

Town of Needham  
Capital Improvement Plan  
January 2012

**EXECUTIVE SUMMARY**

**PRIORITIZING ASSET PRESERVATION**

Asset preservation is defined as committing necessary resources to preserve, repair, or adaptively re-use current assets. Expenditures for asset preservation are intended to keep the physical plant and infrastructure in reliable operating condition for their present use. As noted in previous years, despite the most recent economic downturn and decades of financial uncertainty for municipal governments, the Town of Needham has made an extraordinary investment in public infrastructure during the past decade. While significant investment in many capital facilities is still required and, in some cases, overdue, the Town should be proud of this achievement. The Town's success in this area is a direct result of continued and sustained focus on asset evaluation, needs assessment, careful planning, and prioritization. Such prioritization of spending on infrastructure that is often "invisible" is the hallmark of a community that has refrained from diverting funding from the capital budget to fund operating budget programs and services that are needed and desired. Table 1 shows the Town's investment in facilities and infrastructure over the past five years.

**Table 1  
Facility and Infrastructure Investment  
2008-2012**

| Description                                | 2008              | 2009              | 2010              | 2011             | 2012              | Total              | Five Year Average |
|--|-------------------|-------------------|-------------------|------------------|-------------------|--------------------|-------------------|
| Open Space                                 | 0                 | 0                 | 920,000           | 800,000          | 0                 | 1,720,000          | 344,000           |
| Municipal Facilities                       | 180,000           | 7,760,000         | 18,204,837        | 548,000          | 8,150,000         | 34,842,837         | 6,968,567         |
| Townwide Facilities and Community Services | 291,500           | 1,870,000         | 556,291           | 455,600          | 622,500           | 3,795,891          | 759,178           |
| Public Works Infrastructure Program        | 1,150,000         | 1,090,000         | 1,000,000         | 2,186,300        | 1,225,000         | 6,651,300          | 1,330,260         |
| School Facilities                          | 20,475,000        | 1,030,000         | 27,668,728        | 4,052,000        | 1,078,000         | 54,303,728         | 10,860,746        |
| Drains, Sewer, and Water Infrastructure    | 2,956,800         | 4,322,500         | 2,533,300         | 1,483,800        | 8,269,500         | 19,565,900         | 3,913,180         |
| <b>Total</b>                               | <b>25,053,300</b> | <b>16,072,500</b> | <b>50,883,156</b> | <b>9,525,700</b> | <b>19,345,000</b> | <b>120,879,656</b> | <b>24,175,931</b> |

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The need for this level of investment in facilities and infrastructure is generally attributable to three factors. First, the Town is now 300 years old, so its infrastructure, much of which was first installed in the early part of the 20<sup>th</sup> century, is aging. Second, as a built-up community, the Town has a high number of streets and sidewalks to maintain. There are 138 +/- miles of roadway in Needham, which is a community of approximately 12.5 square miles. Similarly-sized communities that are less-developed (as defined by a roadway density ratio) will require less investment in capital and maintenance (including snow and ice removal). Table 2 shows several similarly sized and abutting communities with a range of roadway density ratios. While reliable data on miles of sidewalk is not readily available, it stands to reason that communities with higher roadway density ratios also have a higher number of sidewalks to maintain and clear of snow.

Third, the Town's population grew significantly in the years after the Second World War, from 12,445 in 1940 to 16,262 in 1950 to 25,793 in 1960, according to Town census records. As a result, investment in school buildings increased significantly in the 1950's and 1960's. In fact, with the exception of the High School, all of the school buildings currently in use were built in the same 10 year period from 1951 to 1960. Then, after the advent of Proposition 2 ½ in 1982, the community found it difficult to make necessary investment in its array of school facilities. This resulted in a need for complete replacement or rehabilitation of the entire system beginning in the mid-1990's and continuing today. Table 3 shows the date of construction and most recent renovation or rebuilding (if any) of the School and Municipal buildings currently in use in Needham.

**Table 2**  
**Roadway Density in Comparable Communities**

| Community | Square Miles | Road Miles | Roadway Density Ratio |
|-----------|--------------|------------|-----------------------|
| Sherborn  | 16.89        | 55.70      | 3.30                  |
| Dover     | 15.16        | 62.26      | 4.11                  |
| Millis    | 12.17        | 51.74      | 4.25                  |
| Lincoln   | 14.56        | 62.60      | 4.30                  |
| Bedford   | 13.73        | 80.40      | 5.86                  |
| Ashland   | 12.41        | 79.11      | 6.37                  |
| Medway    | 11.16        | 73.90      | 6.62                  |
| Westwood  | 11.15        | 88.46      | 7.93                  |
| Dedham    | 10.50        | 106.40     | 10.13                 |
| Natick    | 14.88        | 154.53     | 10.39                 |
| Needham   | 12.50        | 138.14     | 11.05                 |
| Wellesley | 10.05        | 130.16     | 12.95                 |

Source: MMA Municipal Directory 2010 - 2011

**Table 3**  
**Construction of School and Municipal Buildings**  
**Currently in Use in the Town of Needham**

| School Buildings                      | Year Constructed | Major Renovation Rebuild | Municipal Buildings                     | Year Constructed | Year Renovated or Rebuilt |
|---------------------------------------|------------------|--------------------------|---|------------------|---------------------------|
| Broadmeadow Elementary School         | 1951             | 2002                     | Town Hall                               | 1902             | 2011                      |
| Eliot Elementary School               | 1955             | 2004                     | Public Library                          | 1915             | 2006                      |
| High Rock School - Sixth Grade Center | 1955             | 2009                     | Public Works/470 Dedham Avenue          | 1961             | 1966                      |
| Hillside Elementary School            | 1960             | 1968                     | Public Services Administration Building | 2009             |                           |
| Mitchell Elementary School            | 1951             | 1968                     | Police/Fire Station 1                   | 1931             | 1989                      |
| Newman Elementary School              | 1960             | 1993                     | Fire Station 2                          | 1906             |                           |
| Pollard Middle School                 | 1957             | 1992                     |   |                  |                           |
| Needham High School                   | 1930             | 2008                     |   |                  |                           |
| Emery Grover School Administration    | 1898             |                          |   |                  |                           |

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The position of the Town with respect to its equipment and technology capital investment is also encouraging. Major categories of this capital spending include Public Safety vehicles and equipment, Public Works and Public Facilities vehicles and equipment, School and Townwide technology, and School copiers, furniture and musical equipment. Table 4 shows the Town's investment in these categories of capital spending for the five year period FY2008 through FY2012.

