



REPORT

LEGISLATIVE REFERENCE BUREAU

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27.

Water Works, 2015

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27. Water Works

\$85,584,403

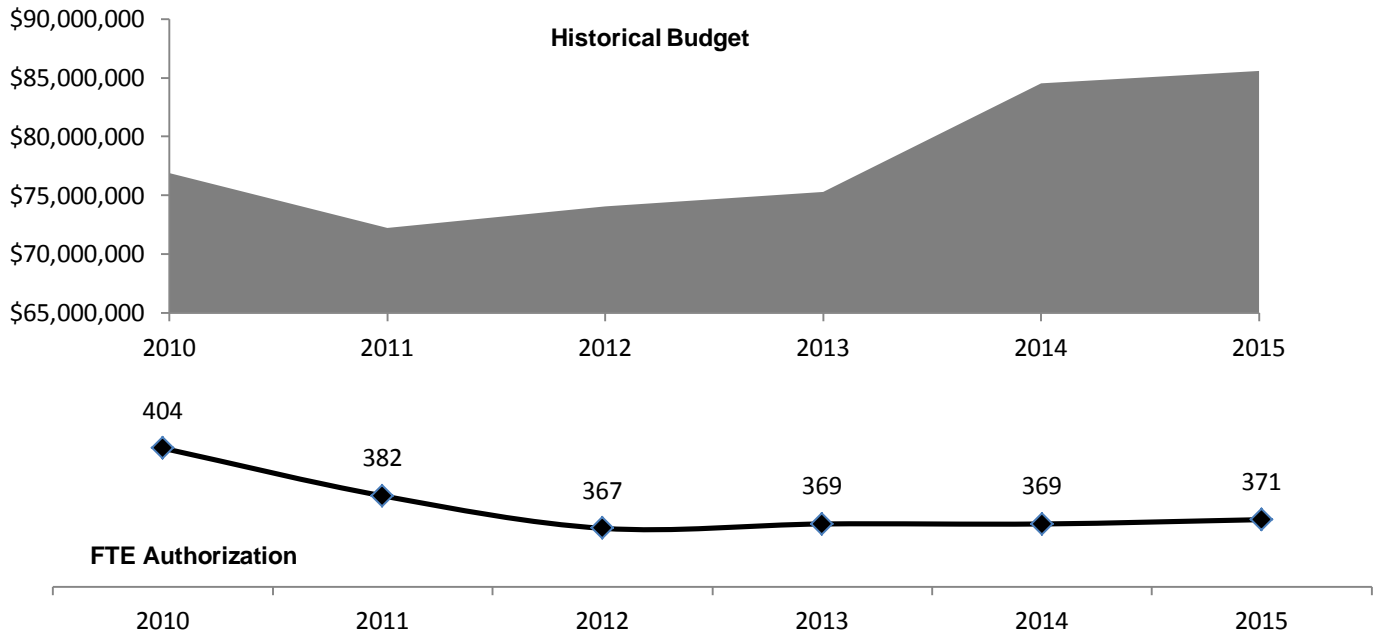
Proposed Department Budget

\$1,054,960

Nominal Change in Proposed Department Budget

1.25%

Percent Change in Proposed Department Budget



0.5%

Percent Change in FTE 2014 to 2015 Proposed

2

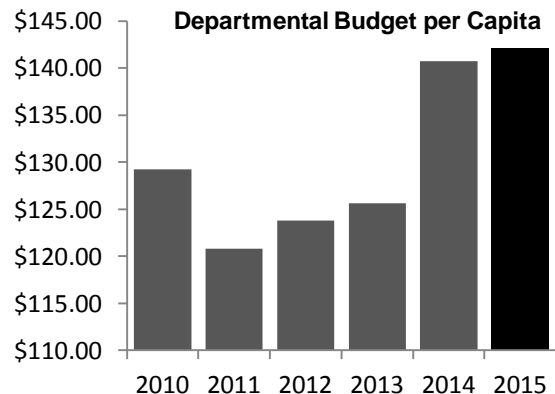
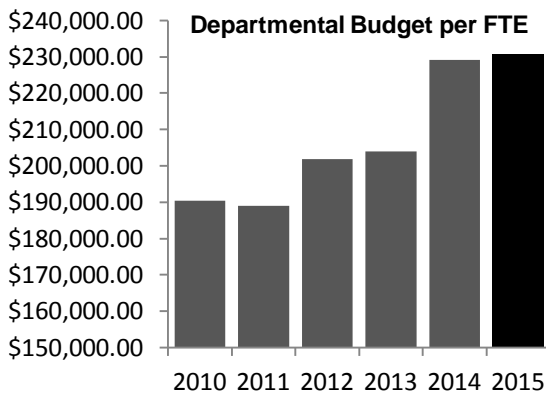
Nominal Change in FTE 2014 to 2015 Proposed

39

Vacant Positions

47%

% Eligible for Retirement within 10 years



11.5%

The percent of an authorized water rate increase, likely to be implemented before the end of 2014. No rate increase is planned for 2015.

