



City of Newburyport

# Indirect Cost Analysis

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Division of Local Services / Technical Assistance Section

June 2012



June 5, 2012

The Honorable Donna D. Holaday  
Office of the Mayor  
60 Pleasant Street – P.O. Box 550  
Newburyport, MA 01950

Dear Mayor Holaday:

It is with pleasure that I transmit to you the enclosed *Indirect Cost Analysis* of the Water and Sewer Enterprise Funds completed by the Division of Local Services for the City of Newburyport. It is our hope that the information presented in this report will assist the city in reaching an agreement on indirect cost allocations, addressing areas of concern and meeting its long-term planning needs.

As a routine practice, we will post the completed report on the DLS website, [www.mass.gov/dls](http://www.mass.gov/dls), and forward a copy of the report to the city's state representative.

If you have any questions or comments regarding our findings and recommendations, please feel free to contact Rick Kingsley, Bureau Chief of the DLS Municipal Data Management and Technical Assistance Bureau at 617-626-2376 or at [kingsleyf@dor.state.ma.us](mailto:kingsleyf@dor.state.ma.us).

Sincerely,

Robert G. Nunes  
Deputy Commissioner &  
Director of Municipal Affairs

cc: Representative Michael A. Costello  
Newburyport Water Commissioners  
Newburyport Sewer Commissioners

## Introduction

At the joint request of Newburyport Mayor Donna Holaday and the Water and Sewer Commissioners, the Division of Local Services has completed this limited scope analysis of the city's water and sewer enterprise funds. The focus of this review is to evaluate the indirect costs that are assigned to the water and sewer enterprise funds and validate the reasonableness of these allocations. As part of this analysis, we assessed the services that the water and sewer enterprise funds provide to the city as well. The commissioners also sought guidance as to whether or not the city is in compliance with state guidelines and polices regarding enterprise fund accounting.

To complete this analysis, we reviewed documents such as the original indirect cost calculations that the city has used since FY2006, the health and other insurance cost data for active and retired municipal employees, and the usage of water and sewer services by city-owned properties. We examined the payments in lieu of taxes for water and sewer assets and analyzed the exchange of other services between the water and sewer divisions and other city departments. We also reviewed documents such as the FY2012 city budget and tax rate recapitulation sheet, the supporting documentation for the water and sewer enterprise fund budgets and the balance sheets for the city's general fund and enterprise funds.

Local Services staff also interviewed employees of the water and sewer divisions to collect information about the general operation of the city's water and sewer services. To assess the role of other city departments in support of water and sewer, we interviewed individual department heads to document staff responsibilities and the number of hours devoted to water and sewer operations. For example, responsibilities in the treasurer/collector's office include borrowing for capital projects, transferring funds among various city accounts and assisting in the collection of water and sewer bills. The city auditor's office handles enterprise fund accounting and financial reporting responsibilities for the water and sewer divisions, including the review of invoices and payroll, preparation of warrants, capital project accounting, and posting of receipts into enterprise fund accounts.

## Overview of Water and Sewer Enterprise Funds

### **Water Division**

The Newburyport Water Division was originally established by a special act of the State Legislature, Chapter 403 of the Acts of 1908. The act allowed the city to take or acquire water supplies and water rights in West Newbury and, in particular, water located in the Artichoke River primarily located in the town of West Newbury. The act also allows Newburyport to distribute water to all or part of neighboring Newbury. A five-member board of water commissioners sets water rates and generally exercises the powers and duties granted to the city by the special act. The commissioners are city residents that are appointed by the mayor, subject to the approval of the city council.

The water division is comprised of three units: operations, construction and administrative. The operations unit oversees the water treatment plant and is responsible for maintaining the quality of the city's drinking water. They also manage three reservoirs, two storage tanks, two pumping stations and two wells. The construction unit is responsible for maintaining more than 80 miles of water mains. They maintain fire hydrants and valves and fix water main breaks and install new mains. They also replace meters and are available to respond to emergencies. The administrative unit is responsible for customer billing, responding to inquiries and scheduling service.

The water division has recently undertaken significant capital improvements including the construction of a new clearwell reservoir to hold treated water prior to distribution. The new system will replace the existing system which is failing. Other projects include improvements to the distribution system to eliminate dead ends and improve water quality and the construction of new flow equalization tanks. The total capital budget for these projects is about \$18.75 million. The city intends to finance these improvements through the Water Pollution Abatement Trust (WPAT), a state agency that offers low cost financing for water and sewer projects. It is anticipated that the annual debt service will be financed through water rates. The water enterprise fund had retained earnings as of July 1, 2011 totaling \$1,509,696. Once certified by DLS, retained earnings are available for appropriation and are the enterprise fund equivalent of free cash in the city.

