Donnalee Lozeau

MAYOR

To: Board of Aldermen

From: Donnalee Lozeau

Date: November 1, 2013

Re: Wastewater Fund Rate/Revenue Requirements Analysis

As you are aware, O-13-039 Amending the Sewer User Fees Rates and Charges will be discussed at the next Budget Review Committee meeting scheduled for Thursday, November 7, 2013. I have enclosed a Memo from CFO Griffin along with an updated Wastewater Fund Rate/Revenue Requirements Analysis labeled November 2013. This will provide you with the opportunity to review the information in advance of the meeting.

Thank You.

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# City of Nashua

Office of the Chief Financial Officer
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To: Mayor Donnalee Lozeau

From: John L. Griffin

Date: November 1, 2013

Re: Wastewater Fund Rate/Revenue Requirements Analysis

***Introduction***

The purpose of this communication is to transmit to you an updated Wastewater Fund Rate/Revenue Requirements Analysis as of November 2013. The updated study includes projected information from FY2014 to FY2020. The study indicates that a 15% increase in sewer rates is needed. The increase is proposed to become effective on January 1, 2014. Therefore, this increase would be reflected in the April quarterly billing for residential customers and in the January billings for commercial customers as these accounts are billed monthly.

Assuming an average residential quarterly bill of $65.35 at current rates, the proposed increase will be approximately $9.80 per quarter. As these new rates are proposed to become effective mid-way through this fiscal year, the average residential customer will see an increase of $19.60 in FY2014. The last rate change was a 15% increase in rates effective July 1, 2011 (FY2012).

The proposed 15% increase will be applied to the volumetric and demand rates. Increasing both rate components spreads the increase more evenly among all customers and also provides the wastewater fund with a more consistent source of demand rate revenue. The average annual residential bill is currently $261.40. If the proposed rates are approved, the new average annual residential bill will be $300.61.

***Revenue Analysis***

The Wastewater Fund receives most of its revenue from user fees. Additional rate increases for FY2015 through FY2020 are projected in the analysis. The projected rate increases assume a January effective date for consistency. We will continue to monitor the Wastewater fund on an annual basis to determine if any changes to the projected rate increases become necessary.

The fund also has received State Aid Grants (SAG) towards the cost of wastewater projects. The SAG program was deferred during FY09 and as a result, the City of Nashua has not received any SAG grants on new completed projects since the deferral was put in place. The State plans to fund some of the projects that qualify for funding, but the dollar value due to Nashua is not known at this time.

***Cost Analysis***

The analysis includes the cost of operations, several capital projects, as well as the capital equipment replacement schedule. Capital equipment replacement costs for the next three fiscal years are projected as follows:

- FY14 $1.6 million
- FY15 $1.6 million
- FY16 $0.6 million

The City of Nashua is under an Administrative Consent Order (Consent Decree) from the EPA to reduce combined sewer overflows to the Nashua River and Merrimack River. The cost of the components of the Consent Decree totaled approximately $69 million at the time of this study. The City continues towards the completion of the Consent Decree capital projects. The larger Consent Decree capital projects should be substantially completed during FY15.

***Capital Project Financing With Debt***

The analysis includes debt financing needs for the larger capital projects. During the next three fiscal years, debt proceeds are projected to be used as follows:

- FY14 $21.0 million
- FY15 $10.4 million
- FY16 None

***Annual Capital Expenditures Funded With Cash***

The analysis includes annual capital expenditures that will be funded with cash. These annual expenditures include consent decree operational expenditures, sewer infrastructure improvements, sewer structure replacement, CSO flooding, storm water abatement and other expenditures noted within the analysis. The annual expenditures for these items over the next three years are projected to be as follows:

- FY14 $4.2 million
- FY15 $2.3 million
- FY16 $2.4 million

As shown in the analysis, the use of cash for these purposes results in a reduction in the Unrestricted Retained Earnings balance.

***Fund Balance - Unrestricted Net Assets***

As of June 30, 2013, the Wastewater Fund had a net asset balance of $5,500,000, which is made up of a positive $11,000,000 balance in the Wastewater Capital Equipment Reserve Fund and a deficit balance of $5,500,000 in Unrestricted Retained Earnings.

***Summary***

The recommended rate increases shown on Schedule A would allow the City to:

- Fund normal operating costs;
- Meet the EPA Consent Decree deadlines;
- Adequately fund reserves for future equipment needs;
- Fund infrastructure improvements with cash; and
- Pay for the increase in debt service payments during the next several fiscal years.


# City of Nashua
# Wastewater Fund
# Rate/Revenue Requirements Analysis
# November 2013

## Wastewater Fund: Rate/Revenue Requirements Analysis

### Page 3 – Schedule A – Analysis of Operations

Schedule A is the Analysis of Operations for the Wastewater Fund for the period FY2014 through FY2020.
Included in the analysis is:

1) Percentage increases projected in Retail User Fees.
2) Projected Revenues and Expenditures from operational activities resulting in the calculation of Net Surplus from Operations for each year.
3) Projected Capital Costs and Expenditures offset by Debt Proceeds, Use of Funding from the Capital Equipment Reserve, and State Aid Grants Grants resulting in Net Surplus or Deficit from Capital Projects and Expenditures for each year.
4) Projected Total Unrestricted Net Assets in the Fund - Unrestricted Retained Earnings and Capital Equipment Reserve.

### Page 4 – Schedule B - Analysis of Capital Projects – Capital Expenditures

Schedule B is the Analysis of Capital Projects for the Wastewater Fund.
Included in the analysis is:

1) A listing of the various Consent Decree Projects and Collections System and Other Expenditures.
2) For each project, the schedule shows the total project amount, the type and amount of financing used and the estimated spending plan for the years FY2014 to FY2020.

### Page 5 - Schedule C – Analysis of Capital Projects – Capital Funding Sources

Schedule C is the Analysis of Capital Funding Sources for the Wastewater Fund.
Included in the analysis is:

1) A listing of the Projects funded by debt along with the anticipated debt proceeds for each year.
2) Use of funds from the Capital Equipment Replacement Fund for each year.
3) A listing of State Aid Grants and the amounts anticipated to be received for the years FY2014 to FY2020.

**Page 6 - Schedule D – Capital Equipment Replacement Fund Schedule**

This table lists all plant and mobile equipment and includes year acquired, original cost, life, year of replacement, future value (projected value at year of replacement), and amount to reserve each year in order to reach that future value (with inflation and investment earnings factored in). This equipment is categorized by plant and collections.

**Page 16 - Schedule E – Debt Service Schedule**

This table shows the debt schedules for each of the projects being debt financed.

**Page 17 - Schedule F – Analysis of Wastewater Fund**

This table shows the year end fund balance and rate changes for FY2002 to FY2014.