\$1.15 million

The cost to significantly extend the useful life of Water's \$51 million ozonation system.

40%

The percent increase in actual operating expenditures between 2007 and 2013, up \$12,923,016.

\$2.5 million

The total cost estimate to repair the Texas Avenue Intake Pipe.

168%

The percent increase in capital improvements borrowing, at \$10.74 million for 2015, up from \$4 million.

\$8.5 million

The estimated cost to repair 852 water main breaks during the first 8 months of 2014.

\$399,717

The amount of savings from Automating the Howard Treatment Plant.

\$19.5 million

The amount budgeted in 2015 to replace 15 miles of water mains mandated by the PSC.

\$785,494

The amount of additional costs in 2015 to meet requirement to replace 15 miles of water mains.

\$83.6 million

The amount projected in 2015 for water sale revenues, up 7.5% or \$5.8 million.

Salary & Wage	Fringe Benefits	Operations
\$438,258 Proposed change	-\$947,138 Proposed change	\$1,808,700 Proposed change
\$18,658,500 Proposed Total	\$9,051,503 Proposed Total	\$48,256,700 Proposed Total
21.80% % of Total Department Budget	10.58% % of Total Department Budget	56.38% % of Total Department Budget

I. INITIATIVES AND PROGRAMS.

1. Water Rates.

Water Works has recently been more assertive in requesting rate reviews from the Wisconsin Public Service Commission (PSC). By the time the utility requested a Full Rate Review in 2009 based in PSC's benchmark rate of return, the utility's cash reserves were so depleted capital improvement projects were being delayed. When the rate increase was awarded – 20.83% - concerns from customers, especially wholesale customers, delayed implementation of the increase until February, 2011, further stressing Water's financial vitality.

After the 20.83% rate increase was implemented in 2011, Water was awarded a Simplified Rate Case (SRC) of 3% in both June, 2013 and June, 2014. An SRC is similar to a "cost-of-living" adjustment and requires less PSC scrutiny.

Water has been awarded a Full Rate Review increase of approximately 11.5% based on a targeted 5.38% rate of return, likely to be implemented before the end of 2014. Water's actual rate of return in 2013 was 1.96% and 2014's rate of return is estimated to be 1.7%. Both are substantially below PSC's target rate.

No rate increase is planned for 2015, and the utility expects to seek an SRC increase (typically 3%) in each of the subsequent 5 years, 2016-2020. Water consumption is declining in general at about 2.5% per year, so 3% rate increases should at least prevent actual revenue declines during the period.

The utility expects water sale revenue for 2015 to be up \$5.8 million (7.5%) over 2014 based on the 11.5% rate increase.

2. Texas Avenue Intake Pipe.

In May 17, 2014, cracks discovered in a 72-inch water intake pipe forced the shutdown of the Texas Avenue pumping station, and the Howard Treatment Plant which depends solely on the pumping station for water. Water Works increased the pumping pressure so water from the remaining Linnwood Treatment Plat could be pumped the customers usually supplied from the Howard Pant.

While water service was not interrupted, the increased water pressure precipitated a rash of water main breaks in the city. Eighty-two main breaks were ultimately attributed to the Howard plat shutdown before the intake pipe was repaired on June 27 and the treatment facility was back online.

The cost of repairing the steel intake pipe, which had corroded from natural causes, was \$175,000, although an additional \$1.5 million was spent to reline the pipe with carbon fiber to prevent future leaks and extend the pipe's useful life. It is estimated each main break cost \$10,000 to repair, suggesting the Texas Avenue Intake Pipe leak also cost Water \$820,000 to repair broken mains caused by increasing waterb pressure so the Linnwood Plant could supply water throughout the system.

Total cost of the Texas Avenue Intake Pipe break might be estimated at \$2,495,000 including repair, relining and the cost of repairing 82 water mains.

3. Frigid Winter Main Breaks.

Water main breaks more than doubled – they were up 112% - from the utility's 10-year average for the first 4 months of 2014 due to the frigid weather. Water had 615 breaks during the period. The 10-year average is 290. With each water main break estimated to cost \$10,000 to repair, the 325 incremental breaks alone cost \$3,250,000. There are estimates that the total "winter" main breaks cost \$5.3 million.

4. PSC's Main Replacement Mandate.

In recent years, Water has replaced only 16.5 miles of mains – 1.3 miles in 2012, 7.2 miles in 2013 and 8 miles in 2014. The 852 main breaks during the first 8 months of 2014 have raised concerns over Water's slow replacement pace and the utility's ability to properly manage its capital improvement needs. .

