Town of North Brookfield

Information Technology Review

October 2015

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DIVISION OF LOCAL SERVICES

MA DEPARTMENT OF REVENUE

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DIVISION OF LOCAL SERVICES
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Mark E. Nunnelly
Commissioner of Revenue

Sean R. Cronin
Senior Deputy Commissioner

October 26, 2015

Board of Selectmen
215 North Main Street
North Brookfield, MA 01535

Dear Board Members,

I am pleased to present to you the enclosed Information Technology Review for the Town of North Brookfield. I truly believe that if the Town follows the recommendations presented here, it will be better positioned to plan for its future technology needs. I would also like to thank Theo Kalivas, Kirsten Shirer, and Tod Jackson for their efforts in producing this report, and Mike Hamel from MassIT's Office of Municipal and School Technology for collaborating on the project.

As a routine practice, we will post the report on our website, www.mass.gov/dls, and forward copies to the town's state senator and representative.

If you have any questions regarding the report, please feel free to contact Zack Blake, Director of the Technical Assistance Bureau, at 617-626-2358 or blakez@dor.state.ma.us.

Sincerely,

Sean R. Cronin
Senior Deputy Commissioner

cc: Senator Anne M. Gobi
Representative Donald R. Berthiaume, Jr.

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Introduction

At the request of the board of selectmen, the Division of Local Services reviewed the Town of North Brookfield's information technology (IT) administration and associated practices. This report's objective is to provide guidance on strengthening the town's ability to provide for its technology needs and to improve the way it administers its IT infrastructure and equipment. To complete this analysis, we interviewed the administrative assistant to the board of selectmen, treasurer, collector, chair of the board of assessors (who is also the town clerk), a member of the board of assessors (who is also the webmaster), and the chair of the board of selectmen. We also reviewed assorted budget and financial documents provided by town staff, and have developed an inventory of town technology assets.

Based on our observations, we found that North Brookfield's IT administration is disjointed and ineffective. Among its many challenges:

- There is no centralized IT department or individual with appreciable IT expertise;
- The town's long-term technology planning is essentially nonexistent, with no overall technology plan or equipment cycling schedules;
- The town is locked into a strictly reactive posture when addressing day-to-day technology issues; and,
- Town departments are not on a centralized network, with some departments having separate agreements with different internet service providers and varying levels of internet access.

Improving North Brookfield's IT administration will be a long-term process. The town's lack of a cohesive administrative structure and limited financial resources represent significant hurdles. However, there are a number of no- to low-cost steps the community can take to immediately improve and secure the town's technology infrastructure.

Overview

In 2007, DLS conducted a financial management review for the Town of North Brookfield which found a number of issues exerting significant pressure on its overall financial condition. For the most part, these conditions are still in effect today. The town continues to balance its budget through supplemental appropriations of same-year free cash. There is a significant debt burden from the town's construction of a junior/senior high school. It is also increasingly difficult to cover the amount of school choice tuition paid to other districts—a trend that has only accelerated in FY2015. As a result, it has been very difficult for the town to sustain—let alone grow—reserves, and municipal budget planning is often an exercise in maintaining the status quo with as little budget growth as possible. This makes it difficult to plan long-term or make significant investments in staff and infrastructure.

North Brookfield is a small community in Worcester County with a population of approximately 4,600 and an annual budget of about $15 million. The town operates under a three-member board of selectmen – open town meeting form of government. The select board manages without a town administrator, and the chair takes a direct role (conferring with the accountant) in high-level budget and financial decisions. The board employs an administrative assistant, whose role is to coordinate with town departments and communicate the board's priorities. However, she has neither direct management authority nor the ability to make administrative decisions. This lack of strong, centralized management authority makes it difficult to bring town staff together to focus on specific issues like technology, and it puts the town in a reactive position when it comes to general problem solving.

Nevertheless, some management functions are centralized to the administrative assistant. For instance, she administers the budget for the board's office, which includes running the town hall building. Part of this budget is a technology line item that is meant to cover all technology-related expenses for departments at town hall. This has the effect of centralizing some technology purchasing for these departments, as they must first come to the assistant for approval. However, this structure functions primarily as a budget control, not a technical review, and does not serve to coordinate technology use between departments. For example, when making incidental technology purchases, a department head sends a request to the administrative assistant, who evaluates it and determines whether her tech budget can afford it. If she determines that the request is reasonable and that funding is available, she approves the purchase and pays for it out of the BOS budget item. Since this does not apply to other town departments such as the police, fire, highway or the water and sewer departments, the benefits of centralizing the IT budget in this way are limited.