**Table 4  
Vehicles, Equipment and Technology Capital  
2008 to 2012**

| Description               | 2008             | 2009             | 2010             | 2011             | 2012             | Total             | Five Year Average |
|---------------------------|------------------|------------------|------------------|------------------|------------------|-------------------|-------------------|
| <b>Equipment</b>          | <b>1,241,235</b> | <b>448,061</b>   | <b>1,083,681</b> | <b>1,364,903</b> | <b>729,763</b>   | <b>4,867,643</b>  | <b>973,529</b>    |
| All Other Functions       | 25,000           | 43,500           | 25,000           | 68,000           |                  | 161,500           | 32,300            |
| Public Facilities & Works | 1,081,200        | 352,511          | 977,000          | 1,189,253        | 610,063          | 4,210,027         | 842,005           |
| Public Safety             | 58,700           |                  |                  |                  |                  | 58,700            | 11,740            |
| Public School             | 76,335           | 52,050           | 81,681           | 107,650          | 119,700          | 437,416           | 87,483            |
| <b>Technology</b>         | <b>219,079</b>   | <b>443,520</b>   | <b>194,393</b>   | <b>389,400</b>   | <b>306,596</b>   | <b>1,552,988</b>  | <b>310,598</b>    |
| All Other Functions       |                  |                  | 25,000           | 282,800          | 145,000          | 452,800           | 90,560            |
| Public Facilities & Works |                  | 85,280           |                  |                  |                  | 85,280            | 17,056            |
| Public Safety             | 25,000           | 100,000          |                  | 68,000           | 112,496          | 305,496           | 61,099            |
| Public School             | 194,079          | 258,240          | 169,393          | 38,600           | 49,100           | 709,412           | 141,882           |
| <b>Vehicles</b>           | <b>804,123</b>   | <b>862,427</b>   | <b>635,133</b>   | <b>743,334</b>   | <b>1,067,500</b> | <b>4,112,517</b>  | <b>822,503</b>    |
| All Other Functions       |                  | 14,000           |                  |                  | 52,000           | 66,000            | 13,200            |
| Public Facilities         | 28,500           |                  |                  | 65,046           | 25,000           | 118,546           | 23,709            |
| Public Safety             | 197,832          | 343,034          | 153,900          | 176,888          | 400,000          | 1,271,654         | 254,331           |
| Public Works              | 577,791          | 505,393          | 481,233          | 501,400          | 590,500          | 2,656,317         | 531,263           |
| <b>Total</b>              | <b>2,264,437</b> | <b>1,754,008</b> | <b>1,913,207</b> | <b>2,497,637</b> | <b>2,103,859</b> | <b>10,533,148</b> | <b>2,106,630</b>  |

## **Financing Methods**

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The number of capital projects to be funded must be considered in the context of the total operating budget, capital budget needs, and revenue growth. Capital improvement projects are funded through current receipts, reserves, and/or other funds such as grants.

*Current Receipts* – Current receipts include property tax revenue, local receipts (such as fees and charges), and state aid. This plan includes no projects to be funded from current receipts.

*Undesignated Fund Balance (or “Free Cash”)* – Free Cash is a function of actual revenue collections in excess of estimates and expenditures less than appropriations. Because Free Cash cannot be relied upon as a recurring revenue source, it should not be relied upon as an operating revenue source. In this plan, we have continued the effort to minimize the Town’s reliance on free cash to support on-going operations by limiting such use to no more than 2% of the prior year’s appropriated departmental budgets, or the actual turn back, whichever is lower. As such, the plan includes as much as \$2,774,133 to be funded from General Fund revenue (of which \$1,813,865 is in the primary cash capital category).

*Capital Improvement Fund* – In 2004, the Town created a General Fund Cash Capital Equipment and Facility Improvement Fund (CIF). The purpose of the CIF is to allow the Town to reserve funds to use for general fund cash capital. The CIF may be used in future years to fund the acquisition of new equipment, the replacement of existing equipment, and building and facility improvements which cost less than \$250,000, for which the Town may borrow for a period of five years or more. Projects must be included in the CIP in order to be eligible for funding through the CIF. The November 30, 2011 balance in the fund is \$561,540. This plan includes no projects to be funded from the Capital Improvement Fund.

*Capital Facility Stabilization Fund* – In 2007, the Town created a Capital Facility Fund to allow the Town to reserve funds for design, maintenance, renovation or reconstruction relating to the structural integrity, building envelope or MEP (mechanical, electrical, plumbing) systems of then existing capital facilities. For this purpose, capital facility refers to any building or structure which is located on Town property and is under the jurisdiction of the Town Manager, including any Town-owned building, structure, room, or space within a building, facility, park or plaza, open space, driveway, landscaped area, or other physical improvements under the administrative control of the Town. The November 30, 2011 balance in the fund is \$733,924. This plan includes no projects to be funded from the Capital Facility Stabilization Fund.

*Retained Earnings* – Three of the Town’s operations – water, sewer, and solid waste – are accounted for as enterprise funds. The revenues and expenditures of these operations are not commingled with those generated by general fund operations. Generally, each enterprise will generate surplus funds on an annual basis. The Board of Selectmen’s retained earnings policies are included in Section 12. The policies contain reserve targets to ensure liquidity and stability of operations. Surplus funds

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above the target are considered available for appropriation. This plan includes \$1,661,100 in funding from the enterprise fund retained earnings accounts.

*Debt* – The Board of Selectmen’s debt management policies (Section 12) provide guidance in translating capital expenditures into annual debt service. Section 4 of this plan contains a graphic presentation of the Town’s current debt service and a calculation of the Town’s debt burden (annual debt service as a percent of total Town revenues). The figures used in calculating the debt burden are derived from the Town’s long-term debt service schedule that is also included in Section 4. This plan includes a recommendation for \$2,560,000 in projects to be funded through General Fund debt, and no recommendation for debt financing in the enterprise funds.