## **Sewer Division**

The Newburyport Sewer Division was originally established by a special act in 1889. Today, the sewer division operates based on a more recent special act, Chapter 261 of the Acts of 1963, which repealed the original act along with other older special acts. The Newburyport Sewer Division is responsible for wastewater collection, pumping and treatment services. The department provides these services to all but a handful of city residential and commercial properties and provides services to Plum Island, including the portion of the island located in Newbury. Sewer user fees are set by a three-member board of sewer commissioners that is appointed by the mayor, subject to confirmation by the city council.

The sewer division maintains about 72 miles of sewer lines throughout the city and Plum Island. With the exception of Plum Island which is served by a relatively new vacuum system, the city is served by a conventional gravity-based collection system. The system relies on sixteen lift stations to move the wastewater to the treatment facility. The wastewater treatment facility is designed to accommodate up to 3.4 million gallons of wastewater per day.

The city has recently completed construction on Phase 1 of improvements to the wastewater facility, including a new operations center complete with a lab and sophisticated industrial control software that allows plant operators to monitor plant operations and quickly identify and correct problems. Phase 2 of the project involves demolishing the old building and making improvements to the headworks and gravity thickeners.

The headworks is designed to remove inorganic materials (grit, sticks, stones and sand) from the treatment stream to protect equipment used in the later phases of treatment. The gravity thickeners remove concentrated solids and sludge. The total cost of both phases of the treatment plant improvements will be about \$32 million. The city will finance these costs through the WPAT and plans to cover the associated debt service through the sewer user fees. Retained earnings for the sewer enterprise fund totaled \$2,075,862 as of July 1, 2011.

## The Basics of Enterprise Funds

Enterprise fund accounting establishes a separate accounting and financial reporting mechanism for municipal services for which a fee is charged in exchange for goods or services. Prior to the enactment of the enterprise fund statute in 1986, communities relied on special revenue funds authorized by general law or special acts to account for these services. In large part, however, these special revenue funds were deficient in that there were limitations on which services qualified and what costs could be included within the fund.

For example, prior to 1986, there was no general law mechanism to segregate sewer revenues and expenses. With the advent of enterprise funds, communities were allowed to account for all costs within the fund, including costs typically budgeted in the general fund such as debt service, employee benefits and support services provided by other departments to the enterprise.

A distinct advantage of enterprise accounting, with financial statements separate from all other governmental activities, is that it helps communities identify the total cost of a particular service. This allows local officials to readily determine whether or not user fees are sufficient to cover the costs of the service or whether a general fund subsidy is necessary. Another advantage is that investment income and any operating surplus (actual revenues in excess of estimates and expenditures less than appropriation) are retained by the enterprise rather than closed out to the general fund. Operating surpluses, or retained earnings, are certified by DLS and available for appropriation for enterprise fund related expenses.

One of the challenges of enterprise accounting is to identify costs funded from other departmental line-items that support the water and sewer enterprise. Some of these costs are fairly easy to identify such as the collection and accounting assistance provided to water and sewer by the treasurer/collector's and city auditor's offices. In other cases, these costs are more difficult to quantify and additional analysis is necessary to determine whether they are legitimate costs that should be borne by the water and sewer ratepayers rather than the city's general fund revenues.

In the sections that follow, we include a summary table of the original indirect cost allocations as determined in FY2006 and provide a discussion on the methodology used to calculate each of the indirect costs of the water and sewer enterprise funds.

Original Indirect Cost Calculations

City of Newburyport  
Original Indirect Costs for Water and Sewer Enterprise Funds

	<b>Water</b>	<b>Sewer</b>
City Administrative Support	\$48,611.27	\$48,611.27
Payments in Lieu of Taxes	\$54,871.51	\$122,743.62
<b>Total City Charges to Enterprise</b>	<b>\$103,482.78</b>	<b>\$171,354.89</b>
Services to City	\$16,120.00	\$44,000.00
Public Usage	\$87,972.16	\$112,169.87
<b>Total Enterprise Charges to City</b>	<b>\$104,092.16</b>	<b>\$156,169.87</b>
<b>Net Cost</b>	<b>\$609.38</b>	<b>-\$15,185.02</b>

**City Charges to Enterprise****City Administrative Support**

In the original FY2006 cost allocations, the city estimated salary amounts for those departments that were identified as providing administrative support to the water and sewer enterprises. The approach was to estimate the number of work hours devoted to support water and sewer operations and then multiplying the number of hours by the hourly salary rate of the employee. The bulk of these costs are budgeted in the auditor's, treasurer/collector's and MIS department budgets, with some less significant costs identified in the mayor's, city council's, and city clerk's budgets. Modest costs for city hall office space for the administrative division of the water and sewer enterprises were also included in the administrative support category. These costs were then evenly divided between the two enterprise funds, reflecting the fact that water and sewer billing is combined and a function of metered water usage.

