

**Preliminary Report of the Town of South Hadley
Technology Study Committee
Phase III
January 2008**

Committee Members:

Tom Adams
Deborah Baldini
Judith Barthelette
Melissa Couture
Dan Evans (chair)
Richard Harris
Steve Parentela
Jim Reidy
Lynn Roberts
Chris Sweklo
Candy Walczak

Report compiled by Daniel Evans, Information Technology Director

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Background Information

Charge of The Technology Committee:

Background: In February of 2001 the Report of the Technology Committee was issued. This report set out technology needs for the immediate, short term, and for 3 to 5 years out in two phases. The recommendations of the report were fully supported at the May, 2001 Annual Town Meeting and led to the creation of the IT Director position and department, extensive acquisitions of software and hardware, and \$25,000 in attendant wiring improvements to retrofit Town offices. The plan also called for the installation and implementation of a Local Area Network (LAN) implemented in 2001, and recommendations for the installation of a Wide Area Network (WAN). The contract executed by SHELD and the Five College Network in 2007 will provide the WAN for the Town in the foreseeable future. With this is also the completion of the entire Technology report, phases I and II.

In February, 2007, the Selectboard approved as its #1 Kea Result Area for the Town Administrator, a new Technology Plan. The plan differs significantly from the charge of six years ago in that it will focus not only on internal business communications and services, but external services as well, including the expansion of the Website and Internet uses and policies. The charge is as follows:

Charge:

In accordance with the powers vested in the Selectboard of the Town of South Hadley a Technology Study Committee is established.

Purpose:

The purpose of the committee will be to review and analyze current automated functions in the Town and gauge their continued effectiveness and efficiencies in delivery of Municipal services. The committee will also focus on Internet and Website matters specifically as they relate to accessing Town services and information as well as downloading information and forms and payment for Town services. The committee is also charged with measuring staff training and usage of various software functions and applications and providing recommendations on how systems and procedures may be improved. Review of appropriate staffing and needs of the IT Department will also be part of the committee's scope. Last, the committee will provide an implementation plan for funding and implementation of the Wide Area Network working in conjunction with the South Hadley Electric Light Department.

The Technology Study Committee is charged with exploring these various options, both on a long-term and short-term basis, for the Town's information technology functions. To borrow from the 2001 report: "Where we are now and what can we do, what we can't do and would like to do, and where we would like to go..."

Subcommittees:

Following are the subcommittee charges. The following should be noted:

- The Customer Service Committee performed its initial work, provided a final report and merged with the Website committee.
- The Infrastructure and Security committees merged very early on.
- The Emergency Planning Subcommittee, after gathering information from Town Departments, determined that the subcommittee's initiatives were better served in the already existing COOP Planning. A final report was submitted.

TECHNOLOGY SUBCOMMITTEE DESCRIPTION/CHARGE

MUNIS Subcommittee: This subcommittee is charged with reviewing MUNIS as the primary provider of all the Town's financial software and hardware systems. The subcommittee will review the current levels of satisfaction with MUNIS, both pros and cons, and recommend a long-term plan for keeping this system in place or the necessity to change at some point in the future.

Permitting/GIS: This subcommittee is charged with reviewing the current utilization of GIS software and hardware and compatibility not only in Town departments but the districts as well. The subcommittee will also investigate the use of current applications for permitting and interdepartmental reviews as they relate to information exchange and communication for planning and development purposes.

Staff Training Needs: This subcommittee is charged with reviewing staff capabilities related to use of personal computers for various office functions, training assessment needs, and training development needs for the next few years.

System Security: This subcommittee is charged with reviewing the safety and firewall systems as well as virus protections/SPAM for ALL town computer systems.

Website Development & Maintenance: This subcommittee is charged with reviewing greater usage of the Town's website for internal business functions as opposed to external customers. The subcommittee will review, through a cost/benefit analysis, whether or not to have an outside vendor provide this service as well as current staff use of the existing website and the development of policies mandating the use of the website for certain town informational or functional needs.

Emergency Planning: This subcommittee is charged with developing a continuation of operations plan (COOP) for operation and backup of the town's computer systems in the event of business interruption or an extended loss of service as a result of an emergency.

Customer Service: This subcommittee is charged with looking globally as to how we provide services to residents, businesses, developers, etc as they involve information technology. This focus is for external, customer driven, business functions.

Interdepartmental Communications: This subcommittee is charged with looking at how various town departments and/or the districts interact with each other to provide and exchange information via technology rather than using a paper process.

Infrastructure: This subcommittee is charged with looking at our long-term information technology exchange to departments not located in Town Hall and the infrastructure and cost allocations needed to support it. Focus will also be on the impending implementation of the Wide Area Network and how that process will work.

Technology Committee Summary

In accordance with the Charge of the Selectboard, the Technology Committee was formed in August of 2007 by then Town Administrator, Patricia Vinchesi, who served as an Ex-Officio member. Daniel Evans, IT Director was appointed as Chairperson.

The committee members created several subcommittees. These subcommittees consist of staff from various Town entities, some of whom sit on the Technology Committee, some of whom do not.

The dynamics of the Committee has been rather fluid in that structural adjustments have been made where appropriate. Some subcommittees had personnel adjustments and some eventually merged together. Moving forward, the Technology committee will be permanent. Some subcommittees will continue to operate and evolve and there will be new subcommittees.

In addition to the Selectboard charge there was some initial direction given by the Town Administrator. The subcommittees were to work within a three level structure: *Immediate, Short Term (1 to 2 years), Long Term (3 years and beyond)*. We were also directed not to take cost into consideration in our recommendations. Although the committee recognizes the budgetary difficulties faced by the Town, our charge is to base our recommendations on our needs. Included in this report are our FY09 budgetary recommendations.

This undertaking involves Town departments, the School Department, and Districts 1 and 2. Representation from SHELD was requested but they did not to participate in subcommittee meetings.

Acknowledgements

This report was made possible by the dedication and commitment of the many people who served on the Committee and Subcommittees. The Technology Committee took a team approach to this undertaking. The cooperation, professionalism, and enthusiasm of the group have been outstanding.

We were able to bring together the Town Departments, School Department, and Districts in a collaborative spirit which may well be unprecedented. The Technology Committee is particularly proud of this accomplishment.

Recommendations of the Technology Study Committee

Following are the recommendations of the Committee. The recommendations are categorized by Immediate, Short Term (1 to 2 years), and Long Term (3 years and beyond). Supporting documentation for these recommendations can be found in the Subcommittee Reports contained in the Appendices.