*Community Preservation Fund* – The Community Preservation Act (CPA) allows cities and towns to raise monies through a surcharge on the tax levy. These funds may then be used to acquire, create and preserve open space, acquire and preserve historic resources, create, preserve and support community housing, and acquire, create and preserve land for recreational use. The CPA also provides for matching funds from the Commonwealth. The CPA was approved at the May, 2004 Annual Town Meeting and by voters at the November 2, 2004 election. The CPA requires that each fiscal year Needham must spend, or set aside for later spending, at least 10% of the annual revenues in the Town of Needham Community Preservation Fund for each of three CPA target areas: open space (but not including land for recreational use), historic resources, and community housing. The remaining 70% may be appropriated at the Town’s discretion as long as it is used for the three target areas or recreation. The statute also permits the Town to appropriate up to 5% of the annual revenue estimate for the administrative expenses of the Community Preservation Committee (CPC). Projects submitted for inclusion in the CIP that qualify for CPA funding are forwarded to the CPC for its consideration.

## **The Recommended Capital Plan**

The Town Charter requires that the Town Manager, after consultation with the Board of Selectmen, submit in writing to the Board of Selectmen a careful, detailed estimate of the recommended capital expenditures showing specifically the amount necessary to be provided for each office, department and activity and a statement of the amounts required to meet the debt service requirements or other indebtedness of the town. This plan includes the proposed FY2013 Capital Budget, which is recommended to the Finance Committee and ultimately Town Meeting for consideration. The projects presented for FY2014-FY2017 reflect an assessment by municipal departments and the School Committee of future capital needs and are primarily shown for planning purposes. While many of these projects may ultimately be recommended for funding, the plan is a fluid one, and projects may be added and deleted from the list as circumstances change. The proposed financing plan for the recommended FY2013 capital budget is shown in Table 5.

The general fund cash capital recommendation is broken into two components – primary and secondary. Secondary cash

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capital is recommended only if additional revenue, not yet identified, becomes available. In several of the past few years, the Town has been fortunate in that we have been able to supplement the primary cash capital recommendation with funds held in the Reserve Fund for snow and ice removal that was not needed. For example, in fiscal year 2012, an additional \$80,000 in Tier 2 capital was appropriated at the May 9, 2011 Special Town Meeting.

Recurring requests for on-going programs and replacement schedules represent by far the largest portion of the available cash capital allocation – 75% of the “primary” category for fiscal year 2013. In collaboration with the Finance Committee, we continue to explore methods of increasing resources dedicated to cash capital needs.

**Table 5  
FY2012 Proposed Financing Plan**

| <b>2012 Capital Recommendation Summary</b> | <b>Cash</b>      | <b>Debt</b>      | <b>Other</b>     | <b>Total</b>     |
|--|------------------|------------------|------------------|------------------|
| General Fund Tier 1 (Primary)              | 1,813,865        | 2,560,000        | 1,550,000        | 5,943,865        |
| General Fund Tier 2 (Secondary)            | 960,268          |                  |                  | 960,268          |
| Solid Waste Enterprise                     | 175,200          |                  |                  | 175,200          |
| Sewer Enterprise                           | 647,100          |                  |                  | 647,100          |
| Water Enterprise                           | 838,800          |                  |                  | 838,800          |
| <b>Total (all funds)</b>                   | <b>4,435,233</b> | <b>2,560,000</b> | <b>1,550,000</b> | <b>8,565,233</b> |

The Capital Improvement Plan (CIP) is primarily a planning document. It is updated annually, and is subject to change as the needs of the community become more defined. Used effectively, the capital improvement planning process can provide advance project identification, evaluation, scope definition, design, public discussion, cost estimating, and financial planning. Capital planning helps ensure that the community is positioned to:

- preserve and improve its basic infrastructure through construction, rehabilitation and maintenance;
- maximize the useful life of capital investments by scheduling major renovation, rehabilitation, or replacement at the appropriate time in the life-cycle of the facility or equipment;
- identify and examine current and future infrastructure needs and establish priorities among projects so that available resources are used to the community’s best advantage; and
- improve financial planning by balancing needs and resources and identifying potential fiscal implications.

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While much of the Town's budget and financial planning efforts are by necessity focused on one or at most two year intervals, capital planning helps to focus attention on the Town's long-term objectives and financial capacity, and the balance between operating and capital needs. The Town is often faced with the option of reducing its capital plan in order to balance the operating budget. Having a formal and accepted plan helps to maintain a consistent level of spending for capital needs, barring extraordinary circumstances. Individual projects are evaluated against long-term objectives and in relationship to each other. By strategically programming capital projects, the Town can maintain a tolerable level of debt service, and prevent unexpected changes in debt service payments. Needham's capital planning initiatives have contributed to the successful achievement and maintenance of its AAA bond rating from Standard and Poor's. This bond rating places Needham in the top tier of communities and allows the Town to borrow at a lower interest rate.

The Town's Capital Improvement Policies provide guidance for assessing the capital needs of the Town. These policies, included in Section 12, define capital projects as those items requiring the expenditure of at least \$25,000 and having a useful life of more than five years. Recommended capital project requests are prioritized using the following criteria:

- the project is required to comply with State and/or Federal handicapped accessibility standards;
- the project is necessary to protect the health and safety of people; and
- the project is necessary to maintain an existing capital facility, or operation of equipment used in providing town services.

In addition to the criteria listed above, the Town has a long practice of funding the systematic replacement of obsolete or worn-out equipment, and those items requested for the improvement of operating efficiency and the equitable provision of services.

## **Project Summaries – Recommended Projects**

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### **GENERAL GOVERNMENT**

#### **NETWORK SERVERS AND SWITCHES (Request: \$30,000)**

The request is to replace older servers, application and data, with newer, faster, and more energy-efficient models. This can also include the replacement of the spam filter, virus firewall, and Internet filtering. The request includes funding for the replacement of older network switches to connect buildings, departments, and workstations throughout the Town. Newer models of both servers and switches will be better able to take advantage of the Town fiber and increase the speed of data within the Town's fiber network. Not replacing or updating this equipment can have a negative impact on email, financial applications, internet access, and data accessibility. *(Submitted by: Finance Department)*

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The Town Manager's recommendation for Network Servers and Switches is \$30,000 in the primary cash capital category.