As a result, PSC has conditioned its rate increase award with a requirement to replace 15 miles of water mains each year from 2015 to 2017, 18 miles in 2018 and 2019, and 20 miles in 2020. In addition, Water must hire an independent consultant to conduct a main replacement study, submit a report on the condition of all mains and report its progress on the mandatory replacement program.

The Proposed Budget includes funding to comply with PSC's mandate. Water will replace 15 miles of mains in 2015 at a cost of \$19.5 million. Total proposed capital improvements spending is \$24.5 million, and the utility plans to borrow \$10,736,000.

Because Water lacks the engineering capacity to design the full 15 miles of main replacement, 10 miles will be designed in-house, and the remaining 5 miles will be done by outside consultants.

Water expects to spend roughly \$785,494 in salaries, equipment and operating costs, including an additional \$65,000 for consultants to meet the main replacement mandate.

4. Debt Financed Capital Improvements.

Table 27.1. Debt Financing of Capital Financing.

Year	Debt Financed (million)	% of Capital Projects	Mains Replaced & Relined	% Change	Other	% Change	Total.
2010	\$0	0%	\$9,728,663	-30.9%	\$7,097,018	35.5%	\$16,831,549
2011	\$11.625	96.8%	\$3,909,320	-59.8%	\$8,260,888	16.4%	\$12,004,175
2012	\$4.0	39.1%	\$2,595,517	-33.6%	\$7,674,463	-7.1%	\$10,232,691
2013	\$5.342	35.2%	\$8,365,752	222.3%	\$6,851,476	-10.7%	\$15,201,032
2014	\$4.0	29.8%	\$11,500,000	37.5%	\$2,325,000	-66.1%	\$13,425,000
2015	\$10.736	43.0%	\$19,500,000	69.6%	\$5,450,000	134.4%	\$24,950,000

PSC's main replacement requirement will likely cause Water to borrow a greater portion of its capital improvements needs. Before 2011, Water rarely borrowed to make "routine" capital improvements, but as Table 27.1 indicates, since 2011 has borrowed or is budgeted to borrow \$35.7 million or 47.1% of the \$75.8 million in capital improvements. In 2011, following a period where Water made fewer rate increase requests, Water borrowed 96.8% of its capital improvements budget.

Mindful of Water's possible greater need for debt financing of capital improvements, LRB calculated the utility's Current Ratio to determine its liquidity, and its debt coverage ratio to determine its capacity for debt repayment.

As suggested by Table 27.2, Water's liquidity as measured by its current ratio, while adequate, is low, especially as projected for 2014 and 2015. A current ratio of 2 is often viewed as evidence of financial vitality.

Table 27.2. Current Ratio.

Year	Net Fund Increase	Cash Reserves YE	Current Ratio
2010	(\$13,914,168)	\$4,174,000	1.0
2011	\$13,331,603	\$4,052,000	1.5
2012	\$8,838,344	\$5,826,000	1.7
2013	\$1,682,010	\$9,063,000	1.6
2014	(\$4,978,883)	\$2,608,557	1.4 *
2015	(\$4,713,403)	(\$3,704,846)	1.2*

* Estimated by Legislative Reference Bureau

Operating losses in 2009 and 2010 (before rate increase recovery) and projected operating losses for 2014 and 2015 indicate that during these years Water had no funds available for debt service and had to (will have to) draw on reserves to pay its annual debt obligations. However, during 2011 and 2012, when rates were properly matched with the utility's costs, Water's debt coverage ratio showed solid financial strength, with the utility "earning" \$3.13 for every \$1 it needs for debt service.

Table 27.3. Debt Coverage Ratio

Year	Bond Debt	Operating Income	Debt Coverage
2009	\$24,685,000	(\$6,882,962)	(1.37)
2010	\$21,915,000	(\$8,814,168)	(1.73)
2011	\$29,551,000	\$19,604,603	3.13
2012	\$25,236,000	\$15,046,344	2.42
2013	\$26,627,000	\$6,932,010	1.32
2014	\$24,832,000*	(\$234,443)*	(0.04)
2015	\$30,606,000*	(\$1,013,403)*	(0.19)

* Estimated by Legislative Reference Bureau

5. Automation of Howard Plant.

Water has been preparing for 3-4 years to “automate” the Howard Treatment Plant and operate it remotely from the Linnwood Plant with the Howard facility staffed solely with a security guard. Howard is the newer plant (63-65 years old), and the water treatment process at the 2 facilities are identical. Mechanical equipment has been updated to operate flawlessly.

The Howard Plant has just completed the first month of a 6-month trial period. The plant is being staffed for only the day shift Monday through Friday. Personnel are monitoring operations and taking no direct action as the Howard facility is being remotely operated from the Linnwood Plant.