## **Payments in Lieu of Taxes**

In the original indirect cost allocations, payments in lieu of taxes were calculated for water and sewer facilities based on the FY2006 assessed valuations of this property multiplied by the \$10.26 tax rate in use that year. Often, payments in lieu of taxes are made by tax-exempt entities such as private schools, colleges, or hospitals to compensate the host community for the municipal services that they may consume. Typically, they are calculated as some fraction of the total tax due if the property were taxable. In this case, the payment in lieu of taxes represented the full tax bill that would have been due on these city properties if taxable for FY2006.

All of the above components were then taken together with services provided to the enterprises measured against services provided by the enterprise to the city. Since the net impacts were relatively insignificant, the services exchanged between the city and the water and sewer enterprises were determined to be offsetting for budgetary purposes.

## **Enterprise Charges to City**

### **Services to City**

Similar to the manner in which the city provides administrative support to the enterprise operations, the water and sewer department, in turn, provide certain services to the city. For example, the water department turns on and shuts off water for the city's outdoor grounds and seasonal facilities, plows city schools and provides water repairs in public buildings. The sewer department provides the city with 2,000 yards of compost and provides support to the Board of Health. Other costs included engineering services provided to the city, vector/jetter service to clear drains, and assistance to the harbormaster.

### **Public Usage**

In Newburyport, other city departments have not traditionally paid for water and sewer services. Usage is metered for these city properties, but they do not receive bills. Instead, the city has factored the amount that would have been owed by these public users into its indirect cost calculations as benefits that the water and sewer enterprise funds provide to the city. The regular rate structure, where metered water usage determines sewer charges, is used to determine the amounts owed. In the original indirect cost calculations, the city included usage by the water and sewer divisions along with the usage by all other city facilities.

## Current Indirect Cost Calculations

Indirect costs often include the benefits paid to employees in the enterprise fund or the debt service associated with the enterprise. In Newburyport, both the water and sewer debt service and employee benefits are budgeted as direct costs of the enterprise funds so they have not been included in our analysis. Costs related to water and sewer employees include pension costs, health, dental and life insurance benefits of active and retired employees, Medicare taxes, and workers' compensation insurance. Other line-items included as direct enterprise fund costs include a share of the annual audit and legal expenses, municipal vehicle and property insurance related to enterprise fund assets.

In the sections that follow, we provide updated indirect cost calculations for the enterprise funds and detail the services that, in turn, are provided by the enterprise funds to the city.

### **City Charges to Enterprise**

#### **City Administrative Support**

In our analysis, we have identified the offices of the city auditor, treasurer/collector, information technology, mayor, city council, city clerk and human resources coordinator as the departments that provide support to the water and sewer divisions. We will discuss each department's contribution to the water and sewer enterprise followed by a table that details these salary and employee benefit allocations. Our salary allocations reflect updated salary rates and time allocations to support water and sewer. The time allocated to each department employee was determined through interviews with staff in these departments. We also added the current cost of employee health and life insurance benefits, Medicare and workers' compensation insurance when determining administrative support costs to allocate to the water and sewer enterprises. Pension costs were determined to be immaterial for these employees.

**City Auditor's Office** – Enterprise accounting establishes a separate accounting and financial reporting mechanism for water and sewer services. Revenues and expenses of the service are segregated into a fund with financial statements separate from all other governmental activities. As a result, the city auditor and his staff play a significant role in supporting the water and sewer enterprise funds.

The auditor's office supports the water and sewer operation by reviewing invoices and preparing warrants for water and sewer expenditures. By its nature, enterprise fund accounting also involves allocating various costs such as insurance to these services. Reviewing and monitoring

capital project spending, and accounting for water and sewer debt, contribute to the significant role the auditor's office plays in supporting the water and sewer operation. Water and sewer receipts are posted to the enterprise funds and the office handles budget administration and transfers. The office also reconciles accounts, reviews payroll and prepares payroll warrants, attends meetings and responds to inquiries.