IMMEDIATE RECOMMENDATIONS:

- Hire Consulting Services to assist in designing and configuring the Wide Area Network and determining direction for other Infrastructure and Security initiatives.
- Add permanent Technology line items to the Police and Library budget requests.
- Review physical security at Town Hall
- Institute a 5 year computer replacement cycle for the Library and a 3 year cycle for the Police Department
- The town government support the use of the Council on Aging building as the COOP relocation destination for the IT department.
- Analyze and Improve data backup systems in various Town Departments
- Contract with Virtual Town Hall (contract has been signed, project is underway)
- Educate department heads on what services can be offered on-line
- Basic training of staff to update and keep current the information available on the website
- Creation of web pages for departments that do not have one, providing at least a minimum amount of contact information
- Put desired links on individual pages or home page
- Conversion of MUNIS to Version 6.2 (This project has been completed)
- Staff Training on MUNIS version 6.2
- Enhance the usage of the MUNIS Payroll System
- Schedule times for employees to complete the skills test for Word and Excel.
- Determine categories of skill level for Word and Excel.
- The website/customer service sub-committee will work as liaisons between Virtual Town Hall and the Department Heads in order to transition to the new website.
- Designation of ArcGIS (current version) as a uniform operating system
- Linkage of the Assessors Database with the Planning Board ArcGIS database
- New digital base map
- Training/continued training in use and operation of ArcGIS
- Trimble Unit for Town Hall
- Training in use/operation of trimble units
- Submittal of Accounts Payable including the potential to eliminate vouchers; highlight pertinent information on the bills or develop a stamp type system will be addressed. The elimination of vouchers for bills payable will be implemented.
- Creating common templates for the various forms utilized throughout the Town should be pursued.

SHORT TERM RECOMMENDATIONS:

- Implement the Wide Area Network throughout the Town
- MUNIS Server replacement
- Establish some basic specs for town hardware and software
- Each town location should regularly inventory their own infrastructure and consult with the town IT department regarding compatibility or connectivity issues
- Standardize on Symantec Corporate Edition Antivirus Software throughout the Town
- Review all Security hardware, software, and policies. Review and modify as necessary all Acceptable Use Policy documents. Modify where appropriate
- Investigate new technologies such as Voice over IP, Virtualization and off-site backup, as well as global management of computers and software.
- Create Infrastructure Plan for the next three years
- Relocate the Library wiring closet and switches.
- Forms and applications made available online
- On-line payment option for all possible avenues
- All departments should use email; all email addresses should be through a southhadley.org or a mass.gov type format (or the like) due to spam filters rejecting other names etc... This would probably exclude the School Department, Library, and Police Department.
- The development of the Personnel system; tracking accruals, benefits, etc... will be addressed.
- Usage of the Emergency phone system by School Department and/or Police Dept. for communications; road closings, building closings, etc... should be developed. This should also incorporate the Fire Districts.
- It is the Interdepartmental Communications Subcommittee recommendation that the Town have someone from the State come out to do a presentation for the Town regarding emails as a public record. This would include what emails are considered a public record, which ones can be deleted and which ones need to be retained and for how long etc... From this presentation, the Town should consider developing a uniform plan regarding email management as well as the archiving of records
- Implementation of Personnel System
- Design and purchase of Bridge program for Personal Property
- Implementation of annual training program
- Investigate modules offered by MUNIS that may enhance the efficiency of Town departments
- Schedule training opportunities for Word and Excel – these trainings could be conducted by internal staff, as well as the use of external resources, or a combination of both.
- Work with Department Heads and Virtual Town Hall representative(s) to resolve any technical /operational issues
- Establishment of an Integrated Digital Permitting System
- New large format printer
- Web-based GIS

LONG TERM RECOMMENDATIONS

- Implement new Infrastructure technologies as defined by the Infrastructure plan developed in the short term
- Install / Implement Town wide Voice over IP system
- Continued maintenance of the website
- Continual training and education to all town departments and staff regarding changing and updating the website
- Compatibility issues within the town's computer systems should be addressed due to potential communication problems between computers etc.; there should be a minimum type spec for all towns' computers.
- Investigate submittal of Payroll; emailing of payroll worksheets (outside departments?) and the potential for keying payroll by departments
- Streamlining of the Accounting Dept. reports, i.e. Budget, enterprise, trust fund, account balances, PO requisitions and forms, etc.
- Develop an Intra-net for the Town staff.
- The potential for streamlining the budget process should be explored
- Review software and possibility of vendor change
- Continued training of new applications.
- Refresher training of specific applications.
- Computer skills training for new staff members.
- Determine areas of improvement, streamline workflow and stay abreast of the technological advancements/new offerings that Virtual Town Hall may be able to provide. Continue to explore options that make for the most enjoyable and informational user experience.
- Acquisition/installation of ArcGIS for other departments (need to identify whom)
- Professional GIS staff person

Technology Committee FY09 Budget Proposal

Assuming that the Technology Committee will remain intact, we will be requesting funds for various initiatives each year.

Following are the FY2009 budgetary recommendations of the Technology Committee. *Supporting narrative for this request can be found in the following Reports of The Subcommittees: Infrastructure (appendix C), MUNIS (appendix F), GIS (appendix I)*

Capital:

GIS New Digital Base Map:	\$ 60,000
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Technology Committee Budget:

GIS Arcview Training	\$ 2,300
Town Hall trimble unit and training	\$ 6,500
MUNIS training	\$ 5,000
Infrastructure Consulting	\$ 10,000

Total Technology Budget	\$ 23,800
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Total Capital and Technology Budget	\$ 83,800
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These requests pertain to initiatives to take place in FY09. In addition the committee recommends the following, which will have implications for FY09 and beyond:

- The committee recommends that the Police and Library budgets include a Technology line item. Funds should be requested as deemed appropriate by those entities. In the case where grant money becomes available in a given year, the funds should be turned back.
- The first action initiative undertaken by the Technology Committee was the implementation of the *Virtual Town Hall* website service. The committee examined and voted to approve the service. It was subsequently approved by the Selectboard and implementation is underway. This is being funded by 'donations' from each department and commission which will have a presence on the site. It is mentioned here because there is an annual maintenance fee of \$3,500.

APPENDICES

A: Report of the Customer Service Subcommittee

The Charge of the committee was to look globally as to how we provide services to residents, businesses, developers, etc. as they involve information technology. This focus is for external, customer driven business functions.

In the initial meetings there was much discussion as to what the town was offering in relation to on-line services. Using internal and external surveys, viewing websites of other communities and gathering input from town departments, the committee has evaluated all of the information gathered. The results clearly show that the Town of South Hadley is far behind in what it offers in the way of customer service on-line. As evidenced by the attached meeting notes, survey results and reports, the offerings to the community are minimal at best.

