

DPW WATER FILTRATION

	FY2012 BUDGETED	FY2012 EXPENDED	FY2013 BUDGETED	FY2013 EXPENDED	FY2014 BUDGETED	FY2014 EXPENDED	FY2015 BUDGETED	FY2016 DEPT REQ	FY2016 TM REC	FY2016 FIN COM REC
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Salaries

5111 Regular	658,212	634,195	660,879	654,988	703,613	674,697	729,056	708,876	708,876	
5130 Overtime	35,000	76,638	53,710	53,968	62,057	59,468	52,000	54,400	54,400	
5135 Uniform Allowance	1,800	795	-	-	1,662	1,662	2,160	2,160	2,160	
5150 Car Allowance	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	
5160 Sick Leave Buy Back	5,450	2,413	5,450	1,239	1,263	1,263	5,000	2,600	2,600	
5163 Holiday Pay	17,736	16,438	18,091	16,967	17,583	17,583	18,822	18,822	18,822	
5180 All Other Salaries	500	480	500	167	838	120	500	500	500	
Total Salaries	722,298	734,559	742,230	730,929	790,616	758,393	811,138	790,958	790,958	

Operating

5210 Energy Utilities	353,000	352,076	383,796	356,535	378,797	378,796.95	360,000	365,000	365,000	
5231 Water Purchase	18,000	18,000	25,980	25,980	33,980	33,979.60	8,000	8,000	8,000	
5240 Repairs and Maintenance	102,525	101,200	126,563	125,034	132,682	131,417.44	123,782	124,947	124,947	
5270 Leases and Contract	31,477	30,297	54,540	52,330	55,826	51,037.49	62,464	67,356	67,356	
5310 Professional Services	-	-	-	-	-	-	-	-	-	
5340 Communications	17,200	16,737	14,785	14,251	14,000	13,738.51	14,000	14,000	14,000	
5420 Office Supplies	2,000	1,913	2,000	1,862	2,000	1,634.93	2,000	2,500	2,500	
5423 All Other Supplies and Exp.	60,542	57,972	54,275	53,576	63,650	55,384.83	53,165	53,105	53,105	
5429 Computer Equipment	-	-	-	-	-	-	-	-	-	
5441 Chemicals	422,500	415,108	449,512	432,420	456,039	450,970.53	483,398	469,550	469,550	
5442 Residual Disposal	49,000	49,000	54,874	45,279	56,392	52,795.31	60,107	62,625	62,625	
5443 Water Assessment	7,710	7,710	7,473	7,473	8,000	6,910.50	8,000	8,000	8,000	
5580 Uniform Allowance	-	-	1,800	1,552	1,800	588.44	-	-	-	
5703 Dues and Memberships	700	697	468	468	700	481.00	700	700	700	
5790 Staff Development/Training	2,951	2,726	3,300	3,089	2,500	2,500.00	2,500	3,000	3,000	
Total Operating	1,067,603	1,053,434	1,179,365	1,119,847	1,206,365	1,180,236	1,178,116	1,178,783	1,178,783	

Capital Outlay

5833 Capital Outlay	19,837	19,468	-	-	-	-	-	-	-	
Total Capital Outlay	19,837	19,468	-							

Total Budget

	1,809,738	1,807,461	1,921,595	1,850,777	1,996,981	1,938,628	1,989,254	1,969,741	1,969,741	-
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	FY2012 BUDGETED	FY2013 BUDGETED	FY2014 BUDGETED	FY2015 BUDGETED	FY2016 DEPT REQ	FY2016 TM REC	FY2016 FIN COM REC
Position	FTE	FTE	FTE	FTE	FTE	FTE	FTE
Chief Water Operator	1	1	1	1	1	1	
Chemist	1	1	1	1	1	1	
Head Filter Operator (HFO)	7	7	7	7	7	7	
Proejct Manager			0.6	0	0	0	
Cross Connection Coordinator	1	1	1	1	1	1	
Total Staffing	10	10	10.6	10	10	10	0