**Treasurer/Collector's Office** – The treasurer and her staff play a substantive role in supporting water and sewer operations as well. The treasurer is involved in all borrowings for enterprise fund capital projects, prepares debt schedules and is responsible for paying related debt service timely. She reconciles accounts and makes transfers among the city's bank accounts. The payroll administrator handles the preparation and dissemination of payroll data for the city's payroll vendor and processes various deductions such as health, dental and life insurance. The staff open mail containing water and sewer payments (bills are combined) and prepares batches of receipts for deposit. The bills are then sent to the water and sewer departments for posting into the MUNIS financial management software.

**Mayor's Office** – The mayor, the director of policy and administration and the executive aide all support the work of the water and sewer divisions. For the mayor, much of her involvement centers on monitoring capital projects, meeting with the owner's project manager and bi-monthly meetings with the water and sewer commission. For the director of policy and administration this support consists of the development of budget and capital information, collective bargaining and handling employee grievances.

**Information Technology** – The information technology director devotes a considerable amount of his time to water and sewer work. This assistance involves general system administration work as well as upgrades to the MUNIS financial management software. He has also been very involved in the installation of the industrial control system SCADA (Supervisory Control and Data Acquisition System) at the new sewer operations center. Other support includes the Read Center software that is used for the radio read of water meters necessary for water and sewer billing. The director estimated that the water and sewer divisions were responsible for about seventy-five percent of cost of the annual lease costs for wireless equipment, or \$27,000 of the \$36,000 appropriated for this purpose in FY2012.

**Human Resources** – The human resources director is involved in advertising all city and enterprise fund employment opportunities, collecting resumes, scheduling and participating in interviews, coordinating background and CORI checks and notifying the selected candidate. She is also involved in the procurement of employee health insurance and enrolls employees in the health and dental plans offered by the city.

**City Clerk** – The city clerk provides some general support to water and sewer operations and prepares agendas, meeting minutes and responds to general inquiries and correspondence.

**City Council** – The city council provided some general support to water and sewer as well through general legislative actions such as borrowing and budget approvals, transfers and other communications.

**City Hall Office Space** – The costs associated with the water and sewer administrative office space located in city hall were originally assessed based on the rent that the water and sewer divisions would have paid for downtown office space of a comparable size. Other city hall maintenance costs were also allocated to water and sewer. We have continued to use these cost allocations for the office space occupied in city hall by the water and sewer divisions, but understand that if the administrative offices move out of city hall that these costs will no longer be valid indirect costs.

**Conclusion** - In total, the support services provided by city departments to the water and sewer enterprise funds are estimated to cost \$188,081. We believe that the city's approach of dividing these total support costs evenly between water and sewer is a reasonable approach for these indirect administrative support costs and continue this methodology. The above allocations are detailed in the table on the next page.

City of Newburyport  
City Administrative Support to Enterprise Funds

Department/Staff	Hourly Rate	Hours per Year	Total Salary Cost	Allocated Health/Life	Medicare @ 1.45%	Workers' Comp.	Total Salary and Benefits
<b>City Auditor</b>							
Auditor	\$50.67	364	\$18,443.88	\$2,801.59	\$267.44	\$27.67	\$21,540.57
Assistant	\$35.00	182	\$6,370.00	\$1,400.80	\$92.37	\$9.56	\$7,872.72
Risk/Accounts Payable	\$29.38	364	\$10,694.32	\$1,092.38	\$155.07	\$16.04	\$11,957.81
Data Processing p/t	\$15.50	146	\$2,263.00	\$444.41	\$32.81	\$3.39	\$2,743.62
<b>Treasurer/Collector</b>							
Treasurer	\$38.87	144	\$5,597.28	\$1,115.23	\$81.16	\$8.40	\$6,802.07
Payroll Assistant	\$25.21	48	\$1,210.08	\$183.30	\$17.55	\$1.82	\$1,412.74
Staff	\$23.91	783	\$18,721.53	\$5,243.49	\$271.46	\$28.08	\$24,264.56
<b>Mayor</b>							
Mayor	46.52	208	\$9,676.16	\$1,540.88	\$140.30	\$14.51	\$11,371.86
Director of Policy/Admin.	35.03	208	\$7,286.24	\$593.38	\$105.65	\$10.93	\$7,996.20
Executive Secretary	27.37	52	\$1,423.24	\$163.86	\$20.64	\$2.13	\$1,609.87
<b>City Council</b>							
Council	n/a	n/a	\$5,600.00		\$81.20	\$8.40	\$5,689.60
<b>City Clerk</b>							
Clerk	34.21	24	\$821.04	\$151.16	\$11.91	\$1.23	\$985.34
Staff	26.41	24	\$633.84	\$54.39	\$9.19	\$0.95	\$698.37
<b>Human Resources</b>							
Coordinator	29.61	52	\$1,539.72	\$418.21	\$22.33	\$2.31	\$1,982.57
<b>MIS</b>							
Director	38.02	780	\$29,655.60	\$6,023.42	\$430.01	\$44.48	\$36,153.51
Expenses	36000	75%	\$27,000.00				\$27,000.00
			\$146,935.93	\$21,226.50	\$1,739.07	\$179.90	\$170,081.40
<b>City Hall Office Space</b>							
Office Space							\$12,000.00
Admin./Maint. Support							\$6,000.00
<b>Total</b>							\$188,081.40
<b>Water Enterprise @ 50%</b>							\$94,040.70
<b>Sewer Enterprise @ 50%</b>							\$94,040.70