Currently, the only on-line payment options offered are through the Collector's Office. Payment of real estate, personal property, motor vehicle excise, sewer use and curbside pickup fee bills can be made on-line with a checking account or credit card. Looking at the websites of other communities, and meeting with the on-line payment vendor used by the Collector, we found that just about every fee paid to the town can be done on-line. The vendor works with individual departments to structure the payment option to meet their needs. At this time there is no charge to the town for this service. A wide range of services are currently being offered for on-line payments both by very large communities and those that are much smaller than South Hadley. It is an inexpensive and relatively simple means of improving customer service to the community.

In looking at the results of the internal survey on what town departments are currently utilizing the town's website for, and what they wish they could do, we found that many of the "wish list items" are easily obtainable with our current website. We also found that the current website is not being utilized to its full potential, which in turn has affected the customer service being offered by the town. Through information from the IT Director, changes have already been made to the website such as removal of outdated material and the addition of links. Survey results show that some departments seem to be unaware of the potential uses of the website for providing information and materials to the public.

A majority of the committee members were in attendance at the demonstration of the product being offered by Virtual Town Hall. All

committee members have viewed community sites that use this product. Based on what we have seen, we strongly recommend that the town move forward with this product.

The committee has determined these conclusions and makes the following recommendations:

Immediate Goals:

- Contract with Virtual Town Hall
- Educate department heads on what services can be offered on-line
- Basic training of staff to update and keep current the information available on the website
- Creation of web pages for departments that do not have one, providing at least a minimum amount of contact information
- Put desired links on individual pages or home page

Short Term Goals:

- Forms and applications made available online
- On-line payment option for all possible avenues

Long Term Goals:

- Continued maintenance of the website
- Continual training and education to all town departments and staff regarding changing and updating the website

As previously stated, this committee recommends moving forward with Virtual Town Hall in the belief that many of the above stated goals will be obtained through this product.

We want to thank everyone that provided us with information for their input, and we look forward to continuing to help the town move forward in this endeavor.

Respectfully submitted,

Deborah Baldini, Chair
Judith Barthelette
Melissa Couture
Jennifer Wolowicz

Richard Harris
Lisa Napiorkowski
Elizabeth Stieg

B: Emergency Planning Subcommittee

Background: The Emergency Planning Subcommittee was formed with the following description/charge:

“This subcommittee is charged with developing a continuation of operations plan (COOP) for operation and backup of the town’s computer systems in the event of business interruption or an extended loss of service as a result of an emergency.”

Discussion: This subcommittee met several times to discuss this issue and identify problems with computer access during COOP-type situations. Dan Evans briefed everyone that the MUNIS program was backed up every night to a remote server in Maine. He also stated that his COOP plan was to relocate to the Council on Aging building and operate from that location. This would provide MUNIS access for other town departments during any interruption of normal business. MIS also maintains the town website and would be able to access similar control from their COOP relocation site.

Other departments also had plans, either tentative or more formalized to relocate to other buildings in the event of a business disruption in their primary offices. Procedures to back-up computer systems existed in various formats. But these systems were generally department-specific and the discussions started to depart from town computer systems to individual department planning.

Summary: The town MIS department currently has a well thought-out plan to back up the MUNIS system and re-locate to a building which would support their function. This will allow MIS to provide virtually uninterrupted computer support to town functions during COOP situations.

Recommendations:

1. The town government support the use of the Council on Ageing building as the COOP relocation destination for the MIS department.
2. The MIS department research cost-efficient ways of providing computer back-up support to other town agencies with their internal computer systems.
3. The Emergency Planning subcommittee’s charter be considered complete and that the remaining tasks be transferred to the upcoming COOP project.

Forrest D. Price, Jr.
Assistant Emergency Management Director

C: Infrastructure and Security Subcommittee

Preliminary Report

Subcommittee members:

Dan Evans (chair), Steve Parentela, Joe Rodio, Bill Collins, Tom Adams, Joanne Trybus, Jim Riedy (a representative from SHELD was requested but they chose not to participate)

This committee began as two separate committees, Infrastructure and Security. Early on it was decided that an assessment should be made regarding our current systems, hardware, software, and policies. The committee recognized that in order to move forward, we need to have a fair understanding of where we are today.

After inventories were taken and reviewed, walk thrus of various Town facilities were undertaken. At this point the two subcommittees were merged into one. Joanne and Jim were excused as we were moving into areas of a technical nature. As the work of this subcommittee continues, we will require active representation from the districts.

The Infrastructure and Security subcommittee has an important and crucial charge. The Town Infrastructure is the foundation upon which all other subcommittee charges will rest. The infrastructure must support the initiatives that come out of the committees.

We have visited and met with other Municipalities. The good news is that we seem to be on a par with most Towns our size. However, like those other Towns we face the challenges of leveraging new technologies and we know we must modernize to keep up. It is crucial that we begin to put in place the Infrastructure of our future NOW.

This subcommittee must deal with myriad issues. Moving forward, many challenges will be encountered. Interdependency of hardware and software, changing and emerging technologies, disparate systems and infrastructures at various locations, budgetary implications, and the need for specialized technical expertise are just some of the challenges we will encounter. To that end, we will recommend that this be a permanent committee.

As a short term goal, the subcommittee should create a plan for long term Infrastructure initiatives. The plan should be continually reviewed and adjusted where appropriate.

The following is a preliminary summary of the issues that the committee has looked at so far. This document is not meant to set forward a design or plan. And it is by no means a thorough, comprehensive technical assessment. We hope to achieve those initiatives in FY09, provided our budgetary recommendations are adopted.

Fiber optic Network

South Hadley Electric Light is installing fiber throughout the Town. Although we are not able to obtain technical specifications or a specific time frame at this writing, our understanding is as follows. SHEL is installing fiber to Town buildings, including the districts. This is not 'dark' fiber as we originally expected. Rather it is bandwidth. This means there will be electronics lighting the fiber. It will be under the management and control of SHEL. We will be able to configure it so that we will not only have access to the Internet through it but we will have interconnectivity between buildings. Basically a WAN (wide area connection) or MAN (municipal area connection). The initiatives of the subcommittee assume that this fiber is ,at least in part, installed in FY2009.

Location Infrastructures

Each Town location is distinct. There are no common standards to the configurations. Infrastructures were originally designed and installed with no regard to each other. Much of it was installed before the advent of current technologies. The high school is the closest facility we have to being 'state of the art'. We for see this location as the HUB of the Infrastructure. The subcommittee recommends the following:

- Establish some basic specs for town hardware and software
- Each town location should regularly inventory their own infrastructure and consult with the town IT department regarding compatibility or connectivity issues

Network Hardware and Cabling:

Network cabling to this point has been is adequate. At some locations however, it will not support the emerging technologies that we see as crucial to our future. For instance, some of the Police Department cabling is category 3 rather than category 5. This will not support technologies such as Power over Ethernet. At Town Hall, when cabling was originally installed, it was designed to support whatever nodes were there at the time. It seems as if the possibility of expansion was not taken into consideration. When the IT department was initiated one of the first initiatives was to create an IP network. Much of it was retrofitted to the existing environment. The result is that there are workgroup switches in nearly all offices rather than direct backbone connections. This is currently serving the Town well and creates no network traffic problems. However when we inevitably institute a Voice over IP phone system, it may prove to be inadequate. Facilities will also require managed network switches for emerging technologies. Currently, most switched are unmanaged.