**DESKTOP VIRTUALIZATION (Request: \$130,000)**

This request is for virtualizing approximately 100 employee workstations by adding additional licenses and hardware. Licensing would also be purchased to enable certain users to access their workstations remotely. All of the applications used by employees (e.g. Microsoft Office, Adobe Acrobat, or Internet Explorer) are stored on servers controlled by the Information Technology Center (ITC). Any specific application is then served to the employee's desktop through the network. Because the applications are bundled in one location, the ITC Network Manager can more efficiently and productively roll-out upgrades, allowing for consistent versions of software. Virtualization will help make existing staff more productive and help to support the growing demands of the current workforce. Workstation Support is more streamlined because issues with applications served out to the workstations are managed in the ITC, and only serious hardware issues will need to be addressed at the employee workstation. The hardware that is used by employees at their desks can be replaced at a lower cost than current workstation hardware. *(Submitted by: Finance Department)*

The Town Manager's recommendation for Desktop Virtualization is \$130,000 in the primary cash capital category.

**PROPERTY ACQUISITION (Request: \$630,000)**

The acquisition of the property at 37-39 Lincoln Street will contribute to the availability of surface parking in the downtown, which is seen as critical for implementation of mixed use redevelopment goals. The parcel is immediately adjacent to the Chestnut Street/Lincoln Street municipal lot, and will add approximately 26 parking spaces. The net increase in parking spaces will be impacted by future redesign of the Chestnut Street/Lincoln Street parking lots and the on-going evaluation of the buddy parking system. In October, 2011 the Finance Committee approved a Reserve Fund Transfer request in the amount of \$25,000 to secure the property until an appropriation can be sought at the 2012 Annual Town Meeting. *(Submitted by: Board of Selectmen/Town Manager)*

The Town Manager's recommendation for Property Acquisition is \$630,000 in the primary debt financing category.

**PUBLIC SAFETY**

**DEPUTY CHIEF VEHICLE/C-3 (Request: \$35,000)**

This request is to replace a 2004 Ford sedan that is used daily by the Deputy Chief of Operations. Currently the car has over 56,000 miles of service, and at the time of replacement is estimated to have over 70,000 miles of service. At the time of replacement, the vehicle will be nine years old, up to two years beyond its scheduled replacement. A new vehicle will be

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purchased and put into service as C-1. The current C-1 will then be passed down to replace C-3. *(Submitted by: Fire Department)*

| Unit | Division | Year | Description                     | Miles  | Cost     |
|------|----------|------|---------------------------------|--------|----------|
| C-3  | Fire     | 2004 | Crown Victoria/Replace with SUV | 56,500 | \$35,000 |

The Town Manager's recommendation for the Deputy Chief Vehicle is \$35,000 in the primary cash capital category.

**FIRE QUINT ENGINE/LADDER/E-3 (Request: \$750,000)**

This request is to replace Engine #3, which is a 1994 "Quint" model truck (combination pumper/ladder). At the time of replacement, this vehicle will be over 20 years old, two years past its scheduled replacement. This is a "front line" emergency response vehicle, and is a vital component of the Fire Department's emergency services operation. This is a versatile piece of apparatus that is capable of providing many functions at an emergency. To add to the versatility of this apparatus, the Fire Department will specify that the new vehicle be built so that it can be housed at either fire station. The current E-3 will only fit at Station 1. *(Submitted by: Fire Department)*

The Town Manager's recommendation for the Fire Quint Engine/Ladder is \$750,000 in the primary debt financing category.

**STRUCTURAL FIRE FIGHTING GEAR (Request: \$40,000)**

Structural firefighting protective gear has a recommended life expectancy of 10 years depending on exposure and wear. The Fire Department is requesting replacement of this gear for twenty (20) staff members who will be using gear that is over 11 years old at the time of replacement. *(Submitted by: Fire Department)*

The Town Manager's recommendation for the Structural Fire Fighting Gear is \$40,000 in the primary cash capital category.

## **PUBLIC SCHOOLS**

**SCHOOL COPIER REPLACEMENT (Request: \$97,570)**

School photocopiers are located in all of the schools and the administration building, and are used both by administrative and teaching staff. Teachers use the machines to reproduce classroom materials, including homework sheets, exams, teaching packets, etc. Currently, the School Department owns 46 copiers and 7 RISO duplicating machines. In FY2009, the School Department modified its methodology for predicting copier replacement to reflect the lifecycle analysis based on actual usage and model capacity. In previous fiscal years, a seven-year age along with frequent maintenance needs was used to determine the replacement cycle. When frequent maintenance occurred to a copier before the age of seven, it became a priority to be

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replaced. Using the lifecycle analysis, the School Department projects when a copier should be replaced based on actual usage and the manufacturer's total estimated capacity, which may be more than seven years if the copier is lightly used, or less than seven years for heavily used machines. This analysis also reflects the redeployment of copiers around the district, as needed, to more closely match copier use with copy machine useful lives. *(Submitted by: Needham Public Schools)*

**SCHOOL FURNITURE, MUSICAL INSTRUMENTS, AND GRAPHIC ARTS EQUIPMENT (Request: \$57,630)**

The School Furniture Replacement Program began in fiscal year 2005 and is geared toward replacing furniture in school facilities which are not scheduled to undergo capital renovation/ addition projects in the near future (Hillside, Mitchell, Newman and Pollard). In these schools, furniture is 10-20+ years old and in a state of disrepair after decades of heavy use. By FY2015, all furniture in 'poor' condition will have been replaced at all four schools. The FY2013-FY2017 funding request begins the replacement of furniture in fair condition at these schools.

Fiscal year 2013 represents the eighth year of the musical equipment replacement cycle. The scheduled replacements in FY2013 are additional middle school percussion instruments, additional string instruments, and assorted elementary school Orff percussion instruments. The purpose of the program is to replace musical instruments, especially large string instruments and pianos, which are over 25 years old. After decades of heavy use, many of the School Department's string instruments are no longer usable or repairable. The older pianos, while still usable, are becoming increasingly costly to repair and maintain. Although students do purchase some of the less expensive instruments (clarinets, trumpets, etc.), a quality band and/or orchestra program needs to ensure balanced instrumentation to deliver the proper musical experience required by the curriculum.