## Payments in Lieu of Taxes

In Newburyport, virtually all of the city's taxpayers also pay user fees for water and sewer service. Before the adoption of enterprise fund accounting in FY2006, the city did not factor in payments in lieu of taxes as costs of the water and sewer divisions. As a result, before this date, general government services such as police, fire and public works were supported entirely by general fund revenues, primarily the property tax levy. Once the city began including in lieu of taxes payments in the indirect cost calculations, some of these costs were, in effect, shifted to the enterprise funds, thus freeing up general fund revenue.

In lieu of tax payments are generally calculated at some fraction of the full tax bill that a tax exempt entity would pay if taxable. Usually, this fraction does not exceed 25 percent of the full tax obligation if taxable. We doubt that charging the water and sewer ratepayers a full in lieu of taxes payment to cover services that they have already paid for as taxpayers makes sense from an equity perspective, especially given the minimal service demands of the enterprises. For example, with a tax-exempt college where non-resident students demand substantial amounts of public safety resources, it is reasonable to ask that they contribute something in the way of an in lieu of taxes payment for the services they receive. However, we were unable to identify much demand for these services by the water and sewer divisions. We note, as well, that despite the use of enterprise accounting, the water and sewer divisions are regular city departments.

While from the perspective of generally accepted accounting principles (GAAP) it may be appropriate to charge in lieu of tax payments to the water and sewer enterprises, we question whether these charges represent true costs of the enterprise from a legal standpoint. As pointed out in the Division's *Enterprise Fund Manual*, from a legal point of view, "it is not at all clear to what extent a court would consider a payment to be part of the actual cost of providing the service, and therefore an appropriate component of the enterprise's fee structure."

In our analysis, we suggest reducing the in lieu of tax payments when determining indirect costs of the water and sewer departments. To avoid disruptive impacts on city budgets and preserve stability in these calculations, we recommend that the city scale back these payments over time.

City of Newburyport  
Payments in Lieu of Taxes - FY2012

**Sewer Division Property**

Location	Description	Map/Lot	Parcel Value	\$12.80 tax rate
				FY12 Tax Dollars
115 Water St		20/8	1,114,700	14,268
157 Water St.	Sewer treatment plant	23/11	11,013,500	140,973
Water St	Sewer pump	31/7	36,700	470
Parker St	Pump House	36/36A	232,800	2,980
378 Merrimac St	City Drain	68/26	45,900	588
415 Merrimac St	Sewer lift station	68/29A	171,500	2,195
417 Merrimac St		68/30	45,100	577
526 Merrimac St		72/35	38,500	493
Low St		82/9	186,600	2,388
12 Laurel Rd	Pump Station	111/20	164,100	2,100
4 Laurel Rd	Sewer Easement	111/50	53,300	682
<b>Total</b>			<b>\$13,102,700</b>	<b>\$167,714</b>