The wiring closet a the library needs to be modernized. The physical location is literally a small closet. There have been issues in the past with water leakage from the roof. This needs to be addressed.

Hardware

The School and most Town Departments are in good shape as far as computers and printers are concerned. Most locations are on a four to five year desktop replacement

cycle. The exceptions are the Library and the Police department. These two entities have largely relied on grants for most of their hardware. For instance, the Police received a grant within the last two years which allowed them to replace servers, desktops, and laptops. The equipment that this grant replaced came from an earlier grant. All of the equipment was of the same age. Some of the computers were barely running. It is fair to say that the server was on its last leg when it was replaced. This equipment is crucial to the 24/7 operation of the department. Although we should actively pursue future grants, it is irresponsible to rely on them. Therefore a recommendation will be made to include a technology line item in the Police and Library budgets moving forward. This is to assume a replacement cycle of 5 years at the library and 3 years at the Police department. Servers must be upgraded or replaced as necessary. The Library's existing budget line for telecommunication network services could either be expanded to include hardware maintenance costs or supplemented with an additional line dedicated to this purpose.

Note on the MUNIS server:

The MUNIS server is scheduled for replacement in FY 2010. The cost is estimated to be between \$18,000 and \$20,000.

Security

Security for our purpose refers to hardware, software, policy, and physical security. The Town, Schools, Library, and Police Department use Norton Corporate Edition for desktop Security and Antivirus. We recommend that all Town entities be standardized on this software. There are firewall appliances at all locations. We believe this is adequate at this time but we recommend it be reviewed. The school also employs a Sonic Wall security device for content filtering. We recommend that the Town employ hardware and software to lock down employee Internet access. There is no physical lockdown in place, only policy. In addition, the subcommittee will review and if necessary, revise all computer use policies in Town.

Physical security at Town Hall is under review.

Backup

These are some issues we need review. This is by no means a comprehensive list. There are many issues not addressed here which need to be addressed in the future.

Backup: Again, there is no standard method for backup. We employ tape backup, peer to peer backup, offsite database transfer. At some Town locations there is data that we know is not being backed up at all. The IT department is actively addressing this problem employing current technologies. The subcommittee recommends that we explore the possibility of offsite backup over a secure Internet connection. This would be both secure and cost effective as well as non-tedious.

Emerging Technologies

Keeping abreast of current and emerging technology is essential for the Town. There are technologies that we can gain vast benefits from, while saving money. For instance, Virtualization, such as VM Ware. This is an incredible new technology which combines server consolidation and redundancy among other things. Just as an example, using this

Technology, the Amherst Police department was able to reduce 8 file servers down to 3. And if one server should fail another server will automatically take over. It is invisible to the user. That is just one example of the benefits of that particular technology.

We also feel that with the impending Wide Area Network we can leverage technologies such as Centralized Hardware and Software Management and Voice over IP. Anything we can do globally should be investigated. We need to be looking at vendors and comparing technologies. Moreover we need to employ expert consultation to help set us on the right track.

A long term goal should be established to install a Voice Over IP communications system throughout the Town.

Appendix D

D: Infrastructure Recommendations with FY09 budgetary implications

- The committee recommends a budget request of \$10,000 for consulting fees. This is to assist us in the WAN configuration and to help steer us in the proper direction for our other initiatives.
- The committee recommends that the Police and Library budgets include a Technology line item. Funds should be requested as deemed appropriate by those entities. In the case where grant money becomes available in a given year, the funds should be turned back.

Respectfully Submitted:

Dan Evans (chair)

Joe Rodio

Steve Parentela

Bill Collins

Tom Adams

E: Interdepartmental Communications Subcommittee
Preliminary Report

Subcommittee Members:

**William Sutton, Lynn Roberts, Steve Parentella, Dan Evans, JoAnne Trybus,
Tom Adams, Christine Sweklo, Candice Walczak, Jim Reidy, Joe Rodio**

The Interdepartmental Communications Subcommittee had several meetings beginning in August of this year. Various topics were discussed regarding communication concerns within the Town's departments. The following represents the Committee's conclusions and recommendations at this juncture. Further meetings can be held in the future depending on the Technology Committee's needs or concerns.

Summary of Interdepartmental Communications Conclusions, Recommendations:

- All departments should use email; all email addresses should be through a southhadley.org or a mass.gov type format (or the like) due to spam filters rejecting other names etc... This would probably exclude the School Department, Library, and Police Department. This was classified as a short term goal with a migration period.

- Compatibility issues within the town's computer systems should be addressed due to potential communication problems between computers etc.; there should be a minimum type spec for all towns' computers. It was also mentioned that the Infrastructure Subcommittee was addressing these issues as well. It was mentioned that a system for requesting help with problems, i.e. a help desk communication method, could be a good avenue to look into as well. This was classified as a long term goal and would be a great deal of work as well as expense.

- Submittal of Accounts Payable including the potential to eliminate vouchers; highlight pertinent information on the bills or develop a stamp type system will be addressed. The elimination of vouchers for bills payable will be implemented. Departments will "highlight" the pertinent information on the bills. Cover sheets will still need to be done and would need the approval signatures. This is an immediate goal and will be phased in by departments starting within the next month.

- Submittal of Payroll; emailing of payroll worksheets (outside departments?) and the potential for keying payroll by departments was discussed. It was discussed that the emailing of payroll worksheets would be a problem due to the fact that an approval signature is required on the payroll. The committee felt that the ability of having individual departments keying their own payroll could be looked into but it would be a long term goal. Various set - ups and securities would have to be pursued as well.

- The development of the Personnel system; tracking accruals, benefits, etc... will be addressed. This would also include the potential to eliminate weekly and/or monthly benefit sheets. It was discussed that this is an ongoing goal of the accounting department and now that we have converted to the MUNIS 6.2 version, that progress would begin. Various training on the package and what it offered would be needed. This should be able to automate the accrual process and eliminate the weekly and or monthly benefit sheets. The question of whether it would be linked to payroll or not came up and it was said that this would have to be looked into as we moved forward. It was asked that accounting keep the school department in the loop as to whether we would be linking to payroll or not. This would be considered an immediate to short term goal and hopefully over the next year or two the basic system could be up and running with more being added and accomplished as we move forward.

