

November 14, 2005
Adirondack Information Group, LLC

Part One:

Inventory and Results

Village of Lake Placid/Town of North Elba
GIS Needs Assessment

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GIS Needs Assessment Project

Funded by:

The New York State Archives and Records Administration (NY SARA)

Local Government Records Management Improvement Fund

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II. Executive Summary

Overview of the GIS Needs Assessment for the Village of Lake Placid and Town of North Elba

The Village of Lake Placid in the Town of North Elba is within New York's Adirondack Park. A trend toward new development and concurrent efforts to improve growth management planning in Lake Placid and North Elba spurred local interest in being able to use GIS. The two overlapping municipalities therefore cooperated to pursue – and were awarded – a grant from the State Archives and Records Administration (SARA) Local Government Records Management Improvement Fund. In August 2005, they hired Adirondack Information Group LLC to conduct the study.

The needs assessment followed three primary stages, including an inventory of needs and resources through interviews of 35 municipal department heads, staff members, relevant community institutions, and supporting agency leaders; outline of a potential system design by the AIG team; and a suggested implementation plan. This report represents a draft documenting these stages, as follows:

- Part 1 serves as an introduction and provides an overview of GIS as well as the framework for this effort within the operations of the Village of Lake Placid and Town of North Elba. It also includes a summary. Finally, it describes the results of the departmental interview process and inventory of GIS resources.
- Part 2 provides descriptions of the most important GIS needs for the Village of Lake Placid and Town of North Elba and outlines a GIS System that AIG feels will be most appropriate for addressing the short and long-term needs of the Village of Lake Placid and Town of North Elba. It addresses:
 - Hardware and software recommendations
 - Data needs and development
 - Personnel needs and institutional coordination
- Part 3 provides a concrete Plan for implementation of a GIS system for the Village of Lake Placid and Town of North Elba. It addresses:
 - Budget
 - Schedule, including phasing of critical data and application development and capacity building
 - Methods to ensure coordination with Village and Town operations and County/ State resources.

The staff of AIG who have worked on these reports include Raymond Curran, Kara Page, Craig Cheeseman, Steve Halasz, and John Barge.

The next stage, agreement on and finalization of the report, will lay the groundwork for implementation fund applications, due for submission to the State in December 2005.

a) Key Findings of the Assessment

Although the Village and Town have some experience with GIS, their use of technology in general is minimal and uncoordinated. Although a few functions are integrated between the municipalities, for the most part there are physical and institutional barriers to coordination and further integration. Staffing is limited and many staff members do not have the interest, time, or training to tackle significant new technology tasks. Growing interest in more efficient and effective government could be facilitated by information management through a GIS.

Following are the key considerations from the Needs Assessment:

1. Small Municipal Governments

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Both the Village of Lake Placid and Town of North Elba are small branches of government in terms of the budget resources available. This translates into limited staffing resources and limited ability to procure equipment. Existing staff already fulfill multiple functions and duties that probably go beyond what they were hired to accomplish.

They function as two separate government entities, although there is some integration of overlapping functions. There is no dedicated person to support enterprise-wide technology and applications, such as a network or software maintenance, at this time. Overall there are limited staffing resources that can be used to implement GIS and the prospect of adding new staff to address the functions needed to support GIS is not good.

Enterprise-wide GIS functions may be used to help integrate municipal functions, at least functionally if not formally.

2. Existing Computer Infrastructure

The desktop machines in use by Village of Lake Placid and Town of North Elba departments are up-to-date and in general seem to be up to the expectations of increased use for GIS. While there is no local area network between departments or between the municipalities, there is an adequate connection through the Adelphia cable system to the Internet. This important connection is widely available at each of the 12 physical locations of the municipalities.

3. Experience with GIS

A few staff members have experience with GIS, although it is limited to that of users of the data, not as service providers or GIS data base developers. Others without hands-on experience have been introduced to the concepts of GIS by communication with their respective professional organizations or personal contacts.

4. GIS Relevant to Municipal Functions

There is widespread excitement about improving access to GIS capabilities from almost every department covered in the interviews. For example, the Water and Waste Department has critical immediate needs for GIS data layer development. Others need general capabilities to view data layers in their every day work. There is also an expectation that GIS could improve efficiency of government and save money for the taxpayers.

5. Realistic View of GIS Role

On the other hand there was also recognition by the administration and the departments that technology changes will not solve every problem. They also realized that expectation for change must be realistic within the time and budget constraints of the municipalities.

6. Access to High Value Data Sets

The Village of Lake Placid and Town of North Elba are probably in a unique position with respect to the availability of existing GIS data layers. Essex County has developed and makes available to them the real property data layer of digital land ownership boundaries and maintains an ARC-IMS server to provide updated data. New York State has high quality

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data available through the NYS GIS Clearinghouse. These include layers like current aerial photography and water features. In addition the New York Adirondack Park Agency has digital data sets available that are of high quality. Primary among those are the permit database and the regulatory wetlands data.

The County E911 Office and Emergency Preparedness Office are developing data that may in the near future also be useful to GIS development for Village of Lake Placid and Town of North Elba.

7. Need to Develop Data for “Public Works” Applications

The applications identified by the “public works” departments require the development of GIS data layers as a prerequisite to implementing the applications. As a by-product, development of these data will be of significant benefit to other departments such as Building, Planning and Fire.

8. Similar Geographic Area of Interest

For the most part each of the departments has a similar geographic area of interest and there is no need to segregate data sets geographically or to provide a special geographic data set for one department.

b) Priority Applications

There is a critical need for some GIS applications, data layers, and tools sooner than others. For example the Village is under a State mandated remediation plan that requires use of GIS to monitor the sewage infrastructure. Emergency and police departments are operating without current accurate hydrant, road and address maps, let alone digital information. Highway, water, and electrical work are severely hamstrung without accurate information about infrastructure locations, conditions, and capacities. Growth is explosive and threatening to consume all available open land in the vicinity. The codes and comprehensive plan are in transition. The Joint Planning Commission, a collaboration of Village and Town, is currently organizing to revise the land use and comprehensive plan documents. Also, organization of government is in transition, as there is talk of consolidation; in the years to come as staff members retire there may be changes in municipal organization. Establishing a basis for institutional memory is vital if crippling problems, such as the loss of maps to individual staff members, are to be avoided.

In this context, our reports try to recognize the existing circumstances and discuss the results in realistic terms.

c) System Design Concepts

The potential system design is a framework to guide the process of putting in place a GIS for the Village of Lake Placid and Town of North Elba. Looking at the options available for system implementation, it describes a related assembly of hardware, software, data elements, personnel arrangements and functional institutional support to achieve the needs of the Village of Lake Placid and Town of North Elba. This part provides a discussion of generic options is given, with an in-depth recommendation for each part of a potential system design. There are several generic issues worth pointing out here.

Management

Successful operation and implementation of an enterprise-wide (i.e., all-Town and all-Village) GIS will require careful institutional guidance from the administration and departments of both municipalities. It is not a self-implementing process. Its execution will be complex and will require constant support and monitoring. Establishment of policies at the Town and Village level may significantly enhance the municipalities' ability to regularize GIS and geographic data management over time. Since the human skills and the physical framework for successful implementation are not presently in place this guidance is all the more critical.

System Compatibility

Any system implemented must be compatible with the operations of the Village and Town and with those whose support is necessary to achieve success. The Village and Town must pay particular attention to software and data compatibility with other GIS systems and with data being produced by the County.

Cooperative Relationships

Because of limited resources it will be necessary to cultivate and nurture many possible cooperative relationships. These include:

Municipal relations

The Town and Village will need to share resources, staff, data and most importantly a consistent vision for a cooperative GIS.

Essex County and other external partners

The County maintains essential parcel ownership information upon which many GIS applications are based, and operates a County-wide GIS services bureau that may ultimately help support many local GIS needs.

User groups, such as the Adirondack Users Group and an Essex County group that maybe formed in the future can be essential partners in system development. And, like the County, New York State provides essential data layers and skill support that should be continuously recognized by the Village and Town.

d) Design Criteria

The design needs to be capable of sustaining the high priority applications identified in terms of hardware, software functions, access throughout, and future maintenance. This translates into the following principles:

- Appropriate to the Organizations - within the institutional constraints the system must fit the limits of the municipalities but also meet their needs
- State-of-the-art software environment - to facilitate minimal maintenance and maximum efficiency
- Generic hardware components - to facilitate minimal maintenance yet meet the needs efficiently
- User friendly and broad access - throughout the municipalities to maximize ease of use and availability
- Data access needs to have controls to provide security and integrity
- On-going GIS support and maintenance – the system needs to have planned on-going support to ensure proper training, maintenance of data layers

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- Expansion – the system needs to be flexible enough to allow additions of applications and data as needs change or as technology evolves
- Cost – the system must be within reasonable expectations for system funding; ongoing as well as startup costs must be considered

Following is a basic discussion of the most important options available and AIG's recommended approach.

- **Hardware:** There is no reason to make any major changes in the existing hardware computing system environments. We recommend adapting a system to take advantage of the existing environment. Following are the several generic specifications for the hardware components of the system:
 - Use of existing computers as "Arc IMS viewers"
 - Several desktop stand-alone GIS computers, including peripherals
 - Shared resources, such as a large format plotter.
- **Software:** Options should reflect local circumstances including cost, support service needs, data compatibility, and product relevance. The system recommendation envisions three levels of software:
 - Arc IMS for providing GIS through the Internet.
 - Web browser software for end-user access to map images generated by the Arc IMS server.
 - Desktop Stand-alone GIS (for special functionality)
- **Data:** Options reflect local needs including maintenance, availability, development of new data, application needs, format, access, metadata, and map base.
- **Personnel:** Options include building skills of existing employees, adding consultants, contracting out services, and creating new positions. They need to address functions including: system administrator, GIS coordinator, desktop technicians, technical support and training, data and application development, and system evaluation
- **Institutional arrangements:** Relations with APA, Essex County GIS and other organizations are to be formalized.
- **Installation options:** stand-alone desktop computers with shared resources and a web-based system.

e) Suggested Implementation Plan

The narrative above provides a framework for discussion for GIS implementation within the municipalities. The Implementation Plan identifies the steps that are feasible and appropriate to be initiated on a short and long-term basis, and a schedule on which to accomplish those steps. The schedule for implementation reflects many factors including municipal priorities, funds available, and the capacity of the municipalities to institute the changes needed. The steps that need to be included in the plan relate to personnel and administrative provisions, hardware installation, data acquisition and application development.

This report lists key priorities for each step, notes whether they are short- or long-term priorities, and develops a logical sequence of GIS implementation that embodies a feasible approach.

For the purposes of this report priorities will be based upon the following factors: intensity of need – for example, the environmental benefit of developing a wastewater infrastructure data layer is a legal requirement from the State Dept. of Environmental Conservation at the moment and therefore time-sensitive and important; relative cost of development; and magnitude of payback.