**Water Division Property**

Location	Description	Map/Lot	Parcel Value	\$12.80 tax rate
				FY12 Tax Dollars
High St B & M		35/15	489,700	6,268
High St	Elevated tank	34/19	856,400	10,962
Rawson Ave	Water Tank	39/44A	758,700	9,711
Artichoke River		91/4	42,200	540
Plummer Spring Rd		91/7	86,400	1,106
Artichoke River Isl.		91/8	23,500	301
Plummer Spring Rd		92/1	161,900	2,072
Plummer Spring Rd		92/2	275,500	3,526
24 Plummer Spring Rd		92/3	145,500	1,862
22 Plummer Spring Rd		92/4	144,400	1,848
20 Plummer Spring Rd		92/5	140,500	1,798
18 Plummer Spring Rd		92/6	139,800	1,789
16 Plummer Spring Rd		92/7	139,200	1,782
14 Plummer Spring Rd		92/8	138,600	1,774
12 Plummer Spring Rd		92/9	138,100	1,768
10 Plummer Spring Rd		92/10	137,800	1,764
8 Plummer Spring Rd		92/11	138,000	1,766
Artichoke River		102/2	36,300	465
Artichoke River		102/3	63,800	817
239 Storey Ave		103/85	545,300	6,980
Ferry Road		110/24	230,400	2,949
Ferry Road		112/3	566,400	7,250
7 Spring Lane	Treatment plant	113/1	1,300,500	16,646
Spring Lane		113/1A	587,200	7,516
127 Ferry Rd		115/2A	18,500	237
<b>Total</b>			<b>\$7,304,600</b>	<b>\$93,497</b>

## Enterprise Charges to City

### Services to City

We updated cost estimates for the direct services provided by the water and sewer divisions to the city. The updated cost estimates for these services were provided by the water and sewer division staff.

Some of the costs that were included in the original indirect cost allocation have not been included in our analysis. For example, costs for engineering support are no longer necessary since one-third of the engineer's salary is currently funded by direct city appropriation. Charges related to cleaning city drains with the vactor/jetter truck have been eliminated as well since the sewer department now owns these drains. Other support such as the assistance formerly provided to the harbormaster for billing is no longer occurring and has not been included.

### Current Services to City

	<b>Amount</b>
<b>Water</b>	
Water on/off for public grounds (1)	\$4,560
Plow Schools (2)	\$15,600
Water repairs to Public Buildings (3)	\$2,000
Water Tests for Harbormaster	\$0
Harbormaster billing	\$0
<b>Total</b>	<b>\$22,160</b>
<b>Sewer</b>	
2000 Yards of Compost	\$13,000
Engineering Services to City	\$0
Sewer Vactor/Jetter service for drainage	\$0
FOG issues for B of H (3)	\$2,500
Harbormaster billing	\$0
<b>Total</b>	<b>\$15,500</b>

Notes:

1. \$60 per turn on/off @ 38 facilities @ 2 per yr.
2. \$81.25/hr/truck and driver @ 4trucks @ 6hrs/storm @ 8 storms
3. 40 hours/year @ 2 staff @ \$25/hour
4. Equals half of estimated sewer spending on FOG issues

**Public Usage** – In our analysis, we reviewed the most current usage data available for public facilities (calendar 2011) and applied current water and sewer rates to this usage to calculate the amount of service the enterprise funds provide to the city (see table on next page). Though these calculations were consistent with the city’s approach to base sewer charges on water usage, we note that a substantial amount of the city’s usage appears to be from irrigation of city parks and athletic fields where there are no actual costs for sewer treatment.

In the original indirect cost calculations, the city included usage by the water and sewer divisions along with the usage by all other city facilities. We felt that the water and sewer services used by the enterprise funds were tied directly to the provision of these services and more appropriately supported by the water and sewer rate structure. For example, the water department uses a considerable amount of water when cleaning the filtration system during “backwash” procedures when the filtration system is flushed by reversing the water flow to clean out system filters. Since water usage is used to calculate sewer bills, this usage generates additional sewer charges as well. Consequently, in our methodology, we deducted the usage of the water and sewer divisions from the total public usage to determine the costs of services provided by the enterprise funds to other city departments.

City of Newburyport  
Public Usage Charges (1/1/11 - 12/31/11)