- Streamlining the Accounting Dept. reports, i.e. Budget, enterprise, trust fund, account balances, PO requisitions and forms, etc... Discussion centered on the various budget reports that are provided by the accounting department and if there was ability to have them accessed by all departments in some form of database for example. There is a MUNIS Workflow module that could be looked into to see what capabilities exist to see if this could happen. The committee felt this would be a long term goal.

- Develop an Intra-net for the Town. Purchase of the FirstClass system to accommodate this was not recommended by the Interdepartmental Communications Subcommittee due to its complexity and cost. The pursuit of an intranet for the Town was classified as a long term goal.

- Usage of the Emergency phone system by School Department and/or Police Dept. for communications; road closings, building closings, etc... should be developed. This should also incorporate the Fire Districts. It was discussed that additional training could be looked into to explore and expand on the capabilities of the emergency phone system to enhance communications within the Town. This was identified as a short term goal and successful testing has already begun with the Police Department.

- Creating common templates for the various forms utilized throughout the Town should be pursued. It was discussed that common templates should be done for various reports so all departments are using a standardized form. A couple of examples were mileage forms and departmental payment to Treasurer forms. It was suggested that we identify what forms we would want to or need to standardize. It was also mentioned that someone from the school department could assist in teaching how to create templates. It was felt that this could be an immediate goal and hopefully could be in place for July 1, 2008.

- It is the Interdepartmental Communications Subcommittee recommendation that the Town have someone from the State come out to do a presentation for the Town regarding emails as a public record. This would include what emails are considered a public record, which ones can be deleted and which ones need to be retained and for how long etc... From this presentation, the Town should consider developing a uniform plan regarding email management as well as the archiving of records. We have included the Town of Burlington's policy as a sample. This was identified as a short term goal.

- There should be PC software uniformity and usage among departments. For example, is everyone with a computer at their desk using email, and excel to do worksheets, if they have it etc..? It was determined that we could coordinate with the Training Subcommittee to see what information they had already obtained related to this and pursue from there. The Training Subcommittee was looking into what applications the various departments had and what training was required for the employees. We would defer to the Training Subcommittee for their recommendations.

- The potential for streamlining the budget process should be explored in the future. Due to the large volume of worksheets and the inconsistencies of software and hardware within the Town, it is difficult to make major changes at this time or in the near future. Streamlining the budget process should continue to be looked into in the future but would be considered a long term goal.

F: Munis Sub-Committee

Budgetary Recommendation Report

This sub-committee was given the charge of reviewing the software currently in use by the Town of South Hadley and recommending whether a future change in vendors may be required. The entire sub-committee felt that changing from the current software system would be too costly and that comparable systems that integrate both the financial package and the tax and property package are very limited. With this in mind, the sub-committee focused instead on the enhanced usage of the currently owned software, with possible consideration of the addition of supplementary packages in the future.

When this sub-committee was formed, the Town was beginning the process of a software upgrade intended to bring us current with other municipalities using Munis software. Since then, we have finalized the upgrade and the progression to utilize the currently owned software to its best ability is advancing. The greatest hurdle that the software users are facing is the lack of funds for training. A survey was prepared and distributed to the majority of the Town departments, especially those utilizing the Munis software package. Most of the respondents requested more training in all aspects of their software usage. Through out this process, the one item that all of the members agreed upon was the lack of a training program. The majority of the employees using the software have been trained by another employee, limiting the advancement in usage to what is known by the individual providing the training. This predicament also includes the employee responsible for the administrative side of the system, who has received no specialized Munis training in her two years in the position. This is a serious issue that this committee feels needs to be addressed as soon as possible. One of the recommendations of this sub-committee is that a formalized training program be implemented, insuring that all employees are provided with adequate training and insuring the most efficient usage of the software.

As part of the training program implementation, Munis was contacted to supply information in regards to their current group-training sessions, which are approximately \$200/class. As of now, group-sessions are no longer offered, leaving the Town with the option of requesting in-house training (\$1,100/day + travel expenses) or WebEx training, which is handled the same as a go-to assist. The cost of the WebEx training is equivalent to a half day of in-house training, without the additional travel expenses. With those costs in mind, the sub-committee requests that monies be requested in FY2009 to provide training in all 9 major modules of the software. The sub-committee also requests that monies be requested to provide Access training for the 17 employees who are the major

software users. It was felt that this form of training would provide an enhanced knowledge of the software currently in use by the Town.

As mentioned in the notes from the previous meeting, immediate administrative training is requested for the Applications Specialist. The employee has received no formal training in the 2+ years filling the position, only limited training provided by other employees. With the current upgrade of the system, and the lack of knowledge in regards to the administrative applications, time is often wasted in contacting Munis Support, when the problems could possibly be handled in-house. Often times, more efficient practices are discovered while speaking with support, that could have been implemented under the administrative side of the system had proper training been provided. While we understand that monies have not been budgeted for such training, all committee members felt that with the current upgrade and the installation of new modules, it is essential that this position be given the training that will enhance the usage and security of the system.

The time-line provided by the Munis sub committee requires no changes at this time. The immediate goal in regards to the conversion has been achieved and is progressing smoothly. While the goal of training of staff on V6.2 may not be realized within 12 months due to funding issues, we anticipate the short-term goal concerning the implementation of the Personnel System to begin in the coming months. As for other modules available from Munis, a great deal of investigation must still be completed before any requests are presented to the Technology Committee.

<i>Immediate (0 - 12mo)</i>	<i>Short Term (12 - 24mo)</i>	<i>Long Term (3 - 5 yrs)</i>
<i>Conversion to version 6.2</i>	<i>Implementation of Personnel System</i>	<i>Review software & possibility of vendor change</i>
<i>Training of Staff on 6.2</i>	<i>Design & Purchase of Bridge program for Personal Property</i>	
<i>Specialized training of Applications Specialist</i>	<i>Implementation of an Annual Training Program</i>	
<i>Enhanced usage of Payroll System</i>	<i>Investigate modules offered by Munis that may enhance the efficiency of other Town depts.</i>	

Respectfully submitted,

Melissa Couture
 Joan Germain
 Joyce Lynes
 Linda Monahan
 Ellen Netkovick

Jennifer Picard
Candice Walczak
Lynn Roberts, Chair

Appendix G

G: Staff Training

December 3, 2007

This is the final report of the Staff Training Needs Subcommittee. The charge of the committee was to review staff capabilities related to the use of personal computers for various office functions, training assessment needs, and training development needs for the next few years.

This subcommittee met once a month during the months of August, September and October. The subcommittee was comprised of a mix of individuals from various departments and each person brought value to the subcommittee.