Fiscal year 2013 is the first year of a request to establish an equipment replacement cycle for the Graphics Production Center at Needham High School. Although the Center received new equipment during the recent renovation at the High School, the School Department has determined that an ongoing source of funding is needed to sustain and update program equipment. During the summer of 2011, a complete inventory analysis of all equipment was completed. The equipment proposed for replacement in fiscal year 2013 includes a screen print dryer and wide format printer. *(Submitted by: Needham Public Schools)*

**INTERACTIVE WHITEBOARD TECHNOLOGY AND TECHNOLOGY REPLACEMENT (Total Request: \$672,800)**

This interactive whiteboard project would fund the purchase and installation of interactive technology (SMART and Mimio boards) at Needham schools. The \$148,300 in funding requested for interactive whiteboards includes the completion of the SMART Board purchase and installation at the Newman School to coincide with the return to the renovated building. Included in this purchase for Newman are 11 additional SMART Boards as well as the permanent installation of 23 existing boards and the purchase and installation of wall-mounted short throw projectors. In addition to the completion of Newman, interactive whiteboards will be added at Broadmeadow (1), Hillside (1), and Pollard (2) to advance the District's inventory towards its goal of full interactive whiteboard implementation for grades one through twelve.

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The School technology replacement program includes the replacement of 300 teacher, administrator, student, lab and laptop computers that have reached or are functioning beyond the end of their seven-year lifecycle: 169 of these computers are for teachers and administrators throughout the district; 68 are for classroom computers at Broadmeadow, Eliot, Mitchell, and Newman; and at Pollard there is a cart with 30 laptops that is being replaced. Although the majority of the computers being purchased are for the elementary schools and Pollard, FY2013 represents the first year of replacement of computers and LCD projectors that have reached the end of their lifecycle at the High School. The replacement of the High School technology will be phased in over five years. Funding in FY2013 would support 75 teacher and administrator computers, included in the previous count of 169 teacher and administrator computers, as well as 33 student laptop computers in the library. Also included in the replacement cycle are 10 LCD projectors.

Beyond the 300 teacher, administrator, student, lab and laptop computers mentioned above, this request also includes the replacement of two district data servers that are housed at the ETC. These servers have been running 24/7 for three and four years and will be repurposed to less critical functions for two and three years respectively. Also in this category is the replacement of eight UPS batteries that support critical servers throughout the district. Replacement of 19 printers across the district is also included within the technology replacement cycle. The request also includes funding for the impact of conversion to Lion, Apple's new operating system. *(Submitted by: Needham Public Schools)*

The Town Manager's recommendation for Consolidated School Copiers, Musical Instruments and Equipment, and Technology is \$494,232 in the primary cash capital category and \$333,768 in the secondary cash capital category.

**EMERY GROVER RENOVATION/RELOCATION FEASIBILITY STUDY (Request: \$30,000)**

This funding will support a feasibility study of the renovation of Emery Grover and a lease/purchase alternative to the building renovation. The Emery Grover School Administration Building is in need of additional office and storage space as well as extensive repair and modernization. The Town Facilities Master Plan had estimated the renovation cost at \$11.4 million in 2008 dollars. The scope of the original renovation was to reorganize the layout of offices, make the building fully ADA accessible, remove remaining asbestos and lead paint, replace deteriorating systems, and allow for full utilization of all four floors. The feasibility study will include studying options in the marketplace as well as alternatives for the Emery Grover Building. *(Submitted by: Needham Public Schools)*

The Town Manager's recommendation for the Emery Grover Feasibility Study is \$30,000 in the primary cash capital category.

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**PUBLIC WORKS**

**CORE FLEET (Request: \$315,000)**

The Core fleet consists of passenger vehicles such as sedans and wagons, vans, pick-up trucks, small dump trucks, and utility trucks. Unless circumstances require otherwise, the vehicles scheduled to be replaced in FY2013 include:

| Unit | Division    | Year | Description                   | Miles   | Cost      |
|------|-------------|------|-------------------------------|---------|-----------|
| 45   | Engineering | 2006 | Ford E-150/8 Passenger Van    | 52,990  | \$25,000  |
| 43   | Highway     | 2007 | Ford F-350/4WD Pick-up        | 51,354  | \$52,000  |
| 39   | Highway     | 1999 | Ford F-350/One Ton Dump Truck | 102,062 | \$67,000  |
| 8    | Highway     | 1996 | IH S4900/6 Wheel Dump Truck   | 45,520  | \$171,000 |

*(Submitted by: Department of Public Works)*

The Town Manager's recommendation for the Public Works Core Fleet is \$315,000 in the primary cash capital category.

**LARGE SPECIALTY EQUIPMENT (Request: \$271,500)**

Public Works specialty equipment consists of power-assisted equipment or other specialized tools used by the Department in the performance of its work. Unless circumstances require otherwise, the vehicles scheduled to be purchased in FY2013 include:

| Unit | Division | Year | Description           | Miles | Cost      |
|------|----------|------|-----------------------|-------|-----------|
| 181  | Highway  | 1998 | Elgin Pelican Sweeper | N/A   | \$210,000 |
| New  | Parks    | New  | Groundmaster Mower    | N/A   | \$61,500  |

*(Submitted by: Department of Public Works)*

The Town Manager's recommendation for Large Specialty Equipment is \$271,500 in the secondary cash capital category.

**SMALL SPECIALTY EQUIPMENT (Request: \$41,000)**

This program provides funding to purchase new and replace existing Public Works specialty equipment. This equipment is critical for the efficient operation of the Department's maintenance programs. The purchase of this equipment will increase productivity and expand the use of maintenance dollars. Unless circumstances require otherwise, the equipment scheduled to be replaced in FY2013 includes:

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| Unit | Division | Year | Description   | Miles | Cost     |
|------|----------|------|---------------|-------|----------|
| 254  | Parks    | 1989 | Brush Chipper | N/A   | \$41,000 |

*(Submitted by: Department of Public Works)*

The Town Manager's recommendation for Small Specialty Equipment is \$41,000 in the secondary cash capital category.