Based on this analysis we have organized the potential tasks into an arrangement based on priorities. These include:

- Arrange personnel requirements and institutions
- Agree on priority applications

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- Establish a management team and data policy, including metadata, sharing protocols, monitoring and evaluation
- Contract for services
- Establish relationships with data-provision agencies
- Acquire data layers and establish applications in order of priority
- Set up several desktop systems
- Set up a Municipality Wide Mapping Service (MWMS)

f) Priority Applications

Several of the priority applications are:

- Development of the Sewer Infrastructure Data layer
- Development of Data Display, Query, Access and Printing Capabilities to All Departments
- Permit Documents Data Layer
- Inspection Data Layer (Waste Water)
- Abutters Notification
- Planning Thematic Overlays
- E911 Address Correlation
- Highway Infrastructure Data Layer

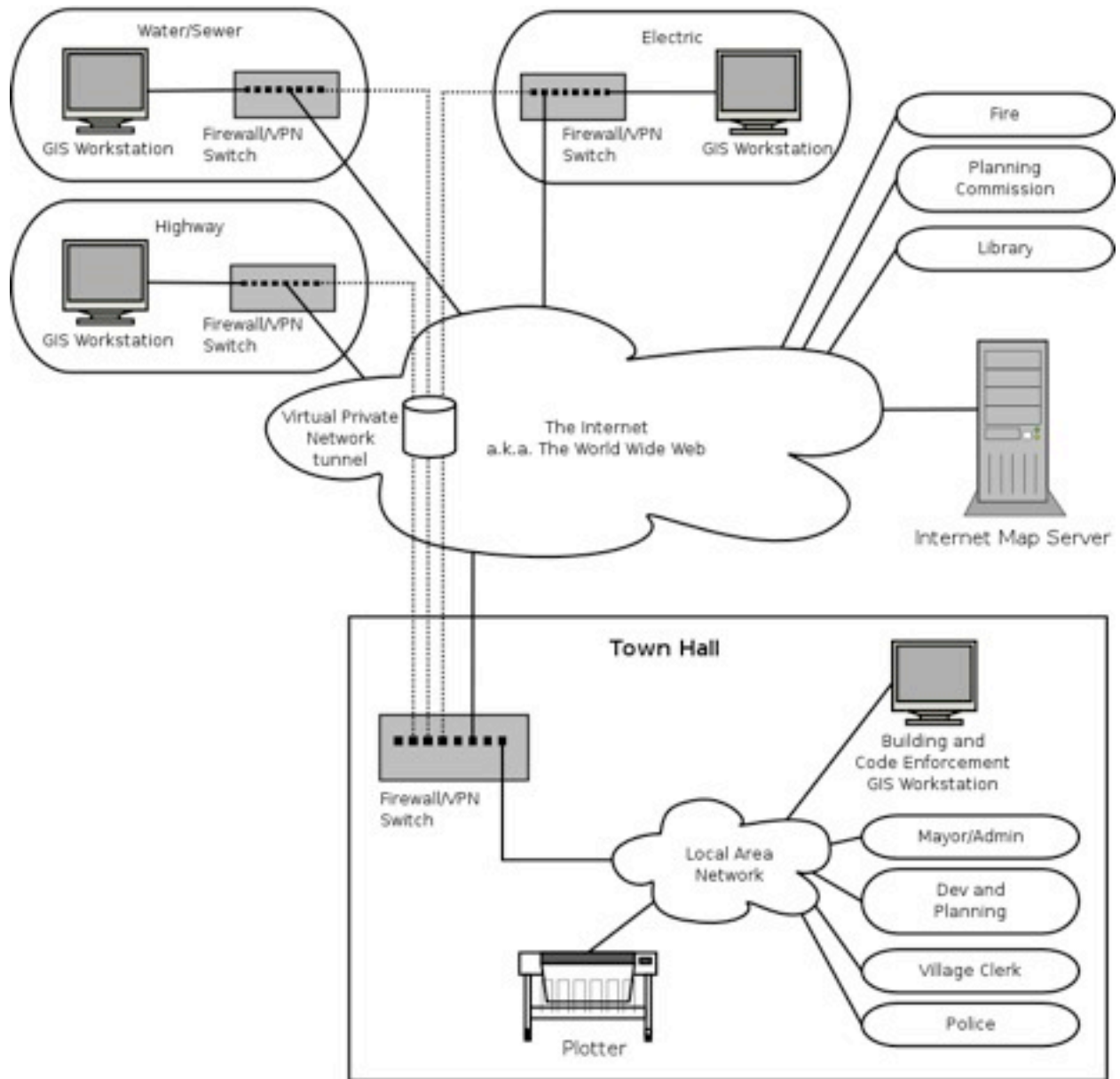
These are explained in more detail in the report - Part Three.

g) Scheduling and Budget

The implementation would be phased in over three years, with highest priority needs being addressed first (see the Schedule discussion in the Implementation Plan).

Total for all three years would be \$208,000, of which the municipalities might apply for \$125,000 in implementation assistance from NYS SARA.

Figure E-1. Recommended System Configuration.



III. Introduction and Overview

The Village of Lake Placid is located in the Town of North Elba, which is entirely within New York's Adirondack Park. The Town has a population of 8,661, of whom 2,638 live inside the Village. Both municipalities provide services to not only their residents but to a large and growing number of tourism-based developments and second home owners. Recent development of new buildings and subdivisions and concurrent efforts to improve growth management planning in the Village of Lake Placid and Town of North Elba spurred local interest in GIS.

The Village of Lake Placid and Town of North Elba have been considering, to varying degrees, the use of GIS for a number of years. To some extent individual departments have begun to use GIS; other agencies and other organizations have demonstrated the use of GIS in situations that are similar to those found in the Village.

The study has been made possible by the Village of Lake Placid and Town of North Elba securing a grant from the State Archives and Records Administration (SARA) Local Government Records Management Improvement Fund. The GIS Needs Assessment follows the guidelines and format developed by SARA for conduct of the study.

Interest in GIS has been spurred by a move to revise the nearly 30 year old comprehensive plan with new map information, some of which is available digitally.

Growing interest in more efficient government, with the merger of some functions into one department, could be facilitated by sharing of information through a GIS. Department heads also recognized that even the resolution of complex infrastructure and environmental problems, such as waste water management, could be better addressed through use of GIS.

h) Community Commitment

The municipalities have demonstrated their commitment to records management in the past, by the adoption of retention schedules and the completion of past records management projects.

With respect to the use of GIS technology, the municipalities have taken advantage of opportunities to learn more about the benefits of this approach. They have participated in workshops describing the process and requirements of GIS. Staff, municipal officials, and volunteers have used their own resources to take advantage of GIS in simple ways and have demonstrated the capacity to understand and make use of spatial data and maps. The ongoing joint (Village and Town) planning process makes extensive use of spatial resources. This commitment signals a willingness to engage in long-term support of GIS in the municipalities, especially as its utility is demonstrated over time.

This report, developed by Adirondack Information Group, LLC, in cooperation with the Village of Lake Placid and Town of North Elba, is a tangible step toward laying out a path to address GIS issues.

AIG considers GIS a tool of many to use in the need for information management. It can be used well or ill; it can cost a lot or a little. It can bring together other information resources, such as non-spatial analyses (e.g., the Environmental Impact Studies done in Lake Placid regarding the possible Wal-Mart venture, which is available at the local library) that can shed light on local circumstances, and should be available to decision-makers, in the context of current geographic infrastructure data. In this case we feel that a GIS would greatly

enhance day-to-day operations and long-term planning efforts, especially if it eventually helps maintain access to the greater body of information about the area.

Preparation of this report and the interview process has been a learning experience for all those involved. The municipal employees and government officials have a better idea of GIS capabilities and everyone has a clearer picture of the ways in which government operations can be coordinated through GIS. The process has in itself been a learning tool.

i) Content

This report is organized into four parts.

1. Part 1 serves as an introduction and provides an overview of GIS as well as the framework for this effort within the operations of the Village of Lake Placid and Town of North Elba. It also includes a summary. Finally, it describes the results of the departmental interview process and inventory of GIS resources.
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j) Basic Concepts of GIS

i) Sample applications

The Municipalities are in a position to benefit immediately from the use of GIS. We feel that the following uses are appropriate examples of tangible benefits of a GIS for the municipalities.

(1) Display of Zoning Information

The planning and zoning departments could retrieve and look at the current “zoning” of land outside hamlet boundaries on the Adirondack Park Land Use and Development Plan Map (the APLUDP or “fruit salad” map). This map is available in hardcopy or digital format free of charge from the Adirondack Park Agency. As new versions are available from the Park Agency a GIS would allow for the rapid update of information for the municipalities. In a GIS the maps could be displayed at a variety of scales for better analysis.

(2) Community Infrastructure Information

The location, size and capacity of existing fire hydrants could be mapped into a GIS and used for display in digital and/or printed form in each emergency vehicle. As this information is collected and updated during infrastructure revitalization efforts the GIS would greatly facilitate maintenance of current information and generation of new maps. Additionally, the Town and Village would be better able to retain the institutional knowledge this entails, without as much

dependence on a few individuals – a common need in the organizational development and “professionalization” of local governments everywhere.

(3) Community Growth and Policy Issues

The location of parcel information “centroid” data¹ is currently available through the NYS Office of Real Property Services for the municipalities. Some groups have prepared digital maps of changes in these uses over time. Presentation of this information in a GIS, together with other community and natural resource information - such as reports and analyses of historical resources, recreational trail systems, wetlands and slopes - would be a powerful analytic tool useful in the community visioning and public outreach processes. The simple GIS process of “overlay” is an example of an achievable tool within the capacity of the staff and volunteers to effectively utilize. This hands-on capability allows more ground-truthing of the data making better information in the long run.

An advantage of the GIS is the ability to change scale; in the context of the municipalities’ visioning process, this will allow the exploration of regional connections of North Elba resources across political boundaries.

ii) Local Government Uses of GIS

The State Archives and Records Administration (SARA) describes the potential use of GIS by local governments as follows:

“The use of geographic information systems by local government falls into five major categories:

- Browse
- Simple display (automated mapping);
- Query and display;
- Map analysis; and
- Spatial modeling.

Browse

This function is equivalent to the human act of reading a map to find particular features or patterns. Browsing usually leads to identification of items of interest and subsequent retrieval and manipulation by manual means. For single maps, or relatively small areas, the human brain is very efficient at browsing. However, as data volumes increase, automated methods are required to effectively extract and use information from the map.

Simple Display

This GIS function is the generation of a map or diagram by computer. Such maps and diagrams are often simple reproduction of the same maps used in a previous manual oriented GIS environment. Examples of this type of use are preparation of a 1:1,000-scale town map, a sketch of an approved site plan, maps of census data, etc.

Query and Display

¹ Centroid data contains point features and attributes for real property tax parcels by county. The points represent the visual center of the parcel on a tax map.

This function supports the posing of specific questions to a geographic database, with the selection criteria usually being geographic in nature. A typical simple query would be: "draw a map of the location of all new residential units built during 1989." A more complex query might be: "draw a map of all areas within the town where actual new residential units built in 1989 exceeds growth predictions." Such a query could be part of a growth management activity within the town. Queries may be in the form of regular, often asked questions or may be ad hoc, specific purpose questions. The ability to respond to a variety of questions is one of the most useful features of a GIS in its early stages of operation. In the long run, other more sophisticated applications of the GIS may have a higher value or benefit, but to achieve these types of benefits, users must be familiar with the GIS and its capabilities. Such familiarization is achieved through the use of a GIS for the simpler tasks of query and display.

Map Analysis (Map Overlay)

This involves using the analytical capabilities of GIS to define relationships between layers of spatial data. Map analysis is the super-imposition of one map upon another to determine the characteristics of a particular site (e.g., combining a land use map with a map of flood prone areas to show potential residential areas at risk for flooding). Map analysis (often termed overlay or topological overlay) was one of the first real uses of GIS. Many government organizations, particularly those managing natural resources, have a need to combine data from different maps (vegetation, land use, soils, geology, ground water, etc.). The overlay function was developed to accomplish the super-imposition of maps in a computer. The data are represented as polygons, or areas, in the GIS data base, with each type of data recorded on a separate "layer." The combination of layers is done by calculating the logical intersection of polygons on two or more map layers. In addition to combining multiple "layers" of polygon-type data, the map overlay function also permits the combination of point data with area data (point-in-polygon). This capability would be very useful in a town for combining street addresses (from the Assessor's files) with other data such as parcel outlines, census tract, environmental areas, etc. Many facility siting problems, location decisions, and land evaluation studies have successfully used this procedure in the past.