City of Nashua
Analysis of Operations
FY2014 through FY2020

Schedule A

11/01/2013

| Line No. | Description | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 | FY 2018 | FY 2019 | FY 2020 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Projected Percent Increase in Retail User Fees | | 15.00% | 20.00% | 15.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| 2 | Effective Rate for the Fiscal Year Assuming a Mid-Year Rate Change | | 7.50% | 10.00% | 7.50% | 0.00% | 0.00% | 0.00% | 0.00% |
| 3 | Projected Percent Increase in Other Revenue | | 0.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% |
| 4 | | | | | | | | | |
| 5 | Revenue | | | | | | | | |
| 6 | Retail User Fee Revenue - Base | $ 9,875,000 | $ 9,875,000 | $ 11,356,250 | $ 13,627,500 | $ 15,671,625 | $ 15,671,625 | $ 15,671,625 | $ 15,671,625 |
| 7 | Retail User Fee Revenue - Increase | | 740,625 | 1,135,625 | 1,022,063 | - | - | - | - |
| 8 | Other Revenue | | 625,673 | 644,443 | 663,776 | 683,690 | 704,200 | 725,326 | 747,086 |
| 9 | Total Revenues | | $ 11,241,298 | $ 13,136,318 | $ 15,313,339 | $ 16,355,315 | $ 16,375,825 | $ 16,396,951 | $ 16,418,711 |
| 10 | | | | | | | | | |
| 11 | Projected Percent Increase in Operating Expenditures | | | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% |
| 12 | Expenditures | | | | | | | | |
| 13 | Operating Expenditures | | | | | | | | |
| 14 | Personnel Related Expenditures | | $ 3,428,663 | $ 3,531,523 | $ 3,637,469 | $ 3,746,593 | $ 3,858,990 | $ 3,974,760 | $ 4,094,003 |
| 15 | Operations and Maintenance | | 3,224,042 | 3,320,763 | 3,420,386 | 3,522,998 | 3,628,688 | 3,737,548 | 3,849,675 |
| 16 | Subtotal - Operating Expenditures | | $ 6,652,705 | $ 6,852,286 | $ 7,057,855 | $ 7,269,590 | $ 7,487,678 | $ 7,712,308 | $ 7,943,678 |
| 17 | | | | | | | | | |
| 18 | Non-Operating Expenditures | | | | | | | | |
| 19 | Reserve for Replacements | | $ 1,607,129 | $ 1,607,129 | $ 1,607,129 | $ 1,607,129 | $ 1,607,129 | $ 1,607,129 | $ 1,607,129 |
| 20 | Buildings and Improvements | | 175,000 | 175,000 | 175,000 | 175,000 | 175,000 | 175,000 | 175,000 |
| 21 | Debt Service Payments (Schedule E) | | 3,262,115 | 3,624,905 | 5,042,870 | 4,934,065 | 4,819,360 | 4,704,654 | 4,589,949 |
| 22 | Subtotal - Non-Operating Expenditures | | $ 5,044,244 | $ 5,407,034 | $ 6,824,999 | $ 6,716,194 | $ 6,601,489 | $ 6,486,783 | $ 6,372,078 |
| 23 | | | | | | | | | |
| 24 | Total Expenditures | | $ 11,696,949 | $ 12,259,320 | $ 13,882,854 | $ 13,985,784 | $ 14,089,167 | $ 14,199,091 | $ 14,315,756 |
| 25 | | | | | | | | | |
| 26 | Net Surplus From Operations | | $ (455,651) | $ 876,998 | $ 1,430,485 | $ 2,369,531 | $ 2,286,658 | $ 2,197,860 | $ 2,102,955 |
| 27 | | | | | | | | | |
| 28 | Captial Projects and Expenditures | | | | | | | | |
| 29 | Capital Costs Funded by Debt (Schedule B - Lines 11 & 33) | | $ (21,018,453) | $ (10,408,000) | $ - | $ - | $ - | $ - | $ - |
| 30 | Debt Proceeds (Schedule C - Line 15) | | 21,018,453 | 10,408,000 | - | - | - | - | - |
| 31 | Net Proceeds (Costs) from Debt Financing | | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 32 | | | | | | | | | |
| 33 | Annual Capital Expenditures Funded by Cash (Schedule C - Lines 16 & 43 ) | | $ (4,214,352) | $ (2,341,331) | $ (2,436,038) | $ (2,535,408) | $ (2,639,675) | $ (2,749,079) | $ (2,863,877) |
| 34 | | | | | | | | | |
| 35 | Capital Equipment Replacement Expenditures (Schedule B - Line 50) | | $ (1,628,000) | $ (1,624,000) | $ (556,000) | $ (1,132,000) | $ (532,000) | $ (853,000) | $ (2,903,000) |
| 36 | Funding from Capital Equipment Reserve (Schedule C - Line 18) | | 1,628,000 | 1,624,000 | 556,000 | 1,132,000 | 532,000 | 853,000 | 2,903,000 |
| 37 | Net Proceeds (Costs) from Capital Equipment Reserve | | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 38 | | | | | | | | | |
| 39 | State Aid Grants (Schedule C - Line 23) | | $ 148,821 | $ 137,545 | $ 132,540 | $ 127,533 | $ 122,526 | $ 117,000 | $ 112,000 |
| 40 | | | | | | | | | |
| 41 | Net Surplus (Deficit) From Captial Projects and Expenditures | | $ (4,065,531) | $ (2,203,786) | $ (2,303,498) | $ (2,407,875) | $ (2,517,149) | $ (2,632,079) | $ (2,751,877) |
| 42 | | | | | | | | | |
| 43 | Unrestricted Retained Earnings | | | | | | | | |
| 44 | Beginning Balance | | $ (5,500,000) | $ (10,021,182) | $ (11,347,970) | $ (12,220,983) | $ (12,259,327) | $ (12,489,818) | $ (12,924,037) |
| 45 | Net Surplus (Deficit) From Operations (Line 26 above) | | (455,651) | 876,998 | 1,430,485 | 2,369,531 | 2,286,658 | 2,197,860 | 2,102,955 |
| 46 | Net Surplus (Deficit) From Capital Projects and Expenditures (Line 41 above) | | (4,065,531) | (2,203,786) | (2,303,498) | (2,407,875) | (2,517,149) | (2,632,079) | (2,751,877) |
| 47 | Ending Balance | $ (5,500,000) | $ (10,021,182) | $ (11,347,970) | $ (12,220,983) | $ (12,259,327) | $ (12,489,818) | $ (12,924,037) | $ (13,572,959) |
| 48 | | | | | | | | | |
| 49 | Capital Equipment Reserve | | | | | | | | |
| 50 | Beginning Balance | | $ 11,000,000 | $ 10,979,129 | $ 10,962,258 | $ 12,013,387 | $ 12,488,516 | $ 13,563,645 | $ 14,317,774 |
| 51 | Capital Equipment Additions Funded by Sewer Rates (Schedule D) | | 1,607,129 | 1,607,129 | 1,607,129 | 1,607,129 | 1,607,129 | 1,607,129 | 1,607,129 |
| 52 | Payments for Capital Equipment Expenditures (Schedule D) | | (1,628,000) | (1,624,000) | (556,000) | (1,132,000) | (532,000) | (853,000) | (2,903,000) |
| 53 | Ending Balance | $ 11,000,000 | $ 10,979,129 | $ 10,962,258 | $ 12,013,387 | $ 12,488,516 | $ 13,563,645 | $ 14,317,774 | $ 13,021,903 |
| 54 | | | | | | | | | |
| 55 | Total Unrestricted Net Assets | $ 5,500,000 | $ 957,947 | $ (385,712) | $ (207,596) | $ 229,188 | $ 1,073,827 | $ 1,393,737 | $ (551,056) |