At each meeting the subcommittee addressed the issues detailed in the charge and discussed suggestions of ways to train the staff more comprehensively in regards to computer skills.

Therefore, the committee has determined the following conclusions:

Immediate:

- Schedule times for employees to complete the skills test for Word and Excel.
- Determine categories of skill level for Word and Excel.

Short term:

- Schedule training opportunities for Word and Excel – these trainings could be conducted by internal staff, as well as the use of external resources, or a combination of both.
-

Long term:

- Continued training of new applications.
- Refresher training of specific applications.
- Computer skills training for new staff members.

Respectfully Submitted:

Jennifer L. Wolowicz, Chair
Maureen Cronin
Claudia Frappier
Ann Guenette
Christine Sweklo
Peggy Feilen
Angela Burke

PRELIMINARY REPORT

1/8/08

Technology Committee:

H: Website Development and Maintenance / Customer Service Subcommittee

Website Subcommittee: Tom Adams (chair), Dan Evans, Andy Rogers, Richard Harris, Jim Reidy,

Customer Service Committee: Deborah Baldini (chair), Missy Couture, Lisa Napiorkowski, Judi Barthelette, Richard Harris and Jennifer Wolowicz

The Website Development and Maintenance Subcommittee had a number of meetings beginning in August 2007 (merged with the Customer Service Subcommittee in October 2007). Various topics were discussed regarding the need for the town's website to be updated/overhauled. Much of the discussion focused on what could be done to improve the effectiveness of the website and what could be done to make it more of a tool that could benefit town staff members as well as the residents of South Hadley. Future meetings will be held to implement the feedback that has been gathered as well as to assist in coordinating the startup and operation of the new website operated by VirtualTownHall.net. The following represents the sub committee's conclusions and recommendations at this juncture.

Summary of Website Development and Maintenance/ Customer Service Subcommittee Actions:

All Town Hall department heads as well as the Water Departments, Fire Departments, SHELD and Gaylord Library were contacted to see if they had interest in having a presence on the new website. The committee asked the following:

- What information on the current web site they would like to keep.
- What information departments would like to add.
- Review other Town websites to see what similar services they would like to provide.
- Determine what could be done through online payments vs. on site.

The subcommittee discussed the fact that all town staff does not have email. It was stated that all of the clerks etc. do not have their own email and in most departments only the department head has email. The consensus is That all staff should have their own email with a standard suffix (i.e. @southhadley-ma.gov).

The subcommittee viewed other websites operated by Virtual Town Hall and discussed the following:

- what should be our role in new website creation
- develop a plan for individual dept. submissions
- content manager?
- Dan Evans highly recommended that we pursue going with Virtual Town Hall
- The subcommittee discussed the importance and legal issues surrounding archiving email
- Dan Evans arranged demo by Virtual Town Hall and invited other relevant subcommittee members to attend
- streaming video possibilities / costs, web traffic tracking, separate sites for individual depts. Who needs a presence, universal look.

It was decided that website committee will continue to work as liaisons between Virtual Town Hall and the Department Heads in order to make the transition to the new website as efficient as possible.

The Virtual Town Hall contract has been approved and signed by the Selectboard. We will be moving forward and are hoping to have the new website up and running by this spring.

Appendix I

I: GIS/Integrated Permitting Subcommittee Interim Report

The GIS/Integrated Permitting Subcommittee has submitted this interim report while it continues to consider alternative programs for some of its proposed Short-Term and Long-Term priorities. The subcommittee would like to extend its appreciation to Dr. Thomas Millette of Mount Holyoke College and Mr. Shawn Shepard of Tighe & Bond for their assistance in reviewing the GIS issues, particularly the cost to remedy the base map problems. We would also like to thank representatives of ViewPoint for their assistance in viewing the demo of their program and answering various technical questions regarding the installation and operation of an Integrated Permit Tracking System.

Background

South Hadley, like many other communities, has long been involved in permitting of various activities. Like most communities, the permitting has been undertaken using the traditional paper process which requires applicants to physically submit their documents either in person or by mail. Data in this form is cumbersome, to use for analysis or to share with other departments or the public.

Unlike many area communities, South Hadley became involved in the Geographical Information Systems (GIS) approach to mapping in the late 1980's/early 1990's. The Town Planner at that time, George Boyle, utilized the Atlas GIS program (what is now considered antiquated) and a small desktop computer to digitize the Assessors' maps to create the Town's first digital map. This approach served the Town well for some basic functions, such as zoning and analysis of some land use issues. In 2003, Mount Holyoke College, through its Geoprocessing Lab, converted this database to ArcGIS. However, even with this conversion and sharing of the database with other departments, the Town's GIS program has not been "linked" to other departments and has continued to function as a stand-alone system.

Over the past 15 years, the community has experienced substantial development and other municipal departments and entities have become involved in GIS – generally using their own base map and resources. Thus, the issue of GIS and Integrated Permitting has grown in its significance as the community and the permitting environments have changed. Accordingly, the GIS/Integrated Permitting Subcommittee was created with the following Subcommittee Charge:

Review the current utilization of GIS software and hardware and compatibility not only in town departments but the districts as well. The subcommittee will also investigate the use of current applications for permitting and interdepartmental reviews as they relate to information exchange and communication for planning and development purposes.

The subcommittee was formed with the vision of incorporating all departments that are either directly involved in permitting or mapping or are significant users of the permitting or mapping tasks. Accordingly, the following persons/departments were appointed to this subcommittee:

Richard Harris, Town Planner-Chair
Melissa Couture, Associate Assessor
Steve Reno, Building Commissioner
Sharon Hart, Health Director
Steve Parentela, Police Department
Jeffrey Cyr, Fire District #1-Water Department, Superintendent
William Selkirk, Fire District #2-Water Department, Superintendent
Wayne Doerpholtz/Andrew Orr, SHELD
Jim Reidy/Yem Lip, DPW
Janice Stone, Conservation Administrator

Survey of Activities

The initial steps of the committee's work involved a survey of the various mapping resources in use and the permitting activities of the participating departments/agencies. Currently, all of these departments invest some time and/or resources into maintaining information in a geographical referenced system. However, most of the departments maintain their maps as "hard copies" and not in a digital manner. This significantly impedes data sharing and data analysis.

Of those departments that currently utilize a digital mapping system, there are some commonalities but some significant differences:

- Utilize ArcGIS (mostly the current 9.2 version, but one department is still utilizing the older 3.2 version).
- Maintain the data on a part-time basis using existing staff.
- The maps utilized by the two water departments differs from that operated by the Planning Board which is somewhat different from the map used by the Conservation Commission. Thus, multiple mapping scenarios using different data sources are being employed.

