	NYSDOT	NYSOFT	CP		Y	Y	2
NYS Unincorporated Place Points	1:24,000	C	NYSDOT	NYSOFT	CP				
Onondaga County Fire Districts	1" = 1 mile	P	ONOCNTY	NYSOFT	PA				
Onondaga County Legislative Districts	1" = 1 mile	P	ONOCNTY	NYSOFT	PA	Y		Y	2
State Land Unit Boundaries	1:24,000	C	NYSDEC	NYSDEC	PA		Y	Y	2
City of Syracuse Common Council Districts	1" = 1/4 mile	P	ONOCNTY	NYSOFT	PA	Y		Y	2
Zip Code Boundaries	N/A	C	USPS	USEPA	PA	Y			1
Zip Code Boundaries - ESRI data and maps	N/A	C	USPS	ESRI	LA				
Zip Code Points - ESRI data and maps	N/A	C	USPS	ESRI	LA				
Water and Sewer Districts	N/A	UK	UK	UK	UK	Y	Y	Y	3

Appendix 6. (continued) Needs Assessment Questionnaire Summary Report, Requested Spatial Data for the Onondaga Lake Partnership (OLP) Geographic Information System (GIS) library

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Agricultural									
Agricultural Chemical Use & Cropping Practices	1:2,000,000	C	USDCCA	USGS	PA	Y	Y	Y	3
Agricultural Pesticide Use by Agricultural Land Classes	1:2,000,000	C	USDCCA	USDCCA	PA	Y	Y	Y	3
Agricultural Pesticide Use by Crop	1:2,000,000	C	USDCCA	USDCCA	PA	Y	Y	Y	3
Animal Population and Manure by County	1:2,000,000	C	NASS	NASS	PA	Y	Y	Y	3
Crops Harvested & Planted, Cropping Practices, & Ag Info	1:2,000,000	C	NASS	NASS	PA	Y	Y	Y	3
Major, Minor, or Specialty Crop Group by County	1:2,000,000	C	USDCCA	USDCCA	PA	Y	Y	Y	3
Harvested Cropland, Orchard, Vineyard & Pasture Acreage	1:2,000,000	C	USDCCA	USDCCA	PA	Y	Y	Y	3
Fertilizer Sales by County	1:2,000,000	C	USDABC	USDABC	PA	Y	Y		2
Nitrogen & Phosphorus Fertilizer Use by County	1:2,000,000	C	USDA	USGS	PA	Y	Y	Y	3
Individual County Agricultural Districts	1:24,000	C	CIRIS	CUGIR	PA	Y	Y	Y	3
NY Agricultural Boundaries	1:24,000	C	NYSDAM	NYSOFT	PA	Y	Y	Y	3
Basemaps									
7.5 Minute Quadrangle Boundaries	1:24,000	C	SUNYESF	NYSOFT	PA				
7.5 Minute Quadrangle Boundaries	1:24,000	C	USGS	USGS	PA	Y	Y	Y	3
30 x 60 Minute Quadrangle Boundaries	1:100,000	C	USGS	USGS	PA		Y	Y	2
Digital Raster Graphics Quadrangles	1:24,000	C	USGS	CUGIR	SR		Y	Y	2
Digital Raster Graphics Quadrangles	1:24,000	C	USGS	NYSOFT	SR	Y	Y		2
Digital Raster Graphics - Image Catalog	1:24,000	C	USGS	NYSDEC	UK		Y	Y	2
Digital Raster Graphics Quadrangles	1:100,000	C	USGS	NYSOFT	PA	Y	Y	Y	3
Digital Raster Graphics - Image Catalog	1:100,000	C	USGS	NYSDEC	UK		Y	Y	2
Digital Raster Graphics Quadrangles	1:250,000	C	USGS	NYSOFT	PA	Y	Y		2
Digital Raster Graphics - Image Catalog	1:250,000	C	USGS	NYSDEC	UK		Y		1
National Geographic Society Digital Maps	Varies	C	NGS	NGS	LA	Y	Y		2
NYS County Images	1:250,000	C	NYSDOT	NYSOFT	CP	Y	Y	Y	3
NYS DOT Quadrangle Index	N/A	C	NYSDOT	NYSOFT	PA			Y	1
NYS Raster Quadrangles - Color & BW	1:24,000	P/C	NYSDOT	NYSOFT	SR	Y		Y	2
Onondaga County Base Map (Infrastructure, Hydro, Parks)	1" = 1 mile	P	ONOCNTY	NYSOFT	PA	Y	Y	Y	3
Biological									
Breeding Bird Atlas	5km blocks	C	NYSDEC	NYSDEC	PA	Y	Y		2
NYDEC Master Habitat Database Server	N/A	P/C	NYSDEC	NYSDEC	UK	Y	Y		2
NY GAP Analysis Program - Biodiversity Protection	N/A	P/C	Partnership	CORNELL	PA	Y	Y		2
Wildlife Management Units	1:100,000	C	NYSDEC	NYSDEC	PA		Y	Y	2
Zebra Mussels - Onondaga Lake Restoration	N/A	P/C	USGSBRD	USGSBRD	PA	Y	Y	Y	3

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Business									
Community Services Block Grants	N/A	C	NYSDOS	NYSOFT	PA				
Corporations	N/A	C	NYSDOS	NYSOFT	PA	Y		Y	2
Wood Using Industries (Mills)	1:100,000	C	SUNYESF	NYSOFT	PA			Y	1
Cadastral									
Madison County Tax Assessment Maps	1:4,800	P	MADCNTY	NYSOFT	PA				
Real Property Data (2000,1999,1998,1996)	1:600-9,600	C	NYSORPS	NYSOFT	PA	Y			1
Town Tax Parcel Data	1:100,000	P/C	SUNYESF	NYSOFT	PA			Y	1
Climate									
Current & Historical Weather Records & Summaries	N/A	C	NOAA	NOAA	PA	Y		Y	2
Mean Annual Runoff for the Northeast US, 1951-80	1:1,000,000	C	USGS	USGS	PA	Y	Y	Y	3
Mean Annual Precip. & Evapotranspiration NE US, 1951-80	1:1,000,000	C	USGS	USGS	PA	Y	Y	Y	3
PRISM Climate Data	0.020833 Lat	C	OSUSCAS	OSUSCAS	LA	Y		Y	2
Cultural									
Archeological Sites	1:24,000	C	NYSPRHP	NYSOFT	PA	Y	Y	Y	3
Armories	N/A	C	NYSMNA	NYSOFT	PA				
College and University Locations	1:24,000	C	NYSED	NYSOFT	PA				
Geographic Landmarks from GNIS	1:24,000	C	USGS	USEPA	ND				
Geographic Names Information System (GNIS)	1:24,000	C	USGS	USGS	PA			Y	1
Government Buildings, Churches, and Hospitals from GNIS	1:24,000	C	USGS	USEPA	ND				
Historic Sites	1:24,000	C	NYSPRHP	NYSOFT	PA		Y		1
Hospital Locations	N/A	C	NYSDOH	NYSOFT	PA				
Individual County Landmarks from 1995 TIGER Census Files	1:100,000	C	CENSUS	CUGIR	PA				
Individual 1998 County Wide Landmarks - no metadata	N/A	C	N/A	CUGIR	PA				
Individual County Minor Civil Divisions from 1995 TIGER Files	1:100,000	C	CENSUS	CUGIR	PA			Y	1
Individual 1998 County Wide Minor Civil Divisions-no metadata	N/A	C	N/A	CUGIR	PA				
National Register Sites	1:24,000	C	NYSPRHP	NYSOFT	PA				
Nursing Home Locations	N/A	C	NYSDOH	NYSOFT	PA				
Public Library Locations	N/A	C	NYSED	NYSOFT	PA				
Public School Locations	N/A	C	NYSED	NYSOFT	PA				
Scenic Areas of Statewide Significance - Draft	1:24,000	C	NYSDOS	NYSOFT	PA			Y	1