City of Nashua
Analysis of Capital Projects
CSO and Other Projects

Schedule B

| Line No. | Description | Total | <<<< PROJECT FUNDING >>>> Other | Debt | Cash | PROJECT CASH FLOW >>>> FY2014 | FY2015 | FY2016 | FY2017 | FY2018 | FY2019 | FY2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Consent Decree Expenditures** | | | | | | | | | | | |
| | **Completed Projects** | | | | | | | | | | | |
| 1 | Wet Weather Facility | $ 32,375,000 | $ - | $ 14,700,000 | $ 17,675,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 2 | Sluice Gate | 897,000 | - | - | 897,000 | - | - | - | - | - | - | - |
| 3 | Drop Over Structures | 1,634,000 | - | - | 1,634,000 | - | - | - | - | - | - | - |
| 4 | System Optimization | 1,810,000 | - | - | 1,810,000 | - | - | - | - | - | - | - |
| 5 | Harbor Ave | 5,075,000 | - | 5,000,000 | 75,000 | - | - | - | - | - | - | - |
| 6 | **Subtotal - Completed Projects** | $ 41,791,000 | $ - | $ 19,700,000 | $ 22,091,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 7 | | | | | | | | | | | | |
| 8 | **In Progress Projects** | | | | | | | | | | | |
| 9 | Disinfection Facility | 19,785,000 | - | 19,625,000 | 160,000 | 10,441,000 | 7,336,000 | - | - | - | - | - |
| 10 | Storage Tank | 5,764,964 | - | 5,764,964 | - | 5,264,964 | 500,000 | - | - | - | - | - |
| 11 | **Subtotal - In Progress Projects** | $ 25,549,964 | $ - | $ 25,389,964 | $ 160,000 | $ 15,705,964 | $ 7,836,000 | $ - | $ - | $ - | $ - | $ - |
| 12 | | | | | | | | | | | | |
| 13 | **Annual Expenditures** | | | | | | | | | | | |
| 14 | Inflow and Infiltration | $ 500,000 | $ - | $ - | $ 500,000 | $ 393,000 | $ - | $ - | $ - | $ - | $ - | $ - |
| 15 | Consent Decree Operational Expenditures | 1,363,946 | - | - | 1,363,946 | 600,577 | 118,015 | 121,555 | 125,202 | 128,958 | 132,827 | 136,812 |
| 16 | **Subtotal -Annual Expenditures** | $ 1,863,946 | $ - | $ - | $ 1,863,946 | $ 993,577 | $ 118,015 | $ 121,555 | $ 125,202 | $ 128,958 | $ 132,827 | $ 136,812 |
| 17 | | | | | | | | | | | | |
| 18 | **Total - Consent Decree Expenditures** | $ 69,204,910 | $ - | $ 45,089,964 | $ 24,114,946 | $ 16,699,541 | $ 7,954,015 | $ 121,555 | $ 125,202 | $ 128,958 | $ 132,827 | $ 136,812 |
| 19 | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | |
| 21 | **Collection System and Other Expenditures** | | | | | | | | | | | |
| 22 | | | | | | | | | | | | |
| 23 | **Completed Projects** | | | | | | | | | | | |
| 24 | Haines Street | $ 1,499,658 | $ 634,833 | $ 676,025 | $ 188,800 | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 25 | Manchester Street | 100,000 | - | - | 100,000 | - | - | - | - | - | - | - |
| 26 | Net Metering | 495,807 | 245,827 | 249,980 | - | - | - | - | - | - | - | - |
| 27 | **Subtotal - Completed Projects** | $ 2,095,465 | $ 880,660 | $ 926,005 | $ 288,800 | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 28 | | | | | | | | | | | | |
| 29 | **In Progress Projects** | | | | | | | | | | | |
| 30 | Aeration Blowers & Tank Upgrade | $ 4,160,973 | $ - | $ 4,160,973 | $ - | $ 4,160,973 | $ - | $ - | $ - | $ - | $ - | $ - |
| 31 | Dewatering Equipment Replacement | 5,566,516 | - | 5,566,516 | - | 1,151,516 | - | - | - | - | - | - |
| 32 | Other Capital Equipment | 2,572,000 | - | 2,572,000 | - | - | 2,572,000 | - | - | - | - | - |
| 33 | **Subtotal - In Progress Projects** | $ 12,299,489 | $ - | $ 12,299,489 | $ - | $ 5,312,489 | $ 2,572,000 | $ - | $ - | $ - | $ - | $ - |
| 34 | | | | | | | | | | | | |
| 35 | **Annual Expenditures** | | | | | | | | | | | |
| 36 | Annual Sewer Infrastructure Improvements | $ 10,771,877 | $ - | $ - | $ 10,771,877 | $ 1,323,000 | $ 1,389,150 | $ 1,458,608 | $ 1,531,538 | $ 1,608,115 | $ 1,688,521 | $ 1,772,947 |
| 37 | Sewer Structure Replacement | 1,885,079 | - | - | 1,885,079 | 231,525 | 243,101 | 255,256 | 268,019 | 281,420 | 295,491 | 310,266 |
| 38 | CSO Flooding | 2,800,000 | - | - | 2,800,000 | 400,000 | 400,000 | 400,000 | 400,000 | 400,000 | 400,000 | 400,000 |
| 39 | Merrimack River Levee | 150,000 | - | - | 150,000 | 150,000 | - | - | - | - | - | - |
| 40 | Bridge Street Overflow Detension Basin | 890,000 | - | - | 890,000 | 890,000 | - | - | - | - | - | - |
| 41 | Hazard Mitigation | 50,000 | - | - | 50,000 | 46,000 | - | - | - | - | - | - |
| 42 | Storm Water Abatement | 1,479,857 | - | - | 1,479,857 | 180,250 | 191,065 | 200,618 | 210,649 | 221,182 | 232,241 | 243,853 |
| 43 | **Subtotal - Annual Expenditures** | $ 18,026,813 | $ - | $ - | $ 18,026,813 | $ 3,220,775 | $ 2,223,316 | $ 2,314,482 | $ 2,410,206 | $ 2,510,716 | $ 2,616,252 | $ 2,727,065 |
| 44 | | | | | | | | | | | | |
| 45 | **Total Collection System and Other Expenditures** | $ 32,421,767 | $ 880,660 | $ 13,225,494 | $ 18,315,613 | $ 8,533,264 | $ 4,795,316 | $ 2,314,482 | $ 2,410,206 | $ 2,510,716 | $ 2,616,252 | $ 2,727,065 |
| 46 | | | | | | | | | | | | |
| 47 | **Total Capital Expenditures** | $ 101,626,678 | $ 880,660 | $ 58,315,458 | $ 42,430,560 | $ 25,232,805 | $ 12,749,331 | $ 2,436,038 | $ 2,535,408 | $ 2,639,675 | $ 2,749,079 | $ 2,863,877 |
| 48 | | | | | | | | | | | | |
| 49 | | | | | | | | | | | | |
| 50 | **Capital Equipment Replacement Expenditures** | $ 6,325,000 | | | | $ 1,628,000 | $ 1,624,000 | $ 556,000 | $ 1,132,000 | $ 532,000 | $ 853,000 | $ 2,903,000 |

City of Nashua
Analysis of Use of Debt Proceeds, Capital Equipment Reserve and State Aid Grants
CSO and Other Projects

Schedule C

| Line No. | Project Description | Funding | Total | Debt | FY2014 | FY2015 | FY2016 | FY2017 | FY2018 | FY2019 | FY2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | **Consent Decree Projects** | | | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | Disinfection Facility | SRF | 19,785,000 | 19,625,000 | 10,441,000 | 7,336,000 | | - | - | - | - |
| 4 | Storage Tank | Bonds | 5,764,964 | 5,764,964 | 5,264,964 | 500,000 | - | - | - | - | - |
| 5 | **Subtotal - Consent Decree Projects** | | $ 25,549,964 | $ 25,389,964 | $ 15,705,964 | $ 7,836,000 | $ - | $ - | $ - | $ - | $ - |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | **Collection System and Other Projects** | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | Aeration Blowers & Tank Upgrade | Bonds | 4,160,973 | 4,160,973 | 4,160,973 | - | - | - | - | - | - |
| 11 | Dewatering Equipment Replacement | Bonds | 5,567,000 | 5,567,000 | 1,151,516 | - | - | - | - | - | - |
| 12 | Other Capital Equipment | Bonds | 2,572,000 | 2,572,000 | - | 2,572,000 | - | - | - | - | - |
| 13 | | | $ 12,299,973 | $ 12,299,973 | $ 5,312,489 | $ 2,572,000 | $ - | $ - | $ - | $ - | $ - |
| 14 | | | | | | | | | | | |
| 15 | **Total Capital Projects** | | $ 37,849,937 | $ 37,689,937 | $ 21,018,453 | $ 10,408,000 | $ - | $ - | $ - | $ - | $ - |
| 16 | | | | | | | | | | | |
| 17 | | | | | | | | | | | |
| 18 | **Capital Equipment Replacement Fund** | | $ 6,325,000 | | $ 1,628,000 | $ 1,624,000 | $ 556,000 | $ 1,132,000 | $ 532,000 | $ 853,000 | $ 2,903,000 |
| 19 | | | | | | | | | | | |
| 20 | **State Aid Grants** | | | | | | | | | | |
| 21 | Current State Aid Grants | | $ 785,965 | | $ 148,821 | $ 137,545 | $ 132,540 | $ 127,533 | $ 122,526 | $ 117,000 | $ 112,000 |
| 22 | Estimated State Aid Grants | | - | | - | - | - | - | - | - | - |
| 23 | **Total State Aid Grants** | | $ 785,965 | | $ 148,821 | $ 137,545 | $ 132,540 | $ 127,533 | $ 122,526 | $ 117,000 | $ 112,000 |