Spatial Modeling

This application is the use of spatial models or other numerical analysis methods to calculate a value of interest. The calculation of flow in a sewer system is an example of spatial modeling. Spatial modeling is the most demanding use of a GIS and provides the greatest benefit. Most spatial modeling tasks are very difficult to perform by hand and are not usually done unless a computerized system, such as a GIS, is available. These models allow engineers and planners to evaluate alternate solutions to problems by asking "what if" type questions. A spatial model can predict the result expected from a decision or set of decisions. The quality of the result is only as good as the model, but the ability to test solutions before decisions have to be made usually provides very useful information to decision makers. Once again, this type of use of a GIS will evolve over time, as the GIS is implemented and used.²

k) How a GIS might be implemented in Lake Placid and North Elba

² SARA GIS Development Guides. Conducting a Needs Assessment. Part 3 Local Government Uses of GIS. (http://www.archives.nysed.gov/a/nysaservices/ns_mgr_active_gisguides_needassess.shtml)

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The actual implementation of a GIS in any community involves planning activity in several discrete steps. These steps will be applied to the needs of the Village of Lake Placid and the Town of North Elba to come up with a GIS Implementation Plan. Development of a GIS requires the resolution of questions in these topics:

- Computer hardware – what hardware is needed to satisfy the municipalities' GIS needs? How can physical resources be shared? What are the existing strengths upon which a new system can be built?
- Software – taking into account the existing software used by the municipalities, what are the desktop and network software needs? How can existing database and GIS software best be integrated into the system design?
- Geographic Data – within the framework of available and existing data, what are the additional data needs for the municipality? How will the system ensure that quality data will be produced that has the support of the system operators and is durable for the life of the system?
- Institutional Relationships – how can the system take advantage of inter-departmental cooperation to accomplish common tasks and share data? Procedures must be established and adhered to that promote consistency in and quality in data management.
- Staff Training – how can the municipalities provide ongoing support in the form of training and feedback that recognizes the value of employee achievements?

Planning for a GIS system and the development of an implementation plan follow the same steps that any significant program development follow. First an inventory is undertaken, together with an assessment of the needed GIS functions. Secondly, after analysis of the needs, a system is proposed that will accomplish the priority goals of the GIS; and lastly the steps to be taken to implement the system are outlined in an implementation plan. We recommend the implementation of a municipal data policy as well. Data policies are used to institute management of GIS data sharing protocols, metadata development, public access, and other issues. Standards for these policies and for data development at the local level in general may be guided by the Federal Geographic Data Committee, which is developing the National Spatial Data Infrastructure (NSDI) in cooperation with organizations from State, local and tribal governments, the academic community, and the private sector. The NSDI encompasses policies, standards, and procedures for organizations to cooperatively produce and share geographic data (see <http://www.fgdc.gov/standards/standards.html>).

I) Past GIS Activities and the Current Contextual Framework

Since the 1980 Winter Olympics the Village of Lake Placid and Town of North Elba have experienced a steady yet dramatic increase in economic growth resulting in an increase in the number of housing units and commercial activity.

Partly in response, the Village of Lake Placid and Town of North Elba have consolidated zoning codes and the volunteer boards - the planning board and zoning review boards - to administer these codes.

A jointly operated Building and Code Enforcement Department provides staff support and conducts day-to-day operations under these codes. The staff, numbering two persons, has begun to use GIS in day-to-day operations. They are learning how to obtain information through the new (as of June 2005) Essex County GIS ARC IMS site and, because of its availability, also utilize extensive data from State agencies. They use ESRI's ARC View 3.2 software. In

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addition, land developers commonly present plans and data developed in GIS format in support of development proposals before the Joint Review Board (JRB) or Zoning Board of Appeals (ZBA).

There are two places with extensive data sets available to the Village of Lake Placid and Town of North Elba. One is the Essex County GIS (see <http://rpts-web.co.essex.ny.us/rpts/website/essexcountygispublic/default.htm>) (see Table 1) and the other is a Cooperative GIS data CD with Adirondack Park data (see Table 2).

The combination of available data and use, has led to an improving understanding of the capabilities of GIS by many in the Village of Lake Placid and Town of North Elba.

i) Essex County GIS Data

The Village of Lake Placid and Town of North Elba are very fortunate that much of the data needed for a fully functional GIS is already available through the Essex County GIS. This gives the municipalities a tremendous lead on GIS implementation and an advantage in leveraging critical costs.

Essex County was awarded a grant and has completed a SARA funded GIS Needs Assessment. The report entitled "Essex County GIS Needs Assessment" by Geographic Data Link, LLC. was completed and adopted by the County in 1999. It establishes a recommended path for GIS implementation.

Essex County has since developed a robust GIS capability. Currently the function is housed in the Real Property Mapping Services (RPS) Office and the Director of that Office, Mr. Bernard Miller, is also the GIS Director. The County uses both a manually distributed set of GIS CDs and an Internet ARC IMS service to distribute GIS data. The Essex County Real Property data, including both parcel boundaries and attributes from the tax records, is data created by Essex County. This data is not shared publicly but is made available to the Village of Lake Placid and Town of North Elba manually on the CDs and is available for purchase to other users, e.g. the APA is in the process of buying this layer. The CDs distributed in 2005 also contain some of the data layers from the New York State CDs and listed in Table 2 below.

The Essex County RPS Director told us he anticipates that the CDs will be updated and redistributed to municipalities in the country annually. A major limitation of the data is the lack of Metadata, so users of the Essex County GIS data sets will need to locate other sources of information to describe the information they are using and rely upon the assumption that the same terms are in use at Essex County. Equally problematic is the lack of a list of coverage layers currently existing on the CDs so users can find exactly what they need (see Table 1; according to the RPS office deputy, there are hundreds of data layers on the CDs but no list was readily available to the GIS assessment team). There are restrictions on the sharing and copying of some of these data, although most are public and therefore available upon request.

Table 1 - Essex County Data available

(on a 9 CD set distributed in 2005)

Abbreviations:

RPS - Essex County Office of Real Property Services

GIS Data Name	Type	Source	Scale	Extent	Metadata
Real Property Parcels	shapefile	RPS	NA	County	NO

ii) New York State Data

A wealth of data is available through the New York State Adirondack Park Agency on a two CD set called “Shared Data CD.” Essex County also distributes these data on its CD and makes some of the data available on its ARC IMS web site. Except for the Essex County Real Property data the other data sets are available through New York State sources. Another source is the New York State Clearinghouse web site where up-to-date digital orthography is available.

Table 2 – New York State Data available on APA Shared Data CD

Abbreviations

ALSC - Adirondack Lakes Survey Corporation
APA - NYS Adirondack Park Agency
DEC - NYS Dept. of Environmental Conservation
DOH - NYS Dept. of Health
DOT - NYS Dept. of Transportation
NFLI - Northern Forest Lands Inventory

NRCS - Natural Resources Conservation Service
OFT - NYS Office for Technology
ORPS - NYS Office of Real Property Services
SED - NYS Education Dept.
USGS, NMD - USGS, National Mapping Division

GIS Data Name	Type	Source	Scale	Extent	Metadata
Blueline (Park boundary)	shapefile	APA	1:24000	Blueline (Park boundary)	Yes
1892 Blueline	shapefile	APA	1:250000	1892 Blueline	Yes
APA Land Classification	shapefile	APA	1:24000	APA Land Classification	Yes
DEC Regions	shapefile	DEC	unknown	DEC Regions	Yes
Municipal boundaries	shapefile	APA	1:24000	Municipal boundaries	Yes
State Land Unit boundaries	shapefile	DEC	1:24000	State Land Unit boundaries	Yes
Water and Sewer districts	region coverage	APA	1:24000	Water and Sewer districts	Yes
2000 Real Property Centroids	shapefile	ORPS	1:600 to 1:9600	10-mi Park buffer, by county	Yes
State Forest Acquisition/ Old Growth	shapefile	APA, Barbara McMartin	1:177408	Park	Yes
School Districts	shapefile	ORPS	1:600 to 1:9600	Park	Yes
School locations	shapefile	SED	unknown	10-mi Park buffer	Yes
College locations	shapefile	SED	1:24000	10-mi Park buffer	Yes
Public Library locations	shapefile	SED	unknown	10-mi Park buffer	Yes
Census Block Groups 2000	shapefile	US Census Bureau	1:500000 to 1:5000000	10-mi Park buffer	Yes
Hospital locations	shapefile	DOH	unknown	10-mi Park buffer	Yes
Digital Elevation Model	GRID	USGS	1:250000	Park	Yes

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Slope Grid	GRID	USGS	1:250000	Park	Yes
Shaded Relief Grid	GRID	USGS	1:250,000	Park	Yes
10m DEM	GRID	USGS	10m x 10m	Park, by quad	Yes
1916 Fire Protection Map	shapefile	APA	1:126720	Park	Yes
1950 Blowdown	shapefile	APA	1:253440	Park	Yes
1995 Blowdown	shapefile	DEC	1:24000	Affected areas of DEC Regions 5 & 6	Yes
Bedrock Geology	shapefile	NYS Museum/ NYS Geological Survey	1:250000	Park	Yes
Surficial Geology	shapefile	NYS Museum/ NYS Geological Survey	1:250000	Park	Yes
Surface Water	coverage, by USGS 8-digit watershed	DEC	1:24000	Park	Yes
State Designated Rivers	coverage	APA	1:24000	Park	Yes
ALSC Lakes Data	tabular	ALSC	tabular	Park	Yes
1978 Land Cover	GRID	APA	63m x 63m	Park	Yes
1982 Land Cover	GRID	APA	63m x 63m	Park	Yes
National Land Cover Data Set	GRID	USGS	30m	Park	Yes
Digital Orthophotography Quarter Quads	Mr. Sid imagery	OFT	1:12000	Park	Yes
Recreation Points	shapefile	NFLI	1:24000	Park	Yes
Trails	shapefile	NFLI	1:24000	Park	Yes
SSURGO Soils	coverages, by county	NRCS	1:15840	Clinton, Saratoga, St. Lawrence, Oneida Co.'s	Yes
MesoSoils	GRID	APA	1:62500	Park	Yes
Railroads	shapefile	NFLI	1:100000	Park	Yes
Roads (1970s)	shapefile	DOT	1:24000	Park	Yes
Airports	shapefile	NFLI	1:100000	Park	Yes
Major Park Watersheds	shapefile	APA	1:250000	Park	Yes
Detailed watersheds	region coverages, by major watershed	APA	1:24000	Oswegatchie-Black, Upper Hudson, and St. Regis watersheds	Yes
NYS 2,4,6,8,11-digit Hydrologic Units	region coverage	NRCS	unknown	10-mi Park buffer	Yes
Lake Champlain Watershed	shape	USGS Water Resources Div.	1:24000	Lake Champlain	Yes

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Covertypes wetlands	coverages, by quad	APA	1:24000	Oswegatchie–Black, Upper Hudson, and St. Regis watersheds	Yes
Regulatory wetlands	coverage	APA	1:24000	Clinton, Essex, Lewis, Oneida, Warren Co.'s (by quad)	Yes
Wildlife Management Units	shapefile	DEC	1:100000	10–mi Park buffer	Yes
Breeding Bird Atlas	shapefile	DEC	5 km blocks	10–mi Park buffer	Yes

iii) Federal data

An important data set is the soils inventory prepared by the USDA Natural Resource Conservation Service. A detailed soils survey was completed for the 1980 Winter Olympics (however it is unknown if the data has been digitized).

All of these data are extremely valuable. They can provide an impressive and powerful data asset upon which the further GIS work of the Village of Lake Placid and Town of North Elba may be built.

m) Summary Overview

In summary, although the Village and Town have some experience with GIS, their use of technology in general is minimal and uncoordinated. Although a few functions are integrated between the municipalities, for the most part there are physical and institutional barriers to coordination and further integration. Staffing is limited and many staff do not have the interest, time, or training to tackle significant new technology tasks. In this context, our reports try to recognize the existing circumstances and discuss the results in realistic terms.

n) Acknowledgements

This GIS Needs Assessment project has been funded by the New York State Archives and Records Administration (NY SARA). The **Adirondack Information Group** Project Team included:

- Raymond Curran (Project Manager)
- Kara Page (Project Associate)
- Craig Cheeseman (Project Associate)
- Steve Halasz (Project Associate)
- John W. Barge (Project Associate)

The **Village of Lake Placid and Town of North Elba** GIS Coordinating Team included:

- Jamie A. Rogers, Mayor Village of Lake Placid
- Shirley Seney, Supervisor Town of North Elba
- Jim Morganson, Code Enforcement Officer
- Angel Granger, Grants Planner

IV. Inventory of Departmental Needs

o) Preliminary Work

At the outset of the effort it was determined that a committee comprised of municipal and community representatives should be assembled to advise on the conduct of the study. The GIS Needs Assessment Team included the following individuals:

GIS Needs Assessment Team

- Mayor, Village of Lake Placid – Mr. Jamie Rogers
- Supervisor, Town of North Elba – Mrs. Shirley Seney
- Grants Coordinator – Ms. Angel Granger
- Zoning Code Enforcement Officer - Mr. Jim Morganson
- Consultant - Raymond P. Curran, AIG

The GIS Needs Assessment Team met on September 12 to advise on the proposed course of action.