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School District Boundaries from TIGER Census	1:100,000	C	CENSUS	USEPA	ND				
School District Boundaries (2000)	1:600-9,600	C	NYSORPS	NYSOFT	PA		Y	Y	2
School Features from GNIS	1:24,000	C	USGS	USEPA	ND				
Individual County Unified School Districts -1995 TIGER Files	1:100,000	C	CENSUS	CUGIR	PA				
Individual 1998 County Wide Unified School Dist.-no metadata	N/A	C	N/A	CUGIR	PA				
State-funded Snowmobile Trails	1:24,000	C	NYSPRHP	NYSOFT	PA		Y	Y	2
State Park Boundaries	1:24,000	C	NYSPRHP	NYSOFT	PA	Y	Y	Y	3
Veteran Hospital Locations	N/A	C	NYSDOH	NYSOFT	PA				
Voting Districts	1:100,000	C	CENSUS	USEPA	ND				
Demographics									
Individual County Census Blocks & Block Groups - TIGER	1:100,000	C	CENSUS	CUGIR	PA			Y	1
Individual County Wide Blocks & Block Groups - no metadata	N/A	C	CENSUS	CUGIR	PA				
Individual County Census Places & Tracts	1:100,000	C	CENSUS	CUGIR	PA			Y	1
Individual County Wide Census Places & Tracts-no metadata	N/A	C	CENSUS	CUGIR	PA				
Census Blocks with 1990 Population	1:100,000	C	CENSUS	USEPA	ND				
Census Blocks (1995) with selected Demographic Attributes	1:100,000	C	CENSUS	USEPA	ND			Y	1
Census Block 2000	N/A	C	CENSUS	CENSUS	PA				
Census Block Groups w/attributes 2000	N/A	C	CENSUS	CENSUS	PA		Y	Y	2
Census Data 1990	N/A	C	CENSUS	CENSUS	PA	Y		Y	2
Census Data 1980	N/A	C	CENSUS	CENSUS	PA			Y	1
Onondaga County Census Tracts (source date unknown)	1" = 1 mile	P	ONOCNTY	NYSOFT	PA	Y	Y		2
Populated Places from GNIS	1:24,000	C	USGS	USEPA	ND				
City of Syracuse Census Tracts (source date unknown)	1" = 1/4 mile	P	ONOCNTY	NYSOFT	PA	Y	Y		2
Elevation									
7.5-Minute Digital Elevation Model (DEM) - Large Scale	10 meter	C	USGS	CUGIR	PA	Y	Y	Y	3
30 x 60 Minute Digital Elevation Model - Intermediate Scale	2 arc second	C	USGS	USGS	PA		Y	Y	2
1 x 2 Degree Digital Elevation Model - Small Scale	3 arc second	C	USGS	USGS	PA		Y		1
National Elevation Dataset (NED)	10 meter	C	USGS	USGS	PA	Y			1
National Elevation Dataset (NED)	30 meter	C	USGS	USGS	PA				
Elevation Derivatives (EDNA)	10 meter	C	USGS	USGS	NYA				
Elevation Derivatives (EDNA)	30 meter	C	USGS	USGS	NYA				

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Geodetic Control Layers									
NYS Plane Coordinate Zones	N/A	C	NYSOGS	NYSOFT	PA		Y	Y	2
NYS Survey Monument Database (includes HARN)	N/A	C	NYSDOT	NYSOFT	PA		Y	Y	2
Geologic									
NYS Bedrock Geology	1:250,000	C	NYSED	NYSOFT	PA	Y	Y	Y	3
Bedrock Geology for Southern Onondaga County	N/A	P	USGS	USGS	PA	Y	Y	Y	3
Geology (no metadata)	N/A	C	UK	CUGIR	PA				
Landslide Susceptibility Mapping for Southern Onondaga Cnty	N/A	P	USGS	USGS	PA	Y	Y	Y	3
Seismic Hazard Assessment for Onondaga County, NY	N/A	P	NYSED	NYSED	PA	Y	Y		2
Surficial Geology	1:250,000	C	NYSED	NYSOFT	PA	Y	Y	Y	3
Surficial Geology for Southern Onondaga County	N/A	P	USGS	USGS	PA	Y	Y	Y	3
Oswego County Surficial Geology	1:24,000	P	OSWCNTY	NYSOFT	PA			Y	1
Ground Water									
Ground Water Atlas of the United States - Principal Aquifer	1:2,500,000	C	USGS	USGS	PA				
NYS Aquifers prepared by USGS OFR 82-553	N/A	C	NYSDOH	NYSOFT	PA			Y	1
NYS Primary and Sole Source Aquifers	1:24,000	C	USGSNY	USGSNY	UK	Y	Y	Y	3
NYS Primary and Sole Source Aquifers	1:250,000	C	USGSNY	NYSDEC	PA	Y	Y		2
Public Water Supply Wells	N/A	P/C	NYSDOH	NYSDOH	SR	Y	Y	Y	3
Well Logs, Records or Databases - County	N/A	P/C	UK	UK	UK		Y	Y	2
Well Logs, Records or Databases - NYSDOH	N/A	P/C	NYSDOH	NYSDOH	UK	Y	Y	Y	3
Hydrography - Surface Water									
Cayuga County Lakes	1:24,000	P	CAYCNTY	NYSOFT	PA		Y	Y	2
Cayuga County Streams	1:24,000	P	CAYCNTY	NYSOFT	PA		Y	Y	2
Digital Q3 Flood Zone Datasets by County	Varies	C	FEMA	NYSOFT	PA	Y			1
Enhanced River Reach File 1.2	1:500,000	C	USGS	USGS	PA		Y		1
Enhanced River Reach File 2.0	1:500,000	C	USGS	USGS	PA		Y	Y	2
National Hydrography Dataset (NHD) - Medium Resolution	1:100,000	C	USGS/EPA	USGS	PA		Y		1
National Hydrography Dataset (NHD) - High Resolution	1:24,000	C	USGS/EPA	USGS	PA	Y	Y	Y	3
Individual County Hydrography from 1995 TIGER Census Files	1:100,000	C	CENSUS	CUGIR	PA				
Individual 1998 County Wide Hydrography - no metadata	N/A	C	N/A	CUGIR	PA				
NYS Hydrography	1:100,000	C	NYSDOT	NYSOFT	CP	Y	Y	Y	3
NYS Hydrography	1:250,000	C	NYSDOT	NYSOFT	CP		Y		1

Appendix 6. (continued) Needs Assessment Questionnaire Summary Report, Requested Spatial Data for the Onondaga Lake Partnership (OLP) Geographic Information System (GIS) library

Notes: 1) For a list of organizations and key to codes used, see Appendices 10 and 11.

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Theme Name	Scale	OLP Spatial Extent	Originator	Available At	Use Policy	Onondaga County OLP GIS Library	NYSDEC OLP GIS Library	USACE - 1 OLP GIS Library	Total Number of Requests
NYS Hydrography	1:3,000,000	C	NYSDOT	NYSOFT	CP		Y		1
NYS Hydrography (DLG) by Quadrangle	1:24,000	C	NYSDEC	CUGIR	PA	Y	Y	Y	3
NYS Hydrography (DLG) by Hydrologic Unit	1:24,000	C	NYSDEC	NYSDEC	PA	Y	Y	Y	3
Hydrology Data (DLG)	1:100,000	C	USGS	USGS	PA		Y		1
NYS Hydrography (DLG)	1:2,000,000	C	USGS	CUGIR	PA		Y		1
Streams (DLG)	1:2,000,000	C	USGS	USGS	PA		Y		1
Onondaga County Flood Plains (FEMA)	1" = 1 mile	P	ONOCNTY	NYSOFT	PA	Y	Y	Y	3
Onondaga Creek Channel (Historical)	N/A	P	ASLF	NYSOFT	PA		Y	Y	2
Oswego County Flood Hazard Areas (FEMA)	1:24,000	P	OSWCNTY	NYSOFT	PA		Y		1
Oswego County Principal Aquifers and Public Well Fields	1:24,000	P	OSWCNTY	NYSOFT	PA		Y	Y	2
River Reach 1	1:250,000	C	Partnership	USEPA	PA		Y		1
River Reach 3 (Alpha)	1:100,000	C	USEPA	USEPA	PA		Y		1
USGS Hydrologic Features	1:100,000	P/C	SUNYESF	NYSOFT	PA		Y	Y	2
Imagery									
Digital Orthophoto Quadrangles (DOQ)	1:12,000	P/C	USGS	USGS	SR	Y	Y	Y	3
Miscellaneous Aerial Photos from Federal Agencies	Varies	P/C	USGS	USGS	SR	Y	Y		2
National Aerial Photography Program - Color Infrared & BW	1:40,000	P/C	USGS	USGS	SR	Y	Y	Y	3
National High Altitude Aerial Photography Program - CI	1:50,000	P/C	USGS	USGS	SR	Y	Y		2
National High Altitude Aerial Photography Program - BW	1:80,000	P/C	USGS	USGS	SR	Y	Y		2
Project Specific Imagery (Power Authority)	N/A	NYA	NYSPA	NYSOFT	SR				
Statewide Digital Orthoimagery (DOQQs 1994-1999)	1 meter	C	NYSOFT	NYSOFT	SR	Y	Y	Y	3
Statewide Digital Orthoimagery (DOQQs 2003 Annual Lot)	Varies	C	NYSOFT	NYSOFT	SR	Y	Y	Y	3
Land Use / Land Cover									
Forest Disturbance - 1995 Blowdown	1:24,000	P/C	NYSDEC	NYSDEC	UK		Y		1
Forest Plan Management for Finger Lakes National Forest	1:15,840	P/C	USFS	NYSOFT	PA		Y		1
GIRAS Land Use and Land Cover - Mid 1970's to Mid 1980's	1:250,000	C	USGS	USGS	PA			Y	1
National Land Cover Data (NLCD) 1992	30 meter	C	MRLCC	CUGIR	PA	Y	Y		2
National Land Cover Data (NLCD) 1992	30 meter	C	MRLCC	NYSOFT	PA		Y	Y	2
National Land Cover Data 2000 (in process)	30 meter	C	MRLCC	NYA	NYA	Y	Y	Y	3
Onondaga County Land Use Vision	1" = 1 mile	P	ONOCNTY	NYSOFT	PA		Y	Y	2
Oswego County Surface Vegetation	1:24,000	P	OSWCNTY	NYSOFT	PA		Y	Y	2

Appendix 6. (continued) Needs Assessment Questionnaire Summary Report, Requested Spatial Data for the Onondaga Lake Partnership (OLP) Geographic Information System (GIS) library

Notes: 1) For a list of organizations and key to codes used, see Appendices 10 and 11.