**SNOW AND ICE EQUIPMENT (Request: \$171,000)**

This request will provide funding for equipment used primarily in the Snow and Ice Program. Unless circumstances require otherwise, the vehicles and equipment proposed for replacement in FY2013 are as follows:

| Unit | Division | Year | Description                | Miles | Cost      |
|------|----------|------|----------------------------|-------|-----------|
| 8A   | Highway  | 1988 | 10 Ft. Material Spreader   | N/A   | \$31,000  |
| 111  | Highway  | 1995 | Trackless Sidewalk Tractor | N/A   | \$140,000 |

*(Submitted by: Department of Public Works)*

The Town Manager's recommendation for Snow and Ice Equipment is \$31,000 in primary cash capital and \$140,000 in the secondary cash capital category.

**DPW COMPLEX RENOVATION PHASE 2 (Request: \$580,000)**

The recently completed Public Services Administration Building will alleviate space problems and air quality issues on the second floor of the current DPW Operations Building. However, deficiencies continue to exist throughout the building internally and with the DPW site externally. Ultimately the expansion and renovation of the DPW Operations Building (470 Dedham Ave) and site, referred to as DPW Phase II, will be required to address both storage space for equipment and stormwater quality issues. DPW facilities are no longer exempt from NPDES stormwater requirements so the Town must work toward complying with stormwater discharge requirements. In 2009, Town Meeting approved \$42,000 for engineering and design for stormwater quality improvements on a portion of the DPW site. Construction for these improvements will be requested in FY2014. Completion of the DPW facility construction in the Phase II request will resolve these stormwater management issues. The work proposed for FY2013 in the phased project will be the removal of the existing snow trailer and construction of eight garage bays. *(Submitted by: Department of Public Works)*

The Town Manager's recommendation for the DPW Complex Renovation Phase 2 is \$580,000 in the primary debt financing category.

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**SALT STORAGE SHED RELOCATION (Request: \$1,550,000)**

The existing 1,200 ton salt storage building located at 470 Dedham Avenue will be removed from service. The building is 35 years old and in need of replacement. The current salt shed is also within the 100 foot buffer zone. The proposed new material storage building will hold 5,000 tons of material and will be located on the Town's Recycling & Transfer Station site on Central Avenue. The funding for the request includes site work and the construction of a 5,000 ton salt storage building. The new storage building will be large enough to hold all Snow and Ice materials, including salt, sand, salt-sand mix, and chemicals. (Submitted by: Department of Public Works)

The Town Manager's recommendation for the Salt Storage Shed Relocation is \$1,550,000 in alternative financing (Chapter 90).

**PUBLIC WORKS INFRASTRUCTURE PROGRAM (Request: \$600,000)**

*Street Resurfacing:* This program is essential to improve the structural and surface integrity of the Town's network of accepted streets. The primary strategy of this program is asphalt paving and incidental work. Incidental work may include asphalt berm curb, new grass shoulders, corner reconstruction including handicapped ramps, minor drainage improvements, street sign replacement, traffic markings and signs. Applying this repair strategy in a timely manner will extend the useful life of the roadway for up to 15 years. The requested street resurfacing funding in FY2013 is \$296,000.

*Traffic Signal & Intersection Improvements:* This program funds traffic signal improvements and intersection improvements and new traffic signal installations where none currently exist. No funding is proposed in FY2013 in this category.

*Combined Sidewalk Program:* This Program addresses the failing network of sidewalks throughout the community. There are over 160 miles of accepted sidewalks in Needham. Over half of the Town's sidewalks do not comply with current standards and require significant improvements including the installation of handicapped ramps. The requested Combined Sidewalk Program funding in FY2013 is \$279,000.

*Storm Drain Capacity Improvements:* This program provides funding to improve roadway drainage capacity. The Stormwater Master Plan identified a number of areas throughout Needham where improvements are required to resolve flooding problems and illicit discharge. Locations for improvements have been prioritized within the plan. Since the issuance of this report, numerous multi-unit developments have been built or planned in the Town. These developments incorporate new roads with drainage structures and roof or sump connections which are then connected to existing Town systems. These new connections have increased the load on the Town's drainage system and causes flooding in some areas. No funding is requested in this category for FY2013.

*Brooks and Culverts – Repair and Maintenance:* This program addresses the issue of flooded and poorly draining brooks, streams, waterways and culverts throughout the Town that have been severely damaged by heavy rains/storms for many years. Prior funding has funded cleaning and debris removal. Recent flooding caused the failure of retaining walls. Brooks have

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become silted, allowing the overgrowth of vegetation that has impacted the level of the water flows and resulting in the loss of useable abutting property and flooded basements. Projects proposed for FY2013 include the continued wall repair along Rosemary Brook in the amount of \$25,000.

The Town Manager's recommendation for the Public Works Infrastructure Program is \$600,000 in the primary debt financing category.

**PUBLIC FACILITIES**

**CORE FLEET (Request \$50,318)**

The Core fleet consists of passenger vehicles such as sedans and wagons, vans, pick-up trucks, small dump trucks, and utility trucks. Unless circumstances require otherwise, the vehicle scheduled to be replaced in FY2013 is a 2001 Ford F-450 Rack Body Truck that is primarily used for grounds keeping services, trash runs, moving School and Town property, and setting up the stage for the High School graduation.

| Unit | Division | Year | Description                        | Miles  | Cost     |
|------|----------|------|------------------------------------|--------|----------|
| 703  | PFD      | 2001 | Ford F-450/Grounds Rack Body Truck | 50,952 | \$50,318 |

*(Submitted by: Public Facilities Department)*

The Town Manager's recommendation for the Public Facilities Core Fleet is \$50,318 in the primary cash capital category.

**PUBLIC FACILITIES MAINTENANCE PROGRAM (Request: \$450,000)**

This project funds annual maintenance of public buildings throughout the Town and School Department including but not limited to: asbestos abatement, small equipment replacement, duct cleaning, painting, and other repairs and necessary upgrades. Funding in fiscal year 2013 is intended for duct cleaning at the A & B Buildings of the High School, asbestos abatement at the Mitchell School, flooring replacement at the Broadmeadow School and the Library, and Xeriscaping at the High School. Additional work at the Hillside School will include remediation of flooding issues, upgrades to the boiler room, repair to the floor and stairs, and upgrading of AC units. At the Mitchell School, repairs to gutters and downspouts, fuel oil containment work (or conversion to natural gas), handrail upgrades, and egress analysis will be performed. *(Submitted by: Public Facilities Department)*

The Town Manager's recommendation for the Public Facilities Maintenance Program is \$416,000 in the primary cash capital category and \$34,000 in the secondary cash capital category.