Several departments utilize computerized permitting software, but they are not integrated and do not provide a means for electronic plan review. At present, numerous municipal departments/agencies issue a multitude of different permits. Each permit and permitting entity has their own degree of complexity and requirements and processes:

- Board of Health
- Planning Board
- Water Departments
- Fire Departments
- Building Commissioner
- DPW

- Conservation Commission
- Selectboard

Other departments do not issue permits, but have roles in the permitting process which vary from commenting on permits to using the resulting permit to update their records and undertake follow-up activities. For instance,

- The Town Clerk is responsible for receipt of notices of appeals of decisions and issuing certifications that no appeals have been filed.
- The Assessors' Office utilizes records of building permits and certificates of occupancy in scheduling assessment updates.
- The Assessors' Office utilizes records of new development plans in updating their maps.
- The Tree Warden, Fire Chiefs, Police Chief, and other departments comment on various permit applications.

Identification of Issues/Needs

The subcommittee identified the following issues/needs:

Base Map

After discussing the permitting processes and background on the GIS programs in use, the subcommittee quickly identified the condition of the Town's digital base map as a primary issue.

A Geographical Information System (GIS) is a useful and informative tool which links and displays data in a geographical fashion. It allows the user to geographically analyze the data sets. Thus, providing a basis for more informed decision-making.

- *Background on Town GIS*

The Town GIS database has been expanded and transformed over the past 15 years as more data was developed and integrated into the program. Approximately 7 years ago, Mount Holyoke College through its Geoprocessing Lab and the efforts of Dr. Thomas Millette, converted the Atlas database to ArcGIS (a much more user-friendly and adaptable program). This conversion significantly expanded the database' potential utility for in-house and general public purposes.

Since its inception, the Town's GIS program has largely been used for zoning purposes (primarily preparation and maintenance of the zoning map and related project maps). This alone has provided a more accurate and more readily updated zoning map than was used prior to the GIS program development. However, the GIS program has been used for a wide variety of other purposes and projects, for example:

- Preparation, analysis, and graphic display of development activity for consideration by bond rating companies and prospective developers

- Preparation and graphic display of ownership information for assessment purposes
- Preparation, analysis, and graphic display of housing development activity.
- Preparation, analysis, and graphically display of roadway, zoning, and open space projects for Town Meeting consideration
- Analysis of development potential
- Analysis of development limitations
- Analysis of alcoholic beverage licenses
- Review and analysis of town-owned lands
- Analysis of paper street/unaccepted roadways
- Economic Development planning
- Recreation and Open Space planning
- Identification and assessment of potential sites for a new school and affordable housing
- Historic property and district planning and analysis
- Data sharing between departments and other municipal entities

Thus, the existing GIS program has been very useful and beneficial for “in-house” purposes. Yet, this has barely touched the surface of the potential for the GIS program.

Over the past 6 years, the separate water departments of the Fire Districts have developed their own GIS programs. Their databases are based on a more accurate base map which they developed using aerial photography supplied by the state in recent years. However, their databases are foundationally based on centerlines of streets and do not include parcel data – a key consideration for other municipal uses.

Similarly, the Conservation Commission has been using GIS to review wetland permit application sites, using Commission-modified data and MassGIS data sources.

- *Need for Integration of Databases*

Integration of the water departments’ databases, MassGIS, and the municipal GIS database is essential to having a truly comprehensive GIS database. Such integration would dramatically expand the “in-house” and general public benefits of the GIS program – it would, simply put, allow those people who have paid for it to gain the benefits of it.

Even more fundamental to having a public-friendly GIS database is integration of the GIS database with the Assessors’ database. The lack of integration of these two key municipal databases imposes significant time delay in responding to citizen inquiries regarding a wide variety of issues. At present, it takes ½ hour to several days for a citizen to find out the zoning of their land if all they know is their street address. This delay arises from the fact that the Planning Board Office must physically contact the Assessors’ Office to determine the location of the property (using the Map and Parcel reference which most citizens do not have) and then contacting the resident with the information. Integration of the two databases would reduce a 4+ step process involving multiple phone

calls to a simple matter of looking up the information on the computer screen while the person is on the phone.

Once these databases are integrated, expansion to other departments will be relatively simple and result in geometrical expansion of the GIS database. It will also provide the opportunity for the Town to dramatically expand the geographical-based data accessible by the citizens and property owners; possibly through the Town's website.

- *Need for Maintainable Assessors' Maps*

Under Massachusetts General Law, the Board of Assessors is required to maintain parcel boundary maps which include individual identifiers for each parcel and the individual parcel attributes including parcel dimensions. The Associate Assessor has noted that it has become increasingly difficult to obtain consulting services to update the paper maps. Within the next few years, the Associate Assessor anticipates the Town will not be able to find a vendor to update the paper maps. Therefore, it is vital that this barrier be addressed within the next 24 months. While the DPW/Town Engineer have offered to maintain the maps, in the short term, the fact that the maps have not been maintained on mylar sheets for the past several years would significantly increase the initial level of work which would need to be undertaken and would not negate the need to invest in a new digital basemap.

Development of a more accurate GIS base map with the Assessor required annotations would alleviate the potential problem with updating of the Assessors' maps. It would also provide the basis for effectively integrating the various GIS databases into a tool that is also usable by the public.

- *Barriers*

The Town has identified the technical aspects of integration of the databases which must be addressed. In the case of linking the Assessors' database to the Town GIS database, we believe the effort merely requires a technical alteration of the manner in which the 7,200+ parcels are identified in the Town GIS database. This will primarily require time to input the data and have the Assessors' database vendor do the final linkage.

However, the most significant barrier to a truly integrated and effective GIS database is the base map. In the GIS environment, the base map is EVERYTHING. If the base map is not accurate (or reasonably so), the resulting analysis and information which is disseminated will be skewed and inaccurate.

At the present time, the Town can reasonably tell an owner the zoning on a parcel of property. However, distortion inherent in the Assessors' maps (when the different scales are holistically meshed together) was compounded when the maps were digitized and

then converted from one program to another, resulting in various limitations on use of the base map including:

- Inability to scale distances with reasonable accuracy (critical for developing abutters' lists or planning school bus routes)
- Inability to overlay data layers from the MassGIS website (critical in assessing wetlands, floodplains, or any number of other environmental issues)
- Inability to use the GIS-generated maps as the basis for the Assessors' maps (this would save the Town several thousands of dollars annually and enhance the ability to share the maps with the community)
- Inability to integrate the Districts' maps and information with the Town's GIS map

Establishment of a Uniform GIS Program

Fortunately, all of the departments and entities in the community which utilize GIS have selected ArcGIS as their operating platform. This ensures greater consistency and eliminates one major potential barrier which has afflicted some other communities as they attempted to share GIS assets. The community should establish and maintain ArcGIS (current edition) as the GIS operating platform.