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Theme Name	Scale	OLP Spatial Extent	Originator	Available At	Use Policy	Onondaga County OLP GIS Library	NYSDEC OLP GIS Library	USACE - 1 OLP GIS Library	Total Number of Requests
Monitoring									
Air Monitoring Stations	N/A	P/C	NYSDEC	NYSDEC	UK	Y		Y	2
IFLOWS Rain Gage Network	N/A	P/C	NYSEMO	NYSOFT	PA	Y		Y	2
National Atmospheric Deposition Program	N/A	C	Partnership	USGS	PA	Y	Y	Y	3
National Water Information System (NWIS) - Ground Water	1:24,000	C	USGS	USGS	PA	Y	Y	Y	3
National Water Information System (NWIS) - Surface Water	1:24,000	C	USGS	USGS	PA	Y	Y	Y	3
National Water Information System (NWIS) - Water Quality	1:24,000	C	USGS	USGS	PA	Y	Y	Y	3
STORET Water Quality Monitoring Locations	N/A	C	USEPA	USEPA	PA	Y	Y	Y	3
Suspended Sediment Database	N/A	P/C	USGS	USGS	PA	Y	Y	Y	3
Physiography / Ecoregions									
Ecological Land Type for the Finger Lakes National Forest	1:15,840	P/C	USFS	NYSOFT	PA		Y		1
Level III Ecoregions of the United States	1:250,000	C	USEPA	USGS	PA		Y		1
NYS Ecozones	N/A	C	NYSDEC	NYSDEC	UK		Y	Y	2
NYS Physiographic Provinces	N/A	C	NYSDEC	NYSDEC	UK	Y		Y	2
Physical Divisions of United States	1:7,000,000	C	USGS	USGS	PA		Y		1
Recreation									
NYS Public Boat Launch Sites	1:24,000	C	NYSDOT	NYSOFT	CP				
Recreational Trails for the Finger Lakes National Forest	N/A	P/C	USFS	NYSOFT	PA		Y	Y	2
Regulated Facilities									
Air Facility Subsystem (AFS) Facilities	N/A	C	USEPA	USEPA	PA	Y	Y		2
AIR Quality Subsystem (AQS) Monitoring Locations	N/A	C	USEPA	USEPA	PA	Y	Y		2
EPA Regulated Facilities	Varies	C	USEPA	NYSOFT	PA	Y	Y	Y	3
Inactive Hazardous Waste Sites	N/A	C	NYSDEC	NYSOFT	PA	Y	Y	Y	3
National Priority List (NPL) - Superfund subset	N/A	C	USEPA	USEPA	PA	Y	Y	Y	3
Permit & Compliance System (PCS) Facilities	N/A	C	USEPA	USEPA	PA	Y	Y		2
Resource Conservation & Recovery Act	N/A	C	USEPA	USEPA	PA	Y	Y		2
Superfund (CERCLIS) Facilities	N/A	C	USEPA	USEPA	PA	Y	Y	Y	3
Toxic Release Inventory (TRI) Facilities	N/A	C	USEPA	USEPA	PA	Y	Y	Y	3
Soils									
Cayuga County SURGO	1:24,000	P	NRCS	NRCS	PA		Y		1
Cortland County SURGO (uncertified)	1:24,000	P	NRCS	CORCNTY	UK	Y		Y	2

Appendix 6. (continued) Needs Assessment Questionnaire Summary Report, Requested Spatial Data for the Onondaga Lake Partnership (OLP) Geographic Information System (GIS) library

Notes: 1) For a list of organizations and key to codes used, see Appendices 10 and 11.

2) This document was prepared by USGS for the Onondaga Lake Partnership. The information given herein should be considered provisional and subject to revision.

Theme Name	Scale	OLP Spatial Extent	Originator	Available At	Use Policy	Onondaga County OLP GIS Library	NYSDEC OLP GIS Library	USACE - 1 OLP GIS Library	Total Number of Requests
Madison County SURGO	1:24,000	P	NRCS	NRCS	PA		Y		1
Madison County SURGO	1:24,000	P	NRCS	CUGIR	PA				
Onondaga County SURGO (in process)	1:24,000	P	NRCS	NRCS	NYA	Y	Y	Y	3
Oswego County SURGO (uncertified)	1:24,000	P	OSWCNTY	NYSOFT	PA		Y		1
STATSGO Soils Data	1:250,000	C	NRCS	NRCS	PA			Y	1
STATSGO Derivative Soil Characteristics	1:250,000	C	NRCS	USGS	PA			Y	1
Transportation									
Cayuga County Roads	1:600-4,800	P/C	CAYCNTY	NYSOFT	PA		Y	Y	2
Madison County E911 Road Center Lines	1:4,800	P	MADCNTY	NYSOFT	PA				
NYS Bridges	1:24,000	C	NYSDOT	NYSOFT	PA		Y		1
NYS DOT Facilities	1:24,000	C	NYSDOT	NYSOFT	CP		Y		1
NYS DOT Towers	1:24,000	C	NYSDOT	NYSOFT	CP				
NYS Multi-use Trails	1:24,000	C	NYSDOT	NYSOFT	CP		Y	Y	2
NYS Primary Route System	1:24,000	C	NYSDOT	NYSOFT	CP		Y	Y	2
NYS Public Airports	1:24,000	C	NYSDOT	NYSOFT	CP/SR				
NYS Public Roads: CLASS (n/a if County Base Map exists)	1:24,000	P/C	NYSDOT	NYSOFT	PA		Y	Y	2
NYS Public Roads: County Base Map	1:24,000	P/C	NYSDOT	NYSOFT	CP	Y	Y	Y	3
Individual County Roads from 1995 TIGER Census Files	1:100,000	C	CENSUS	CUGIR	PA				
Individual 1998 County Wide Roads - no metadata	N/A	C	N/A	CUGIR	PA			Y	1
NYS Railroad Lines and Stations	1:100,000	C	NYSDOT	NYSOFT	CP	Y	Y	Y	3
Individual County Railroads from 1995 TIGER Census Files	1:100,000	C	CENSUS	CUGIR	PA				
Individual 1998 County Wide Railroads - no metadata	N/A	C	N/A	CUGIR	PA				
NYS Rest Areas	1:24,000	C	NYSDOT	NYSOFT	CP		Y		1
NYS Route Shields and Numbers	1:250,000	C	NYSDOT	NYSOFT	CP			Y	1
NYS Statewide Names	1:250,000	C	NYSDOT	NYSOFT	CP				
NYS Thruway Route System	1:8,000	C	NYSTA	NYSOFT	PA		Y	Y	2
NYS Thruway Toll Plazas	1:24,000	C	NYSTA	NYSOFT	PA				
NYS Thruway Bridges	1:24,000	C	NYSTA	NYSOFT	PA				
NYS Thruway Exits	1:24,000	C	NYSTA	NYSOFT	PA			Y	1
NYS Thruway Services Areas	1:24,000	C	NYSTA	NYSOFT	PA				
NYS Transportation (DLG)	1:2,000,000	C	USGS	CUGIR	PA			Y	1
Onondaga County Highway Functional & Jurisdictional Classes	1" = 1 mile	P	ONOCNTY	NYSOFT	PA				
Rail Lines from USGS Maps	1:100,000	C	SUNYESF	NYSOFT	PA			Y	1
Railroads from 1990 TIGER Files	1:100,000	C	CENSUS	USEPA	NA				
Roads Data from 1995 TIGER Files	1:100,000	C	CENSUS	USEPA	NA			Y	1

Appendix 6. (continued) Needs Assessment Questionnaire Summary Report, Requested Spatial Data for the Onondaga Lake Partnership (OLP) Geographic Information System (GIS) library

Notes: 1) For a list of organizations and key to codes used, see Appendices 10 and 11.

2) This document was prepared by USGS for the Onondaga Lake Partnership. The information given herein should be considered provisional and subject to revision.