To begin the study, especially the data collection phase, and to introduce the concepts of GIS parameters of the study, a kick-off facilitated workshop was held for Town and Village personnel on September 12. Each department was invited. Subsequent to the presentation a facilitated discussion occurred during which several department heads talked about the ways they expected GIS to benefit them in the future. A second workshop was held on September 19 to reach department heads that did not attend the first meeting. A similar facilitated discussion also resulted in the fleshing out of potential GIS applications. At the conclusion of each workshop department heads were furnished with a questionnaire to be completed before individual interview sessions were held.

p) Inventory of Needs

i) Interviews

An important part of the study was the interview process. This included discussions with municipal departments and with outside agencies that might be potential sources of data or collaborators in Town and Village GIS efforts. These interviews helped to educate the staff of AIG and to assemble study data, but also increased the awareness of municipal staff of the potential for GIS for facilitating their daily and long-term capacities at work. The amount of effort put into this phase is an indication of its degree of importance. Over 35 persons were interviewed over approximately 3 weeks (see Table 3). Questionnaires were completed using additional information from the interviews, then returned to interviewees for comments. Given the opportunity to make changes two persons responded. The results are reported in two sections; the first covers municipal departments and the second, other departments including County, State and private organizations.

Village Department	Interviewee	Date of Interview
Mayor and Administration	Jamie Rogers	9/30/05
Water and Waste	Phil Perry	9/13/05

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	Lyle Holzer	9/22/05
	Randy Richards	9/13/05
Sewage Treatment Plant	Stuart Baird	9/15/05
Electric	Peter Kroha	9/19/05
Highway	Richard Boyer	9/21/05
Fire	Brad Jacques	9/14/05
Police	Scott Monroe	9/14/05
Assessor	Kim Daby	9/19/05
Development and Planning	Angel Granger	9/14/05
Village Clerk	Kathryn McKillip	9/20/05
Engineer	Ivan Zdrahal	9/9/05
Joint Planning Commission	Michael Clarke	9/27/05
Joint Review Board	Bill Hurley, Chip Bissell	9/22/05
Town Department	Interviewee	Date of Interview
Supervisor and Administration	Shirley Seney	9/30/05
Highway	Norm Harlow	9/19/05
Building and Code Enforcement	Jim Morganson	9/19 /05
	Joyce Marshall	9/14/05
Parks District	Butch Martin	9/19/05
Assessor	Kim Daby	9/19 /05
Town Clerk	Barbara Whitney	9/19/05
Black Fly program	John Reilly	9/22/05
Historian	Beverly Reid	9/15/05
Library	Patricia Perez	9/15/05
County Department	Interviewee	Date of Interview
Real Property	Bernard Miller	9/22/05
Planning	Vic Putman	N/A
E-911	Don Jaquish	9/19/05
Visitor's Bureau	Jim McKenna	9/23/05
Other	Interviewee	Date of Interview
LP Land Trust	Audrey Hyson, Tony Goodwin, Liz Clarke	9/22/05
ORDA	Bob Hammond	9/22/05
Network Support	Keith Hall (572 3275)	NA
State	Interviewee	Date of Interview
APA	Brian Crisi	9/26/05

ii) Town Organization

We documented the organization of the departments, channels of responsibility and major pathways for information flow in the following figure (Table 4. Village of Lake Placid and Town of North Elba Organizational Structure)

Table 4. Village of Lake Placid and Town of North Elba Organizational Structure

Organization of Municipal Governments	
Village of Lake Placid	
Elected Officials	
Mayor	Rogers
Trustee	Strack
Trustee	Gallagher
Trustee	Jones
Trustee	Roy
Clerk	McKillip
Assessors	Daby
Highway	Boyer
Departments	
Electric	Kroha
Water	Perry
Sewer	Perry
Fire	Police
Finance	Hutlinger
Town of North Elba	
Elected officials	
Supervisor	Seney
Councilman	Favro
Councilman	Warner
Councilman	Rand
Councilman	Doty
Clerk	Whitney
Assessors	Daby
Highway	Harlow
Departments	
Parks	Martin
BTi	Reilly
Finance	Gregory
Shared Departments	
Building and Codes	Morganson
Planning and Grants	Granger
Joint Planning Commission	Clarke
Joint Zoning Board of Appeals	Hurley

q) Department Reports

Following are detailed reports for each department. They describe functions, resources available, GIS information flow, GIS needs and potential applications that might be used by each department. For each application, the interviews have been used to project the expected frequency of use of each application in categories (see table).

i) Village departments - Mayor and Administrator

Department Title: Mayor and Administrator

Date: 9/30/2005

Department Head: James E. Rogers, Mayor Village of Lake Placid

Department Overview:

The Mayor is the Chief Administrative Officer of the Village and has day-to-day management responsibilities for all government matters in the Village.

Critical ongoing issues that relate to GIS are:

- Work of the Joint Planning Board in updating and revising the Comprehensive Plan.
- Compliance with the NYS DEC plan to address Sewer Infrastructure Issues.
- Examination of the efficiency of government vis-à-vis overlap of Village and Town responsibilities.

The Mayor has a need to display and query the GIS data layers available for the Village to answer questions from the public and help to administer the office.

Number of Staff: 1

Existing Resources:

Computer Equipment:
One stand alone computer: AMD Athlon 256 MB RAM; 70 GB harddrive; XP OS
Desktop displays (17" LCD)
Internet: Adelphia

Inventory of GIS or Database Software

None

Inventory of Map Data

Description	Form	Frequency of Use
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None		
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Inventory of Non-Map Geographically Referenced Data

Description	Form	Frequency of Use
None		

Applications Identified by Priority

Name	Description	Source
BG1	Display and Query of Data Layers (particularly in reference to old and E911 addresses)	Digital

ii) Water and Wastewater

Department Title: Water and Wastewater

Interview Date: September 13, 2005

Title: Phil Perry, Superintendent

Also attending: Lyle Holzer, Randy Richards

Department Overview: The Department maintains and operates the water supply and wastewater collection, filtration, treatment and distribution system.

Priorities:

Several problems were identified by the Department that might benefit from GIS. The most pressing is the need to digitize the sewer infrastructure to enable creation of a data layer to meet the requirements of a DEC approved remediation plan (see Application WW1).

A similar need exists, but not as crucial, for water supply infrastructure (see Application WW2). Identifying, recording and providing access to the exact location of underground curb boxes is essential. Mr. Perry stated that they would use that application 10 times per day, often during freezing and inclement weather, if it was available. He has an interest in and a commitment to the success of each of these applications.

The Department is half way through the process of installing water meters and will complete that this winter.

The Department has two employees with specialized skills and interests related to GIS. Lyle Holzer is the operator of the water treatment and pumping station on Mirror Lake Drive and has helped to automate records. He has a small Access database of some of the water supply curb boxes, including scanned images of hand drawn maps showing the approximate location of curb boxes. Randy Richards is the "Infrastructure Code Enforcement Officer." He has shown an interest in automation and field application of GPS units to be used in locating underground facilities. He operates an inspection video camera in the sewage collection system. He also initiated the hardcopy database of the septic system inspections near the shore of Lake Placid, inspections of grease traps and a hand-drawn map of fire hydrants.

Over the long term the Department faces several other pressing challenges. They relate to infrastructure capacity. The first is the need to reduce storm water infiltration into the waste water infrastructure. According to Stuart Baird (see interview below), effluent entering the sewage treatment plant may increase from 1.5 million gallons per day (mgpd) to 3-5 mgpd

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during storm events. Having to treat excess waste will affect the future capacity of the Treatment Plant and its useful life. Once the infrastructure is mapped this layer can assist in the analysis of infiltration (see Application WW5).

There is no anticipated need to share water quality data with, for example, EPA.

Also, relative to planning for growth in both municipalities, portions of the existing infrastructure may not have sufficient capacity for increased growth. The excess capacity of individual mains should be determined and compared to potential infill growth potential using GIS to properly assess the actual cost of new infrastructure to accommodate such growth and to direct development into areas of existing capacity. In certain areas, lines may not have adequate capacity for more development without an upgrade, which could be assessed as a contribution of the subdivision developer if the municipality has adequate data to prove its case (see Application WW4).

In the long term the GIS layers may be used to help address both of these issues.

Number of Staff: 11

Existing Resources:

Computer Equipment:
At the water filtration plant, a stand alone computer with AMD x86 processor, 60 gb hard drive, Windows 5.1 Service Pack 2 OS.
15" Desktop display (CRT), color inkjet printer
Network: Adelphia

Inventory of GIS or Database Software

Microsoft Office, Excel and Access

Inventory of Map Data

Description	Form	Frequency of Use
Sewer and water infrastructure engineering drawings of selected areas (dates range from 1970 - present). Approximately 100 scanned maps located at the water filtration Plant. The Sewer Master Trunk line is a good approximation. An inventory of other maps exists. They are of varying accuracy and condition.	Hardcopy and digital	1/week

Inventory of Non-Map Geographically Referenced Data

Description	Form	Frequency of Use
Water Meters (about ½ completed)	Hardcopy	90/month
For the shoreline area of Lake Placid, reports of on-site waste water inspection visits, photos of the site.	Hardcopy	1/week
Digital database of water curb stops including images of sketches describing location	Digital	300/month
Grease Trap inspection Reports	Hardcopy	90/month

Applications Identified by Priority

Name	Description	Source
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WW1	Development and maintenance of sewer infrastructure GIS Layer	Contract and In-house
WW2	Development and maintenance of water supply infrastructure GIS Layer	Contract and In-house
WW3	Development and maintenance of inspection of infrastructure GIS Layer	Contract
WW4	Infrastructure Capacity Analysis and Segment attribution	Contract
WW5	Storm water Infiltration Analysis	Contract

iii) Sewage Treatment Plant

Departmental Report: Sewage Treatment Plant

Department Title: Wastewater Treatment Plant

Date: September 15, 2005

Title: Stuart Baird, Chief Operator and Lab Director

Department Overview:

The Department is responsible for operating and maintaining the wastewater treatment plant including monitoring of plant performance, regular reporting to DEC of data and analysis.

Mr. Baird identified two issues of concern which deserve long term GIS consideration. They relate to infrastructure capacity. The first is the need to reduce storm water infiltration into the waste water infrastructure. He says that the effluent entering the plant may increase from 1.5 mgpd to 3-5 mgpd during storm events.

Second, he thinks the municipalities would benefit by determining the capacity of individual trunk lines and comparing this to potential infill growth potential to properly assess the actual cost of new infrastructure to accommodate and/or charge developers to reimburse the municipalities for such growth. Certain segments of the lines may not have adequate capacity, and upgrades will be required to service development in those areas.

GIS layers may be used to help address both of these issues.

Two of the staff operators of the plant have specialized GIS interests and knowledge (Jason Endries and Tom Van Benschoten). Both are graduates of Paul Smiths College and studied GIS.

Number of Staff: 5

Existing Resources: The Department has the following resources relevant to GIS:

Computer Equipment:
Stand alone computers
Two desktop systems, Pentium grade, Windows ME, 15" monitors, will be connected via cable modem

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- Interested in digitizing infrastructure. Suggested use of Paul Smiths College Students for GPS data collection.
- Data out: Yearly billing data goes to State power authority.
- Staff with computer skills include Accounts Receivable Clerk Ginny Partridge and Deputy Mike Baker. Currently using SCADA system for tracking.
- Need: digital map of all electrical infrastructure including: transformers, switches, poles, lines underground or overhead, substations. Would need to update it yearly – they add transformers and lines to new developments each year or as needed. Wants to get this all in system ASAP as deputy may retire next year and Mr. Kroha may also do so within 3 – 4 years.
- Permitting system ok – no data needs there.
- In regards to conservation of electricity, the facility has spent approximately \$1 million so far on conservation for commercial and public buildings, and incentives for residential electric which the state requires have certain insulation types/amounts in place. The director does not think the locations for this effort need to be mapped. They participate in a regional utilities group that pools funds for conservation.