Automating the Howard Plant operations is expected to save \$399,717 in salaries during 2015.

6. Automatic Meter Reader Replacement (AMR).

Water’s program to replace its Automatic Meter Readers, which enable the utility to read its meters simply by driving passed, stalled somewhat during 2014 allowing the utility to save roughly \$500,000 in 2015 by installing meters in 2015 that were purchased in prior years. Meter replacement was delayed in part due to the severe winter weather and in part because Water has already replace readily accessible meters and is now working to replace meters that are harder to access.

Water expects to complete the accelerated portion of its AMR program by late 2017 and then begin “routine” replacement of 6,500 meters each year to maintain 20-year replacement cycle.

7. Ozonation—Useful Life Extension.

Although the Water Works’ entire ozonation system, which is designed to prevent cryptosporidium, cost approximately \$51 million, Water expects to complete the final \$175,000 phase of a \$1,150,000 rejuvenation to significantly extend the system’s useful life by replacing the dielectrics, the devices that generate the ozone through electrical discharge which is infused into the water to destroy the bacteria and micro-organisms that can cause cryptosporidium.

Six of 7 ozonation units have been rejuvenated at a cost of \$975,000, and the final unit the Linnwood Plant is scheduled for 2015.

8. Sale of the Kinnickinnic Meter Facility.

Water sold its Kinnickinnic Meter Facility to the Election Commission in September, 2014, for \$500,000 to be paid in installments of \$50,000 per annum for 10 years. Although the facility had a \$700,000 book value, Water thought the sale price was reasonable because the transaction stipulates the Election Commission with allow free access and use by Water of the meter testing facility inside the building. This testing facility calibrates meters for accurate flow monitoring to ensure accurate customer charges. Water estimates the cost to replicate the Kinnickinnic meter testing facility elsewhere would cost roughly \$2 million.

II. EXPENDITURES.

Table 27.4. Changes in Expenditure Amounts by Account.

Expenditure Account	2013 Actual	2014 Adopted Budget	% Change	2015 Proposed Budget	% Change
Salaries and Wages	\$16,711,190	\$18,220,242	9.03%	\$18,658,500	2.41%
Fringe Benefits	\$6,773,715	\$9,998,641	47.61%	\$9,051,503	-9.47%
Operating Expenditures	\$45,162,110	\$46,448,000	2.85%	\$48,256,700	3.89%
Equipment Purchases	\$1,364,319	\$1,967,000	44.17%	\$2,517,700	28.00%
Special Funds	\$5,279,963	\$7,895,560	49.54%	\$7,100,000	-10.08%
Total Operating Budget	\$75,291,297	\$84,529,443	12.27%	\$85,584,403	1.25%

1. Budget Summary.

The 2015 Proposed Budget for Water Works of is \$85,584,403, up \$1,054,960, or 1.25% from the 2014 Adopted Budget of \$84,529,443.

2. Personnel Costs.

Personnel Costs are up \$438,258 (2.41%). Water's modest increase in personnel costs from 2014 to 2015 of \$438,258, of 2.41%, belies the significant reshuffling of staff. Table 27.5 summarizes these changes, which include the elimination of 12 positions due to the automation of the Howard Treatment Plant saving \$399,717, an increase of 4 positions in the engineering and distribution divisions increasing costs by \$488,494, the net addition of 10 positions in various divisions increasing costs \$390,393 and resulting in an increase of 2 authorized positions at the utility.

Total changes in position reclassifications, overtime, pay rate increases, furlough and personnel cost adjustments of \$320,088 are 73% of the increase and account for all but \$118,170 of the \$438,258 overall increase.

3. Fringe Benefits.

The Proposed 2015 Budget changes the Fringe Benefit multiplier from 55.44% in 2014 to 48.51%, resulting in a decline of \$947,138, or -9.47%, despite a \$438,258 increase in Salary and Wage costs.

4. Operating Expenditures.

Projected 2015 Operating Expenditures of \$48,256,700 are up \$1,808,700, or 3.89%, from the 2014 Adopted Budget of \$46,448,000. Operating Expenditures have been trending upward for the past 7 years. Actual 2013 expenditures were up \$12,923,016, or 40%, since 2007.

Table 27.5. Changes in Payroll Costs Excluding Fringe Benefits.