Theme Name	Scale	OLP Spatial Extent	Originator	Available At	Use Policy	Onondaga County OLP GIS Library	NYSDEC OLP GIS Library	USACE - 1 OLP GIS Library	Total Number of Requests
Utilities									
Electric Company Franchise Areas	N/A	C	NYSPSC	NYSOFT	PA				
Electric Transmission Lines	N/A	C	NYSPSC	NYSOFT	PA	Y		Y	2
Empire and Iroquois Lines	N/A	C	NYSPSC	NYSOFT	PA			Y	1
Gas Company Franchise Areas	N/A	C	NYSPSC	NYSOFT	PA				
Gas Transmission Lines	N/A	C	NYSPSC	NYSOFT	PA	Y		Y	2
Nuclear Power Plants, etc.	1:100,000	C	NYSEMO	NYSOFT	SR			Y	1
Oswego County Sewer Districts	1:24,000	P	OSWCNTY	NYSOFT	PA				
Oswego County Water Districts	1:24,000	P	OSWCNTY	NYSOFT	PA				
Watersheds									
Hydrologic Unit Boundaries - 11-digit	1:24,000	C	NRCS	NRCS	PA	Y	Y	Y	3
Hydrologic Unit Boundaries - 11-digit	1:24,000	C	NYSDEC	NYSDEC	PA	Y	Y	Y	3
NY Basin Polygons	1:24,000	C	USGS	USGS	PA	Y	Y	Y	3
Watershed Boundary Dataset (WBD) - proposed	1:24,000	C	NRCS/USGS	NYA	NYA	Y	Y	Y	3
Hydrologic Unit Boundaries - 8-digit	1:250,000	C	USGS	USGS	PA		Y		1
Water Use									
Water Use	N/A	C	USGS	USGS	PA	Y	Y	Y	3
Wetlands									
Individual County NYSDEC Regulatory Freshwater Wetlands	1:24,000	C	NYSDEC	CUGIR	PA	Y	Y	Y	3
NYS DEC Regulatory Freshwater Wetlands	1:24,000	C	NYSDEC	NYSDEC	UK		Y	Y	2
National Wetlands Inventory	1:24,000	P/C	USFWS	USFWS	PA	Y	Y	Y	3

Appendix 7. Needs assessment questionnaire summary report – additional questionnaire responses

Needs Assessment Questionnaire for the Onondaga Lake Watershed Geographic Information System Project

Responses of William E. Kowalewski to Questions E1 and E2 of Questionnaire

1. **Are there any digital GIS products or applications, currently unavailable in your organization that would contribute to or enhance your organization's management or science activities within the Onondaga Lake Watershed? Please provide a description for each including the necessary source materials.**

- Location, footprint, and status of projects within the scope of the Onondaga Lake Partnership (projects to restore, preserve, or enhance Onondaga Lake and its surrounding watershed) being conducted by OLP partners and member agencies.
  - -- Onondaga County ACJ projects
  - -- NYS DEC contaminated site remediation projects
  - -- USACE and USEPA projects through the OLP
  - -- Other projects by partners/members or their parent organizations
  - -- Sampling sites, monitoring wells, buoys, surveying benchmarks…

- Location, footprint, and status of major projects in and around Onondaga Lake and watershed, being conducted by others, potentially having some inter-relationship OLP projects (opportunities, conflicts, duplication, mutual benefit…)
  - -- Destiny USA Mall Expansion
  - -- Lakefront Development Corp Projects
  - -- City of Syracuse redevelopment
  - -- DOT (State, County, Federal) transportation projects

- Areas of concern
  - -- Onondaga Nation – culturally sensitive areas, burial sites, contamination…
  - -- Sensitive/protected ecosystems & habitat
  - -- Flood plain, wetlands
  - -- Property ownership, rights of way
  - -- Major infrastructure (horizontal and vertical locations, sizes, capacities…)

- If met, all of these needs could greatly help in one of the partnership's major functions – to monitor, facilitate, coordinate, and promote lake and watershed improvement projects. Sharing existing project status and planning future projects are two major objectives under this function.

2. **Are there any particular features or attributes you would like to see built into any proposed GIS product listed in Question 1?**

- Internet access by the primary audience (OLP partners and members)
- Internet access by secondary audience (public) only after the primary audience needs are met, tested, and proven
- If possible – a tiered structure based upon a user's data requirements and GIS skills. Provide some standard queries to answer "frequently asked questions" about the Onondaga Watershed. Provide some capability for the user to turn-on/off layers of data.
- Ease of use. Make interface with users as simple as possible. Provide a link to a GIS glossary of terms to help explain various attributes. Provide a link to a set of instructions for various functions.

Appendix 8. Minutes from the May 28, 2003 Onondaga Lake Partnership (OLP) Geographic Information System (GIS) Planning Committee Meeting

Minutes from the Onondaga Lake Partnership GIS Planning Committee Meeting

May 28, 2003, Onondaga County Metro Plant Offices, Syracuse NY

Present: Marc Graham, USACE
Elizabeth Coyle, NYSDEC
Carrie VanDerhoof, Onondaga County Water and Environment Protection
Don Jordan, Syracuse-Onondaga County Planning Agency
Edward Hart, Syracuse-Onondaga County Planning Agency
Doug Freehafer, USGS
Oliver Pierson, USGS

Absent: Lawrence Rinaldo, EPA Region 2
William Kowalewski, USACE
Glen Mihal, City of Syracuse
Martin Davis, City of Syracuse

Needs Assessment Questionnaire Summary Report Review

The GIS Committee reviewed the draft of the report from the needs assessment process. The following comments and suggestions were provided, and the final version of the report will be updated accordingly:

- The Syracuse-Onondaga County Planning Agency is switching from a UNIX to PC hardware platform by the end of the year.
- An important use for spatial data that was omitted in the draft is “Land-Use Planning Applications.”
- The Syracuse-Onondaga County Planning Agency plans to outsource development and hosting of an internet-based data repository. The primary goal of this planned web site is to support other county agencies, with possible limited public access in the future.

Appendix 8. (continued) Minutes from the May 28, 2003 Onondaga Lake Partnership (OLP) Geographic Information System (GIS) Planning Committee Meeting

The language in the draft document on legal and ethical issues surrounding data sharing was reviewed and approved by the committee. Additional follow-up actions that came out of the report review are:

- The NYSDEC and Syracuse-Onondaga County Planning Agency will provide to the USGS lists of existing spatial data that their agencies are preparing. The County's list is currently being developed and will be forwarded to the USGS when it is completed. The NYSDEC will provide a list of available data that can be shared under FOIA laws.
- There were some questions about whether FEMA or another agency had performed LIDAR mapping activities in the Onondaga Lake Watershed. DEC and USGS will follow up to find out more information on the status of this activity.
- Onondaga County SSURGO data is apparently nearing completion. USGS will attempt to get more information on the status of this dataset.
- It was agreed that the USGS will send all present members of the GIS Committee a complete copy of the Summary Report, including Appendices and Tables.

Establishment of a GIS Library

The USGS is currently downloading, clipping to size, and archiving coverages relevant to Onondaga Lake Watershed activities. The "Existing Available Spatial Data List" developed for the questionnaire is being used as a reference for what data sources exist, and the priorities expressed in the questionnaire are guiding the order in which coverages are obtained. This library of spatial data will be used in the development of a future OLP GIS product. Upon completion, the USGS will share a list of its contents with OLP members.

Online Project Database

The USACE (OLP) has hired Parsons Consulting to develop an Online Project Database. The database will consist of a set of information concerning all active projects in the Onondaga Lake Watershed. There is an opportunity to include a spatial element in this database, to allow for an eventual link with the future GIS Product. One possibility would be to add a "Sewer-shed" field to the database, and each project would be placed in its appropriate "Sewer-shed." Alternatively, projects could add a location point (latitude and longitude) to a field in the database. Issues about how best to classify different types of projects by area and how accurate field collection of location points would be came up, but it was concluded that some location data, even if it is of questionable accuracy, is better than nothing. USGS and USACE will continue to discuss possibilities with Parsons about how best to integrate a spatial component into their database.

Appendix 8. (continued) Minutes from the May 28, 2003 Onondaga Lake Partnership (OLP) Geographic Information System (GIS) Planning

Brainstorming about Next Steps in the GIS Product Development Process

To begin this discussion, Doug Freehafer presented some ideas he had on the various elements of a GIS to consider when planning a product for use by agencies and the public. They include:

- People
- Data
- Applications
- Technologies

The audiences for the GIS include the OLP, Onondaga Lake watershed project people, educational institutions, and the public. Data for the GIS include existing data that is either currently available or available by request and FOIA. Another data category is requested spatial data that could be developed either by other agencies (e.g. soils by NRCS) or OLP-specific data generated by or for the partnership.

Examples of applications include monitoring the success of projects, using GIS for land-use planning, and making relevant data sets available to agencies or the public. Multiple technologies for viewing or distributing spatial data, from static maps to internet mapping, were presented.