Number of Staff: 15

Existing Resources:

Computer Equipment:
One Pentium class 128MB RAM; XP 2002 OS and Two old stand alone computers
15" Desktop displays
1 color ink jet printer; 2 Mono
Internet: Adelphia

Inventory of GIS or Database Software

None

Inventory of Map Data

Description	Form	Frequency of Use
Underground power lines	hardcopy	

Inventory of Non-Map Geographically Referenced Data

Description	Form	Frequency of Use
None		

Applications Identified by Priority

Name	Description	Source

Part One: Village of Lake Placid, Town of North Elba GIS Needs Assessment

EL1	Digital map of all electrical infrastructure including: transformers, switches, poles, lines underground or overhead, substations. Would need to update it yearly.	Some hard copy
BG1	Data Layer Display and Query	digital

v) Village Highway

Departmental Report

Department Title: Village Highway

Date: 9/20/2005

Department Head: Richard Boyer, Highway Superintendent

Department Overview:

The Department is responsible for maintenance of the Village highway infrastructure. There are approximately 11.3 miles of Village roads, and that number has remained constant for many decades. Part of the infrastructure is the storm water drainage system which requires regular maintenance. Most storm drains are cleaned out twice a year, but the Vortex Collection Systems located around Mirror Lake are cleaned out monthly. They remove snow on both Village and State highways.

There is no map of the storm water system. If he needs a map he gets it from Norm Harlow or Bob Marvin. Bob Marvin may also flag boundaries as needed. He sees information sharing as adequate. He sees no need for further GIS improvement.

Number of Staff: 18

Existing Resources:

Computer Equipment:
One stand alone computer Tiger AMD AThlon 128 MB RAM; 30 GB harddrive; XP OS with 17" display
Internet: Adelphia

Inventory of GIS or Database Software

None

Inventory of Map Data

Description	Form	Frequency of Use
None		

Inventory of Non-Map Geographically Referenced Data

Description	Form	Frequency of Use
None		

Applications Identified by Priority

Name	Description	Source
	None	

vi) Fire

Departmental Report

Department Title: Fire and Emergency Services

Date 9/14/05

Department Head: Brad Jacques, Fire Chief

Overview:

The fire department acts as the dispatch center for all emergency calls in Town and Village after hours and on weekends, including water, electrical, etc.; and for all except police during office hours. Aside from Ticonderoga, it is the only self-dispatching center in Essex County.

Calls come in and the address (not mapped) is often available through the County web site, if the caller cannot for some reason identify the address. [Rental properties are a big problem in this regard as many renters do not know their address and landlords are apparently not required to post it near the phone.]

They are concerned with the County’s E911 maps - County mapping program not adequate because of required training and need to hand-draw certain features. Need to be updated often.

Note: Several attempts were made to meet with Ambulance service manager as well, without success.

Staff: Three trucks, 6 fulltime staff, 2 not so comfortable with computers.

Inventory of Existing Departmental Resources:

Computer Equipment:
2 stand alone computers, one with printer and one to maintain archive (via DVD) of emergency calls (linked to Dictaphone and Essex County addresses web site), which they want to keep separate to maintain confidentiality, not network outside, although these stations are in the process of being networked together.
Other Stand-alone Hardware: 2 monitors.
One Printer

Inventory of GIS or Database Software

Software	Version	Copies	GIS or Database
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Red Alert – county uses this; received grant. Greg Hayes enters data for them.			Data management program for fire event reporting, has mapping component that can be ordered, has hydrant tracking component too.
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Data used in day-to-day operations, which is on a map:

Inventory of Map Data Description	Digital or Hardcopy	Frequency of Use
Year old road maps (out of date and hand-pasted street names) from Essex County, 1 copy on wall, none in trucks.	Hard copy	Calls/year: 300 fire; 1200 ambulance; 200 police = 1700

Data used in day-to-day operations that is geographically referenced, but not on a map:

Description	Digital or Hardcopy	Frequency of Use
Hydrant locations	Hardcopy	
Weights on bridges		
Boundaries between T/V and Wilmington, Keene, St. Armand		

New use of geographic data that would assist in day-to-day operations:

Description	Digital	Hardcopy	Source
Ideally: hydrants/infrastructure and road map, with floor plans of buildings, on laptops in each truck and/or in office (three screen view)	No	Yes	County and local files, GPS units (would not be hard to integrate this)
Old and E911 addresses (less than ½ of all homes have updated addresses). Verizon has contracted to update them but County has not signed contract yet.	Yes	Yes	County
Fire Emergency Call reports	No	Yes	Local database
Boundaries between T/V and Wilmington, Keene, St Armand (north end of Lake Placid), Saranac Lake (when unclear, currently have to send trucks from BOTH jurisdictions – a huge waste)			
Eventually – put medical info into system (person on O2, e.g.)			

Process Flow:

- They submit fire reports monthly to state and county through internet reporting system – no problems with that and don't have to keep hard copies.
- Long-term issue: insurance rating requires showing hydrant locations and flow rates test of domestic pressures, and inspections / flushing must be done twice a year. They are working with Phil Perry's department to get that data; it is now done once a year. Keeping CDs of photos for maintenance, and ½ page hard copy sheets. Randy Richards is beginning to map

Part One: Village of Lake Placid, Town of North Elba GIS Needs Assessment

hydrants with color coding to indicate size of main and where mains are connected (so the dept. doesn't hook up to wrong source).

- They keep call report forms. Police reports indicate lat/long. Fire do not but should – could use that for long-term planning, fire trouble spots, hazardous materials, etc.
- Cell coverage spotty.
- They keep copies of floor plans and photos of interiors of school, industrial, commercial, and other public buildings (large incident sites), including any hazardous materials, exits, and mechanical structures. Could use aerial photos that indicate large incident sites, [and plume planning – for ammonia at bobsled run and arena, for example].
- They need maps of ponds for rural fire fighting.

Applications Identified by Priority

Name	Description	Source
BG1	Data Layer Display and Query: Digital and hard copy map of all emergency infrastructure including: hydrants, bridges, ponds, roads, addresses. Would need to update it frequently.	Digital
BG4	Correlate old and E911 addresses	Digital

vii) Police

Departmental Report

Department Title: Lake Placid Village Police

Date: 9/14/2005

Department Head: Scott Monroe **Title:** Chief of Police

Others: Pat Gallagher, Commissioner

Department Overview:

Public safety and security on events (e.g. the Ironman Triathlon), traffic, coordination with fire dept, which does dispatch for police after hours. Officers complete their own forms every day. Respond to 600 calls/month on average; two kinds of form – docket is just a record of an activity, such as locking gates to a plant every night; incident report is something that requires investigation by police.

Data is shared with village board and used by chief to track performance and productivity of officers. They also submit a uniform crime report (UCR) to state (NYBRIS – incident-based reporting system).

They first got computers in 1994 loaded with State system (SJS); then-chief changed it to different system that doesn't really fit needs, so they plan to change back very soon. Chief Monroe has a company looking at cost of converting their database back to SJS so they can maintain data in just one database.

He doesn't see need for analysis of trouble spots as the village is small and is the only area covered; the state police in Ray Brook cover the Town. Boundary areas between Town and

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Village are not clearly defined or mapped, however, and that is a big problem. This information should be available via computer as soon as a call comes in. At the moment they have no computer guidance or maps at all, not even the County address system (on-line) or the outdated paper maps to which the fire department has access.

There is a plan to house the police, fire and ambulance together, and they already share info very well.

[Question: does SJS have mapping capability/could it be convergent with GIS?

- Follow up from discussion with Police Chief Monroe:
- Frank Clemente, SJS: Yes, it is compatible with GIS.]

Number of Staff: 19

Existing Resources:

Computer Equipment:
Six Stand alone computers with 17" displays; including a server running XP Professional with 1 GB RAM and 80 GB and 160 GB hard drives
Network: LAN
Internet: Adelphia
Scanner: one

Inventory of GIS or Database Software:

New York State provided software SJS (Spectrum Justice System); has a mapping component, they can extract 7 files, send to Crime Mapping Program / "E-justice", (MapInfo-based system). Frank Clemente is a contact.
--

Inventory of Map Data:

Description	Form	Frequency of Use
Boundary areas between town/village are not clear, though and that is a big problem. Should pop up on screen with label - village or town - when call comes in. Now, no computer guidance, no maps at all, not even County addresses and outdated paper maps that fire dept. has.		

Inventory of Non-Map Geographically Referenced Data:

Description	Form	Frequency of Use
Map of registered sexual offenders		

Applications Identified by Priority:

Name	Description	Source
BG1	Display and Query Data Layers	digital

viii)Development and Planning

Departmental Report

Department Title: Grants and Development Department

Date: 9/14/2005

Department Head: Angel Granger, Grants Coordinator

Department Overview:

Part-time contracted position – 3 days / week at the pleasure of the Town/Village Boards to facilitate work of the Joint Planning Commission, update and create plans, write and administer grants, facilitate public transportation (trolley).

Note: this interview includes information from Denise Fredericks, who administers the HUD Section 8 (low-income housing assistance) program for the Village.

Number of Staff: 1

Existing Resources:

Computer Equipment:
Dell Optiplex 6x270 Pentium 4 CPU 2.40 GHz; 512 MB RAM; Windows XP 2002 SP1
15" Desktop displays (CRT)
Internet: Adelphia
Color Inkjet Printer

Inventory of GIS or Database Software

ArcView 3.2

Inventory of Map Data

Description	Form	Frequency of Use
Tax parcel map	Hardcopy	1/mo
Aerial photo of village: used for grant applications	Digital (and hardcopy)	1/mo

Inventory of Non-Map Geographically Referenced Data

Description	Form	Frequency of Use
Grant applications	Hardcopy	1/mo
Land use planning	Hardcopy	1/mo
Low income housing needs / poverty-socioeconomic data (From Section 8 program and First time home buyer's / rehabilitation program)	Hardcopy	occasional

New Use of Geographic Data that Would Assist in Day-to-Day Operations.

Description / Source	Digital	Hardcopy	Estimated Frequency of Use?
Tax maps updated	Yes		
Land use planning			
Infrastructure replacement/capacity planning			
Social data / income surveys (have some from past, some upcoming). Use for area planning and affordable housing planning, rental registration control/fee enforcement. Use to apply for new grant funds for infrastructure upgrades/low income housing.		Yes	During planning efforts for affordable housing and subdivision requirements for low income housing.
Tony Goodwin - use for easement planning on Jackrabbit Trail			yearly

Applications Identified by Priority

Name	Description	Source
BG1	Data Layer Display and Query of	Digital
PL1	Demographic Data Analysis	Digital

ix) Village Clerk

Departmental Report

Department Title: Village Clerk

Date: 9/20

Department Head: Kathryn McKillip, Village Clerk

Department Overview:

The Village Clerk maintains Village Records, records Board minutes, makes payroll, is the personnel officer, pays bills and takes in revenue.

She is currently administering another SARA grant to organize historic records. Some may be digitized for later retrieval.

Number of Staff: 1

Existing Resources:

Computer Equipment:
One stand alone computer: AMD Athlon 256 MB RAM; 70 GB harddrive; XP OS
Desktop displays (19" CRT)
Internet: Adelphia
HP Inkjet printer (color)

Inventory of GIS or Database Software

None

Inventory of Map Data

Description	Form	Frequency of Use
None		

Inventory of Non-Map Geographically Referenced Data

Description	Form	Frequency of Use
None		

Applications Identified by Priority

Name	Description	Source
BG1	Display and Query of Data Layers (particularly in reference to old and E911 addresses)	Digital
BG4	Correlate old to E911 addresses	Digital

x) Engineer

Departmental Report

Department: Engineering

Date: September 9, 2005

Title: Ivan Zdrahal, Consulting Engineer

Also attending: Phil Perry, Randy Richards

Department Overview:

The consultant provides consulting engineering advice and services. In particular the Village is working to fulfill the requirements of a DEC mandated plan (Document entitled: Sanitary Sewer System Maintenance and Inspection Program (SSSMIP) for Village of Lake Placid. Dated - May 2005). Relative to information management the plan calls for implementation of GIS capabilities on page 4.