Category	POS	Change
Howard Plant Automation	(12)	(\$399,717)
MAIN Replacement Staffing	4	\$468,494
Other Position Changes		
System & Project Manager	1	\$66,208
Distribution Systems Manager	(1)	(\$62,123)
Program Assistant II	1	\$42,118
Hydrant Service Worker	(1)	(\$40,287)
Water Utility Laborer	19	\$752,182
Water Distribution Laborer	(11)	(\$416,592)
Meter Field Supervisor (0.5 FTE)	1	\$28,041
Meter Reading Spec. (0.5 FTE)	1	\$20,846
Total Other Position Changes	10	\$390,393
Various Position Reclassifications		\$23,128
Overtime		\$55,000
Pay Rate Changes		\$59,896
Allocated to Capital Improvements Budget		(\$341,000)
Furlough		\$185,468
Personnel Cost Adjustment		(\$3,404)
Total Change	2	\$438,258

Table 27.6. 2014 Operating Expenditure Changes.

Category	Change	% Change
AMR Program	(\$504,200)	-8.49%
Property Services	\$681,000	4.28%
Energy	\$651,200	10.14%
Professional Services	\$641,500	15.18%
Infrastructure Services	\$424,000	9.66%
Information Technology Services	\$254,700	13.05%
Vehicle Repair Services	\$169,000	19.93%
Non-Vehicle Equipment Rental	\$10,000	12.82%
Tools & Machinery Parts	\$8,000	5.17%
Other Operating Services	(\$16,500)	-3.36%
General Office Expense	(\$33,000)	-4.38%
Other Operating Supplies	(\$477,000)	-13.00%
Total Changes	\$1,808,700	3.89%

AMR (Automatic Meter Reader Replacement) Program.

AMR (Automatic Meter Reader Replacement) Program is down \$504,200 (-8.49%). Reduction is the result of decreases in Tools & Machinery Parts, Construction Supplies and Other Operating Supplies as Water draws upon unused inventory and supplies from 2014 to replace meters in 2015.

Property Services.

Property Services are up \$681,000 (4.28%). Increase due to \$295,000 increase in PILOT payment and \$386,000 to align 2015 projections with actual 2012 and 2013 results.

Energy.

Energy cost is up \$651,000 (10.14%). Increase due to anticipated 2015 rate increases.

Professional Services.

Professional Services are up \$641,500 (15.18%). Increase due to anticipated increases in water main inspection, telephone hotline and inventory management costs.

Infrastructure Services up \$424,000 – 9.66%.

Infrastructure Services are up \$424,000 (9.66%). Increase due to anticipated increases in pavement restoration for water main repair and hydrant repair costs.

Information Technology Services.

Information Technology Services are up \$254,700 (13.05%). Increase due to engineering needs for increased water main replacement mandated by the PSC, new maintenance contracts for enQuesta Link and ESRI, upgrade-Business and SCADA and automation needs at the Linnwood and Howard Treatment Plants.

Vehicle Repair Services.

Vehicle Repair Services are up \$169,000 (19.93%). Increase due to anticipated increases in gasoline, motor oil and part costs.

Non-Vehicle Equipment Rental and Tools & Machinery Parts.

Non-Vehicle Equipment Rental and Tools & Machinery Parts are up \$18,000 (7.74%). Increase due to aligning 2015 projections with actual 2012 and 2013 results.

Other. Operating Services and Gen. Office Expenses.

Other. Operating Services and Gen. Office Expenses combined are down \$49,500 (-3.98%). Decrease due to Howard Plant automation and improved training practices.

Other Operating Supplies.

Other Operating Supplies are down (\$477,000) (-13%). Decrease due to fully stocked supply inventories in anticipation of the Howard Plat automation.

5. Equipment Purchases.

Equipment Purchases are up \$550,700 (28%). Seventy-nine percent of this increase comes from the engineering division - \$163,000 to gear up to engineer the main replacement pace mandated by PSC, \$155,000 to provide engineering software used by all other DPW divisions and \$120,000 for 24 new computer workstations.

6. Special Funds.

Special Funds are down \$795,000 (-10.08%). The 2015 Proposed Budget for Special Funds of \$7,100,000 is down \$795,000, or -10.08%, from 2014's Adopted Budget amount of \$7,895,560. The decrease comes from a \$920,000 (-14.79%) decrease in debt service, and a \$124,440 (8.43%) increase in pension contribution.

III. PERSONNEL.

Table 27.7. Changes in Full-Time Equivalent (FTE) and Authorized Positions.

Position Category	2013 Actual Spending	2014 Adopted Budget	Change	2015 Proposed Budget	Change
O&M FTEs	343.72	345.07	0.4%	343.98	-0.3%
Non-O&M FTEs	8.95	10.60	NA	16.44	55.1%
Total Authorized Positions	369.00	369.00	0.0%	371.00	0.5%

1. Personnel Changes.

The 2015 Proposed Budget increases the utility's position authority from 369 to 371, by adding and eliminating many positions as noted in Table 27.5.