The GIS Committee discussed the pros and cons of some of the available GIS technologies, as well as issues surrounding the release of data and hosting and/or maintaining a GIS product. Some of the key points are resumed below:

- The GIS committee agreed that one option for a GIS product would be to provide a limited amount of spatial data on an internet-based mapping application, such as ArcIMS, that would be open to the public. OLP Agencies could provide data to this site that is cleared for use by all, via individual agency policy or FOIA.
- Such a web-site could also share more sensitive data via password protected access. OLP member agencies would receive passwords, and others could apply for them on a case-by-case bases
- A second method of sharing data that the committee discussed as a possibility is via CD-ROMs. Data that is available to OLP partner agencies but not to the general public could be archived and maintained in a central location, with lists of available data distributed to OLP member agencies. Agencies could then make requests for the data they needed and this data would be sent to them on a CD, allowing whomever is hosting the data to track who is using it.
- The GIS Committee decided that a two-tiered approach, with some data available to all via the web and more sensitive data distributed by CD is an option worth further investigation. A standard procedure for updating data could be developed.
- Any data that was shared would need to be attributed properly if it was to be included into a report or other public document.
- Many examples of existing internet-based data sharing websites exist, and it was recommended that the USGS study their protocols for updating and maintaining data sets. One example mentioned in the meeting was Erie County, NY (http://erie-gis.co.erie.ny.us/website/erie_help/help.htm).

Appendix 8. (continued) Minutes from the May 28, 2003 Onondaga Lake Partnership (OLP) Geographic Information System (GIS) Planning

The GIS Committee also discussed what type of organization(s) would be best-placed to maintain, house, and disseminate these potential GIS products. Some of the key points of that discussion are resumed below:

- Collecting, hosting, maintaining and updating data for the life of the product represents a considerable task, under with current staffing levels, no OLP member agencies have the capacity to undertake.
- Hiring a private firm to perform these tasks is one option. A private firm is desirable option as they are an objective third-party not involved with collecting this data, and could maintain it without conflict of interest issues. Additionally, a firm may have the required skills and personnel to expedite the development of this product. However, if a GIS product is housed and maintained by a firm, a funding gap could mean the death of the GIS product.
- It was suggested that it might be desirable to confer the task of housing and maintaining a GIS product to the county, as the limits of Onondaga County and the Onondaga Lake Watershed are very similar. Additionally, from a long-term sustainability point of view, if there was a funding gap, the County may be able to maintain the product in a reduced fashion until additional funds were allocated. However, the County does not currently have the personnel to take on such a product. Additionally, if the county housed a GIS Product with environmental data sets collected in the county, there may be a conflict of interest, and some stakeholders might accuse the county of manipulating data.

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Appendix 9. Onondaga Lake Partnership (OLP) spatial data library spreadsheet

Notes: 1) For a list of organizations and key to codes used, see Appendices 10 and 11.
2) All data in Universal Transverse Mercator (UTM) Zone 18, NAD83 unless otherwise noted.
3) Additional Onondaga County datasets are available directly from Syracuse-Onondaga County Planning Agency
4) This document was prepared by USGS for the Onondaga Lake Partnership. The information given herein is subject to revision.

Theme Name	Scale	OLP Spatial Extent	Data Originator	Available At	Use Policy	Data Type	File Name	Metadata
Administrative								
County Boundaries - NYS Shoreline Version	1:24,000	C	NYSCSCIC	NYSOFT	CP	coverage	county_bndry	http://www.nysgis.state.ny.us/gis3/metadata_records/cscic.nyshore.html
Native American Land Boundaries	1:100,000	C	CENSUS	USEPA	ND by EPA			http://www.epa.gov/region02/gis/atlas/na_resrv.htm
NYS Civil and Public Land Boundaries	1:24,000	C	NYSCSCIC	NYSOFT	CP	coverage	civil_public	http://www.nysgis.state.ny.us/gis3/metadata_records/cscic.nybndry.html
NYS Federal-Aid Urban Area Boundaries	1:24,000	C	NYSCSCIC	NYSOFT	CP	coverage	urban_areas	http://www.nysgis.state.ny.us/gis3/metadata_records/cscic.nyurban.html
Onondaga County Boundary	1:24,000	P	ONOCNTY	ONOCNTY	PA	coverage	ono_cntybnd	Projection: NYS State Plane, Central, FIPS 3102, Clarke 1866 Spheroid, NAD27 Datum, Feet
Onondaga County Municipalities	1:24,000	P	ONOCNTY	ONOCNTY	PA	coverage	ono_munic	Projection: NYS State Plane, Central, FIPS 3102, Clarke 1866 Spheroid, NAD27 Datum, Feet
Onondaga County Names	1:24,000	P	ONOCNTY	ONOCNTY	PA	coverage	ono_names	Projection: NYS State Plane, Central, FIPS 3102, Clarke 1866 Spheroid, NAD27 Datum, Feet
Onondaga County Villages	1:24,000	P	ONOCNTY	ONOCNTY	PA	coverage	ono_villages	Projection: NYS State Plane, Central, FIPS 3102, Clarke 1866 Spheroid, NAD27 Datum, Feet
Agricultural								
Agricultural Districts - Cayuga County	1:24,000	C	CIRIS	CUGIR	PA	coverage	c011aga83	http://cugir2.mannlib.cornell.edu/Isite/CUGIR_METADATA/011/011aga.html
Agricultural Districts - Cortland County	1:24,000	C	CIRIS	CUGIR	PA	coverage	c023aga83	http://cugir2.mannlib.cornell.edu/Isite/CUGIR_METADATA/023/023aga.html
Agricultural Districts - Onondaga County	1:24,000	C	CIRIS	CUGIR	PA	coverage	c067aga83	http://cugir2.mannlib.cornell.edu/Isite/CUGIR_METADATA/067/067aga.html
Agricultural Districts - Oswego County	1:24,000	C	CIRIS	CUGIR	PA	coverage	c075aga83	http://cugir2.mannlib.cornell.edu/Isite/CUGIR_METADATA/075/075aga.html

Appendix 9. (Continued) Onondaga Lake Partnership (OLP) spatial data library spreadsheet

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Theme Name	Scale	OLP Spatial Extent	Data Originator	Available At	Use Policy	Data Type	File Name	Metadata
NY Agricultural Boundaries	1:24,000	C	NYSDAM	NYSDAM	PA		Available directly from NYS Dept. of Agriculture and Markets (518-457-7368)	None Available
Basemap								
Digital Raster Graphics	1:24,000	C	USGS	NYSDEC	UK	tiff image	usgstopo24	Hard Copy Available
Digital Raster Graphics	1:100,000	C	USGS	NYSDEC	UK	tiff image	usgstopo100	Hard Copy Available
Digital Raster Graphics	1:250,000	C	USGS	NYSDEC	UK	tiff image	usgstopo250	Hard Copy Available
NYS B&W Raster Quadrangles	1:24,000	C	NYSDOT	NYSOFT	SR	tiff image	nysdot24	http://www.nysgis.state.ny.us/quads/dotplan.htm
NYS County Images	1:250,000	C	NYSDOT	NYSOFT	CP	tiff image	nysdot250	http://www.nysgis.state.ny.us/repository/cntymap.htm
NYS DOT 7.5 Minute Quadrangle Index	N/A	C	NYSDOT	NYSOFT	PA	shapefile	quad_bndry24	None Available
Onondaga County Base Map (Infrastructure, Hydro, Parks)	1" = 1 mile	P	ONOCNTY	NYSOFT	UK	N/A	Currently not available for download	http://www.nysgis.state.ny.us/inventories/onco.htm
Biological								
NY GAP Analysis Program - Biodiversity Protection	varies	C	Partnership	CORNELL	PA	varies	ftp://ftp.gap.uidaho.edu/products/new_yor	ftp://ftp.gap.uidaho.edu/products/new_york/gis/Analysis/nystats.html
Biological Resource Division collaboration studies to evaluate the effects of zebra mussels on the restoration of Onondaga Lake	N/A	P/C	USGSBRD	USGSBRD	PA	varies	Available from USGSBRD	http://biology.usgs.gov/state.partners/activities/ny-act.html
Business								
Corporations	N/A	C	NYSDOS	NYSOFT	PA		Currently not available for download	None Available
Wood Using Industries (Mills)	1:100,000	C	SUNYESF	NYSOFT	PA		Available directly from SUNY-ESF (315-470-6696)	http://www.nysgis.state.ny.us/inventories/esf.htm