**Schedule D - CAPITAL REPLACEMENT SCHEDULE**
**NASHUA WASTEWATER FACILITY**
**FISCAL YEAR 2013**

**Assumptions:**

Savings Interest Inflation Rates Compounded Annually — **Savings Rate:** 2.5%
Future Value is the Inflation Factor — **Inflation Rate:** 3.0%
Annual Reserve Payment is Discounted by Savings Rate

| Equipment or Structure | Equip. ID No: | Year Acquired | Total Installed Cost | Years Before Replace | *Replacement Year* | Future Replacement Cost | Annual Reserve Payment |
|---|---|---|---|---|---|---|---|
| **PLANT CAPITAL EQUIPMENT FUND** | | | | | | | |
| Roll-Off | ROF | 2000 | $10,000 | 13 | *2013* | 15,000 | 1,000 |
| WAS Thickener # 1 | WAT 1 | 1989 | $95,000 | 24 | *2013* | 193,000 | 6,000 |
| Anaerobic Digester Grinders (first half - several grinders) | ADG | 2000 | $100,000 | 13 | *2013* | 147,000 | 9,700 |
| Roll-Off | ROF | 2000 | $10,000 | 13 | *2013* | 15,000 | 1,000 |
| Screw Conveyors (bar screen) | SCR 1 | 2000 | $50,000 | 13 | *2013* | 73,000 | 4,800 |
| Screenings Washer | SCW 1 | 2000 | $70,000 | 13 | *2013* | 103,000 | 6,800 |
| Screenings Washer | SCW 2 | 2000 | $70,000 | 13 | *2013* | 103,000 | 6,800 |
| Wet Well Odor Control Mechanical | WWOC | 1992 | $100,000 | 21 | *2013* | 186,000 | 6,800 |
| WAS Pumps # 1 | WAS 1 | 1995 | $20,000 | 18 | *2013* | 34,000 | 1,500 |
| WAS Thickener # 2 | WAT 2 | 1989 | $95,000 | 24 | *2013* | 193,000 | 6,000 |
| Underground Storage Tanks (1) | UST 1 | 2002 | $80,000 | 11 | *2013* | 111,000 | 8,900 |
| Plant Air Compressor | | 1975 | **$25,000** | **38** | *2013* | 77,000 | 1,200 |
| Control Bldg 3 Ton Rail Crane | | 1975 | **$25,000** | **38** | *2013* | 77,000 | 1,200 |
| Hypochlorite Pump #1 | | 1989 | $17,000 | 24 | *2013* | 35,000 | 1,100 |
| Hypochlorite Pump #2 | | 1989 | $17,000 | 24 | *2013* | 35,000 | 1,100 |
| RAS Drive - Pump #1 | | 1989 | $30,000 | 24 | *2013* | 61,000 | 1,900 |
| WAS Polymer Pump (4 EA) | | 1989 | $12,000 | 24 | *2013* | 24,000 | 700 |

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|---|---|---|---|---|---|---|---|
| | **Schedule D - CAPITAL REPLACEMENT SCHEDULE** | | | | | | |
| | **NASHUA WASTEWATER FACILITY** | | | | | | |
| | **FISCAL YEAR 2013** | | | | | | |
| **Assumptions:** | | | | | | | |
| Savings Interest Inflation Rates Compounded Annually | | | | | | **Savings Rate:** | 2.5% |
| Future Value is the Inflation Factor | | | | | | **Inflation Rate:** | 3.0% |
| Annual Reserve Payment is Discounted by Savings Rate | | | | | | | |
| WAS Thickener # 3 | WAT 3 | 1989 | $95,000 | 24 | *2013* | 193,000 | 6,000 |
| Anaerobic Digester Grinders (second half - several grinders) | ADG | 2000 | $100,000 | 13 | *2013* | 147,000 | 9,700 |
| Primary Tanks Chain & flights # 5 | PSD 5 | 2006 | $25,000 | 7 | *2013* | 31,000 | 4,100 |
| Hypochlorite Pump #3 | | 1989 | $17,000 | 24 | *2013* | 35,000 | 1,100 |
| Hypochlorite Pump #4 | | 1989 | $17,000 | 24 | *2013* | 35,000 | 1,100 |
| RAS Drive - Pump #2 | | 1989 | $30,000 | 24 | *2013* | 61,000 | 1,900 |
| Blower Building Roof | BBR 1 | 1989 | $20,000 | 25 | *2014* | 42,000 | 1,200 |
| Grit Chamber Roof | GCR | 1989 | $15,000 | 25 | *2014* | 31,000 | 908 |
| Raw Sewage Pump # 3+ Controls | RSP 3 | 1975 | $140,000 | 39 | *2014* | 443,000 | 6,800 |
| Above ground diesel storage tanks (3) | | 1999 | $18,000 | 15 | *2014* | 28,000 | 1,600 |
| Primary Tanks Chain & flights # 1 | PSD 1 | 2007 | $25,000 | 7 | *2014* | 31,000 | 4,100 |
| Primary Tanks Chain & flights # 2 | PSD 2 | 2007 | $25,000 | 7 | *2014* | 31,000 | 4,100 |
| Primary Tanks Chain & flights # 3 | PSD 3 | 2007 | $25,000 | 7 | *2014* | 31,000 | 4,100 |
| Primary Tanks Chain & flights # 4 | PSD 4 | 2007 | $25,000 | 7 | *2014* | 31,000 | 4,100 |
| RAS Drive - Pump #3 | | 1989 | $30,000 | 25 | *2014* | 63,000 | 1,800 |
| WAS Polymer Pump (3 EA) | | 1989 | $10,000 | 25 | *2014* | 21,000 | 600 |
| Central Generator | CG1 | 1990 | $200,000 | 25 | *2015* | 419,000 | 12,300 |
| Roof Adminstration Bldg | ADM 1 | 1995 | $45,000 | 20 | *2015* | 81,000 | 3,200 |
| Aeration Tanks Grid System | ATC 1 | 1995 | $325,000 | 20 | *2015* | 587,000 | 23,000 |
| Aeration Tanks Diffusers | ATD 1 | 2005 | $105,000 | 10 | *2015* | 141,000 | 12,600 |
| Control Building Instrumental | CBI 1 | 2000 | $70,000 | 15 | *2015* | 109,000 | 6,100 |
| Hypochlorite Chambers Mixers # 2 | HCM 2 | 2008 | $12,000 | 7 | *2015* | 15,000 | 2,000 |
| Primary Sludge Transfer Pumps | PST 1 | 1985 | $25,000 | 30 | *2015* | 61,000 | 1,400 |