“VII. MANAGEMENT INFORMATION SYSTEM

The Village shall develop a Management Information System which will have the following components:

- Mapping of the system which will utilize a Geographic Information System (GIS) technology combining mapping with detailed database about the physical structures within the system and information on system maintenance monitoring and rehabilitation actions.

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- Properly organized all inspection and maintenance forms for all components of the sewer system.
- Properly organized results of sewer TV inspection logs and TV tapes.
- Properly organized all reports on sewer system overflows (SSO)
- Annual reports to the NYSDEC”

The consultant maintains and uses recently created AutoCAD files of infrastructure improvements from major projects constructed in the Town or Village. The Lake Placid Club, Whiteface Inn and Mirror Lake Inn projects were mentioned.

Number of Staff: Consultancy

Existing Resources:

See Section in Water and Waste Department

Applications Identified by Priority:

See Section in Water and Waste Department

xi) Joint Planning Commission

Departmental Report

Department Title: Joint Planning Commission

Date: September 27, 2005

Department Head: Michael Clarke, Chair

Department Overview:

This is a volunteer organization with seven members. They are responsible for:

- Update and maintaining Joint Land Use Code, Comprehensive Plan and land use regulations.
- Review of major subdivisions.
- Forum for and reaction to where the community is going.
- Providing tools and guidance to Joint Review Board and Town/Village Planning staff
- View on GIS Needs:
 - To record and use for regular review of and maintenance of Land Use Code maps
 - Plan updates – analysis needs maps for support. They find digital maps very helpful. As an example: they need to look at area zoning districts to examine planning goals and determine outcomes.
 - Evaluation of special issues, such as trail system connectors, transportation, affordable housing, rental housing trends.
 - To support review board work by increasing knowledge base. Now rely on personal knowledge. Could use existing data to build interpretive layers. Use a volunteer science team. Good examples are surficial geology map, interpreting glacial deposits

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in and around lakes, look for underground aquifers, interpret soils maps, and interpret orthophotos.

Number of Staff:

Staff support comes from Angel Granger and Joyce Marshall both of whom have other duties. There is a substantial gap in expectations for staffing support; the volunteers are more or less on their own.

Existing Resources:

They rely on the Planning Office and Building Department for computer support.

Applications Identified by Priority:

Name	Description	Source
BG1	Display and Query of Data Layers	Digital
PL2	Interpretation of specific data layers (soils, geology, census, real property trends)	Contract and In house

xii) Joint Review Board

Departmental Report

Department Title: Joint Review Board

Date: 9/21/05

Interviewees: Bill Hurley, Chair; Chip Bissell

Description:

The Joint Review Board, a volunteer group, meets twice a month to act on permit applications for both the Town and Village. In addition they make field inspections and determine permit conditions in the field. Sometimes locating the area or line in the field is a problem, as is translating this information into permit conditions. They feel a sub-meter accuracy GPS unit would assist them in recording location information.

They receive a detailed packet from the Building Department staff, including orthophotos, maps showing property boundaries, topography, water bodies, wetlands, and large trees.

They would like better access to this information and support the application designed to provide data layer display and query capabilities. In addition they would like to see a database built with digital records of decisions available (applications, permits, variances, both local and State) and referenced geographically to the parcel boundaries.

They support the need for a digital projection system to reduce the use of paper, the need to make better use of the digital maps available and the need for better printing capabilities to support their Board.

Applications Identified by Priority

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Name	Description	Source
BG1	View and Query Multiple Data Layers	digital
BG2	Scan and locate reference documents for building permits and variances issued.	hardcopy

xiii)Town Departments -- Supervisor and Administration

Departmental Report

Department Title: Supervisor and Administrator

Date: 9/30

Department Head: Shirley W. Seney, Supervisor, Town of North Elba

Department Overview:

The Supervisor is the Chief Administrative Officer of the Town and has day-to-day management responsibilities for all government matters in the Town.

Critical ongoing issues that relate to GIS are:

- Work of the Joint Planning Board in updating and revising the Comprehensive Plan.
- Examination of the efficiency of government vis-à-vis overlap of Village and Town responsibilities.

The Supervisor has a need to display and query the GIS data layers available for the Town to answer questions posed by the public.

Number of Staff: 1

Existing Resources:

Computer Equipment:
One stand alone computer: AMD Athlon 256 MB RAM; 70 GB harddrive; XP OS
Desktop displays (15" CRT)
Internet: Adelphia

Inventory of GIS or Database Software

None

Inventory of Map Data

Description	Form	Frequency of Use
None		

Inventory of Non-Map Geographically Referenced Data

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Description	Form	Frequency of Use
None		

Applications Identified by Priority

Name	Description	Source
BG1	Display and Query of Data Layers (particularly in reference to old and E911 addresses)	Digital

xiv)Town Highway

Departmental Report

Department Title: Town Highway

Interview Date: September 20, 2005

Title: Norm Harlow, Superintendent

Also attending: Rose Van Wermer, Secretary (523 9081)

Department Overview:

The Town Highway department operates and maintains the Town Highway infrastructure, including the storm water collection system. They are also responsible for snow removal, sometimes on State and Village highways. They also manage the cemetery (2 staff, need map of plots for winter), transfer stations (5 staff), and airport grounds maintenance/hangars.

They have a shared services agreement with the Village and help each other with equipment. The Town buys water from Village and the Village maintains the water system. They have to find water pipes each time; duplication of effort is a problem.

If they had guidelines, they could ask subdivision developers to put in the services themselves, map them, and provide the data to the Town on a regular basis. They also need easements and fees to control pipe development in subdivisions - at the very least, the municipalities should get hard copy maps from subdivisions; this is not currently required, they think.

They urgently need maps of the road and highway infrastructure: roads, catch basins, way boxes, laterals in subdivisions, storm water management facilities, road signs, electric and telephone poles, and culverts. They need access to maps of sewer lines and information on the condition of those lines; water mains for which the municipalities are responsible extend all the way to Whiteface Mountain.

Surveyors are currently hired to find culverts and road location data, each time this service is needed. The department cannot use metal detectors if culverts and water mains are constructed of plastic, i.e. HDPE, which is common. If they were mapped the dept. could triangulate to find missing data.

They currently have right of way data, but not roads. They have some hand drawn maps and could digitize some. They feed the need for a system here, not at county level; this should be integrated with the County but updated and controlled here. Initially, they could get students to

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help collect necessary data with GPS units and digitizing; then would update as they implement tasks in future. They would use this data at least once a week. Would update as collected, might take years to do all.

The department does a yearly inventory of highways now, including road widths, current pavement type, and date of last maintenance. Ms. Van Wermer enters all the data in a log. They measure road with a wheel, not GPS. They would need it marked often and with extreme accuracy: 1' or less. They know the state is updating their roads center line data and has its own baselines for State roads data as the county does for its roads.

They use "Canopy" software, which if needed they could use to network to Town. The department is sued 2-3 times / year for accidents. They could use the data for depositions.

Sometimes private roads are "dedicated" to town; he has to make recommendations to board for approval.

Number of Staff: 7 staff for highways.

Existing Resources:

Computer Equipment:
Three desktop systems -Rose's, 2 Transfer Station; XP OS; 1 GB RAM
B&W laser printer, FAX, Color inkjet
Internet: Adelphia
Network: LAN to transfer station

Inventory of GIS or Database Software

Microsoft Office, Excel and Access
Canopy

Inventory of Map Data

Description	Form	Frequency of Use
Road drawings	Hardcopy	1/day

Inventory of Non-Map Geographically Referenced Data

Description	Form	Frequency of Use
Road Inventory Database	Hardcopy	Annual report

Applications Identified by Priority

Name	Description	Source
HW1	Development and maintenance of highway infrastructure GIS Layer	Contract and In-house
WW1	Development and maintenance of sewer infrastructure GIS Layer	Contract and In-house

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WW2	Development and maintenance of water supply infrastructure GIS Layer	Contract and In-house
WW3	Development and maintenance of inspection of infrastructure GIS Layer	Contract
WW5	Storm water Infiltration Analysis	Contract
EL1	Digital map of all electrical infrastructure including: transformers, switches, poles, lines underground or overhead, substations. Would need to update it yearly.	Some hard copy
BG1	Display and Query of Data Layers	Digital

Note: Need large format plotter or access to one somewhere in municipalities, not county.

xv) Building and Code Enforcement

Departmental Report

Department Title: Building and Code Enforcement Department (Town and Village)

Date: 9/14/05

Department Head: Jim Morganson, CEO

Others: Joyce Marshall

Department Overview:

They function as the Planning and Building Department for both Town and Village.

What they do:

- Code enforcement, building permits
- Each permit requires: building permit, then highway information (curb cuts), then electric and water/sewer hook up (at some point E911 address) and tax number.
- Fire safety for buildings (following NYS residential and commercial codes),
- Joint Review Board support (looks at specific / special projects, architectural guidance in certain areas, subdivisions, conditional uses, lake overlay districts on both lakes). 2 meetings / month. Lots of paperwork and maps required.
- Zoning Board of Appeals (addresses variance requests) support,
- Planning support.
- Issue tickets for violations (only Jim and Police can do this) e.g. junk cars.

Issues:

- Essex County GIS is a huge help, became available in August; they got it via CD in June. Essex was, she thinks, the last county in NYS to get it because State took photography of County last.
- Zoning maps (year 2000) on wall out of date (use frequently) – provided by Town and supposed to be updated regularly. LA Group was paid to digitize them and provide county with new data, but still no new maps.
- Joyce is putting land use code information on a CD now. Also old permit information is only available to them in files, which are hard to sort through

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and used frequently. This information is not mapped anywhere although the County has most of the data available in some format.

- Permitting software program (Checklist – an ACCESS-based database, new as of 2004) is not fulfilling their needs, primarily because the County is on a different system. They are trying to resolve with County.
- In June 2005 they were told to use only 911 addresses but county did not provide list of old and new addresses (a security risk, apparently), so she could not find properties when people submitted requests, because the new addresses were not yet in the system. She insisted and finally got a hard copy of the list, arranged by new street names so still not perfect.
- Yearly data dump by County Real Property Office wipes out their data, yet is out of date, sometimes a year old. They need to be able to update information in system on regular basis, preferably monthly or yearly. Link delays in data updates back to Assessor’s office which often has 2-year delay.
- This does not need to be via Internet necessarily – are regularly “hacked” but not a problem – but don’t want others to have access to their database and change their data. No one will agree to network – don’t want that. Should be public information, but not so others can change it. It should be in centralized location for all county, and real property office is logical place as data has to go through there anyway. Code enforcement officers from Jay, Wilmington, and Keene agree on that.
- Highway, Fire, Electric don’t even know about Essex County system.

They need the ability to prepare a mailing list for abutting landowners for notification of hearings and other notices required by the local ordinances. It would be best to be able to merge this with a word processing program so letters could be generated automatically.

The ability to identify land ownerships for which past permits have been issued and to view the associated permits, plans, field reports or other documents (or images) pertinent to the property is needed. The number of past permits is as follows: 2002 – 196; 2003 – 206; 2004 - 238. It would also be valuable to be able to view permits issued by the Adirondack Park Agency.