The lack of strong, centralized administrative direction is made worse by the decentralized nature of the town's IT spending. While some incidental tech purchases are centralized to the administrative assistant, all major costs are borne by individual departments. For instance, the town accountant's budget contains the annual cost for the community's accounting software ($6,500), while the collector pays for the town's tax collection software ($5,000) out of her department's budget. The assessing department also pays its annual Community Software Consortium dues ($1,750) directly out of its budget. Other departments, such as police, fire and highway, do not have dedicated IT line items in their budgets, making it difficult to track their individual tech-related spending. Departments also make independent spending decisions on consultant services and equipment purchasing, foregoing the benefit of the town's organizational buying power by negotiating on a departmental basis. Knowledge and technical expertise regarding the town's computer systems is similarly isolated to each department.

Reflecting a lack of centralization, the financial departments use several different software applications, rather than a comprehensive, integrated financial software package. The accountant uses Tyler's Infinite Visions to maintain the general ledger, make journal entries, conduct budget transfers and adjustments, and monitor departmental budgets. She is also the only staff member with administrative access and the ability to modify user permissions. The treasurer has access to Infinite Visions, but only for posting and managing deposits. Most of her time is devoted to processing payroll in Harpers. The collector uses Point to process tax billing and for maintaining the receivable control, while water and sewer department billing is handled through Business Management Systems Inc. (BMSI)—which does not integrate with Point. The assessing department uses the Community Software Consortium's (CSC) CAMA system for their valuation software, which integrates well with Point and allows the assessors to electronically deliver tax commitments to the collector.

The town's approach to data and internet security is similarly varied. Backup strategies are a patchwork of informal, makeshift solutions from vendors, which puts critical data at risk. Point, for instance, provides a cloud-based, remote backup function as part of its annual support package, while Harpers backs up client data remotely at its Worcester headquarters. The CAMA system is backed up on CSC servers, and the accountant and treasurer copy their daily work in Infinite Visions onto a USB drive and take it home with them when they leave. They also take turns bringing the server drives (including the one that contains Infinite Visions, the town's general ledger) home with them. Similarly, the chair of the board of assessors/town clerk does her clerk-related work on a USB drive and brings that home daily.

Departments are also responsible for keeping track of their own computers and hardware and do so without coordination or integration. In town hall, there are approximately 14 PCs across the nine departments in the building. Of these, the administrative assistant has one standalone PC that is not networked to any other. The accountant and treasurer have their own PCs networked to each other, with a shared drive between them. The collector's office has two PCs, and both have Point installed. However, only one computer is capable of posting to the receivable control, while the other has read-only access. There are a total of three PCs in the assessing department (one for each board member), which form a small, departmental network (one acts a server for the other two).

The town also operates a server, which is stored in a rack-mount unit with two bays for hot-swappable hard drives. One hard drive hosts Infinite Visions, while the other is a shared drive for the accountant and treasurer. The server room is not climate-controlled and the unit is not kept in a rack. Rather, it sits on a small desk in an open closet, with an LCD monitor placed directly on top of it. An oscillating fan is located a few feet away, locked into position so that it constantly blows on the server. Storing the unit like this poses increased risk of unit failure and accelerated wear and tear due to insufficient heat dissipation. As a result, there is a strong likelihood of losing critical data, and increased wear would require more frequent unit replacement. In fact, staff noted that the server overheating is a constant problem. Since our visit, the town has replaced the server hardware. Nevertheless, without proper maintenance, it is only a matter of time before the same issues arise again.

Staff described a general lack of an in-house problem-solving capability for technology issues as well, although they informally consult with each other before calling for outside support. The town has an existing relationship with Whalley Computers, but this is not an ongoing arrangement for IT support. Rather, the town usually purchases hardware from Whalley and calls customer support when necessary. Typically, contacting Whalley for support is a last resort in an emergency situation. Furthermore, both of Whalley's locations (Southwick and Milford, MA) are about an hour away from North Brookfield, which would result in additional lag time in an emergency situation if the town asked for a site visit. The town will also periodically ask Whalley to perform a needs assessment on its network infrastructure and equipment. The lack of a resident IT expert (such as a systems administrator) makes it impossible for officials to critically evaluate these recommendations or to determine the suitability of less costly substitutes, where applicable. Not all departments, however, contact Whalley when they need support. For instance, the collector's approach to emergency situations is to consult the local phone book to find an available service, while other departments—including police, fire, and highway—do not coordinate with each other on IT support or planning needs.

This fragmentation is also evident in how the town purchases internet service. Ideally, a community will negotiate a single rate with an internet service provider (ISP) for all town departments, which they often leverage through cable franchise licensing. In North Brookfield, a department's internet service often depends on its location. Town hall departments are connected to the internet through Charter Cable, while other outside departments, such as police, fire and highway have different ISP agreements ranging in connection types from cable/broadband to DSL. This leaves it up to individual departments to negotiate agreements on their own, with varying levels of technical expertise.