Location	Meter Size	Usage	Water Division		Sewer Division	
			Per billing period	Annual	Per billing Period	Annual
DPW	2	9,590	\$179.20	\$716.82	\$159.98	\$639.92
	2	876	\$86.84	\$347.34	\$10.75	\$43.01
Fire Dept						
Central	2	17,456	\$272.81	\$1,091.25	\$294.68	\$1,178.74
North End	1.5	10,439	\$188.20	\$752.81	\$174.52	\$698.07
Newbury	2	9,364	\$176.81	\$707.23	\$156.11	\$624.43
Police Dept	2	12,595	\$212.17	\$848.69	\$211.44	\$845.76
City Hall	2	11,077	\$194.97	\$779.86	\$185.44	\$741.77
Library	2	46,547	\$635.72	\$2,542.90	\$792.87	\$3,171.47
Nbpt High	2	127,479	\$1,645.35	\$6,581.40	\$2,178.83	\$8,715.31
Lower Field	1	47,460	\$1,177.13	\$2,354.25	\$1,617.01	\$3,234.01
Football Field	2	106,210	\$2,760.04	\$5,520.08	\$3,629.19	\$7,258.39
Middle School	2	131,164	\$1,691.32	\$6,765.28	\$2,241.93	\$8,967.73
Field	2	1,710	\$191.35	\$382.70	\$50.07	\$100.14
Bresnahan	2	68,994	\$915.75	\$3,663.00	\$1,177.27	\$4,709.09
Brown	2	37,207	\$519.21	\$2,076.83	\$632.92	\$2,531.68
Kelley	1	11,389	\$139.72	\$558.89	\$190.79	\$763.15
Fuller Field	1	17,350	\$425.88	\$851.77	\$585.74	\$1,171.48
Fuller Field Club	1	4,674	\$137.09	\$274.18	\$151.58	\$303.17
Cherry Hill Soceer	2	36,740	\$1,026.76	\$2,053.53	\$1,249.85	\$2,499.69
Public Restrooms	1	18,998	\$467.00	\$934.00	\$642.18	\$1,284.36
Hill St Cem	1	156	\$41.31	\$82.61	\$60.00	\$120.00
"	1	575	\$50.19	\$100.38	\$11.19	\$22.39
Belleville Cem	1	1,439	\$68.51	\$137.01	\$40.79	\$81.57
Parker Cem	1	13	\$38.28	\$76.55	\$60.00	\$120.00
St. Mary's Cem	1	2,292	\$86.59	\$173.18	\$70.00	\$140.00
	1	5,932	\$163.76	\$327.52	\$194.67	\$389.34
Pioneer League	2	330,610	\$8,358.82	\$16,717.64	\$11,314.89	\$22,629.79
	1	2,132	\$83.20	\$166.40	\$64.52	\$129.04
	1	1,105	\$61.43	\$122.85	\$29.35	\$58.69
Atkinson Common	1	10,416	\$258.82	\$517.64	\$348.25	\$696.50
	2	410,390	\$10,349.33	\$20,698.66	\$14,047.36	\$28,094.72
Cashman Park	1	794	\$54.83	\$109.67	\$18.69	\$37.39
Cashman Park Irr	2	35,620	\$998.82	\$1,997.64	\$1,211.49	\$2,422.97
Moseley Park	1	2,358	\$87.99	\$175.98	\$72.26	\$144.52
Maudsley Irrigation	1	8,612	\$220.57	\$441.15	\$286.46	\$572.92
drinking fountain	1	125	\$40.65	\$81.30	\$60.00	\$120.00
Ayres Park	1	40	\$38.85	\$77.70	\$60.00	\$120.00
3-Roads	1	9	\$38.19	\$76.38	\$60.00	\$120.00
Joppa Park	1	13,127	\$320.52	\$641.04	\$441.10	\$882.20
Perkins Playground	1	2,399	\$88.86	\$177.72	\$73.67	\$147.33
Perkins Irrigation	2	85,800	\$2,250.81	\$4,501.62	\$2,930.15	\$5,860.30
Brown Sq	1	105	\$40.23	\$80.45	\$60.00	\$120.00
park behind firehouse	2	152,690	\$3,919.72	\$7,839.43	\$5,221.13	\$10,442.27
<b>Annual Total</b>		<b>2,569,522</b>		<b>\$95,123.34</b>		<b>\$122,953.29</b>

**Fire Hydrants** – The water division flushes all fire hydrants in the city twice each year and performs regular maintenance on these hydrants during the winter months. According to the division staff, there are 792 hydrants within the Newburyport city limits. It typically takes two water department staff about 2.5 weeks to flush each of these hydrants, a task that is completed twice each year. Repairs and greasing of hydrants are completed during the months of November through April, as weather allows. Generally, this involves two staff that, on average, spends between 10 and 15 hours per week on these tasks during these months. When the hourly salary rates are multiplied by the number of hours necessary for flushing and maintenance, the total cost to flush and maintain hydrants in Newburyport totals \$21,550.