2. Vacancies

There are currently 39 vacant positions in Water, 33 the utility is actively seeking to fill and 6 that are on hold while Water considers reclassifications or other personnel shifting needs. Of the 33 actively sought to fill, 18 positions are hard to fill—11 Meter Technician, 3 Laborers and 4 Machine Repair Persons—either because qualified candidates are difficult to find, or the position is a “revolving door” for employees who are either promoted or leave the department altogether for better paying, private-sector jobs.

Table 27.8. Summary of Vacant Positions, 2015.

POS.	Position	Est. Salary	Date Vacated	Approved to Fill
Active Position Vacancies to be Filled				
1	Program Assistant II	\$42,118	New Position	1/1/2014
11	Meter Technician	\$449,810	12/09/13 thru 8/27/14	2/5/14 thru 9/17/14
1	Inventory Assistant III	\$42,906	4/25/2014	5/7/2014
1	Chief Repair Worker	\$51,258	9/15/2014	10/08/14*
4	Repair Worker	\$173,590	5/10 thru 9/29/2014	5/30 thru 10/08/14
2	Utility Investigators	\$90,693	New Position	1/1/2014
3	Laborer	\$118,766	New Position	1/1/2014
1	Communication Assistant V	\$42,635	9/6/2014	9/17/2014
1	Network Coordinator Associate	\$44,857	9/2/2013	9/19/2013
4	Machine Repair Person	\$203,570	9/9/13 thru 4/30/14	11/21/13 thru 5/30/14
2	Sr. Plant Treatment Operator	\$114,407	4/30/14 thru 5/31/14	5/7/14 thru 9/17/14
1	Maintenance Supervisor	\$50,959	N/A	9/17/2014
1	Maintenance Manager	\$58,075	7/26/2014	9/17/2014
33	Total	\$1,483,643		
Position Vacancies on Hold				
1	Water Meter Specialist	\$45,198	7/7/2014	
3	Distribution Repair Worker II	\$130,193	7/6/14 thru 9/19/14	
1	Water Plant Treatment Operator	\$57,204	6/27/2014	
1	Water Maintenance Manager	\$58,075	7/26/2014	
6	Total	\$290,669		

IV. SPECIAL PURPOSE ACCOUNTS (SPA).

None.

V. REVENUES.

Projected total revenues for 2015 of \$93.5 million are up \$6.0 million or 6.8% above projected revenues for 2014 of \$87.5 million, chiefly due to an expected 11.5% water rate increase which is expected to push water sales in 2015 up \$5.9 million to \$83.6 million, or 7.5% greater than 2014's Adopted Budget projections of \$77.8.

Table 27.8. Changes in Revenue by Category.

Revenue Category	2013 Actual	2014 Adopted Budget	Change	2015 Proposed Budget	Change
Water Sales					
Residential	\$32,259,756	\$32,365,000	0.3%	\$34,784,000	7.5%
Commercial - Industrial	\$24,661,777	\$24,635,000	-0.1%	\$26,591,000	7.9%
Other Communities	\$9,690,921	\$10,101,000	4.2%	\$10,125,000	0.2%
Other	11,025,772	10,657,000	-3.3%	12,110,000	13.6%
Total Water Sales	\$77,638,226	\$77,758,000	0.2%	\$83,610,000	7.5%
Other Revenues	\$8,016,537	\$9,050,000	12.9%	\$8,775,000	-3.0%
Other Income	1,176,780	692,000	-41.2%	1,100,000	59.0%
TL Gen Purpose Revenues	\$86,831,543	\$87,500,000	0.8%	\$93,485,000	6.8%

VI. CAPITAL PROJECTS.

The 2015 Proposed Budget includes \$24.95 million for 7 capital projects, an increase of \$11.1 million (80.5%) from the 2014 Budget. Capital projects for 2015 are summarized in Table 27.9 and the discussion that follows.

The Milwaukee Water Works has developed a revised 6-year capital plan that will address concerns from the PSC about the annual level of water main replacement. MWW will replace 15 miles of water mains in the years 2015 – 2017, 18 miles of main in the years 2018 – 2019, and 20 miles of mains in 2020. The plan was submitted to the PSC in September 2014. State statutes give the PSC the legal authority to regulate MWW. The PSC also has the ability to impose forfeitures and to open or reopen dockets to impose additional conditions.

To meet the needs of the increase water main program, MWW will be using consultants for the survey and design of 5 miles of main replacements in 2015. MWW will monitor the contracts to determine the most cost-effective strategy for survey and design work.

Table 27.9. Expenditures for Primary Capital Programs.