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Cadastral								
Real Property Data (2000,1999,1998,1996)	1:600-9,600	C	NYSORPS	NYSOFT	PA		Available from NYSORPS	http://www.nysgis.state.ny.us/inventories/orps.htm
Climate								
Mean Annual Evapotranspiration, Northeast US, 1951-80 (Projection: Lambert Conformal Conic, NAD27)	1:1,000,000	C	USGS	USGS	PA	coverage	ofr96395_eva	http://water.usgs.gov/GIS/metadata/usgswrd/ofr96395_run.meta.html
Mean Annual Precipitation, Northeast US, 1951-80 (Projection: Lambert Conformal Conic, NAD27)	1:1,000,000	C	USGS	USGS	PA	coverage	ofr96395_pre	http://water.usgs.gov/GIS/metadata/usgswrd/ofr96395_run.meta.html
Mean Annual Runoff, Northeast US, 1951-80 (Projection: Lambert Conformal Conic, NAD27)	1:1,000,000	C	USGS	USGS	PA	coverage	ofr96395_run	http://water.usgs.gov/GIS/metadata/usgswrd/ofr96395_run.meta.html
Current & Historical Weather Records & Summaries	N/A	C	NOAA	NOAA	PA	varies		http://lwf.ncdc.noaa.gov/oa/ncdc.html
Cultural								
Archeological Sites	1:24,000	C	NYSPRHP	NYSOFT	SR		Data access is restricted	http://www.nysgis.state.ny.us/inventories/parks.htm
School District Boundaries (2000)	1:600-9,600	C	NYSORPS	NYSOFT	PA	coverage	sch_dist2000	http://www.nysgis.state.ny.us/gis3/data/orps.schooldist00.html
State-funded Snowmobile Trails	1:24,000	C	NYSPRHP	NYSOFT	PA	coverage	Available from NYSPRHP	http://www.nysgis.state.ny.us/inventories/parks.htm
State Park Boundaries	1:24,000	C	NYSPRHP	NYSOFT	PA	coverage	Available from NYSPRHP	http://www.nysgis.state.ny.us/inventories/parks.htm
Demographics								
Census based geographic boundary files (TIGER files)	varies	C	NYSESD	NYSESD	PA	varies	Available from Empire State Development	http:\\www.nylovesbiz.com\nysdc\download_intro.asp
2000 Census attribute data (Census demographic files)	varies	C	NYSESD	NYSESD	PA	varies	Available from Empire State Development	http:\\www.nylovesbiz.com\nysdc\download_intro.asp
Individual County Census Blocks & Block Groups - TIGER	1:100,000	C	CENSUS	CUGIR	PA	varies	Available from CUGIR	http://cugir.mannlib.cornell.edu/browse_map/browse_map.html
Individual County Census Places & Tracts	1:100,000	C	CENSUS	CUGIR	PA	varies	Available from CUGIR	http://cugir.mannlib.cornell.edu/browse_map/browse_map.html

Appendix 9. (Continued) Onondaga Lake Partnership (OLP) spatial data library spreadsheet

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Theme Name	Scale	OLP Spatial Extent	Data Originator	Available At	Use Policy	Data Type	File Name	Metadata
Topologically Integrated Geographic Encoding and Referencing System (TIGER), TIGER/Line and TIGER-Related Products	1:100,000	C	CENSUS	CENSUS	PA	varies	Available from CENSUS	http://www.census.gov/geo/www/tiger/
1990 Census Block Groups with Selected Demographic Attributes	1:100,000	C	CENSUS	USEPA	ND	varies		http://www.epa.gov/region02/gis/atlas/demog_bg.htm
2000 Census Block Groups with Selected Demographic Attributes	1:100,000	C	CENSUS	USEPA	ND	varies		http://www.epa.gov/region02/gis/atlas/blockgroups2000.htm
City of Syracuse Census Tracts	1" = 1/4 mile	P	ONOCNTY	NYSOFT	PA	varies	Available from Onondaga County (315-435-2631)	http://www.nysgis.state.ny.us/inventories/onco.htm
Onondaga County Census Tracts	1" = 1/4 mile	P	ONOCNTY	NYSOFT	PA	varies	Available from Onondaga County (315-435-2631)	http://www.nysgis.state.ny.us/inventories/onco.htm
Elevation and Derivatives								
National Elevation Dataset (NED)	30 meter	C	USGS	USGS	PA	grid	ned_utm83	http://ned.usgs.gov/rgdcmetadata.asp
New York State Digital Elevation Model (DEM) - Merged 7.5 minute quadrangles	10 meter	C	USGS	CUGIR	PA	grid	dem10_all	http://cugir2.mannlib.cornell.edu/Isite/CUGIR_METADATA/36dea.html
Hillshade - hypothetical surface illumination	10 meter	C	USGS	USGS	PA	grid	hill315_45z2	Derived from 10 meter DEM, Azimuth = 315, Altitude = 45, Z-factor = 2
Onondaga Lake Watershed Digital Elevation Model (DEM)	10 meter	P	USGS	USGS	PA	grid	dem10_olbuf	Derived from 10 meter DEM with 4,000 meter buffer
Onondaga Lake Watershed Flow Direction Grid	10 meter	P	USGS	USGS	PA	grid	dir_grd	National Hydrograph Dataset watershed tool support layer; http://nhd.usgs.gov/applications.htm
Onondaga County Watershed Flow Accumulation Grid	10 meter	P	USGS	USGS	PA	grid	accum	National Hydrograph Dataset watershed tool support layer; http://nhd.usgs.gov/applications.htm
Geodetic Control								
NYS Survey Monument Database (includes HARN)	N/A	C	NYSDOT	NYSOFT	PA	shapefile	survey_harn	http://www.nysgis.state.ny.us/gis3/data/dot.nysvydb.html

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Geologic								
NYS Bedrock Geology	1:250,000	C	NYSED	NYSOFT	PA	shapefile	NYS_Bedrock	http://www.nysgis.state.ny.us/gis3/data/sed.nysmbed.html
NYS Surficial Geology	1:250,000	C	NYSED	NYSOFT	PA	shapefile	NYS_Surficial	http://www.nysgis.state.ny.us/gis3/data/sed.nyssurf.html
Bedrock Elevation	10 meter	P	USGS	USGS	PA	grid	bedrock_elev	See file: GWModel_Notes.txt
Oswego County Surficial Geology	1:24,000	P	OSWCNTY	NYSOFT	PA	coverage	oswego_geo	Original map work by USGS; data digitized by OCPD staff. Projection: State Plane, FIPSZone 3102, Units Feet, NAD27
Ground Water								
New York State Aquifers	1:250,000	C	NYSDOH	NYSOFT	PA	coverage	Available directly from NYSDOH (518-402-7990)	http://www.nysgis.state.ny.us/gis3/data/nysdoh.nyaquifer.html
Public Water Supply Wells	N/A	C	NYSDOH	NYSDOH	SR			
Unconsolidated Aquifers in Upstate New York	1:24,000	P	USGSNY	USGSNY	PA	paper	Available directly from USGSNY (518-285-5602)	http://ny.usgs.gov/projects/bgag/aquifer.maps/maps.html
Unconsolidated Aquifers in Upstate New York	1:250,000	C	USGSNY	USGSNY	PA	paper	Available directly from USGSNY (518-285-5602)	http://ny.usgs.gov/projects/bgag/aquifer.maps/maps.html
Hydrography - Surface Water								
New York State 1:250,000 Hydrography	1:250,000	C	NYSCSCIC	NYSOFT	PA	coverage	nyhydg250c	http://www.nysgis.state.ny.us/gis3/metadata_records/cscic.nyhydg.html
New York State 1:100,000 Hydrography	1:100,000	C	NYSCSCIC	NYSOFT	PA	coverage	nyhyd100c	http://www.nysgis.state.ny.us/gis3/metadata_records/cscic.nyhyd.html
National Hydrography Dataset (NHD) - Medium Resolution	1:100,000	C	USGS/EPA	USGS	PA	coverage	nhd_med	http://nhd.usgs.gov/
National Hydrography Dataset (NHD) - High Resolution	1:24,000	C	USGS/EPA	USGS	PA	coverage	nhd_high	http://nhd.usgs.gov/
National Hydrography Dataset (NHD) - Medium Resolution	1:100,000	C	USGS/EPA	USGS	PA	geodatabase	Available after April 2004	http://nhd.usgs.gov/
National Hydrography Dataset (NHD) - High Resolution	1:24,000	C	USGS/EPA	USGS	PA	geodatabase	Available after April 2004	http://nhd.usgs.gov/

Appendix 9. (Continued) Onondaga Lake Partnership (OLP) spatial data library spreadsheet