Without a plan, IT administration is an exercise in coping with unexpected technical issues rather than a strategy for maintaining the town's IT hardware and infrastructure. Framing all technology decisions in the immediate near-term has created difficulties with IT on an organizational, policy, and day-to-day basis. Financial constraints make it difficult to pursue long-term solutions, such as the hiring of a town IT director or a systems administrator. As a result, the town is locked into a reactive stance, only replacing hardware when it threatens to become nonfunctional. Even though there is a small level of centralization in the form of the administrative assistant's technology budget, large departments like police and highway are not subject to it. This selective autonomy, along with the lack of a strategic plan, makes administering IT needs across departments difficult.

Primary Recommendations

1. Centralize IT Administration

Given the vital role technology plays in municipal operations, North Brookfield should make IT planning a priority. To achieve this, we recommend that the board of selectmen consolidate existing IT spending into one, central budget item and give oversight of it to the administrative assistant. The consolidation process will require strong administrative direction from the board, and they should charge the assistant with managing it. Her demonstrated ability to coordinate activity at town hall has earned her the respect and trust of fellow department heads, and this will be necessary to ensure departmental buy-in and cooperation.

Reestablish the Technology Committee: We recommend that North Brookfield reestablish a technology committee, chaired by the administrative assistant, to serve as a forum for the consolidation process. Historically, town departments have been largely autonomous when making tech decisions. Moving from a narrow view of IT spending and planning to a more comprehensive model will require significant buy-in from staff. With a common forum, departments will be able to

understand how their technology practices affect each other. In the long term, this will allow North Brookfield to be more proactive on issues like software incompatibilities across departments. Additionally, departments will have a place to brainstorm solutions to common tech problems. For instance, when a department head identifies the need for a new infrastructure, hardware, or software purchase, he or she can bring it before the committee for discussion. This way, members can pool their departmental experience and identify potential problem areas in advance.

The town tried to address some of its IT issues through a technology committee before, and although it did not produce any comprehensive solutions, it was able to acquire email and website hosting for the town through a third-party vendor. Since the committee's dissolution ten years ago, there have been no further attempts at strategic IT planning.

In its previous incarnation however, the committee was made up entirely of citizen volunteers. We recommend shifting the committee's membership to include the town department heads that have the greatest stake in technology-related policy. Since IT infrastructure is a town-wide issue, the make-up of the tech committee should reflect this; all technology stakeholders should be represented. Thus, we recommend including appointees from the board of selectmen, school committee, and water and sewer commissions. The board of assessors should also have a representative on the committee, and it should include one or two technologically-oriented members of the community as well.

Identify IT Spending: As chair of the tech committee, the administrative assistant should direct other departments to review their budgets, identify the major and minor tech expenditures, and report findings to the committee. Then, working with the town accountant, she should compile this data into a spreadsheet, calculating both departmental totals and a grand total for the town. This data will give officials a much better understanding of the current scope of IT expenditures and will allow the town to determine its IT cost centers and plan accordingly.

Furthermore, compiling multiple departments' expenditures into one list will make it easier to find purchases that may be redundant or inefficient. For instance, this process may reveal that several departments are replacing similar hardware at varying intervals with different vendors. In this case, it would likely be more cost-effective to select a single vendor and make a large purchase at one time.

Consolidate IT Budgets: Once technology costs have been identified, the town should begin the process of consolidating all technology-related appropriations into one budget category, with separate line items for internet service, hardware costs, software costs, and consulting services. A

good opportunity to do this is at the beginning of a budget cycle. The board of selectmen should adopt IT consolidation as a budget goal and include guidelines to accomplish it in their annual budget memo to departments. During the budget process, departments should be instructed to remove previously identified IT costs from their budgets, and the administrative assistant should include a new line item equal to those costs in the board's departmental budget. Nevertheless, it may be the case that certain tech expenditures should remain in departmental budgets. The tech committee would provide a venue for this discussion to take place.

To start, the town should consolidate the tech budgets of all town hall departments, inclusive of software support costs. This would include internet service, the general tech budget under the administrative assistant, the collector's budget for Point, the treasurer's budget for Harpers, and the accountant's budget for Infinite Visions. As a second phase of the process (potentially carried out in a subsequent fiscal year), officials should consider reallocating funds used for technology in other town departments–such as the police, fire, and highway departments—to this consolidated IT budget. The board should solicit feedback from departments and develop the consolidation plan with input from all departmental stakeholders. With a centralized budget, decision makers will be able to understand the true cost of providing IT systems for all town departments. This will make it possible to coordinate tech purchases among departments, and technology considerations will be more visible when the town sets budget priorities.