Program	2009 Actual	2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Budget	2015 Proposed
Distribution System	\$14,019,719	\$9,734,531	\$3,743,287	\$2,558,228	\$8,365,752	\$11,500,000	\$19,500,000
Plant Building Improvements	\$1,984,244	\$814,375	\$340,116	\$1,095,148	\$1,073,564	\$100,000	\$850,000
Treatment Improvements	\$421,748	\$681,969	\$249,533	\$535,906	\$1,915,475	\$925,000	\$1,350,000
Pump Facilities	\$584,073	\$2,254,680	\$754,183	\$5,350,759	\$2,179,381	\$100,000	\$50,000
Storage Facilities	\$1,523,366	\$1,373,128	\$1,088,150	\$32,809	\$47,276	\$0	\$2,500,000
Backup Power Generation	\$723,836	\$1,070,043	\$5,744,796	\$646,741	\$1,635,780	\$0	\$0
Meter Shop Improvements	\$0	\$902,823	\$84,110	\$13,100	\$0	\$700,000	\$700,000
Contingencies	\$0	\$0	\$0	\$0	\$0	\$500,000	\$0
Total	\$19,256,986	\$15,929,267	\$11,920,065	\$9,270,000	\$15,217,228	\$13,825,000	\$24,950,000

The water main distribution system saw large spikes in the number of water main breaks in the winter of 2013-2014 and the summer of 2014. These spikes were caused by an exceptionally cold winter and a leak at the Texas Avenue pumping station. To fix the leak, the Howard treatment plant had to be taken out of service. The resulting increase in pressure necessary to meet the needs of the entire service area from the Linnwood plant caused an unusually high number of main breaks. Although the number of main breaks can be highly variable from year to year, the number of main breaks per one hundred feet of main has been trending downward for at least 10 years.

1. Currently-Funded Projects.

Water Main Program, \$19,500,000.

The 2015 Proposed Budget includes \$19.5 million for the water main program, an increase of \$8.0 million (69.6%) from the 2014 Budget. MWW anticipates replacing 15 miles of water mains in 2015.

Since 2001, the MWW has received an average of \$12.3 million in funding for its distribution system. Because of revenue losses in 2010, MWW began to scale back its capital program. A total of \$9.7 million was expended in 2010 for water main replacement. In 2011 and 2012, MWW expended \$3.7 million and \$2.6 million respectively, on water main replacement. Expenditures in 2013 totaled \$8,319,621. The 2014 Budget contained \$11.5 million for main replacement

MWW continues to expend the majority of its water main replacement funding on water mains that were constructed between 1946 and 1963. These water mains represent the majority of water main breaks in the system.

Linnwood Plant Building Improvements, \$600,000.

Since 2001 this program has received \$9.4 million in funding. Funding has been highly variable. \$1,040,000 was budgeted for this program in 2012. Funding in 2013 (\$150,000) was provided to install skylight filters that will reduce algae growth on treatment filters. No funding was provided in the 2014 Budget. Expenditures in 2013 totaled \$44,133.

The department anticipates requesting additional funding each year from 2016 through 2020. The 6-year capital request is \$7,985,000.

Linnwood Plant Treatment Improvements, \$1,350,000.

Since 2001, \$9.25 million has been budgeted for this program. \$300,000 was budgeted for this program in 2013 to assess and mitigate deficiencies of various steel pipelines associated with the water treatment process. Funding for 2015 will be used for a variety of projects including the continuation of the motor control replacement project, continued dielectric refurbishment and an analysis of the plant residual handling system.

Expenditures in 2013 totaled \$1.8 million. The department anticipates requesting additional funding each year from 2016 through 2020. The 6-year capital request is \$17,435,000.

Howard Plant Building Improvements, \$250,000.

Since 2001, this program has received just over \$2.3 million in funding. The average budgeted amount is \$167,000 per year. \$100,000 was budgeted for this program in 2013 to upgrade aging electrical systems. Proposed funding in 2015 will be used to resurface the concrete driveway.

The department anticipates requesting additional funding in 2016, 2017 and 2020. The 6-year capital request is \$1,800,000.

Pump Facilities Improvements, \$50,000.

This program provides funding to upgrade or replace various aspects of the pumping facilities that aid in the efficient distribution of water throughout the system. Since 2001, this program has received \$23 million in funding. Annual funding is highly variable.

The Proposed Budget provides \$50,000 for improvements to pump facilities, a decrease of \$50,000 (50%) from the 2014 Budget and \$200,000 (80%) from the requested budget. Funding

has been allocated for the Howard substation switchgear.

In 2012, \$2,250,000 was budgeted for this program to perform a physical inspection of the treated water tunnel between the Linnwood Plant and the Riverside pumping station. The last complete inspection of this 7,200-foot tunnel was in 1986. No projects were scheduled for 2013. Expenditures in 2013 totaled \$2.2 million. The department anticipates requesting additional funding each year from 2016 through 2020. The 6-year capital request is \$19,800,000.

Table 27.10. Capital Program Summary, 2015.