FISCAL YEAR 2016

DPW WATER FILTRATION DEPARTMENT SALARY INFORMATION TOWN MANAGER RECOMMENDED

Regular Salaries

Name	Position	Ann. Date	Grade	Step	Base Salary	Longevity %	Longevity \$	Wage Def.	Total Salary
Lewis Zediana	Chief Operator	5/9/1988	A/4		82,659	15%	12,399.00		95,058
Marlene Ladderbush	Chemist	5/17/2004	4	7	67,923		1,500		69,423
Michael Brothers	Head Filter Oper.	8/30/2004	3b	7	64,950		1,250		66,200
	Longevity (Full)	12/1/2014					250		250
Michael Donovan	Head Filter Oper.	3/21/1994	3b	7	64,950		2,500		67,450
Frank Giannetti	Head Filter Oper.	4/8/1985	3	7	60,453	15%	9,068.00		69,521
Patrick Carey	Head Filter Oper.	11/22/2006	3b	6	50,536		2,000		52,536
	Step	4/23/2016		7	12,395				12,395
Matt Hirtle	Head Filter Oper.	11/4/2002	3b	7	64,950		1,500		66,450
Robert Minor	Head Filter Oper.	4/26/1999	3b	7	64,950		2,000		66,950
John Salerno	Head Filter Oper.	7/3/1989	3b	7	64,950		3,000		67,950
Edward Vieweg	Head Filter Oper.	5/9/1988	3b	7	64,950	15%	9,743.00		74,693
Total Regular Salaries					663,666		45,210	-	708,876

Overtime

Name	Position	Amount	Total Benefit
	HFOs and Chemist	54,400	54,400
Total Overtime		54,400	54,400

Uniform Allowance

Name	Position	Amount	Total Benefit
	HFOs and Chemist	240	2,160
Total Uniform Allowance		240	2,160

Car Allowance

Name	Position	Per/Month	# Months	Total Benefit
Lewis Zediana	Chief Operator	3,600		3,600
Total Car Allowance		3,600		3,600

Sick Leave Buy Back

Name	Position	Retirement Date	# of Days	Annual Sal.	Weekly Sal.	Daily Sal.	Total Benefit
			2,600				2,600
Total Sick Leave Buy-Back			2,600				2,600

Holiday Pay

Name	Position	Amount	Total Benefit
	HFOs		18,822
Total Holiday Pay		-	18,822

All Other Salaries

Name	Position	Amount	Total Benefit
Out of Grade	HFOs		500
Total All Other Salaries		-	500

Department Total								790,958
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**FISCAL YEAR 2016
DPW WATER FILTRATION DEPARTMENT SALARY INFORMATION BUDGET REQUEST**

Regular Salaries

Name	Position	Ann. Date	Grade	Step	Base Salary	Longevity %	Longevity \$	Wage Def.	Total Salary
Lewis Zediana	Chief Operator	5/9/1988	A/4		82,659	15%	12,399.00		95,058
Marlene Ladderbush	Chemist	5/17/2004	4	7	67,923		1,500		69,423
Michael Brothers	Head Filter Oper.	8/30/2004	3b	7	64,950		1,250		66,200
	Longevity (Full)	12/1/2014					250		250
Michael Donovan	Head Filter Oper.	3/21/1994	3b	7	64,950		2,500		67,450
Frank Giannetti	Head Filter Oper.	4/8/1985	3	7	60,453	15%	9,068.00		69,521
Patrick Carey	Head Filter Oper.	11/22/2006	3b	6	50,536		2,000		52,536
	Step	4/23/2016		7	12,395				12,395
Matt Hirtle	Head Filter Oper.	11/4/2002	3b	7	64,950		1,500		66,450
Robert Minor	Head Filter Oper.	4/26/1999	3b	7	64,950		2,000		66,950
John Salerno	Head Filter Oper.	7/3/1989	3b	7	64,950		3,000		67,950
Edward Vieweg	Head Filter Oper.	5/9/1988	3b	7	64,950	15%	9,743.00		74,693
Total Regular Salaries					663,666		45,210	-	708,876

Overtime

Name	Position	Amount	Total Benefit
	HFOs and Chemist	54,400	54,400
Total Overtime		54,400	54,400

Uniform Allowance

Name	Position	Amount	Total Benefit
	HFOs and Chemist	240	2,160
Total Uniform Allowance		240	2,160