Establish an Organizational Framework: While the town consolidates IT spending, it should also evaluate its needs in terms of administrative structure. The ultimate size of the IT budget and nature of the consolidation should inform the town's choice of organizational framework. Ideally, this would begin with the hiring of a qualified IT professional to drive the process and provide technical expertise. However, North Brookfield's financial constraints may make this option cost-prohibitive. An alternative is to designate the administrative assistant as a point person for IT decisions. In this framework, technology decisions can be funneled through the assistant and discussed by the tech committee to prioritize implementation. Additionally, the town may wish to partner with a local IT consultant on an ongoing basis to provide day-to-day monitoring and maintenance of the town's IT infrastructure. While data backup is the priority, this consultant should also be able to oversee routine hardware and software upgrades and provide user support.

Another possibility is to contact the school department about creating a shared-services arrangement between the school committee and board of selectmen. This may be in the form of a combined town-school IT department, or the school IT department could provide support to town departments on an as-needed basis. In this arrangement, the administrative assistant could serve as a single point of contact with the schools. Since the school already has a technology plan and

policies, the technology committee could discuss how to adapt these to the town, with school IT personnel providing support during the process. The agreement should also consider any reimbursements for town-side work completed by the school's IT department.

Alternatively, North Brookfield may wish to pursue a regional agreement, which would most likely take one of two forms. The conventional plan would be for North Brookfield and a regional partner or partners to hire a shared IT director. To begin the process, the board of selectmen would reach out to officials in neighboring communities and determine if there is a shared need for IT administration. Another option would be to identify areas where the town could shift to cloud-based services. In this case, North Brookfield could look for a larger municipal partner offering remote-hosting for most of the town's major systems. Either of these possibilities should be governed by a detailed intermunicipal agreement.

2. Address Information Security Issues

We recommend that the town draft technology policies to bolster its information security practices. These policies should codify the town's data security, back up, disaster recovery, and acceptable use practices.

Develop a common approach to internet security: First, the assistant should work with the tech committee to develop a policy on internet security. Right now, the town is not consistent with its virus and malware protection, and the antivirus software on the two collector's office PCs has expired. We recommend that town staff evaluate all internet security applications currently in use and settle on one package for the whole town. This will make it much easier to identify potential holes in security and keep track of antivirus software updates. Keeping antivirus software up to date is crucial in protecting the town's IT infrastructure against outside attacks.

Similarly, the committee should draft a policy to keep critical software applications and operating systems updated. Windows updates can be set to "automatic," allowing for a seamless update process for the user. These updates often include critical security patches, and failing to complete them leaves town PCs vulnerable to external attack. When considering upgrades for municipal finance software, officials should balance making the necessary expenditures against the considerable risks associated with running dated software. It is important to at least apply all maintenance releases and patches to critical applications and to consider the larger-scale software upgrades on a case-by-case basis, as they are released. Similar to operating system updates, these software updates will often include the patches for serious security vulnerabilities. Maintaining a consistent upgrade schedule (for Point and Infinite Visions, for instance) will likely be more cost-

effective in the long term, since at some point the systems will become truly obsolete or unsafe and require a significant and costly upgrade.

Develop a data backup plan: It is also vital for the town to develop a data backup policy for the core financial departments, with important data in other departments (such as the town clerk) integrated soon after. Through the technology committee, town staff should develop a strategy for what needs to be backed up and how often. Responsibility for data backup in each department should be assigned to specific individuals as a part of the plan. These same individuals should conduct quarterly tests (by restoring a selection of files) to verify that the data is intact. Point, Harpers, and the CSC CAMA already benefit from an off-site, vendor-provided backup function. Thus, officials should focus on backing up the general ledger and all data used by Infinite Visions, any supporting files in use by the accountant and treasurer, as well as the software itself. The current system of taking server drives home is not adequately secure.

Develop a disaster recovery plan: A disaster recovery plan should include a procedure for continuing operations after an event that destroys critical data, such as a fire or flood. Ideally, the town would have an alternate site with a secure server room, to which all town data would be backed up on a regular schedule. This site should be sufficiently removed from town hall so as to have reasonable assurance of not being affected by the same disaster. However, maintaining such a capability is cost intensive, so we recommend that the town identify a remote backup option with a local consultant or data services center. Alternatively, the town should consider taking advantage of the backup and colocation services offered by the Springfield Data Center through MassIT's Office of Municipal and School Technology. Through the technology committee, the town should draft a disaster recovery plan that addresses the following issues:

- Identify the maximum acceptable downtime in terms of workdays
- Create routine backup and storage procedures around downtime limitations
- Create a detailed procedure to follow in the event of a minor or major data loss event
- Schedule regular training for staff
- Test and update the plan regularly

Similarly, the committee should draft a policy outlining the necessary procedures for keeping the town's hardware infrastructure physically secure and intact. This should include guidelines for room temperature, security, cleanliness (excessive dust causes accelerated wear on equipment), and protection against power fluctuations.