Table 5. Town and Village Permit Activity

Year	Town	Village	Total
2002	75	121	196
2003	68	138	206
2004	143	95	238
			640

Number of Staff: 2

Existing Resources:

Computer Equipment:
Three stand alone computers with Windows XP SP2 OS; 128 – 256 MB RAM
Desktop displays (CRT) 15”

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One Laptop: Dell Inspiration 6000 Intel Pentium M 512 MB RAM; 40GB HD
Internet: Adelphia
Printers: HP Office Jet G85 color
Scanners: HP Office Jet G85 Printer/Fax/Scanner/Copier (color); Savin 4022 All-in-one (mono)
PDA: Palm One with computer interface

Inventory of GIS or Database Software

ARVID Associates Checklist2 software running under Microsoft Access 2003 (real property database)
ArcView 3.2
Arc viewer (free)

Inventory of Map Data

Description	Form	Frequency of Use
Essex Co GIS CD data	digital	
APA GIS CD	digital	
Lake Champlain Basin Atlas CD	digital	
Town Zoning (Overlay Architectural districts)	Hardcopy	100/day
Village Zoning	Hardcopy	10/day
Other layers: streets, water bodies, roads, sewer and water districts, flood zones		

Inventory of Non-Map Geographically Referenced Data

Description	Form	Frequency of Use
Building permits and variances issued	Hardcopy and digital	20/week
JRB and ZBA plans, applications and maps	Hardcopy	26/month

Applications Identified by Priority

Name	Description	Source
BG1	View and Query Multiple Data Layers	digital
BG2	Scan and locate reference documents for building permits and variances issued.	hardcopy
BG3	Abutters' addresses merge mail	digital
BG4	Correlation of old addresses with E911 addresses	digital

Other needs:

- Large format printers:
 - 36 " Plotter (tax map sized), and

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- 14 x 17 inch format color printer
- Projector for public presentations

xvi)North Elba Park District

Departmental Report

Department Title: North Elba Park District

Date: 9/20/2005

Department Head: Butch Martin, Manager
(butch@townofnorthelba.org)

Department Overview:

- They operate parks and plan events in the community and operate the Craig Wood Golf Course. Includes horseshow grounds, golf course, airport grounds, and parks. Their primary need is for events planning and facilities maintenance, some for longer-term planning such as where to put new soccer fields, etc.
- They are on an events committee operating through the JPC, with a cross section of government depts. It allows events organizers coming in to the community to deal with one basic checklist of offices/forms/permits, etc. rather than going around to all of them separately.
- They need current maps, aerial views, floor/facilities plans of properties under their control and in municipalities generally. Possibly also weather tracking for events.
- They are also involved in Village Appearance Committee, which want to do a tree inventory and map.
- Technically the Parks dept. is responsible for water quality in the lakes and they monitor it and send data to DEC 4 x a summer. However it seems that most of what is needed is done by voluntary watershed associations. For example purple loosestrife (an invasive species) has just been detected in the watershed and the associations are publicizing the problem. The department is aware of the new Vortex drains now in place around lake helping to reduce the runoff problem.
- A map was done several years ago to examine the skating oval. This was a cooperative venture with Chris Conway of ORDA, aimed at documenting public facilities and the institutions responsible for various installations, e.g. light/electric poles; also aerial mapping with helicopter. Village paid for part of this effort. (See ORDA interview below.)
- They receive maps sometimes from engineering and other studies that usually end up in someone's files, inaccessible to others in government who might benefit from them.
- Mr. Martin participates in NYS Office of Parks and Recreation "listserv" to keep up on current methods and answer specific questions.
- They could use the vacant land analysis – where to put new soccer fields, etc.

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- They submit reports to NYS Health Dept. which controls summer day camps: They layout “lost camper plans,” etc. Would like to include facilities maps. Similar need for safety/access map for toboggan site (Dept. of Labor).

Number of Staff: 8 permanent, 55 seasonal

Existing Resources:

Computer Equipment:
2 Dell Dimension 8400 Windows XP; 512 MB RAM 400 MHz, 80 GB harddrive
15” displays; Mono Printer
Internet: Adelphia

Inventory of GIS or Database Software

None

Inventory of Map Data

Description	Form	Frequency of Use
None		

Inventory of Non-Map Geographically Referenced Data

Description	Form	Frequency of Use
Running courses	Hard copy	
Athletic fields		
Route planning		

Applications Identified by Priority

Name	Description	Source
BG1	Data Layers Display and Query (for event planning, reporting, management)	digital

xvii)Assessors

Departmental Report

Department Title: Assessors Office

Date: 9/19/05

Department Head: Kim Daby, Head Assessor kimwdaby@adelphia.net)

Department Overview:

Kim Daby leads three elected assessors and a part time (1/4 time) clerk. Jim Bishop is a skilled technically oriented staff in his office and would be comfortable with GIS.

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The assessor feels that since all data they need is easily obtained from the County – if one knows what to ask for - why should they be replicated anywhere in the Town or Village? They are happy to use Internet mapping - all data from County is up to date in their experience. They send their new assessment data in paper format and the County keys it in and sends back for review. They plan to set up a dedicated desktop computer for public research use. However they plan to provide data from the County CD set (which is scheduled to be produced only once per year) instead of connecting the computer to the County internet site which would, presumably, be continually updated, because their own records will only be updated once yearly and they must maintain consistency between what is available on the local tax rolls and what is available on the County CD.

Note: Wants a large format plotter though, somewhere in town/village.

Number of Staff: 1 part time

Existing Resources:

The assessors’ office has two powerful stand alone computers and will be budgeting for another this year. One was provided by the Country RPS office.

Computer Equipment: Windows XP Professional 2002 SP2 Dell Dimension 8400 Pentium 4, 3 GHz, 1 GB RAM (planning to get second one in next budget) Windows 2000 SP4 Dell workstation Intel Pentium 2.66 GHz 1 GB RAM Dell printer, used many times per day.
Display size?
Internet: Adelphia
One scanner not setup.

Inventory of GIS or Database Software

ArcView 3.2
MS Office

Inventory of Map Data

Description	Form	Frequency of Use
Tax Maps	Digital	daily

Inventory of Non-Map Geographically Referenced Data

Description	Form	Frequency of Use
Assessments	hardcopy	

Applications Identified by Priority

Name	Description	Source
	Printing of Tax map sized maps	digital

xviii)Town Clerk

Departmental Report

Department Title: Town Clerk

Date: 9/19/2005

Title: Barbara Whitney, Town Clerk

The Town Clerk uses Business Automation Services (BAS) software (out of Clifton) for clerk duties, including licenses and reports to the board. She also does tax collection; Essex County sends her information and she generates letters and marks "paid" in the system. Using a dedicated system she issues hunting and fishing licenses.

She sees no need for maps or change of any kind.

Computer Equipment: Dell Pentium grade; 500 MB RAM; XP Professional SP 2 OS
Mono Printer
Desktop displays (CRT) 15"
Network: Adelphia
Internet: Adelphia

Inventory of GIS or Database Software

None

Inventory of Map Data

Description	Form	Frequency of Use
None		

Inventory of Non-Map Geographically Referenced Data

Description	Form	Frequency of Use
None		

Applications Identified by Priority

Name	Description	Source
	None	

xix)Black Fly Program

Departmental Report

Department Title: BTi Program

Date: 9/26/2005

Department Head: John Reilly **Title:** Program Director

Department Overview:

The BTi program treats streams with a pesticide containing BTi to control black flies each spring. The period of treatment usually runs from the beginning of April until July each year.

A map is produced showing the streams that are treated with BTi during the spring. These streams need to be cross-referenced with landowners to gain permission from the landowners to treat streams on their property or to gain access to streams via their property.

Existing Resources:

Computer Equipment:
Generic PC

Inventory of GIS or Database Software

None

Inventory of Map Data

Description	Form	Frequency of Use
Stream Location Maps – for each treatment area were digitized by Craig Cheeseman and other attributes such as parking and cell phone access have been added to the maps.	Hardcopy	daily

Inventory of Non-Map Geographically Referenced Data

Description	Form	Frequency of Use
None		

Applications Identified by Priority

Having access to the Real Property data would allow us to use the GIS to find out the correct landowner to contact for permission to treat a stream on or near their property.

Name	Description	Source
BG1	Data Layers Display and Query	Digital
BG3	Abutters Mail Merge	Digital

xx) Historian

See Library Departmental Report

xxi) Library

Department Title: Library

Date: 9/15/05

Title: Patricia Perez, Head Librarian. Beverly Reid, Historian

Department Overview:

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Mary McKenzie's files on CD, including building records, historical data.

Uses of geographic data in community:

- garden club information with old homes/garden tours.
- Sally Warner on town board, wants tour information
- Historical society might consider doing tours at some point; should include those sites in municipal planning system
- ORDA tour
- Historical map collection at library
- Environmental and other studies collection at library (not catalogued, in basement room, but could do so). Environmental Impact Statements for Wal-Mart, 1980 Olympics, etc. Academics come in and use Studies and municipality should have them available also.
- Desire on part of library to help disseminate / make information available however possible – e.g. by cataloguing studies, maps, etc.; making building codes and current zoning and village / town maps available to public, etc. Adirondack research collection possible.

Existing Resources:

Computer Equipment: Assorted Windows Stand alone computers with 15 " monitors
Network: Wireless Network
Internet: Adelphia

Inventory of GIS or Database Software

None

Applications Identified by Priority

Name	Description	Source
BG1	General Map Viewing and Query	digital

r) Other Supporting Agencies

i) County Real Property

Supporting Department Interview Report:

Department Title Essex County Real Property Services and County GIS Office

Date: 9/22/05

Department Head: Bernard (Barry) Miller, Director (873 3391)

Department Overview:

His office is geared up to provide GIS services to all of Essex County's municipalities in all areas, not just real property and tax assessment management. He has four staff, including

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himself, who are trained in the technology and can produce maps, update the system, etc. They are continually adding layers and data to the on-line system that will make it increasingly useful for the county's municipalities and citizens. They are the repository for Essex County GIS data.

In the Essex County Real Property Database he has fields for "special districts" in which he can record information about whether the property falls in the sewer, water, BTI, or zoning district boundaries, etc.

Has NOT received North Elba zoning layers from LA Group, will add those when they are received. Note to Jim Morganson. Also, his data structure can accommodate data on whether sewer districts and areas within them are rent/fee or *ad valorem*; similarly with 911 data – will update that as soon as Town/Village sends it.

For municipal users that are not GIS savvy – he wants to offer training and membership in a GIS users group.

911/Fire data: With the State's office of cyber security, he's working on an accident locator program (ALIS) that will include street center lines (addresses every 50 feet, not only county and state roads but also town/village), will include ability to correlate old and new addresses. Should be available late fall 2005 or early 2006.

He updates the data on the internet site frequently, and provides maps if a large format plotter is not available yet in a town. Turn around time within a week or so. Will not provide on-line data updating capacity for fear of data corruption and problems. Will use CD data if sent in more frequently.

To towns and villages, they provided in June a CD including data layers far beyond what is available through the internet site to the public. They will distribute an updated version each year (not clear what time of year), and will provide access to the advanced information through ArcExplorer 9 Java edition for all towns/villages (it's free so can be used on any computer). ARC View 9 GIS software will be a good choice for County GIS users in the future.

One can't copy the CD as it has layers that are copyrighted (Real Property Data for one). It may not be freely distributed. They will provide it for a fee to groups not affiliated with the county, and free to BRASS and other affiliated groups. Recently the Adirondack Park Agency purchased data from him. It is not clear what coverages are included on the CD set. Although the AIG team requested it twice, this list was not forthcoming.

Other key service in development involves use of ImageMate database through internet link to County, developed by System Development Group in Utica, NY (315 798 1328). Subscriber system would be nominal cost for municipalities. Allows user to search parcels for stored images of subdivision maps, floor plans, photos, tax information, other.

Specific data availability:

- o Social services / income data will be included; meeting with them next month.
- o County highway dept. has bridge locations mapped
- o SUNY Plattsburgh (TAC-Howard Lowe) and Emergency Services ((*Ray Thatcher*, County *Emergency Services*) got a grant recently to collect and map emergency facility infrastructure e.g. hydrant data. Not clear if they will do within municipal boundaries.

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Analysis capabilities not available, e.g. plume analysis would have to be done by FEMA or State because of sophistication.