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|---|---|---|---|---|---|---|---|
| | **Schedule D - CAPITAL REPLACEMENT SCHEDULE** | | | | | | |
| | **NASHUA WASTEWATER FACILITY** | | | | | | |
| | **FISCAL YEAR 2013** | | | | | | |
| **Assumptions:** | | | | | | | |
| Savings Interest Inflation Rates Compounded Annually | | | | | | **Savings Rate:** | 2.5% |
| Future Value is the Inflation Factor | | | | | | **Inflation Rate:** | 3.0% |
| Annual Reserve Payment is Discounted by Savings Rate | | | | | | | |
| Primary Sludge Transfer Pumps | PST 2 | 1985 | $25,000 | 30 | *2015* | 61,000 | 1,400 |
| Primary Sludge Transfer Pumps | PST 3 | 1985 | $25,000 | 30 | *2015* | 61,000 | 1,400 |
| RAS Pumps # 1 | RAS 1 | 1988 | $80,000 | 27 | *2015* | 178,000 | 4,700 |
| RAS Pumps # 2 | RAS 2 | 1988 | $80,000 | 27 | *2015* | 178,000 | 4,700 |
| RAS Pumps # 3 | RAS 3 | 1988 | $80,000 | 27 | *2015* | 178,000 | 4,700 |
| RAS Pumps # 4 | RAS 4 | 1988 | $80,000 | 27 | *2015* | 178,000 | 4,700 |
| Sludge Pumping Building Roof | SPR 1 | 1995 | $20,000 | 20 | *2015* | 36,000 | 1,400 |
| WAS Pumps # 2 | WAS 2 | 1995 | $20,000 | 20 | *2015* | 36,000 | 1,400 |
| Water Meter Booster Station | WMB 1 | 1995 | $75,000 | 20 | *2015* | 135,000 | 5,300 |
| Office AC Units - Rooftop | ACU 1 | 2000 | $35,000 | 15 | *2015* | 55,000 | 3,100 |
| Anaerobic Digester Sludge Pumps | ADSP | 2000 | $25,000 | 15 | *2015* | 39,000 | 2,200 |
| Bar Screen - #1 | MBS 1 | 2000 | $300,000 | 15 | *2015* | 467,000 | 26,000 |
| Bar Screen - # 2 | MBS 2 | 2000 | $300,000 | 15 | *2015* | 467,000 | 26,000 |
| RAS Drive - Pump #4 | | 1989 | $30,000 | 26 | *2015* | 65,000 | 1,800 |
| Raw Sewage Pump # 4 + Controls | RSP 4 | 1975 | $140,000 | 41 | *2016* | 470,000 | 6,700 |
| Boat | BOA | 2001 | $5,500 | 15 | *2016* | 9,000 | 500 |
| South Generator | SG1 | 1990 | $210,000 | 27 | *2017* | 466,000 | 12,300 |
| Dechlor Building Roof | DBR 1 | 1991 | $15,000 | 26 | *2017* | 32,000 | 900 |
| Hypochlorite Chambers Mixers # 1 | HCM 1 | 2010 | $12,000 | 7 | *2017* | 15,000 | 2,000 |
| Anerobic Digester Sludge Pumps | ADSP | 2000 | $25,000 | 17 | *2017* | 41,000 | 2,000 |
| Hypochlorite Storage Tank # 1 | HCT 1 | 2007 | $75,000 | 10 | *2017* | 101,000 | 9,000 |
| Primary Tank Odor Control Mechinical | PRI OD | 2007 | $200,000 | 10 | *2017* | 269,000 | 24,000 |
| Anaerobic Digester Vessel and Gas Holding Tank Evaluation | ADV | 2000 | $50,000 | 18 | *2018* | 85,000 | 3,800 |

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|---|---|---|---|---|---|---|---|
| | **Schedule D - CAPITAL REPLACEMENT SCHEDULE** | | | | | | |
| | **NASHUA WASTEWATER FACILITY** | | | | | | |
| | | **FISCAL YEAR 2013** | | | | | |
| | | | | | | | |
| **Assumptions:** | | | | | | | |
| Savings Interest Inflation Rates Compounded Annually | | | | | | **Savings Rate:** | 2.5% |
| Future Value is the Inflation Factor | | | | | | **Inflation Rate:** | 3.0% |
| Annual Reserve Payment is Discounted by Savings Rate | | | | | | | |
| Influent Magmeter | IMM 1 | 2003 | $40,000 | 15 | *2018* | 62,000 | 3,500 |
| Hypochlorite Storage Tank # 2 | HCT 2 | 2008 | $75,000 | 10 | *2018* | 101,000 | 9,000 |
| Dechlor Chemical Feed Pumps # 1 | DCF 1 | 2008 | $17,000 | 10 | *2018* | 23,000 | 2,100 |
| Dechlor Chemical Feed Pumps # 2 | DCF 2 | 2008 | $17,000 | 10 | *2018* | 23,000 | 2,100 |
| Dechlor Chemical Feed Pumps # 3 | DCF 3 | 2008 | $17,000 | 10 | *2018* | 23,000 | 2,100 |
| Roll-Off | ROF | 2008 | $15,000 | 10 | *2018* | 20,000 | 1,800 |
| Wet Weather Odor Control (Carbon Filter) | WWOC | 2008 | $100,000 | 10 | *2018* | 134,000 | 12,000 |
| Wet Weather Flow Meter | WWFM | 2008 | $50,000 | 11 | *2019* | 69,000 | 5,500 |
| Actiflo Mixers (4 EA) | AM | 2009 | $50,000 | 10 | *2019* | 67,000 | 6,000 |
| Actiflo Sand Pump (6 EA) | ASaP | 2009 | $50,000 | 10 | *2019* | 67,000 | 6,000 |
| Actiflo Sludge Pump (2 EA) | ASlP | 2009 | $55,000 | 10 | *2019* | 74,000 | 6,600 |
| Pump Bldg 3 Ton Rail Crane | | 1989 | $25,000 | 30 | *2019* | 61,000 | 1,400 |
| RAS Piping from Pump #1, #2, #3, #4 | | 1989 | $25,000 | 30 | *2019* | 61,000 | 1,400 |
| WAS Piping from Pump #1, #2 | | 1989 | $25,000 | 30 | *2019* | 61,000 | 1,400 |
| WAS Piping from Thickener Pump #1 | | 1989 | $10,000 | 30 | *2019* | 24,000 | 500 |
| WAS Piping from Thickener Pump #2 | | 1989 | $10,000 | 30 | *2019* | 24,000 | 500 |
| WAS Piping from Thickener Pump #3 | | 1989 | $10,000 | 30 | *2019* | 24,000 | 500 |
| Wet Well(s) - Refurbish concrete | | 1989 | $40,000 | 30 | *2019* | 97,000 | 2,200 |
| Dry Well(s) - Refurbish concrete | | 1989 | $25,000 | 30 | *2019* | 61,000 | 1,400 |
| Process Tanks Slide Gate Operator | PSI 1 | 1995 | $85,000 | 25 | *2020* | 178,000 | 5,200 |
| Anaerobic Digester Generator (Wakashau Generator) | ADGen | 2000 | $450,000 | 20 | *2020* | 813,000 | 31,800 |
| Anaerobic Digester Iron Sponge | ADIS | 2000 | $10,000 | 20 | *2020* | 18,000 | 700 |
| Anerobic Digester Vessel Upgrade | ADV | 2000 | $250,000 | 20 | *2020* | 452,000 | 17,700 |