Car Allowance

Name	Position	Per/Month	# Months	Total Benefit
Lewis Zediana	Chief Operator	3,600		3,600
Total Car Allowance		3,600		3,600

Sick Leave Buy Back

Name	Position	Retirement Date	# of Days	Annual Sal.	Weekly Sal.	Daily Sal.	Total Benefit
			2,600				2,600
Total Sick Leave Buy-Back			2,600				2,600

Holiday Pay

Name	Position	Amount	Total Benefit
	HFOs		18,822
Total Holiday Pay		-	18,822

All Other Salaries

Name	Position	Amount	Total Benefit
Out of Grade	HFOs		500
Total All Other Salaries		-	500

Department Total								790,958
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**FISCAL YEAR 2015
DPW WATER FILTRATION DEPARTMENT SALARY INFORMATION**

Regular Salaries

Name	Position	Ann. Date	Grade	Step	Base Salary	Longevity %	Longevity \$	Wage Def.	Total Salary
Lewis Zediana	Chief Operator	5/9/1988	A	4	82,659	15%	12,398.85		95,058
Marlene Ladderbush	Chemist	5/17/2004	4	7	67,663		1,500		69,163
Michael Brothers	Head Filter Oper.	8/30/2004	3b	7	64,702		1,000		65,702
		12/1/2014					250		250
Michael Donovan	Head Filter Oper.	3/21/1994	3b	7	64,702		2,500		67,202
Frank Giannetti	Head Filter Oper.	4/8/1985	3	7	60,265	15%	9,039.75		69,305
Patrick Carey	Head Filter Oper.	11/22/2006	3b	5	47,483		2,000		49,483
		4/23/2015		6	11,919				11,919
Matt Hirtle	Head Filter Oper.	11/4/2002	3b	7	64,702		1,500		66,202
Robert Minor	Head Filter Oper.	4/26/1999	3b	7	64,702		2,000		66,702
John Salerno	Head Filter Oper.	7/3/1989	3b	7	64,702		2,500		67,202
		7/3/2014					500		500
Edward Vieweg	Head Filter Oper.	5/9/1988	3b	7	64,702	15%	9,705.30		74,407
Vacant	Project Manager		PRRB	1	25,961				25,961
Total Regular Salaries					684,162		44,894	-	729,056

Overtime

Name	Position	Amount	Total Benefit
	HFOs and Chemist	52,000	52,000
Total Overtime		52,000	52,000

Uniform Allowance

Name	Position	Amount	Total Benefit
	HFOs and Chemist	240	2,160
Total Uniform Allowance		240	2,160

Car Allowance

Name	Position	Per/Month	# Months	Total Benefit
Lewis Zediana	Chief Operator	3,600		3,600
Total Car Allowance		3,600		3,600

Sick Leave Buy Back

Name	Position	Retirement Date	# of Days	Annual Sal.	Weekly Sal.	Daily Sal.	Total Benefit
			5,000				5,000
Total Sick Leave Buy-Back			5,000				5,000

Holiday Pay

Name	Position	Amount	Total Benefit
	HFOs	18,822	18,822
Total Holiday Pay		18,822	18,822

All Other Salaries

Name	Position	Amount	Total Benefit
Out of Grade	HFOs	500	500
Total All Other Salaries		500	500

Department Total									811,138
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**FISCAL YEAR 2014
DPW WATER FILTRATION DEPARTMENT SALARY INFORMATION**

Regular Salaries

Name	Position	Ann. Date	Grade	Step	Base Salary	Longevity %	Longevity \$	Wage Def.	Total Salary
Lewis Zediana	Chief Operator	5/9/1988	A	4	81,039	15%	12,155.85		93,195
Marlene Ladderbush	Chemist	5/17/2004	4	7	66,337		1,000		67,337
							58		58
Michael Brothers	Head Filter Oper.	8/30/2004	3b	7	63,433		1,000		64,433
Michael Donovan	Head Filter Oper.	3/21/1994	3b	7	63,433		2,000		65,433
							145		145
Frank Giannetti	Head Filter Oper.	4/8/1985	3	7	58,760	15%	8,814.03		67,574
Patrick Carey	Head Filter Oper.	11/22/2006	3b	4	46,551		2,000		48,551
				5	11,685				11,685
Matt Hirtle	Head Filter Oper.	11/4/2002	3b	7	63,433		1,500		64,933
Robert Minor	Head Filter Oper.	4/26/1999	3b	7	63,433		1,500		64,933
							88		88
John Salerno	Head Filter Oper.	7/3/1989	3b	7	63,433		2,500		65,933
Edward Vieweg	Head Filter Oper.	5/9/1988	3b	7	63,433	15%	9,514.92		72,948
Vacant	Meter Rep/Backflow			1	16,368				16,368
Total Regular Salaries					661,337		42,276	-	703,613