Adopt technology and internet use policies: A security policy should have a written procedure for setting up access rights to town PCs that assigns responsibility to a specific staff member. This will include requiring sufficiently complex passwords that employees must change on a cycle. The town should also adopt an email security policy educating employees on how to avoid web and email-based attacks. Clear, universally distributed policies will decrease the likelihood of employees accidentally falling victim to intrusion attempts, such as email phishing schemes, and compromising sensitive data. At the very least, these policies should include the following directives:

- Never share usernames and passwords
- Employees must log in with their assigned username and password to use town PCs
- Require administrative permission for all internet downloads
- Employees should log out of their computer when they leave their desk, or enable a password protected screensaver
- Town hall email accounts should be restricted to town-related business only
- Never click on email attachments or links from unfamiliar senders
- Emails sent and received through town hall addresses are public records and should be treated and retained as such

It will also be important to develop a policy that explains the town's expectations for employees while using their work PCs and internet connection. It should prohibit specific inappropriate activities and make consequences explicit. All employees should then be required to read the policy and deliver a signed acknowledgement to the board of selectmen.

Please see the City of Boston's "Information Technology Resource Use Policy" for a model policy. For additional examples of technology policies, please see the Multi-State Information Sharing and Analysis Center's collection of state and local technology policies at http://msisac.cisecurity.org/resources/local-cyber-policies.cfm.

3. Inventory Equipment and Develop Lifecycle Planning

We recommend that the administrative assistant maintain a basic inventory of IT hardware and, with input from the tech committee, determine a replacement cycle. Equipment should be replaced routinely according to the schedule, rather than when it fails. The inventory of town PCs in Appendix B can serve as a starting point for this process. This should be reviewed annually and updated whenever a department replaces equipment. The inventory lists the device's primary user, model number, computer name, and basic specifications including operating system, security applications, and other software.

Based on this information, the administrative assistant, with input from the tech committee, should classify hardware according to where it is in its lifecycle. There should be one category indicating that the hardware is too old and must be replaced, one category indicating that it is in working order, and another that it is new. The operating system is usually a good sign that a PC may be at or past the end of its useful life. We recommend using this as a proxy for estimating the useful life of existing machines. In the future, the assistant should note the dates of purchase of any replacements in the inventory. On an annual basis, the assistant should refer to the hardware inventory to determine priority for replacement needs.

Without consistent and timely upgrade and replacement schedules, security vulnerabilities may develop with no updates available to fix them. For instance, the inventory shows a Dell Vostro 200 as the recycling center PC, named "BOH2," and indicates that the machine is running Windows XP. However, Microsoft stopped supporting Windows XP as of April 2014, which means that periodic security updates stopped at that time too. This means that any security flaws discovered after April 2014 will not be fixed, leaving the PC increasingly vulnerable to external attack as time goes on. Depending on how up-to-date the PC hardware is, it may be necessary to either upgrade the software or replace the PC outright. Prudent lifecycle planning will therefore not only ensure efficiency through functional equipment, but also enhance data security.

Once the need for replacing or upgrading equipment has been determined, it can be factored into budget planning for the following year as one, consolidated amount. Being able to anticipate replacement needs adds a measure of predictability to the IT planning process, allowing the town to be more proactive in the long term.

4. Consolidate Internet Access Under a Single Provider

We recommend that the town end all departmental agreements with separate internet service providers (ISPs). Instead, the town should negotiate a single broadband agreement for all town departments with one ISP. This will make use of the buying power of the town as a whole rather than leaving it to individual departments to negotiate internet service pricing. During this process, the board of selectmen should also leverage their cable franchise licensing authority to negotiate as favorable a deal for the town as possible. The current system is built on a patchwork of access speeds, and the fact that technology costs are buried among many departmental budgets makes tracking this cost very difficult. When budget items for internet access are transferred out of departments (such as highway and police) and into the administrative assistant's budget, this will provide one consolidated line item that is easy to monitor. Additionally, with an inventory of its

technology resources and an understanding of departmental usage, the town will be in a better position to identify and meet its bandwidth needs.