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|---|---|---|---|---|---|---|---|
| | **Schedule D - CAPITAL REPLACEMENT SCHEDULE** | | | | | | |
| | **NASHUA WASTEWATER FACILITY** | | | | | | |
| | **FISCAL YEAR 2013** | | | | | | |
| **Assumptions:** | | | | | | | |
| Savings Interest Inflation Rates Compounded Annually | | | | | | **Savings Rate:** | 2.5% |
| Future Value is the Inflation Factor | | | | | | **Inflation Rate:** | 3.0% |
| Annual Reserve Payment is Discounted by Savings Rate | | | | | | | |
| Gas Holding Tank Vessel & Equip Upgrade | | 2000 | $200,000 | 20 | *2,020* | 361,000 | 14,100 |
| Digester Complex HVAC | | 2001 | $30,000 | 20 | *2021* | 54,000 | 2,100 |
| Digester Complex Instrumentation | | 2001 | $25,000 | 20 | *2021* | 45,000 | 1,800 |
| Digester Heat Exchanger (H. E. Sargent, Inc.) | | 2011 | $54,000 | 11 | *2022* | 75,000 | 6,000 |
| Boilers | BOI1 | 2002 | $100,000 | 20 | *2022* | 181,000 | 7,100 |
| Car 3 | CAR 3 | 2011 | $27,000 | 12 | *2023* | 38,000 | 2,800 |
| Car 155 | CAR155 | 2013 | $35,000 | 10 | *2023* | 47,000 | 4,200 |
| Wet Weather Pump #1 | WWP 1 | 2008 | $75,000 | 15 | *2023* | 117,000 | 6,500 |
| Wet Weather Pump #2 | WWP 2 | 2008 | $75,000 | 15 | *2023* | 117,000 | 6,500 |
| Wet Weather Pump #3 | WWP 3 | 2008 | $75,000 | 15 | *2023* | 117,000 | 6,500 |
| Wet Weather Pump #4 | WWP 4 | 2008 | $75,000 | 15 | *2023* | 117,000 | 6,500 |
| Wet Weather Screening Conveyor | WWSC | 2008 | $75,000 | 15 | *2023* | 117,000 | 6,500 |
| Wet Weather Bar Rack #2 | WWBR | 2009 | $300,000 | 15 | *2024* | 467,000 | 26,000 |
| Emergency Generator North Facilities | GEN 1 | 2009 | $275,000 | 15 | *2024* | 428,000 | 23,900 |
| Primary Clarifier Drive 1 | PTD1 | 2005 | $30,000 | 20 | *2025* | 54,000 | 2,100 |
| Primary Clarifier Drive 2 | PTD2 | 2005 | $30,000 | 20 | *2025* | 54,000 | 2,100 |
| Anaerobic Digester Boiler #1 | ADB 1 | 2000 | $100,000 | 25 | *2025* | 209,000 | 6,100 |
| Anaerobic Digester Boiler #2 | ADB 2 | 2000 | $100,000 | 25 | *2025* | 209,000 | 6,100 |
| Main Gate Influent Gate Operator | IGO 1 | 2005 | $100,000 | 20 | *2025* | 181,000 | 7,100 |
| Primary Tanks Coating #1 | PSC 1 | 2007 | $45,000 | 20 | *2027* | 81,000 | 3,200 |
| Primary Tanks Coating #2 | PSC 2 | 2007 | $45,000 | 20 | *2027* | 81,000 | 3,200 |
| Primary Tanks Coating #3 | PSC 3 | 2007 | $45,000 | 20 | *2027* | 81,000 | 3,200 |
| Primary Tanks Coating #4 | PSC 4 | 2007 | $45,000 | 20 | *2027* | 81,000 | 3,200 |

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|---|---|---|---|---|---|---|---|
| | **Schedule D - CAPITAL REPLACEMENT SCHEDULE** | | | | | | |
| | **NASHUA WASTEWATER FACILITY** | | | | | | |
| | **FISCAL YEAR 2013** | | | | | | |
| **Assumptions:** | | | | | | | |
| Savings Interest Inflation Rates Compounded Annually | | | | | | **Savings Rate:** | 2.5% |
| Future Value is the Inflation Factor | | | | | | **Inflation Rate:** | 3.0% |
| Annual Reserve Payment is Discounted by Savings Rate | | | | | | | |
| Primary Tanks Coating #5 | PSC 5 | 2007 | $45,000 | 20 | *2027* | 81,000 | 3,200 |
| Aeration Basin/Secondary Clarifier Structural Rehab | | 2013 | $500,000 | 15 | *2028* | 779,000 | 43,442 |
| Aeration Basin/Secondary Clarifier Structural Rehab | | 2013 | $800,000 | 15 | *2028* | 1,246,000 | 69,485 |
| Wet Weather Bar Rack #1 | WWBR | 2008 | $300,000 | 20 | *2028* | 542,000 | 21,200 |
| Wet Weather PS Roof | WWR | 2008 | $20,000 | 20 | *2028* | 36,000 | 1,400 |
| Plant Water System | PWS 1 | 2009 | $120,000 | 20 | *2029* | 217,000 | 8,500 |
| Actiflo Roof | AR | 2009 | $20,000 | 20 | *2029* | 36,000 | 1,400 |
| Actiflo Tanks | AT | 2009 | $150,000 | 20 | *2029* | 271,000 | 10,600 |
| Dry Polymer Feeder #1 | | 2009 | $30,000 | 20 | *2,029* | 54,000 | 2,100 |
| Polymer Run Tank #1 | | 2009 | $30,000 | 20 | *2029* | 54,000 | 2,100 |
| Polymer Make up Tank #1 | | 2009 | $30,000 | 20 | *2029* | 54,000 | 2,100 |
| Dry Polymer Feeder #2 | | 2009 | $30,000 | 20 | *2029* | 54,000 | 2,100 |
| Polymer Run Tank #2 | | 2009 | $30,000 | 20 | *2029* | 54,000 | 2,100 |
| Polymer Make up Tank #2 | | 2009 | $30,000 | 20 | *2029* | 54,000 | 2,100 |
| Sand Feeder | | 2009 | $104,000 | 20 | *2029* | 188,000 | 7,400 |
| Actiflo Cyclone #1 | | 2009 | $35,000 | 20 | *2029* | 63,000 | 2,500 |
| Actiflo Cyclone #2 | | 2009 | $35,000 | 20 | *2029* | 63,000 | 2,500 |
| Actiflo Cyclone #3 | | 2009 | $35,000 | 20 | *2029* | 63,000 | 2,500 |
| Actiflo Cyclone #4 | | 2009 | $35,000 | 20 | *2029* | 63,000 | 2,500 |
| Actiflo Cyclone #5 | | 2009 | $35,000 | 20 | *2029* | 63,000 | 2,500 |
| Actiflo Cyclone #6 | | 2009 | $35,000 | 20 | *2029* | 63,000 | 2,500 |
| Actiflo Sludge Thickener Tank | | 2009 | $520,000 | 20 | *2029* | 939,000 | 36,800 |
| Actflow Floculation Tank | | 2009 | $188,000 | 20 | *2029* | 340,000 | 13,300 |