Overtime

Name	Position	Amount	Total Benefit
	HFOs and Chemist	62,057	62,057
Total Overtime		62,057	62,057

Uniform Allowance

Name	Position	Amount	Total Benefit
	HFOs and Chemist	1,662	1,662
Total Uniform Allowance		1,662	1,662

Car Allowance

Name	Position	Per/Month	# Months	Total Benefit
Lewis Zediana	Chief Operator	3,600		3,600
Total Car Allowance		3,600		3,600

Sick Leave Buy Back

Name	Position	Retirement Date	# of Days	Annual Sal.	Weekly Sal.	Daily Sal.	Total Benefit
			1,263				1,263
Total Sick Leave Buy-Back			1,263				1,263

Holiday Pay

Name	Position	Amount	Total Benefit
	HFOs	17,583	17,583
Total Holiday Pay		17,583	17,583

All Other Salaries

Name	Position	Amount	Total Benefit
Out of Grade	HFOs	838	838
Total All Other Salaries		838	838

Department Total									790,616
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DESCRIPTION/DETAIL

DPW WATER FILTRATION OPERATING

5210 Energy Utilities

FY2012 BUDGETED	FY2012 EXPENDED	FY2013 BUDGETED	FY2013 EXPENDED	FY2014 BUDGETED	FY2014 EXPENDED	FY2015 BUDGETED	FY2016 DEPT REQ	FY2016 TM REC
353,000	352,076	383,796	356,535	378,797	378,797	360,000	365,000	365,000

The cost to produce and pump 1 million gallons, based on FY11 cost, is \$362.00/million; and \$340 in FY13

The estimation of annual flow through the plant is based on 984 million gallons per year;

An increase to the plant's electric cost has been incorporated to address estimate

336,000 336,000

Natural gas has varried depending on serverity of winter weather

Avg NG cost for last three years \$24,000

24,000 24,000

Plant upgrade contingency and increased use of Electric and Gas during construction

5,000 5,000

Total 5210 Energy Utilities:

365,000 365,000

DESCRIPTION/DETAIL

DPW WATER FILTRATION EXPENSES

5231 Water Purchase

FY2012 BUDGETED	FY2012 EXPENDED	FY2013 BUDGETED	FY2013 EXPENDED	FY2014 BUDGETED	FY2014 EXPENDED	FY2015 BUDGETED	FY2016 DEPT REQ	FY2016 TM REC
18,000	18,000	25,980	25,980	33,980	33,980	8,000	8,000	8,000

Purchase of water for residents supplied from the City of Lowell

8,000 8,000

Total 5231 Water Purchase:

8,000 8,000

DESCRIPTION/DETAIL

DPW WATER FILTRATION OPERATING

5240 Repairs and Maintenance

	FY2012 BUDGETED	FY2012 EXPENDED	FY2013 BUDGETED	FY2013 EXPENDED	FY2014 BUDGETED	FY2014 EXPENDED	FY2015 BUDGETED	FY2016 DEPT REQ	FY2016 TM REC
	102,525	101,200	126,563	125,034	132,682	131,417	123,782	124,947	124,947

The budget number anticipates need and correctly reflects a BMP of budgeting 10% of operating for repairs and maintenance