Program	2015 Proposed Budget	2014 Actual Budget	Increase (decrease)	% Chng.	6-year Request
Water Main Program	\$19,500,000	\$11,500,000	\$8,000,000	69.6%	\$84,800,000 ¹
Linnwood Plant					
Building Improvements	\$600,000	\$0	\$600,000	----	\$7,985,000
Treatment Improvements	\$1,350,000	\$775,000	\$575,000	74.2%	\$17,435,000
Howard Plant					
Building Improvements	\$250,000	\$100,000	\$150,000	150%	\$1,800,000
Treatment Improvements	\$0	\$150,000	(\$150,000)	-100%	\$6,800,000
Pump Facilities Improvements	\$50,000	\$100,000	(\$50,000)	-50%	\$19,800,000
Storage Facilities Improvements	\$2,500,000	\$0	\$2,500,000	----	\$14,000,000
Meter Shop Improvements	\$700,000	\$700,000	\$0	0%	\$700,000
Capital Project Contingencies	\$0	\$500,000	\$500,000	-100%	\$1,500,000
Total	\$24,950,000	\$13,825,000	\$11,125,000	80.5%	\$154,820,000

¹ As of March 2014. (The request has since been revised to reflect guidance from the PSC)

Storage Facilities Improvements, \$2,500,000.

This program provides funding for the evaluation, elimination or enhancement of the system's water storage capacity. Since 2001, this program has received \$12.2 million in funding. \$200,000 was budgeted for this program in 2012. Funding in 2013 (\$1,400,000) was provided to replace the roof over the Linnwood South Clearwell. No funding was provided in the 2014 Budget.

The department anticipates requesting additional funding in 2016, 2018 and 2020. The 6-year capital request is \$14,000,000.

Meter Shop Improvements, \$700,000.

This program provides funding for improvements to the operations associated with the Milwaukee Water Works Business Section's Water Meter Services. This program first received funding in 2004. Since that time, \$2 million has been budgeted. The recent requests for this program have been intermittent. No funding was provided in 2012 or 2013. Funding was allocation in 2014 for roof replacement.

There were no expenditures in 2013. No additional capital funding was requested after 2015.

2. Unfunded Capital Requests.

Howard Plant Treatment Improvements, \$650,000.

The 2015 Proposed Budget provides no funding for the program. Since 2001, this program has received \$3.3 million in funding. \$100,000 was budgeted for this program in 2013 to replace the effluent valves that control the flow of water through the plant's 8 filters. Funding in 2014 was allocated to replace dielectric tubes in one of the plant's ozone generators. The project is expected to add between 5 and 10 years to the life of the generator.

Howard Avenue is a newer treatment plant and has not needed extensive upgrades in recent years. The annual funding for this program typically has not exceeded \$500,000.

Expenditures in 2013 totaled \$101,090. The department anticipates requesting additional funding each year from 2016 through 2020. The 6-year capital request is \$6,800,000.

3. Project Updates.

There are no projects that are not part of on-going capital programs.

4. Future Capital Requests.

Backup Power Generation

In response to a regional power outage in the Northeast in 2003, the City retained the consulting firm of Black & Veatch to perform an evaluation of the reliability of the MWW's electrical power. The study had several objectives including providing benchmarking data and developing conceptual designs for critical facilities. The study determined that the electrical feeds to MWW's critical facilities are generally reliable. The study strongly recommended, however, that the City consider implementing emergency power at each of its critical facilities. (See CC File Number 061500 for the full report)

This program was first funded in the 2008 Budget when it received \$12.5 million. Since then it has received \$9.25 million in additional funding. \$3.8 million in 2013 provided for the upgrade of the Grange Pumping Station to include backup power generation and the replacement of aging switchgear.

No capital funding was requested for 2015. The department is currently reviewing whether additional power generation facilities are needed to ensure adequate system operation

VII. ISSUES TO CONSIDER.

- 1.** It's clear that Water's financial vitality depends on consistent and regular rate increase from the PSC, and ways to ensure Water seeks these rate increases on a timely basis without regard to political considerations is critical to the utility's success.
- 2.** The fact that the PSC does not consider debt service part of the cost "investment" on which Water is entitled to earn a rate of return could potentially undermine rate increases awarded by the PSC and leaves Water with a evenue stream to repay the debt incurred to comply with the PSC's main replacement mandate.
- 3.** The ability of the Water Works to effectively maintain its infrastructure, which includes the water mains, the treatment plants, and pumping facilities, is directly tied to the development of a rate structure that will generate enough revenue to allow investment in the utility's assets. It is also tied to the utility's ability to successfully get its rate structure approved by the Public Service Commission.
- 4.** The PSC's recent guidance that MWW install a minimum amount of water main each year presents financing challenges. Increasing the replacement of water mains to the level required by the PSC will be challenging for MWW both operationally and financially.

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