Other Considerations

Elevate the Administrative Assistant: We suggest that the board of selectmen consider expanding the role of the administrative assistant in directing town operations and providing organizational focus. Consolidating the town's technology administration is a significant undertaking that will require a strong individual to drive the process. However, the town could also benefit from a strong leadership presence in matters other than technology, such as in budget planning and coordination between departments. The administrative assistant already takes on a coordinating role in administering town hall operations, budget monitoring, and the technology budget. To elevate her, the board could create the position of executive assistant or town administrator. In this case, we further recommend that the select board codify any change through a by-law spelling out the new position's duties and responsibilities.

Deliver Abatement and Exemption Information to the Collector Electronically: We found that one major source of inefficiency in the collector's office stems from the assessors manually submitting abatement and exemption forms to the collector. The assessors deliver all abatements and exemptions to her as handwritten index cards at a volume of about 400 per year. This means that the collector must devote a significant portion of her limited time to manually data entering each card into the corresponding taxpayer account in Point. Further compounding this problem is the timing of the information; the assessors deliver exemption information at the same time that bills are being distributed. The result is that many outgoing bills are essentially incorrect and require the collector to process and issue refunds for all affected taxpayers. This process results in significant time inefficiencies and complicates the town's ability to track its cashflow position and monitor revenue. To remedy this, we recommend the assessors transfer all abatement and exemption information to the collector electronically.

There are two potential solutions to this issue. The first is through the town's CSC CAMA software, which can include exemption and abatement information with the commitment file generated for Point. We recommend the town speak to a CSC advisor, arrange for this functionality to be activated, and train the assessors and collector in its use. This approach has the advantage of not requiring any expenditure of town funds. The other solution is to acquire the abatement/exemption module from Point software. Through consultations between staff and the technology committee, the town should determine which option better serves its operations.

Standardize Collections Software: The town should consider standardizing its collections software to resolve the compatibility and reliability issues present in the water, sewer, and landfill billing processes.

The most significant issue is with water billing. Due to a vacancy in the water department, there is no one there who knows how to use BMSI. This has made it necessary for the collector to process billing. To do this, she must access a PC in the water department through a remote desktop connection on her PC. Unfortunately, the connection between her office and the water department is unreliable and terminates during periods of sustained rainfall, making it necessary for someone in the water department to physically restart the computer. There have also been instances of residents coming to the collector's window to ask about their water bills, and the remote connection terminates before she can finish pulling up their information.

BMSI has presented other difficulties and has had problems integrating with Point. Of particular concern is an issue related to the final reading and billing when a resident moves to a new address. In this case, the software cannot create an invoice for the final reading, and so the payment is applied to an old bill. By the time the bill is processed, the old homeowner has left, with the payment for their final reading posted to their old bill, which gets a credit. However, the final reading still generates a bill for that address, which is sent to the new homeowner as past due. The only time this comes to staff attention is when the new homeowner comes to the collector's counter about the past-due bill. This requires the collector to devote a considerable amount of her time to correcting errors.

Since BMSI is incompatible with Point, one possible solution is to purchase Point's utility billing module. Additionally, BMSI does not integrate with UniPay, the town's online bill payment system for tax bills, which means residents do not have the option of paying their utility bills online. Consolidating utility collections under Point will streamline the process significantly, reduce errors, and improve customer service to residents.

The landfill billing system is another point of concern. The landfill enterprise uses a Microsoft Access database, and it is not integrated with any other town systems. It was set up about two decades ago by the daughter of a landfill employee to temporarily provide an electronic billing function. Every year, the employee's daughter resets the database for the current year. However, this set-up lacks any reporting capability, and it is impossible to accumulate data for the purpose of any year-over-year analysis. Since continued support is contingent upon this individual's willingness to donate her time, the Access database is not a good long-term solution.

Instead, landfill billing should be centrally administered by the collector's office through Point. Integrating the transfer station billing into a unified system under the collector will allow for more robust reporting, leading to better data for revenue analysis and financial planning.

Enable Remote Entry for Payroll Processing: The town should evaluate use of the remote-entry capability in Harpers for payroll processing. On a biweekly schedule, departments submit manual time sheets to the accountant, who checks the math on the cover sheet and verifies the availability of appropriations. She then sends the time sheets to the treasurer, who manually data enters each one into Harpers. This occupies most of the treasurer's 28-hour week. If town departments were able to remotely transmit their time sheets, then the treasurer could review and process them without data entry taking up the majority of her time. Since the school department represents the largest single payroll, this is a good place to begin the process. This would create more capacity for the treasurer to focus on other priorities. Working with the administrative assistant and town departments, the treasurer should set up a schedule to train department staff in Harpers remote entry functionality, while the process of moving to a remote-entry basis could be coordinated through the technology committee.