**Schedule D - CAPITAL REPLACEMENT SCHEDULE**
**NASHUA WASTEWATER FACILITY**
**FISCAL YEAR 2013**

**Assumptions:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Savings Interest Inflation Rates Compounded Annually | | | | | | **Savings Rate:** | 2.5% |
| Future Value is the Inflation Factor | | | | | | **Inflation Rate:** | 3.0% |
| Annual Reserve Payment is Discounted by Savings Rate | | | | | | | |
| Actiflow Clarifier #1 | | 2009 | $300,000 | 20 | *2029* | 542,000 | 21,200 |
| Actiflow Clarifier #2 | | 2009 | $300,000 | 20 | *2029* | 542,000 | 21,200 |
| Actiflow Mixing Tank #1 | | 2009 | $318,000 | 20 | *2029* | 574,000 | 22,500 |
| Actiflow Mixing Tank #2 | | 2009 | $318,000 | 20 | *2029* | 574,000 | 22,500 |
| Skid #1 Polymer Pump #1, #2, #3 | | 2009 | $30,000 | 20 | *2029* | 54,000 | 2,100 |
| Skid #2 Polymer Pump #1, #2, #3 | | 2009 | $30,000 | 20 | *2029* | 54,000 | 2,100 |
| Skid #3 Polymer Pump #1, #2, #3 | | 2009 | $30,000 | 20 | *2029* | 54,000 | 2,100 |
| Grease Transfer Pump (Bourgen pump) | | 2010 | $10,000 | 20 | *2030* | 18,000 | 700 |
| Net Metering Equipment & Transformer | | 2011 | $150,000 | 20 | *2031* | 271,000 | 10,600 |
| Sluice Gate | | 2011 | $700,000 | 20 | *2031* | 1,264,000 | 49,500 |
| Primary Tanks Sludge Storage Drive # 1 | PSA 1 | 2012 | $55,000 | 20 | *2032* | 99,000 | 3,900 |
| Primary Tanks Sludge Storage Drive # 2 | PSA 2 | 2012 | $55,000 | 20 | *2032* | 99,000 | 3,900 |
| Raw Sewage Pump # 1+ Controls (Alice Chamers pump) | RSP 1 | 2012 | $90,000 | 20 | *2032* | 163,000 | 6,400 |
| Hypochlorite Pump #5 | | 2009 | $17,000 | 23 | *2032* | 34,000 | 1,100 |
| Hypochlorite Pump #6 | | 2009 | $17,000 | 23 | *2032* | 34,000 | 1,100 |
| Blower Bldg Wall Rehab | | 2013 | $220,000 | 20 | *2033* | 397,000 | 15,541 |
| Aeration Blower Replacement (3 Units) | | 2013 | $1,200,000 | 20 | *2033* | 2,167,000 | 84,832 |
| Instrumentation | | 2013 | $200,000 | 20 | *2033* | 361,000 | 14,132 |
| Grit Chamber HVAC | GCHV | 2013 | $100,000 | 20 | *2033* | 181,000 | 7,086 |
| Grit Chamber Grit Classifier # 1 | GCC 1 | 2013 | $100,000 | 20 | *2033* | 181,000 | 7,086 |
| Grit Chamber Grit Classifier # 2 | GCC 2 | 2013 | $100,000 | 20 | *2033* | 181,000 | 7,086 |
| Grit Chamber Electrical | GCE | 2013 | $140,000 | 20 | *2033* | 253,000 | 9,904 |
| Grit Chamber Instrumentation | GCI | 2013 | $60,000 | 20 | *2033* | 108,000 | 4,228 |

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|---|---|---|---|---|---|---|---|
| | **Schedule D - CAPITAL REPLACEMENT SCHEDULE** | | | | | | |
| | **NASHUA WASTEWATER FACILITY** | | | | | | |
| | | **FISCAL YEAR 2013** | | | | | |
| | | | | | | | |
| **Assumptions:** | | | | | | | |
| Savings Interest Inflation Rates Compounded Annually | | | | | | **Savings Rate:** | 2.5% |
| Future Value is the Inflation Factor | | | | | | **Inflation Rate:** | 3.0% |
| Annual Reserve Payment is Discounted by Savings Rate | | | | | | | |
| Grit Chamber Piping | GCP | 2013 | $50,000 | 20 | *2033* | 90,000 | 3,523 |
| Grit Pump # 1 | GCP 1 | 2013 | $25,000 | 20 | *2033* | 45,000 | 1,762 |
| Grit Pump # 2 | GCP 2 | 2013 | $25,000 | 20 | *2033* | 45,000 | 1,762 |
| Grit Chamber Cyclo Blower # 1 | GCB 1 | 2013 | $25,000 | 20 | *2033* | 45,000 | 1,800 |
| Grit Chamber Cyclo Blower # 2 | GCB 2 | 2013 | $25,000 | 20 | *2033* | 45,000 | 1,800 |
| Grit System Slide Gate | | 2013 | $50,000 | 20 | *2033* | 90,000 | 3,500 |
| Sludge Processing Mechanical Piping # 1 | SPP 1 | 2013 | $700,000 | 20 | *2033* | 1,264,000 | 49,482 |
| Belt Press Conveyors | BPC | 2013 | $150,000 | 20 | *2033* | 271,000 | 10,609 |
| Sludge Processing Electrical | SPE 1 | 2013 | $200,000 | 20 | *2033* | 361,000 | 14,132 |
| Sludge Processing Instrumentation | SPI 1 | 2013 | $150,000 | 20 | *2033* | 271,000 | 10,609 |
| Sludge Processing Mechanical Piping # 2 | SPP 2 | 2013 | $700,000 | 20 | *2033* | 1,264,000 | 49,482 |
| Sludge Processing Mechanical Piping # 3 | SPP 3 | 2013 | $700,000 | 20 | *2033* | 1,264,000 | 49,482 |
| Press Polymer Pump (4 EA) | | 2013 | $125,000 | 20 | *2033* | 226,000 | 8,847 |
| Sludge Pumping Building Scum Ejector # 1 | SPE 1 | 2013 | $150,000 | 20 | *2033* | 271,000 | 10,609 |
| Sludge Pumping Building Scum Ejector # 2 | SPE 2 | 2013 | $150,000 | 20 | *2033* | 271,000 | 10,609 |
| Sludge Processing Building Odor System | SPO 1 | 2013 | $50,000 | 20 | *2033* | 90,000 | 3,523 |
| Raw Sewage Pump # 2+ Controls | RSP 2 | 2013 | $90,000 | 20 | *2033* | 163,000 | 6,400 |
| Roll Off Truck # 111 | | 2013 | **$177,000** | **23** | *2036* | 349,000 | 11,400 |
| Grit Chamber Screw Conveyor # 1 | GCS 1 | 2013 | $50,000 | 23 | *2036* | 99,000 | 3,237 |
| Grit Chamber Screw Conveyor # 2 | GCS 2 | 2013 | $50,000 | 23 | *2036* | 99,000 | 3,237 |
| Secondary Clarifier Drive Rehab (1 Units) | | 2013 | $80,000 | 24 | *2037* | 163,000 | 5,039 |
| Electrical | | 2013 | $300,000 | 24 | *2037* | 610,000 | 18,857 |
| **TOTALS PLANT CEF** | | | **$19,264,000** | | | **$34,598,000** | **$1,453,329** |