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**PUBLIC FACILITIES ENERGY EFFICIENCY UPGRADE IMPROVEMENTS (Request: \$34,815)**

The results of a recent energy efficiency upgrade study indicate that if the Town makes an initial investment for energy upgrades in the ten buildings identified in the study, the cost of these upgrades will be recovered through energy savings within five years. Projects proposed for FY2013 include replacing the exterior lighting at Hillside School. The lighting consists of high intensity discharge lamps and will be replaced with induction lighting. Similar work will be performed at the Mitchell School, along with improved insulation levels in the attic. *(Submitted by: Public Facilities Department)*

The Town Manager's recommendation for Energy Efficiency Upgrade Improvements is \$34,815 in the primary cash capital category.

**COMMUNITY SERVICES**

**ATHLETIC FACILITY IMPROVEMENTS (Request \$207,500)**

The Department of Public Works and Park and Recreation Departments have developed a maintenance plan for all fields, which includes new or total reconstruction, partial renovation, irrigation, drainage improvements, and equipment replacement or repair (bleachers, fences/backstops, player benches and miscellaneous equipment) for multi-use fields and ball diamonds. Projects planned for fiscal year 2013 include new fabric and repairs on both backstops and fencing at Claxton Field, installation of an irrigation system for Greene's Field, installation of bleachers and a bleacher pad for Claxton Diamond #2, installation of an irrigation system for Claxton Field, and installation of an irrigation system for the Pollard School multi-purpose field. *(Submitted by: Department of Public Works)*

The Town Manager's recommendation for Athletic Facility Improvements is \$207,500 in the primary cash capital category.

**ROSEMARY TRAIL IMPROVEMENT DESIGN (Request \$50,000)**

The trail system that begins in the parking lot at Rosemary Pool and extends through the camp property and over to Nehoiden Street is used on a daily basis by residents. The beginning section is in the most urgent need for restoration; however, there are other areas of concern, particularly along the steep stretch adjacent to the lake. A portion of this project will be completed by volunteers, and only the larger portions requiring construction will need to be performed by a contractor. At this time, the project is not eligible for CPA funding, but if proposed changes to the wording of the legislation are approved, this project would become eligible. This appropriation would fund the design and permitting phase of the project. It is anticipated that the construction portion will be in the \$100,000 range. *(Submitted by: Community Development and Park and Recreation)*

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The Town Manager's recommendation for Rosemary Trail Improvement Design is \$50,000 in the secondary cash capital category.

**DEFAZIO FIELD RE-SODDING (Request: \$90,000)**

This capital request is for field improvements at the DeFazio Complex. The Healy and Warner fields were seeded twice during the Field of Dreams project. After two seeding applications, the grass still did not fill in. As a result, the fields have taken almost entirely to weeds (large and smooth crabgrass and white clover). The best option to ensure safety and playability is to sod the fields with Kentucky Bluegrass, similar to what was done on the other two fields at DeFazio – Conroy and McLeod. (Submitted by: Department of Public Works)

The Town Manager's recommendation for DeFazio Field Re-sodding is \$90,000 in the secondary cash capital category.

**RECYCLING/TRANSFER STATION (RTS) ENTERPRISE FUND**

**LARGE SPECIALTY EQUIPMENT (Request: \$175,200)**

Public Works specialty equipment consists of power-assisted equipment or other specialized tools used by the Department in the performance of its work. Unless circumstances require otherwise, the vehicles scheduled to be replaced in FY2013 include:

| <u>Unit</u> | <u>Division</u> | <u>Year</u> | <u>Description</u> | <u>Miles</u> | <u>Cost</u> |
|-------------|-----------------|-------------|--------------------|--------------|-------------|
| 53          | RTS             | 1992        | Roll-Off           | 65,012       | \$175,200   |

(Submitted by: Department of Public Works)

The Town Manager's recommendation for RTS Large Specialty Equipment is \$175,200 in the primary cash capital category.

**SEWER ENTERPRISE FUND**

**SMALL SPECIALTY EQUIPMENT (Request \$34,000)**

This program provides funding to purchase new and replace existing Public Works specialty equipment. This equipment is critical for the efficient operation of the Department's maintenance programs. The purchase of this equipment will increase productivity and expand the use of maintenance dollars. Unless circumstances require otherwise, the equipment scheduled to be replaced in FY2013 include:

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| Unit | Division | Year | Description             | Miles | Cost     |
|------|----------|------|-------------------------|-------|----------|
| 170  | Sewer    | 2000 | Trailer Mounted 4" Pump | N/A   | \$34,000 |

*(Submitted by: Department of Public Works)*

The Town Manager's recommendation for Sewer Small Specialty Equipment core fleet is \$34,000 from Sewer Enterprise Fund Retained Earnings.

**CORE FLEET (Request \$31,100)**

The Core fleet consists of passenger vehicles such as sedans and wagons, vans, pick-up trucks, small dump trucks, and utility trucks. Unless circumstances require otherwise, the vehicles scheduled to be replaced in FY2013 include:

| Unit | Division | Year | Description                  | Miles  | Cost     |
|------|----------|------|------------------------------|--------|----------|
| 94   | Sewer    | 2008 | Ford F-250/2WD Pick-up Truck | 66,125 | \$33,100 |

*(Submitted by: Department of Public Works)*

The Town Manager's recommendation for Sewer Core Fleet is \$31,100 from Sewer Enterprise Fund Retained Earnings.

**SEWER SYSTEM INFILTRATION AND INFLOW PROGRAM (Request: \$550,000)**

This program supports the identification and removal of Infiltration and Inflow (I/I) in existing sewer systems. The requested funding for FY2013 is for the evaluation of infiltration, which is defined as groundwater or storm water runoff that enters the system through deteriorated pipe or manhole structures. On the basis of volume of flow and knowledge of local sewer system overflows (SSO) or basement flooding, an order of priority has been established to determine the scheduling of the engineering, design and remediation work. The highest priorities relate to locations of known surcharging with sewage overflow or release or basement flooding. The remediation proceeds in stages starting with the preliminary engineering, followed by the rehabilitation design and concluding with the rehabilitation construction.