Convert to an Electronic Cashbook: We recommend that the treasurer transition away from her partially manual cashbook and fully commit to an electronic workflow. The treasurer uses a combination of Infinite Visions' deposit manager, Excel spreadsheets, and a manual ledger to keep track of the town's cash position. Manual ledgers increase the risk of accumulating computation errors and are not as easily updated and reconciled as electronic spreadsheets. Additionally, it is much easier to conduct additional analysis with spreadsheets. We recommend adopting a cashbook format similar to the example spreadsheet included in Appendix C.

Acquire Terminal for Collections Counter: In order to streamline the process for reviewing customer account information, printing bill data, and posting payments, the collector should consider placing a computer terminal at the collections window. For additional convenience and functionality, it could also be linked to cash drawers, which would then function like a true point-of-service register system. Installing Point on the unit would allow the clerk to post to the collector's receivable control at the time of payment, making customer transactions and record keeping more efficient.

Organize Shared Drive Files: We recommend that the tech committee discuss how best to organize files on the town's shared drives. Although the scope of shared space is currently limited, having a coherent file structure is key to ensuring quick and efficient access to important files. Furthermore,

a logically organized file structure will reduce confusion for new employees when turnover occurs, allowing them to more quickly access necessary information and documents.

Consider Overhauling the Town Website: The tech committee should reevaluate the look, feel, and functionality of the town website. While the website serves a number of basic functions, information is not particularly well organized, some sections should be updated more frequently, and some information is repeated in multiple locations. We would recommend that the committee start by identifying information that residents would find most useful and organizing the website around them. Goals for the town's website should include quality of information and ease of use. It is also important that staff have the ability to update information on a regular schedule. For examples of municipal websites, we recommend reviewing the following:

- www.sterling-ma.gov
- www.amherstma.gov
- www.spencerma.gov
- www.dunstable-ma.gov

Appendix A: Financial Departments Tech Inventory

Department	User	Model & Date of Purchase	PC Name	Specs	Software	Condition	Notes
Assessing	Priscilla	Dell Optiplex 380 [date]	BOACLIENT1	Windows 7 Pro 32 bit SP1 8 GB Ram 2.93 GHz Intel Core Duo CPU E7500 232 GB HDD	Symantec Endpoint Protection Malwarebytes Anti Malware Business Objects I.Q. Objects Sigma Systems (CAMA) MS Office Pro Plus 2010 (32 Bit)	New ☐ Working ☐ Replace ☐	
	Sheila	Dell Optiplex 380	Shelia-PC	Windows 7 Pro 32 Bit Sp1 4 GB Ram 2.93 GHz Intel Core Duo CPU E7500 232 GB HDD	Symantec Endpoint Protection Malwarebytes Anti Malware Sigma Systems (CAMA) MS Office Pro Plus 2010 (32 Bit) Oracle 9i	New ☐ Working ☐ Replace ☐	
	Reedy	Dell Optiplex 390	Reedy-PC	Windows 7 Pro 32 bit SP1 6 GB Ram 3.30 GHz Intel Core i3 CPU 2120 465 GB HDD	Symantec Endpoint Protection I.Q. Objects Malwarebytes Anti Malware MS Office Pro (32 Bit) Oracle 9i Sigma Systems (CAMA)	New ☐ Working ☐ Replace ☐	
BOS	Leslie	Dell Optiplex 390	Selectmen-PC	Windows 10 Pro 64 bit 8 GB Ram 3.30 GHz Intel Core i3 CPU 2120 465 GB HDD	AVG Anti Virus 2015 Malwarebytes Anti Malware Malwarebytes Anti Exploit MS Office Pro (32 Bit)	New ☐ Working ☐ Replace ☐	
Collector	Donna	Dell Optiplex 390	DonnaGauthier	Windows 7 Pro 64 bit SP1 8 GB Ram 3.30 GHz Intel Core i3 CPU 2120 465 GB HDD	Norton Antivirus - **EXPIRED** MS Office Pro 2010 (32 Bit) Trusteer Endpoint Protection Quickbooks Quicken Point	New ☐ Working ☐ Replace ☐	Replace/update anti-virus
	Debra	Unknown	TownColl1	Windows 7 Pro 64 bit SP1 4 GB Ram 3.00 GHz Intel Core i5 CPU 4430 132 GB HDD	Norton Anti Virus -**EXPIRED** MS Office 2013 Pro (32 Bit) Point	New ☐ Working ☐ Replace ☐	Replace/update anti-virus
Clerk	Sheila	Dell Optiplex 330	Townclerk	Windows 7 Pro 32 Bit Sp1 2 GB Ram 2.40 GHz Intel Core Duo E4600 148 GB HDD	AVG Anti Virus 2015 MS Office 2007 Pro Plus (32 Bit)	New ☐ Working ☐ Replace ☐	
Recycling	Cindy	Dell Vostro 200	BOH2	Windows XP Home SP3 1 GB Ram 1.60 GHz Intel Pentium Dual CPU E2140 148 GB HDD	AVG Anti Virus 2015 MS Office 2003 Pro SP3 (32 Bit)	New ☐ Working ☐ Replace ☐	Operating system no longer supported, specs outdated
	Cindy	Dell Optiplex 380	BoH-PC	Windows 7 Pro 32 Bit Sp1 4 GB Ram 2.93 GHz Intel Core Duo CPU E7500 232 GB HDD	Avast Free Anti Virus MS Office 2010 Pro Plus (32 Bit) MS Office 2013 (Office 365)	New ☐ Working ☐ Replace ☐	
Accountant	Nancy	HP Pro 3000	TownAccountant2	Windows 7 Pro 64 bit SP1 4 GB Ram 3.00 GHz Intel Core Duo CPU E8400 455 GB HDD	Symantec Endpoint Protection MS Office 2010 Pro Plus (32 Bit)	New ☐ Working ☐ Replace ☐	
Treasurer	Anne	HP Pro 3000	Treasurer-2	Windows 7 Pro 64 bit SP1 4 GB Ram 3.00 GHz Intel Core Duo CPU E8400 459 GB HDD	Symantic Endpoint Protection Trusteer Endpoint Protection MS Office 2010 Pro Plus (64 Bit) Harpers	New ☐ Working ☐ Replace ☐	
Server Room	Server	HP Server	NBSSVR01	Windows Server 2012 R2 Essentials 64 Bit 8 GB Ram 2.00 GHz Intel Xeon CPU E5-2620 C:\ 279 GB HDD D:\ 558 GB HDD	Symantec Endpoint Protection Symantec Endpoint Protection Manager Adobe Acrobat Reader DC Barracuda Backup Agent Infinite Visions	New ☐ Working ☐ Replace ☐	
	Switch	HP Procurve Switch 2610-24	n\a	24 ports 10\1000	n\a	New ☐ Working ☐ Replace ☐	
	Hub	Dell Power connect 2724	n\a	24 ports 10\1000	n\a		