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|---|---|---|---|---|---|---|---|
| | **Schedule D - CAPITAL REPLACEMENT SCHEDULE** | | | | | | |
| | **NASHUA WASTEWATER FACILITY** | | | | | | |
| | | **FISCAL YEAR 2013** | | | | | |
| **Assumptions:** | | | | | | | |
| Savings Interest Inflation Rates Compounded Annually | | | | | | **Savings Rate:** | 2.5% |
| Future Value is the Inflation Factor | | | | | | **Inflation Rate:** | 3.0% |
| Annual Reserve Payment is Discounted by Savings Rate | | | | | | | |
| **COLLECTION SYSTEM CAPITAL EQUIPMENT FUND** | | | | | | | |
| Vacuum Truck 87 | VAC87 | 2000 | $200,000 | 13 | *2013* | 294,000 | 19,400 |
| Fulton Street PS | FPS | 1995 | $180,000 | 19 | *2014* | 316,000 | 13,200 |
| Pump Station Pumps (4) | PSP | 1995 | $70,000 | 19 | *2014* | 123,000 | 5,100 |
| Spaulding Street PS | SPS | 1995 | $180,000 | 19 | *2014* | 316,000 | 13,200 |
| Pump Station Pumps (3) | PSP | 1995 | $60,000 | 19 | *2014* | 105,000 | 4,400 |
| Truck 62 - ' 04 Chevy 2WD- Plant | | 2004 | $12,000 | 10 | *2014* | 16,000 | 1,400 |
| Truck 86 - ' 05 Ford | | 2004 | $12,000 | 11 | *2015* | 17,000 | 1,400 |
| National Street PS (Sandy Pond) | NPS | 1995 | $350,000 | 20 | *2015* | 632,000 | 24,700 |
| Truck 136 - 1/2 Ton Chevy w/crane | | 2004 | $20,000 | 12 | *2016* | 29,000 | 2,100 |
| Truck 135 - 3/4 Ton Chevy | | 2004 | $15,000 | 12 | *2016* | 21,000 | 1,500 |
| Truck 176- Ford F350 | | 2004 | $19,000 | 12 | *2016* | 27,000 | 2,000 |
| Collection Truck 82 (1 Ton w/ Crane) | | 2004 | $25,000 | 13 | *2017* | 37,000 | 2,400 |
| TV Video Truck 112 | TVT 1 | 2002 | $110,000 | 15 | *2017* | 171,000 | 9,500 |
| Truck 4 - CB Cleaner w/ Clamshell Bucket | | 2004 | $40,000 | 14 | *2018* | 61,000 | 3,700 |
| Kubota Tractor | | 2004 | $15,000 | 15 | *2019* | 23,000 | 1,300 |
| Street Sweeper | | 2004 | $90,000 | 15 | *2019* | 140,000 | 7,800 |
| Vacuum Truck 171 | VST 171 | 2005 | $200,000 | 15 | *2020* | 312,000 | 17,400 |
| Portable Generator (big one) | | 2000 | $20,000 | 20 | *2020* | 36,000 | 1,400 |
| Watson Street PS | WPS | 1995 | $350,000 | 25 | *2020* | 733,000 | 21,500 |
| 6" Dewatering Pump (Flood Relief) | | 2004 | $5,000 | 20 | *2024* | 9,000 | 400 |
| **TOTAL COLLECTION SYSTEM CEF** | | | **$680,000** | | | **$1,253,000** | **$153,800** |

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|---|---|---|---|---|---|---|---|
| | **Schedule D - CAPITAL REPLACEMENT SCHEDULE** | | | | | | |
| | **NASHUA WASTEWATER FACILITY** | | | | | | |
| | | **FISCAL YEAR 2013** | | | | | |
| | | | | | | | |
| **Assumptions:** | | | | | | | |
| Savings Interest Inflation Rates Compounded Annually | | | | | | **Savings Rate:** | 2.5% |
| Future Value is the Inflation Factor | | | | | | **Inflation Rate:** | 3.0% |
| Annual Reserve Payment is Discounted by Savings Rate | | | | | | | |
| **TOTAL CEF** | | | **$19,944,000** | | | **$35,851,000** | **$1,607,129** |

City of Nashua
Debt Service Schedule
FY2014 through FY2020

Schedule E

**EXISTING DEBT**

| Line No. | Project | Debt Amount | Debt Type | FY2014 | FY2015 | FY2016 | FY2017 | FY2018 | FY2019 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Sewer Component Refunding | $ 186,478 | SRF | $ 15,735 | $ 14,970 | $ - | $ - | $ - | $ - |
| 2 | | | | | | | | | |
| 3 | Sludge Digestor | $ 9,225,408 | SRF | $ 626,000 | $ 605,409 | $ 584,818 | $ 564,227 | $ 543,635 | $ 523,043 |
| 4 | | | | | | | | | |
| 5 | Wet Weather Facility | $ 14,700,000 | SRF | 1,103,852 | 1,082,155 | 1,060,458 | 1,038,761 | 1,017,064 | 995,366 |
| 6 | | | | | | | | | |
| 7 | Haines Street | $ 676,025 | SRF | 52,686 | 51,637 | 50,588 | 49,539 | 48,490 | 47,440 |
| 8 | | | | | | | | | |
| 9 | Net Metering | $ 249,980 | SRF | 29,363 | 28,878 | 28,393 | 27,908 | 27,423 | 26,938 |
| 10 | | | | | | | | | |
| 11 | Storage Tank | $ 5,764,964 | Bonds | 460,511 | 460,604 | 450,238 | 439,871 | 426,915 | 413,958 |
| 12 | | | | | | | | | |
| 13 | Aeration Blowers & Tank Upgrade | $ 4,160,973 | Bonds | 332,383 | 332,450 | 324,968 | 317,487 | 308,134 | 298,782 |
| 14 | | | | | | | | | |
| 15 | Dewatering Equipment Replacement | $ 2,864,898 | Bonds | 255,545 | 255,596 | 249,844 | 244,092 | 236,901 | 229,710 |
| 16 | | | | | | | | | |
| 17 | **Subtotal - Existing Debt Service** | | | **$ 2,876,075** | **$ 2,831,700** | **$ 2,749,308** | **$ 2,681,884** | **$ 2,608,562** | **$ 2,535,238** |
| 18 | | | | | | | | | |
| 19 | | | | | | | | | |

**NEW DEBT**

| | | Debt Amount | | FY2014 | FY2015 | FY2016 | FY2017 | FY2018 | FY2019 |
|---|---|---|---|---|---|---|---|---|---|
| 20 | | | | | | | | | |
| 21 | | | | | | | | | |
| 22 | | | | | | | | | |
| 23 | | | | | | | | | |
| 24 | Disinfection Facility | $ 19,625,000 | SRF | $ - | $ - | $ 1,515,050 | $ 1,488,360 | $ 1,461,670 | $ 1,434,980 |
| 25 | | | | | | | | | |
| 26 | Harbor Ave | $ 5,000,000 | SRF | 386,040 | 378,880 | 371,720 | 364,560 | 357,400 | 350,240 |
| 27 | | | | | | | | | |
| 28 | Dewatering Equipment | $ 2,701,618 | Bonds | - | 208,565 | 204,891 | 201,217 | 197,542 | 193,868 |
| 29 | | | | | | | | | |
| 30 | Capital Equipment | $ 2,572,000 | Bonds | - | 205,760 | 201,902 | 198,044 | 194,186 | 190,328 |
| 31 | | | | | | | | | |
| 32 | **Subtotal - New Debt Service** | | | **$ 386,040** | **$ 793,205** | **$ 2,293,563** | **$ 2,252,181** | **$ 2,210,798** | **$ 2,169,416** |
| | | | | | | | | | |
| | **Total Debt Service** | | | **$ 3,262,115** | **$ 3,624,905** | **$ 5,042,870** | **$ 4,934,065** | **$ 4,819,360** | **$ 4,704,654** |

**City of Nashua**
**Analysis of Wastewater Fund**
**FY2002 to FY2014**

**Schedule F**

| Line No. | Fiscal Year | | Year End Balance | Rate Change | % Change | Type of Rate Change | Volumetric Change |
|---|---|---|---|---|---|---|---|
| 1 | 2002 | | $ 24,023,769 | | | | |
| 2 | 2003 | | $ 24,007,147 | | | | |
| 3 | 2004 | | $ 25,885,082 | (Decrease) | -27% | Volumetric Rate Only | $1.66 to $1.22 |
| 4 | 2005 | | $ 26,563,313 | | | | |
| 5 | 2006 | | $ 25,038,320 | | | | |
| 6 | 2007 | | $ 13,463,254 | | | | |
| 7 | 2008 | | $ 1,036,825 | | | | |
| 8 | 2009 | | $ (6,211,530) | | | | |
| 9 | 2010 | | $ 8,629,973 | Increase | 27% | Volumetric Rate Only | $1.22 to $1.55 |
| 10 | 2011 | | $ 4,608,016 | | | | |
| 11 | 2012 | | $ 5,044,891 | Increase | 15% | Demand and Volumetric | $1.55 to $1.78 |
| 12 | 2013 | | $ 5,500,000 | | | | |
| 13 | 2014 | Est | $ 960,000 | Increase | 15% | Demand and Volumetric | $1.78 to $2.05 |