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Theme Name	Scale	OLP Spatial Extent	Data Originator	Available At	Use Policy	Data Type	File Name	Metadata
Onondaga Lake Watershed Dendrite	1:24,000	P	USGS	USGS	PA	shapefile	dendrite	National Hydrography Dataset watershed tool support layer; http://nhd.usgs.gov/applications.htm
Onondaga County Lakes	1:24,000	P	ONOCNTY	ONOCNTY	PA	coverage	ono_lakes	Projection: NYS State Plane, Central, FIPS 3102, Clarke 1866 Spheroid, NAD27 Datum, Feet
Onondaga County Major Hydrography	1:24,000	P	ONOCNTY	ONOCNTY	PA	coverage	ono_majhyd	Projection: NYS State Plane, Central, FIPS 3102, Clarke 1866 Spheroid, NAD27 Datum, Feet
Onondaga County Names	1:24,000	P	ONOCNTY	ONOCNTY	PA	shapefile	067hys_utm27	Projection: UTM, NYS, Zone 18, Clarke 1866 Spheroid, NAD27 Datum
Onondaga County Flood Plains (FEMA)	1" = 1 mile	P	ONOCNTY	NYSOFT	PA	N/A	Available directly from Onondaga County	http://www.nysgis.state.ny.us/inventories/onco.htm
Onondaga Creek Channel (Historical)	N/A	P	ASLF	NYSOFT	PA	shapefile	Available directly from ASLF	http://www.nysgis.state.ny.us/inventories/atlantic.htm
Imagery								
Statewide Digital Orthoimagery (DOQQs 1994-1999)	1 meter	C	NYSOFT	NYSOFT	PA	MrSID	DOQQ1990s	http://www.nysgis.state.ny.us/gateway/mg/cir_descrip.htm
Statewide Digital Orthoimagery (DOQQs 1994-1999)	1 meter	C	NYSOFT	NYSOFT	SR	MrSID	Available by request only	http://www.nysgis.state.ny.us/gateway/mg/cir_descrip.htm
Statewide Digital Orthoimagery (DOQQs 2003 Annual Lot) - Cayuga County	Varies	C	NYSOFT	NYSOFT	SR	MrSID	Available Spring 2004	http://www.nysgis.state.ny.us/orthoprogram/cayuga.htm
Statewide Digital Orthoimagery (DOQQs 2003 Annual Lot) - Cortland County	Varies	C	NYSOFT	NYSOFT	SR	MrSID	Available Spring 2004	http://www.nysgis.state.ny.us/orthoprogram/cortland.htm
Statewide Digital Orthoimagery (DOQQs 2003 Annual Lot) - Onondaga County	Varies	C	NYSOFT	NYSOFT	SR	MrSID	Available Spring 2004	http://www.nysgis.state.ny.us/orthoprogram/onondaga.htm
Statewide Digital Orthoimagery (DOQQs 2003 Annual Lot) - Oswego County	Varies	C	NYSOFT	NYSOFT	SR	MrSID	Available Spring 2004	http://www.nysgis.state.ny.us/orthoprogram/oswego.htm

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Land Use / Land Cover								
GIRAS Land Use / Land Cover - Mid 1970's to Mid 1980's	1:250,000	C	USGS	USEPA	PA	coverage; Albers projection	lbi42074; lel42076; lut43074; lro43076	http://www.epa.gov/ngispgm3/spdata/EPAGIRAS/meta/
National Land Cover Data (NLCD) 1992	30 meter	C	MRLCC	NYSOFT	PA	grid	nlcd_1992	http://www.nysgis.state.ny.us/gis3/data/usgs.newyork.html
National Land Cover Data 2001 (in process)	30 meter	C	MRLCC		PA	grid	Available in 2004	http://landcover.usgs.gov/nationallandcover.asp
GAP Analysis Program	30 meter	C	USGS	USGS	PA	varies	ftp://ftp.gap.uidaho.edu/products/new_york/gis/	http://www.gap.uidaho.edu/default.htm
Monitoring								
National Water Information System (NWIS) - Real-time, Site Information, Surface Water, Ground Water, and Water Quality	1:24,000	C	USGS	USGS	PA	varies	Available directly from USGS	http://ny.waterdata.usgs.gov/nwis/nwis
Suspended-Sediment Database - Daily Values of Suspended Sediment and Ancillary Data	N/A	P	USGS	USGS	PA	varies	Available directly from USGS	http://webserver.cr.usgs.gov/sediment/
OLP Spatial Extent								
Onondaga Lake Partnership Project Area	1:24,000	C	OLP	OLP	PA	coverage	project_area	Spatial data extent approved by OLP Project Committee
Recreation								
New York State Public Boat Launch Sites	1:24,000	C	NYSDOT	NYSOFT	CP	shapefile	nyboat_point	http://www.nysgis.state.ny.us/gis3/metadata_records/cscic.nyboat.html
New York State Multiuse Trails	1:24,000	C	NYSDOT	NYSOFT	CP	coverage	nytrails	http://www.nysgis.state.ny.us/gis3/metadata_records/cscic.nytrail.html
Regulated Facilities								
EPA Regulated Facilities	Varies	C	USEPA	NYSOFT	PA	varies	Latest versions available directly from EPA Region 2	http://www.epa.gov/region02/gis/data/thematicdata.htm

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Inactive Hazardous Waste Sites	N/A	C	NYSDEC	NYSOFT	PA	N/A	Available directly from NYSDEC (518-402-9873)	http://www.nysgis.state.ny.us/gis3/data/nysdec.hazwaste.html
Soils								
Soil Survey (SSURGO) Geographic database - Cayuga County	1:24,000	P	NRCS	NYSOFT	PA	coverage (zipped)	011soa	http://cugir2.mannlib.cornell.edu/Isite/CUGIR_METADATA/011/011soa.html
Soil Survey (SSURGO) Geographic database - Cortland County	1:24,000	P	NRCS	NYSOFT	PA	coverage	Available in 2005	Requires initial or update mapping before SSURGO digitizing
Soil Survey (SSURGO) Geographic database - Onondaga County	1:24,000	P	NRCS	NYSOFT	PA	coverage	soil_NY067	http://soildatamart.nrcs.usda.gov/Metadata.aspx?Survey=NY067&UseState=NY
Soil Survey (SSURGO) Geographic database - Oswego County	1:24,000	P	NRCS	NYSOFT	PA	coverage	Available in 2005	Available for SSURGO digitizing
Oswego County SSURGO (uncertified)	1:24,000	P	OSWCNTY	NYSOFT	PA	coverage	oscosoil	Data received by approved NRCS consultant, then scanned into digital format.
Onondaga County Soil Associations	1:24,000	P	NRCS	N/A	PA	shapefile	onon_cnty_ec	Data received from Elizabeth Coyle, NYSDEC
State Soil Geographic (STATSGO) database	1:250,000	C	NRCS	NRCS	PA	coverage; UTM Zone 18, NAD27	ny_soils	http://cugir2.mannlib.cornell.edu/Isite/CUGIR_METADATA/36_so_a.html
State Soil Geographic (STATSGO) database - hydrology-relevant compilation	1:250,000	C	NRCS	USGS	PA	coverage	ussoils	http://water.usgs.gov/GIS/metadata/usgswrd/ussoils.html
State Soil Geographic (STATSGO) database - multi-layer soil characteristics dataset for regional climate and hydrology modeling	1:250,000	C	NRCS	ESSC	PA	varies	Available directly from ESSC	http://www.essc.psu.edu/soil_info/index.cgi?soil_data&conus&data_cov
Transportation								
New York state Primary Route System	1:24,000	C	NYSDOT	NYSOFT	CP	coverage	nyroute	http://www.nysgis.state.ny.us/gis3/metadata_records/dot.nyroute.htm
Cayuga County Road File	1:24,000	P	NYSDOT	NYSOFT	CP	coverage	cayroad	http://www.nysgis.state.ny.us/gis3/metadata_records/cscic.cayroad.html
Cortland County Road File	1:24,000	P	NYSDOT	NYSOFT	CP	coverage	corroad	http://www.nysgis.state.ny.us/gis3/metadata_records/cscic.corroad.html
Onondaga County Roads File	1:24,000	P	NYSDOT	NYSOFT	CP	coverage	onoroad	http://www.nysgis.state.ny.us/gis3/metadata_records/cscic.onoroad.html

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Onondaga County Major Roads	1:24,000	P	ONOCNTY	ONOCNTY	PA	coverage	ono_majroads	Projection: NYS State Plane, Central, FIPS 3102, Clarke 1866 Spheroid, NAD27 Datum, Feet
Oswego County Roads File	1:24,000	P	NYSDOT	NYSOFT	CP	coverage	oswroad	http://www.nysgis.state.ny.us/gis3/metadata_records/cscic.oswroad.html
New York State Railroad Lines and Stations	1:100,000	c	NYSDOT	NYSOFT	CP	coverage	nyrail	http://www.nysgis.state.ny.us/gis3/metadata_records/cscic.nyrail.html
Utilities								
Electric Transmission Lines	1:1,000,000	C	NYSPSC	NYSOFT	SR	coverage		http://wwwhttp://www.nysgis.state.ny.us/gis3/data/nysdps.elctline.html
Empire and Iroquois Lines	N/A	C	NYSPSC	NYSOFT	SR	coverage		http://www.nysgis.state.ny.us/gis3/data/nysdps.empirq.html
Gas Transmission Lines	N/A	C	NYSPSC	NYSOFT	SR	coverage		http://www.nysgis.state.ny.us/gis3/data/nysdps.gastline.html
Nuclear Power Plants, etc.	1:100,000	C	NYSEMO	NYSOFT	SR	coverage		Not Available
Manholes	N/A	P	ONOCNTY	ONOCNTY	PA	shapefile	manholes	Projection: NYS State Plane, Central, FIPS 3102, Clarke 1866 Spheroid, NAD27 Datum, Feet
Sewer Lines	N/A	P	ONOCNTY	ONOCNTY	PA	shapefile	sewers	Projection: NYS State Plane, Central, FIPS 3102, Clarke 1866 Spheroid, NAD27 Datum, Feet
Watersheds								
Hydrologic Unit Boundaries - 8-digit	1:250,000	C	USGS	USGS	PA	coverage	huc250k	http://water.usgs.gov/GIS/metadata/usgswrd/huc250k.html
Hydrologic Unit Boundaries - 11-digit	1:24,000	C	NRCS	CUGIR	PA	coverage	nrsc_hu11	http://cugir2.mannlib.cornell.edu/lsite/CUGIR_METADATA/36huc11a.ht
New York Basin Polygons	1:24,000	C	USGS	USGS	PA	coverage	hu24k	Narrative.txt is metadata file.
Onondaga Lake Watershed (outlet is Seneca River confluence) - developed for Surface Water Model	1:24,000	P	USGS	USGS	PA	coverage	onon_basins	Narrative.txt is metadata file.
Onondaga Lake watersheds converted from a raster format	1:24,000	P	USGS	USGS	PA	coverage	shed_cov	National Hydrography Dataset watershed tool support layer; http://nhd.usgs.gov/applications.htm