Appendix B: Cashbook Sample

Treasurer's Cash Book FY ________

Begin Balance:	**1,500,000.00**		
Total - receipts:	6,850.00	Total Deposits:	6,850.00
Total - warrants:	(606,000.00)		
Balance:	900,850		

Current Date: **03/11/2006**

	General Account	[Bank Name] Vendor	[Bank Name] Payroll	[Bank Name] Sch Dep CD	[Bank Name] Ambulance	[Bank Name] Tax Coll	Totals
	(599,150.00)	0.00	0.00	0.00	0.00	0.00	(599,150.00)
Total - In:		$46,000.00	$560,000.00	$0.00	$0.00	$0.00	$6,850.00
Total - Out:		($46,000.00)	($560,000.00)	$0.00	$0.00	$0.00	($606,000.00)

Date	Source/Description	Check # or Batch #	Receipts	Disbursements (warrants)	Deposit Date	Deposits	General Account	[Bank Name] Vendor	[Bank Name] Payroll	[Bank Name] Sch Dep CD	[Bank Name] Ambulance	[Bank Name] Tax Coll	Totals
	[prior month end balance]												0.00
02/05/2006	Collector's TO #234	B 1468	2,500.00										0.00
	Bldg Insp TO #56	B 3579	3,700.00										0.00
	Clerk TO #86	B 5008	650.00		02/05/2006	6,850.00	6,850.00						6,850.00
03/08/2006	transfer to vendor						(46,000.00)	46,000.00					0.00
	transfer to payroll						(560,000.00)		560,000.00				0.00
03/09/2006	Vendor Warrant #26	C 450-479		(46,000.00)				(46,000.00)					(46,000.00)
03/11/2006	Payroll Warrant #33	C 509-525		(560,000.00)					(560,000.00)				(560,000.00)
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Acknowledgments

This report was prepared by the Division of Local Services:

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In preparing this review, DLS interviewed the following individuals:

Robert Smith, Board of Selectmen

Mary Walter, Board of Selectmen

Leslie Scott Burton, Administrative Assistant to the Board of Selectmen

Sheila A. Buzzell, Town Clerk & Board of Assessors Chair

Priscilla A. Johnson, Board of Assessors & Webmaster

Nancy Nykiel, Town Accountant

Donna Gauthier, Town Collector

Anne Jannette, Treasurer