Work in prior years has been undertaken in Areas 11, 14, 19-1, 22, 3, 4, 30, 31, 2, 24, 21L, 1, 16. The priority was based on areas that had recorded the highest levels of infiltration. The field work was conducted in 1984, and supplemented in 1986 and 1987. The study results are now approaching 25 years old. The earliest repair work that was undertaken is approaching 20 years old, and the remaining sections identified in the original study show significantly less I/I per length of sewer main. There is a strong probability that the original high leakage areas are contributing greater amounts of infiltration than the remaining sections left to repair as identified in the original study. Therefore, the study must be updated at this time to ensure effective expenditure of Town resources to address current infiltration and inflow. The components of the first phase of the study will include engineering (\$240,000), permanent and portable flow meter installation (\$210,000), and rented flow

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meters (\$100,000). The components of a future phase of the evaluation will include engineering and closed circuit TV services. *(Submitted by: Department of Public Works)*

The Town Manager's recommendation for the Sewer System Infiltration and Inflow Program is \$550,000 from Sewer Enterprise Fund Retained Earnings.

**SEWER SCADA SYSTEM (Request: \$30,000)**

The Department's goal is to provide a communication and alarm system to replace the current system that is outdated and unreliable. Currently there is no linked communication between or among pump stations. The goal is to collect data from the nine sewage pumping stations, then communicate that data to a central location (likely the West Street Pump Station), allowing for efficient management and control of the sewer pumping operations. This system will alert the appropriate emergency response for on-call personnel to remotely access the system, making changes to pump stations as necessary. The current alarm call system uses an outdated verbatim call box at the four major sewage pumping stations and a light and siren system at the five smaller stations. The verbatim system is programmed to call the Police Department dispatcher when an alarm condition has occurred, who then alerts the Sewer Division on-call person. The five smaller stations rely on neighbors to call the Police Department when an alarm occurs. This funding is for a feasibility study to determine the best mode of communication for the SCADA system. *(Submitted by: Department of Public Works)*

The Town Manager's recommendation for the Sewer SCADA System is \$30,000 from Sewer Enterprise Fund Retained Earnings.

**WATER ENTERPRISE FUND**

**CORE FLEET (Request \$117,000)**

The Core fleet consists of passenger vehicles such as sedans and wagons, vans, pick-up trucks, small dump trucks, and utility trucks. Unless circumstances require otherwise, the vehicles scheduled to be replaced in FY2013 include:

| Unit | Division | Year | Description                   | Miles  | Cost     |
|------|----------|------|-------------------------------|--------|----------|
| 1    | Water    | 1999 | Ford F-350/One Ton Dump Truck | 67,128 | \$67,000 |
| 2    | Water    | 2000 | Ford F-350/Utility Pick-up    | 91,719 | \$50,000 |

*(Submitted by: Department of Public Works)*

The Town Manager's recommendation for the Water Core Fleet is \$117,000 from Water Enterprise Fund Retained Earnings.

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**FILTER MEDIA REPLACEMENT (Request: \$72,500)**

Filter media is used for manganese removal at the Charles River Water Treatment Facility. All four filters at the Treatment Facility were replaced with natural greensand in 2008. This program is intended to establish a five year replacement cycle for the replacement of the filter media, with a new synthetic product called Greensand Plus, a substitute for natural greensand. Greensand Plus is promoted as being able to withstand wider variations in operating conditions and therefore may reduce the frequency of media replacement, and reduce the need for the administration of potassium permanganate. The first year of funding for the five year cycle is fiscal year 2012. *(Submitted by: Department of Public Works)*

The Town Manager's recommendation for Filter Media Replacement is \$72,500 from Water Enterprise Fund Retained Earnings.

**WATER SYSTEM REHABILITATION PROGRAM (Request: \$99,300)**

The annual Water System Rehabilitation Program draws from the recommendations of the Water System Master Plan. The master plan recommends that pipes 85 years or older be considered for replacement or relining. This list of older pipes is evaluated and prioritized, and then cross-referenced with work proposed for other utilities, road repairs, or reconstruction. Unless circumstances require otherwise, projects for FY2013 include engineering and design for the installation of a new eight inch pipe (2,500 linear feet) on Grant Street from Junction Street to Dedham Avenue. *(Submitted by: Department of Public Works)*

The Town Manager's recommendation for Water System Rehabilitation is \$99,300 from Water Enterprise Fund Retained Earnings.

**WATER SERVICE CONNECTIONS (Request: \$200,000)**

The primary purpose of this program is to remove old iron pipe water services that may contain lead from the water distribution system. Old water services are to be replaced prior to a road reconstruction/paving project. If the services are not replaced, an element of the subsurface infrastructure is susceptible to failure before the useful life of the reconstructed roadway has been realized. The FY 2013 funding will provide approximately one year's value of water service replacements, which will fall in line with the road resurfacing program schedule. *(Submitted by: Department of Public Works)*

The Town Manager's recommendation for Water Service Connections is \$200,000 from Water Enterprise Fund Retained Earnings.

**WATER FIRE FLOW IMPROVEMENTS (Request: \$350,000)**

The Water System Master Plan has identified a category of improvements for high priority action. The St. Mary Pump Station has four pumps located within the facility that are designed to pump potable water from the MWRA to supplement the Town's demand for water. Only two pumps are operable at the station, resulting in operation at a capacity less than that which is permitted (6.5 million gallons per day). The current pump station is equipped with an emergency auxiliary motor; however, it is

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preferable to have a standby generator similar to other pumping stations and the Charles River Water Treatment Facility. This request will provide the necessary improvements to meet future water demands, and ensure that the station has emergency back-up electrical power. The preliminary design of the station has been completed. The DPW is preparing to seek proposals for selection of a designer for the final design and the Owner's Project Manager (OPM) services. The costs of OPM services were not originally included in the budget for the project budget. \$350,000 is being requested to cover the entire design and construction services for the OPM. A request for funding for the St. Mary Pump Station Improvement Project construction will be proposed for fiscal year 2014 at an expected amount of \$5,070,000. *(Submitted by: Department of Public Works)*

The Town Manager's recommendation for Water Fire Flow Improvements is \$350,000 from Water Enterprise Fund Retained Earnings.