Linkage of Assessors' Database and Town GIS Database

The ArcGIS program has the ability to identify and manage data by a variety of geographical references including, but not limited to, addresses and map/parcel identifiers. The Assessors' database is the only municipal database which has the map/parcel and address identifiers for each parcel. Unfortunately, this data is not linked to the GIS database. Therefore, to access the Assessors' database, several manual steps must be taken which delay and inhibit the prompt response to inquiries (such as zoning, abutter's lists, etc.).

Linkage of these databases will dramatically enhance the ability of all municipal departments and affiliated agencies to respond to public inquiries regarding particular parcels. It will also expedite the Assessors' Office's ability to prepare and certify abutter's lists.

Training of Personnel

Operation and maintenance of the GIS databases requires training of personnel as to the use of the ArcGIS programs which change periodically. In recent years, private vendors (locally, Tighe & Bond) have developed new training programs. As the Town and other community entities progress in the use and development of the GIS program, annual training of personnel needs to be undertaken utilizing one or more of the private-vendor programs.

Commitment of Adequate Personnel

Investment in the GIS program is a significant commitment for the community. This commitment entails hardware, software, development of data, many work hours to compile and organize the databases, etc. The initial and annualized costs are valued at an

amount far in excess of \$100,000. Updating the databases is essential to ensure that they maintain their usability. Development of the new base map will be meaningless if the map is not maintained. Similarly, an updated database is useless if it cannot be used to quickly respond to a department's need for particular mapping.

At present, the Town's database is maintained on a part-time basis as the Town Planner has time to do so. Similarly, the water departments' databases are maintained as the Water Superintendents have time. The DPW is in the process of updating the Town's sewer and drainage maps.

With the proposed expenditure of \$60,000 to develop a new base map and other capital and operating expenditures as well as reliance on the GIS database to provide the Assessors' maps for property assessment purposes, the Town will need to ensure that the GIS database is maintained properly. Commitment of adequate personnel whose primary task is GIS will be necessary to ensure that these expenditures are maintained and don't have to be repeated on a frequent basis.

Trimble (GPS) Units (and Training in their use)

With the development of a more accurate base map, it will be necessary to ensure that the data that is used to maintain the map is at least as accurate. The water departments have been using Trimble Units to locate the elements of the water systems for mapping purposes. Similarly, the DPW will be using a Trimble Unit as a surveying tool, to prepare road/sewer/drainage construction plans, to update and field verify Town sewer and drainage systems, landfill inspections, and similar other Town projects. These handheld Global Positioning System (GPS) devices provide an effective means to collect point location data and transfer that data to the GIS database. Acquisition of such a device for Town Hall personnel and training of personnel in use of the device will enhance the ability to properly locate data points (such as, new houses, wells, septic systems, etc.) on to the GIS database.

ArcGIS Licenses

At present, each water department, the DPW, Planning Board, and Conservation Commission have licensed ArcGIS programs. All town departments do not need an ArcGIS license. However, more departments (those who will be inputting and manipulating data) will need to acquire such licenses. The Town needs to identify which departments need a licensed program in the short-term and long-term.

Web-Based GIS

As the Town upgrades the base map and links the base map with the Assessors' Office database and integrates other data sources, the Town will have a data source that many residents, businesses, and prospective investors could utilize. Conversion of the Town's website to Virtual Town Hall will provide a more user-friendly and informative website. The upgraded map and integration of the data sources will be readily adaptable to a web-based GIS.

Integrated Permit Tracking System

The Town has a wide array of departments and agencies involved with various permits. These range from a simple building permit to a complex subdivision or Special Permit. Fortunately, the Town has managed to maintain an efficient approach to processing most of the permits. Very few permits take months to be processed.

Numerous departments are involved in different aspects of the review process and subsequent inspection and management activities. Over time, results of these permit actions impact other departments and subsequent owners of properties.

An integrated permit tracking system would provide better coordination of permitting activities and enhance the community's ability to track the permit and finalization activities. Integrating the system with the GIS program would also allow for mapping of permit activities to highlight problem areas or future infrastructure issues.

Incorporating the Integrated Permit Tracking System into the Town's website would enhance public access and monitoring of their permits or permits in their neighborhood. Such activities would make the functions more transparent and enhance public participation.

New Large Format Printer

The Town's GIS program currently utilizes an inkjet printer for production of oversized maps. Large (24" x 36" or larger) maps are essential for displaying zoning and other data used by groups and for legal display purposes. While currently functional, the quality of the productions is variable and should be upgraded. Current technology utilizes laser printing which is a far superior quality. The current printer is in excess of 8 years old and should be replaced. However, it is essential that a color printer be available due to the wide variety of data layers which must be displayed at varying times.

Prioritization of Issues/Needs

Each of the aforementioned issues/needs was categorized as either *immediate*, *short term*, or *long term priorities* as follows.

Immediate:

- Designation of ArcGIS (current version) as a uniform operating system
- Linkage of the Assessors Database with the Planning Board ArcGIS database
- New digital base map
- Training/continued training in use and operation of ArcGIS
- Trimble Unit for Town Hall
- Training in use/operation of trimble units

Short Term:

- Establishment of an Integrated Digital Permitting System

- New large format printer
- Web-based GIS

Long Term:

- Acquisition/installation of ArcGIS for other departments (need to identify whom)
- Professional GIS staff person

Cost Estimates:

To provide a measure for financial planning, the subcommittee attempted to identify costs associated with each of the aforementioned recommendations. The figures provided below are current year (2008) estimates. An estimate for several recommendations is not provided as further research needs to be undertaken as noted:

FY09:

- New digital base map: \$60,000
- Training in ArcGIS: \$2,300
- Trimble Unit for Town Hall: \$6,000
- Training in Trimble units: \$500

Total FY09: \$68,800

Short Term Estimates (not fy09)

- Integrated Digital Permitting System: \$80,000 to \$100,000
- New large format printer: *must be researched*
- Web-based GIS: *must be researched*

Long Term Estimates

- GIS staff person: Must be researched. The assumption is that this will be a half time position.

Next Steps

The subcommittee has not completed its assigned tasks yet. Due to the long-term nature of the recommendations of this subcommittee, it is further recommended that the following steps be taken:

- This subcommittee needs to be an ongoing committee to 1.) manage the development of the new base map, 2.) continue the work of integrating the various databases, and 3.) manage the maintenance, integration, and operation of the GIS programs and serve as a Technical GIS committee.
- Conduct further research into the various Integrated Permit Tracking Systems

- Further review the equipment and training needs associated with the GIS and Integrated Permit Tracking System programs.