Appendix 9. (Continued) Onondaga Lake Partnership (OLP) spatial data library spreadsheet

Notes: 1) For a list of organizations and key to codes used, see Appendices 10 and 11.
2) All data in Universal Transverse Mercator (UTM) Zone 18, NAD83 unless otherwise noted.
3) Additional Onondaga County datasets are available directly from Syracuse-Onondaga County Planning Agency
4) This document was prepared by USGS for the Onondaga Lake Partnership. The information given herein is subject to revision.

Theme Name	Scale	OLP Spatial Extent	Data Originator	Available At	Use Policy	Data Type	File Name	Metadata
Onondaga Lake watershed	1:24,000?	P	ONOCNTY	ONOCNTY	PA	shapefile	ononlkbasins	Contact Don Jordan, Syracuse-Onondaga County Planning Agency, DonJordan@ongov.net
Onondaga Lake with 7 minor watersheds	1:24,000?	P	ONOCNTY	ONOCNTY	PA	shapefile	minorbasins	Contact Don Jordan, Syracuse-Onondaga County Planning Agency, DonJordan@ongov.net
Water Use								
Water Use	N/A	C	USGS	USGS	PA	N/A	N/A	Contact Debbie Lumia, USGS Water Resources, NY District, dslumia@usgs.gov
Wetlands								
National Wetlands Inventory	1:24,000	P/C	USFWS	USFWS	PA	shapefile	varies	http://www.nwi.fws.gov/
NYS Regulatory Freshwater Wetlands - Cayuga County	1:24,000	P	NYSDEC	CUGIR	PA	coverage	011fwa	http://cugir2.mannlib.cornell.edu/lsite/CUGIR_METADATA/011/011fwa.html
NYS Regulatory Freshwater Wetlands - Cortland County	1:24,000	P	NYSDEC	CUGIR	PA	coverage	023fwa	http://cugir2.mannlib.cornell.edu/lsite/CUGIR_METADATA/023/023fwa.html
NYS Regulatory Freshwater Wetlands - Onondaga County	1:24,000	P	NYSDEC	CUGIR	PA	coverage	067fwa	http://cugir2.mannlib.cornell.edu/lsite/CUGIR_METADATA/067/067fwa.html
NYS Regulatory Freshwater Wetlands - Oswego County	1:24,000	P	NYSDEC	CUGIR	PA	coverage	075fwa	http://cugir2.mannlib.cornell.edu/lsite/CUGIR_METADATA/075/075fwa.html

Appendix 10. List of organization codes

Data Originator / Availability Key:	**Abbreviation**	**NYS GIS Cooperative**	**Maintain GIS Data**	**OLP Partner**
Federal				
Federal Emergency Management Agency	FEMA	Yes	Yes	
Federal Highway Administration	FHA	Yes	No	
Multi-Resolution Land Characteristics Consortium	MRLCC	No	Yes	
National Oceanic and Atmospheric Administration	NOAA	No	Yes	
US Army Corps of Engineers	USACE	Yes	Yes	Yes
US Department of Agriculture	USDA	No	Yes	
USDA Bureau of Census	USDABC	No	Yes	
USDA Forest Service	USFS	Yes	Yes	
USDA National Agricultural Statistics Service	NASS	No	Yes	
USDA Natural Resources Conservation Service	NRCS	Yes	Yes	
US Department of Commerce, Bureau of the Census	CENSUS	No	Yes	
US Department of Commerce, Census of Agriculture	USDCCA	No	Yes	
US Environmental Protection Agency - Region 2	USEPA	Yes	Yes	Yes
US Fish and Wildlife Service - Region 5	USFWS	Yes	No	
US Geological Survey	USGS	Yes	Yes	
US Geological Survey Water Resources - NY District	USGSNY	Yes	Yes	
US Postal Service	USPS	No	Yes	
State				
NYS Dept. of Agriculture and Markets	NYSDAM	Yes	Yes	
NYS Canal Corporation	NYSCC	Yes	No	
NYS Office of Cyber Security and Critical Infastructure Coordination	NYSCSCIC	Yes	Yes	
NYS Education Dept. (includes NYS Museum)	NYSED	Yes	Yes	
NYS Emergency Management Office	NYSEMO	Yes	Yes	
NYS Empire State Development	NYSESD	Yes	No	
NYS Dept. of Environmental Conservation	NYSDEC	Yes	Yes	Yes
NYS Environmental Facilities Corporation	NYSEFC	Yes	No	
NYS Office of General Services	NYSOGS	Yes	Yes	
NYS Dept. of Health	NYSDOH	Yes	Yes	
NYS Dept. of Law (Environ. Protect. Bureau - Office of AG)	NYSDOL	Yes	No	
NYS Division of Military and Naval Affairs	NYSMNA	Yes	Yes	
NYS Parks, Recreation and Historic Preservation	NYSPRHP	Yes	Yes	
NYS Power Authority	NYSPA	Yes	NYA	
NYS Public Service Commission	NYSPSC	Yes	Yes	

Appendix 10. (continued) List of organization codes

Data Originator / Availability Key:	**Abbreviation**	**NYS GIS Cooperative**	**Maintain GIS Data**	**OLP Partner**
NYS Office of Real Property Services	NYSORPS	Yes	Yes	
NYS Dept. of State	NYSDOS	Yes	Yes	
NYS Office for Technology	NYSOFT	Yes	Yes	
NYS Thruway Authority	NYSTA	Yes	Yes	
NYS Dept. of Transportation	NYSDOT	Yes	Yes	
County				
Cayuga County	CAYCNTY	Yes	Yes	
Cortland County	CORCNTY	Yes	Yes	
Madison County	MADCNTY	Yes	Yes	
Onondaga County (Syracuse / County Planning Agency)	ONOCNTY	Yes	Yes	Yes
Oswego County	OSWCNTY	Yes	Yes	
Municipal				
Village of Baldwinsville		Yes	No	
Town of Camillus		Yes	Yes	
Central New York Regional Planning and Development Board		Yes	No	
Onondaga County Soil & Water Conservation		Yes	No	
Town of Onondaga		Yes	No	
Town of Owasco		Yes	NYA	
City of Syracuse		No	No	Yes
Syracuse Metropolitan Transportation Council		Yes	No	
Town of Van Buren		Yes	NYA	
Academia				
Cornell University	CORNELL	Yes	NYA	
Cornell University Geospatial Information Repository	CUGIR	Yes	Yes	
Cornell Institute for Resource Information Systems	CIRIS	Yes	Yes	
Oregon State University Spatial Climate Analysis Service	OSUSCAS	No	Yes	
Penn State Earth System Science Center	ESSC	No	Yes	
SUNY College of Environmental Science & Forestry	SUNYESF	Yes	Yes	
Wells College	WELLSC	Yes	No	
Non-Profit Organizations				
Atlantic States Legal Foundation	ASLF	Yes	Yes	
Finger Lakes - Lake Ontario Watershed Protection Alliance	FL-LOWPA	No	No	
Genesee / Finger Lakes Regional Planning Council	GFLRPC	Yes	No	
National Geographic Society	NGS	No	Yes	
Nature Conservancy	NC	Yes	No	
New York Rural Water Association	NYRWA	Yes	No	

Appendix 11. List of spatial extent and use of policy codes, acronyms, and data types

OLP Spatial Extent
C = Complete
P = Partial
P/C = To be determined
Use Policy
CP = Copyright Protected
LA = License Agreement
ND = Not Distributable
PA = Public Access
SR = Security Restricted
UK = Unknown
Acronyms
BW = Black & White
CI = Color Infrared
DEM = Digital Elevation Model
DLG = Digital Line Graph
NYA = Not yet available
Data Type
coverge = ESRI Vector Format
geodatabase = ESRI Vector Format
shapefile = ESRI Vector Format
grid = ESRI Raster Format
MrSID = LizardTech Raster Format
tiff image = Raster Format
paper = Paper Map
N/A = Data Type Not Available
varies = Multiple Data Types