The ARCVIEW software (version 3.2) they are providing to the municipalities is licensed to them. They are establishing access to their server through password protection for Essex County municipalities, although it is not clear when this will happen. He believes that he will be able to meet the demand in the future for increased use of the County site and to establish new data layers for municipalities

i) County E-911

Supporting Agency Report

Department Title: Essex County E911 Office

Date: 9/19/05

Department Head: Don Jaquish, Manager

Department Overview:

The Office administers the E911 system, assigning names, numbers and maintaining hardcopy maps of the system. Barry Miller, at RPTS, develops the GIS maps. (see Real Property Interview report)

One project they are developing will deliver enhanced pictometry to the County. The goal will be to have detailed stereo photography available for every building. This can be used to plan incident responses in real time. They are also developing a system to locate wireless calls. The software vendor will be POSITRON; they installed a system in Clinton County. [NB. Positron uses ESRI shape files in their map application] This application will be operable when the County dispatch center is operational in the new jail in Lewis.

Another project, with Howard Lowe of SUNY Plattsburgh TAC, is developing a GIS layer of emergency infrastructure data (including fire hydrants) for Essex County.

Others: Pat Osier and Nancy Dougal

ii) County Visitor's Bureau

Supporting Agency Report

Department Title Essex County Visitors Bureau

Date: 9/20/05

Interviewees: Jim McKenna, Carol Joannette

Overview:

The Visitor's Bureau operates a Chamber of Commerce operation for the region. They are seeking 501c3 status.

They manage five web sites by regions tied in to their pin promotion. They produce web based maps which are adequate, more or less. Use latitude, longitude for determining location.

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Web sites are maintained by Ad Workshop. They have need of better base mapping, including new E911 addresses and road names. They do not have access to the County data.

In the future they will be producing maps served over the Internet with more information: lodging, retail, restaurants, boat launches, and trailheads. They would like access to that information also.

Follow up should be to check on access to data from the County.

iii) LP Land Trust

Supporting Agency Report

Department Title: Lake Placid Land Trust

Date: 9/20/05

Interviewees: Audrey Hyson, Elizabeth Clarke, Tony Goodwin

Overview:

They want to ID landowner that could be worked with to do easements and protect open space.

Jack Rabbit Trail: all the info is in his head, but it's not too cumbersome; only a few landowners. However if trust wants to map trails and build more, that should be included. Property owners (some) need to be notified/contacted yearly.

The Clarkes have ArcGIS license and access to plotter, can use raw data layers and don't need help with analysis. Looking for tax parcel / homeowner and zoning data. High end users.

Trust would like to see municipalities make this data available to public through internet, either in offices or from home. No restrictions. They think this is all public and not sensitive data. Have not explored Essex County system yet but anyway want data layers, not images.

GPS done of snowmobile trails, by DEC? want to know where is that data.

They are in process of getting 501 c 3 status. IRS wants more info.

Not part of official planning process although created out of town's conservation committee. They have to be separate to allow easement donations to be voluntary. Advise town / village and maintain easements (will in future).

We should talk to David Ackerman: Placid Lake Foundation and Mirror Lake Watershed Association.

iv) ORDA

Supporting Agency Report

Department Title: Olympic Regional Development Authority

Date: 9/22/05

Department Head: Bob Hammond, ORDA Engineer (523 1655 x232)

Department Overview:

ORDA is an independent "public corporation."

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What he has, electronically:

All data and facilities maps for Goodwill Games, except Oval layout, which has some utilities/ infrastructure data on it.

Aerial videographic images, including tiff file of village with some more detailed, digitized sections, from 2001. Digitized sections include contour maps of the horseshow grounds and Verizon complex, photos of the bobsled run(s?)

New (Fall 2004) flyover data and images created by Wayne Ryan at AES Northeast (wayneryan@aesnortheast.com, 518 561 1598), for the new Wilmington Water District development that will supply Whiteface Mountain.

Has been there for 3 years so is not as familiar with what Chris Conway put in place before, but can find it easily on CDs. Will share what they have – put it on a CD. Jim Goff, Director of Events, also can help – has AutoCAD Land Development system.

v) New York State APA

Supporting Agency Report

Department Title: Adirondack Park Agency

Date: 9/26/05

Department Head/Contact: Brian Grisi, APA Local Government Specialist (891 4050)

Department Overview:

APA is a NYS agency dedicated to protecting the privately owned regions of the Park through zoning and criteria-based decision-making.

What he has, electronically:

All permits for building, wetlands variances, building heights, etc. in a database.

Aerial imagery of natural resources.

APA could provide permit database for LP/NE on CD – is already providing CD of NR data and imagery - if officially requested to do so by Town and/or Village. It is recommended to speak with Mark Sengenberger, the Deputy Director to secure the information. They seem to be short staffed so may not be able to participate as fully as desired.

v. Results of the Needs Assessment Inventory

s) Overarching Issues

Some of the over-arching considerations that we have observed and will consider when developing a recommendation for potential system implementation for Village of Lake Placid and Town of North Elba are:

i) Administrative

Both the Village of Lake Placid and Town of North Elba are small branches of government - they could almost be considered tiny - in terms of the budget resources available. This translates into limited staffing resources and limited ability to procure equipment. Existing staff already fulfill multiple functions and duties that probably go beyond what they were hired to accomplish.

They function as two separate government entities, although there is some integration of overlapping functions. There is a part time consultant available to support information technology needs, however the response capacity of this person was noted by several respondents to be inadequate. There is currently no dedicated capacity or person to support enterprise wide (i.e. all-Town and/or all-Village) technology and applications, such as a network. Overall there are limited staffing resources that can be used to implement GIS and the prospect of adding new staff to address the functions needed to support GIS is not good.

Enterprise wide GIS functions may be used to help integrate municipal functions, at least functionally if not formally.

The following capabilities are needed on staff:

- Administrator or Committee oversight
- Coordinator
- Technical Support
- GIS Operator
- Broad staff experience with GIS: A few staff members have experience with GIS, although this is limited generally to being users of data; none has experience as a GIS service provider. Others without hands on experience have been introduced to the concepts of GIS by communication with their respective professional organizations or personal contacts. There will be a steep learning curve in any implementation. This is a major consideration in setting realistic objectives for future work.

ii) Priorities

There is a critical need for some applications sooner than others. For example the Village is under a State mandated remediation plan that requires use of GIS to monitor the sewage infrastructure. Emergency and police departments are operating without current accurate hydrant, road and address maps, let alone digital information. Highway, water, and electrical work is severely hamstrung without accurate information about infrastructure locations, conditions, and capacities. Growth is explosive and threatening to consume all available open land in the vicinity. The codes and comprehensive plan are in transition. The JPC is currently organizing to revise the land use and comprehensive plan documents. Also, the organization of

government is in transition, as there is talk of consolidation; in the years to come as, staff retire, there may be changes in municipal organization. Establishing a basis for institutional memory is vital if mistakes made in the past, such as the loss of maps to individual office holders, are to be avoided.

iii) Physical issues

(1) Local area network

There is no existing local area network.

(2) Physical Plant Dispersed

There are multiple offices and scattered departments. By count there are 12 separate buildings housing offices of the municipalities (Table 5). The Town Highway department is scattered over three sites, as is the Waste and Water Treatment Department. This poses special considerations for sharing of information, as well as hardware.

(3) Sharing Resources

It is apparent that several departments that do not now communicate well, because of distance or other reasons, need to share hardware and software resources. For example, the building and code enforcement department and assessor's office should coordinate closely on best practices for conversion to E911 addresses and permitting that can be accurately reflected on a timely basis in the tax rolls. The Town and Village do not share planning information adequately and show concern about networking based on fears about privacy, data corruption or institutional control. These concerns can be addressed given today's technological capabilities. Increased sharing should be facilitated considering the minimal resources available to both municipal governments and the increased power and effectiveness provided by increased access.

(4) Existing Computer Infrastructure

The desktop machines in use by Village of Lake Placid and Town of North Elba departments are up-to-date and in general seem to be up to the expectations of increased use for GIS. While there is no local area network between departments or between the municipalities, there is an adequate connection through the Adelphia cable system to the Internet. This important connection is widely available at each of the 12 physical locations of the municipalities.

iv) GIS Relevant to Municipal Functions

There is widespread excitement about improving access to GIS capabilities from almost every department covered in the interviews. For example, departments such as Water and Waste have critical immediate needs for GIS data layer development. Several others need general capabilities to view data layers in their every day work. There is also an expectation that GIS could improve efficiency of government and save money for the taxpayers!

The positive attitude and willingness to adapt to changing technology was refreshing and well received during the interviews.

Table 6. Buildings of the Municipalities.

Department	Name	Location
Emergency Service	Police	1. Town Hall
	Fire	1. Fire Station

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	Ambulance	1. Ambulance Station
Water	Water Treatment	1. Water Plant
	Waste Treatment	1. Waste Treatment Plant
Town Highway	Airport	1. Airport
	Transfer Station	1. Transfer Station
	Highway Garage	1. Highway Garage
Parks	Beach House	1. Beach House
Village Highway	Highway Garage	1. Highway Garage
Electric	Electric Station	1. Electric Station
Library/Historic	Library	1. Library

t) Summary of Key Findings from the Needs Assessment

We have synthesized what we believe are some of the over-arching considerations from the Needs Assessment when developing a recommendation for potential system implementation for Village of Lake Placid and Town of North Elba.

i) Small Municipal Governments

Both the Village of Lake Placid and Town of North Elba are small branches of government in terms of the budget resources available. This translates into limited staffing resources and limited ability to procure equipment. Existing staff already fulfill multiple functions and duties that probably go beyond what they were hired to accomplish.

They function as two separate government entities, although there is some integration of overlapping functions. There is no dedicated person to support enterprise-wide technology and applications, such as a network or software maintenance, at this time. Overall there are limited staffing resources that can be used to implement GIS and the prospect of adding new staff to address the functions needed to support GIS is not good.

Enterprise-wide GIS functions may be used to help integrate municipal functions, at least functionally if not formally.

ii) Existing Computer Infrastructure

The desktop machines in use by Village of Lake Placid and Town of North Elba departments are up-to-date and in general seem to be up to the expectations of increased use for GIS. While there is no local area network between departments or between the municipalities, there is an adequate connection through the Adelphia cable system to the Internet. This important connection is widely available at each of the 12 physical locations of the municipalities.

iii) Experience with GIS

A few staff members have experience with GIS, although it is limited to that of users of the data, not as service providers or GIS data base developers. Others without hands-on experience have been introduced to the concepts of GIS by communication with their respective professional organizations or personal contacts.

iv) GIS Relevant to Municipal Functions

There is widespread excitement about improving access to GIS capabilities from almost every department covered in the interviews. For example, the Water and Waste Department has critical immediate needs for GIS data layer development. Others need general capabilities to view data layers in their every day work. There is also an expectation that GIS could improve efficiency of government and save money for the taxpayers.

The positive attitude and willingness to adapt to changing technology was refreshing and well received during the interviews.

v) Realistic View of GIS Role

On the other hand there was also recognition by the administration and the departments that technology changes will not solve every problem. They also realized that expectation for change must be realistic within the time and budget constraints of the municipalities.

vi) Access to High Value Data sets

The Village of Lake Placid and Town of North Elba are probably in an unique position with respect to the availability of existing GIS data layers. Essex County has developed and makes available to them the real property data layer of digital land ownership boundaries and maintains an ARC-IMS server to provide updated data. New York State has high quality data available through the NYS GIS Clearinghouse. These include layers like current aerial photography and water features. In addition the New York Adirondack Park Agency has digital data sets available that are of high quality. Primary among those are the permit database and the regulatory wetlands data.

The County E911 Office and Emergency Preparedness Office are developing data that may in the near future also be useful to GIS development for Village of Lake Placid and Town of North Elba.

vii) Need to Develop Data for “Public Works” Applications

The applications identified by the “public works” departments require the development of GIS data layers as a prerequisite to implementing the applications. As a by-product, development of these data will be of significant benefit to other departments such as Building, Planning and Fire.

viii) Similar Geographic Area of Interest

For the most part each of the departments has a similar geographic area of interest and there is no need to segregate data sets geographically or to provide a special geographic data set for one department.