### Fire Hydrants

**Flushing**

Hourly rate	\$21.55
Men	2
Hours to complete (1)	100
Flushings per year	2
<b>Total cost</b>	<b>\$8,620</b>

**Hydrant Repair/Grease**

Weeks done (2)	24
Men	2
Hourly rate	\$21.55
Hours/week	12.5
<b>Total cost</b>	<b>\$12,930</b>

**Total Cost/hydrant**                      **\$21,550.00**

Notes:

1. Two men @ 2.5 weeks (8hrs/day) per flush
2. November to April about 10-15 hours per week

City of Newburyport  
Current Indirect Cost Estimates

	<b>Water</b>	<b>Sewer</b>
City Administrative Support	\$94,040.70	\$94,040.70
Payments in Lieu of Taxes @ 25%	\$41,928.50	\$23,374.25
<b>Total City Charges to Enterprise</b>	<b>\$135,969.20</b>	<b>\$117,414.95</b>
Services to City	\$22,160.00	\$15,500.00
Public Building Usage	\$95,123.34	\$122,953.29
Hydrant costs	\$21,550.00	\$0.00
<b>Total Enterprise Charges to City</b>	<b>\$138,833.34</b>	<b>\$138,453.29</b>
<b>Net Cost</b>	<b>\$2,864.14</b>	<b>\$21,038.34</b>

In the above summary table, we reduce the in lieu of taxes payments to 25 percent of the full tax bill that would have been payable if the water and sewer assets were taxable. Apart from previously stated reasons to do this, it also reflects the fact that the water and sewer ratepayers will be funding significant new and/or improved capital assets, such as the new sewer facility, through the rate structure. In this context, charging these same ratepayers a full in lieu of tax payment for these assets appears excessive.

Reducing the in lieu of taxes payments represents a substantial change from the historical indirect cost method used by the city and should be considered as a transitional step for the FY2014 budget calculations. When the net cost of charges between the enterprises and the city is calculated in this manner, for the water enterprise, this yields nearly a break-even result. For the sewer department, it shows that the city owes the enterprise fund \$21,038. However, given the fact that sewer usage is exaggerated for certain public facilities such as parks and athletic fields where water use is for irrigation and there is no wastewater treatment necessary, this calculation may be close to break-even as well. Going forward beyond FY2014, we recommend that the city consider reducing the in lieu of taxes payments further.

## Recommendations

1. We recommend that the city continue to use the original indirect cost allocation method for the upcoming FY2013 budget year since budget recommendations have been finalized and changing methods at this point would be disruptive. During the first six months of FY2013, however, the city administration and water and sewer divisions should work toward an agreement that can be implemented in FY2014.
2. When reaching this agreement for FY2014, we recommend that city officials develop a written, internal policy describing how these costs will be determined and how they will be allocated between the two enterprise funds. This policy should be reviewed annually and provide a reasonable and consistent basis for determining indirect costs of the enterprise funds. As important, the method should not be overly complex, but straightforward and capable of producing consistent results from year to year.
3. We recommend that all investment income be credited to the enterprise funds. Currently, as water and sewer receipts are collected, they are deposited in a general fund bank account. Periodically, these receipts are transferred to the enterprise accounts where any investment income is credited to the enterprise. To ensure that all interest is credited to the enterprise accounts, the simplest solution may be for the treasurer to set up separate bank accounts for these receipts so that the investment income will be retained by each enterprise fund. This is all the more important given the current plan to move water and sewer billing from a semi-annual to a quarterly basis next fiscal year.
4. We recommend that the water and sewer commissioners consider charging interest on delinquent water and sewer balances. Essentially, the city is giving delinquent payers an interest free loan by not charging interest on overdue amounts. Under the authority of MGL Chapter 40, Section 21E, the city may adopt an ordinance to fix the rate of interest that will accrue on unpaid charges. The interest rate can be set as high as the fourteen percent interest that is charged on delinquent tax bills.
5. We recommend that the city consider consolidating the collection and posting of water and sewer receipts in the treasurer/collector's office. This would represent a substantial increase in workload in this office and additional assistance will be required either through hiring new staff or transferring existing staff. This will allow the city to improve internal controls by separating the meter reading and commitment stages of the process from the bill collection and posting responsibilities. To mitigate the workload increase in the treasurer's office, we also suggest that the city allow water and sewer payments to be sent to the lockbox for processing and consider ways to allow payments to be made on-line.

## Acknowledgements

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Anthony Furnari, Director of Public Services  
Jamie Tuccolo, Collection System Manager  
Joe Dugan, Chief Operator  
Robert Bradbury, Assistant Chief Operator  
Paul Colby, Water Superintendent  
Dan Lynch, Water Distribution Supervisor  
Ethan Manning, Business Manager  
Kathe Talkington, Administrative Office Manager  
William Squillace, City Auditor  
Julie Languirand, Treasurer/Collector  
Mark Kavanagh, Information Technology  
Jennifer Lamarre, Human Resources Coordinator  
Laurie Burton, Newburyport Retirement System  
Richard Jones, City Clerk