Total 5240 Repairs and Maintenance: 124,947 124,947

Chemical Feed Pump Repairs and Supplies

\$6,556

240 gpd KOP Kits	6	\$136	\$816
240 gpd diaphragms	12	\$65	\$780
80 gpd KOP kits	2	\$111	\$222
80 gpd diaphragms	2	\$65	\$130
120 gpd KOP kits	5	\$115	\$575
120 gpd diaphragms	5	\$65	\$325
44 gpd KOP kits	1	\$115	\$115
44 gpd diaphragms	3	\$65	\$195
Five way valves/anti syphon	6	\$68	\$408
Walchem antisiphon valves	8	\$145	\$1,160
Chemical Injectors spring loaded	6	\$55	\$330
Various PVC parts/piping, primer, glue	1	\$1,500	\$1,500

Lubrication

\$500.00

White Grease, Red Grease, Turbo Oil	1	\$500	\$500
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Backflow Program

\$800.00

Brass Inserts for Testing Backflow Devices	1	\$400	\$400
Calibration of Backflow Testing Gauge	2	\$200	\$400

Sludge Drying System

\$10,517.00

Replacement Filter Cloth	2	\$460	\$920
Replacement Autovac Vacuum Seals	2	\$1,335	\$2,670
Replacement Vacuum Pump Seals	2	\$1,200	\$2,400
Duct Tape, Two-sided Tape	24	\$8	\$192
New Knife Blades	3	\$1,445	\$4,335

Replacement Items

\$23,874.00

Sample Pumps	5	\$270	\$1,350
Flocculator Drive VFD's	4	\$2,000	\$8,000
Replace Vacuum Pump	2	\$7,262	\$14,524

Contingency Repair (major failure)

\$32,000.00

Unanticipated or Unplanned	1	\$32,000	\$32,000
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Repair Services

\$42,700.00

Rebuild Flygt pumps	1	\$2,000	\$2,000
Misc.. Repairs and Contingency (small items)	1	\$15,000	\$15,000
Landscaping equipment maintenance/repair	1	\$2,200	\$2,200
Maintenance for remote stations	1	\$5,000	\$5,000
Replace Parking lot lights with LED	5	\$1,000	\$5,000
4 Generators Annual Maintenance (oil/filter)	1	\$1,500	\$1,500
Sludge collection system/ motors/ gears/ chain	2	\$3,000	\$6,000
Mechanical Seals for Large Water Pumps	2	\$2,000	\$4,000
Rebuild gear boxes and vacuum pumps	1	\$2,000	\$2,000

Grounds Maintenance/ Drainage Work

\$8,000.00

Vegetation Mngt at Storage Tank locations	1	\$5,000	\$5,000
Mowing WTP, Ameshill, Astle, Colonial	1	\$3,000.00	\$3,000

Total \$ 124,947 ⁸

DESCRIPTION/DETAIL

DPW WATER FILTRATION OPERATING
5270 Leases and Contract Services

FY2012 BUDGETED	FY2012 EXPENDED	FY2013 BUDGETED	FY2013 EXPENDED	FY2014 BUDGETED	FY2014 EXPENDED	FY2015 BUDGETED	FY2016 DEPT REQ	FY2016 TM REC
31,477	30,297	54,540	52,330	55,826	51,037	62,464	67,356	67,356

Instrument Calibration/Repair (Plant, monthly)	12			\$650			\$7,800	\$7,800
Hach Calibration program	4			\$3,000			\$12,000	\$12,000
Lab Equipment Calibration (Annual)	1			\$1,500			\$1,500	\$1,500
Fume Hood Inspection (Annual)	1			\$300			\$300	\$300
Copier Maintenance Contract	1			\$600			\$600	\$600
HVAC maintenance contract	1			\$6,000			\$6,000	\$6,000
Equipment / pump rental	1			\$200			\$200	\$200
Tokay Computer Software Annual Support	1			\$500			\$500	\$500
Tank Rental Propane	1			\$199			\$199	\$199
Tank Lease Nitrogen	1			\$265			\$265	\$265
Fire System Maintenance/Testing	1			\$1,000			\$1,000	\$1,000
Solarbee Maintenance Contract	1			\$1,992			\$1,992	\$1,992
Backflow Inspections and surveys	1			\$35,000			\$35,000	\$35,000
<i>Total 5270 Leases and Contracts:</i>							67,356	67,356

DESCRIPTION/DETAIL

DPW WATER FILTRATION OPERATING

5340 Communications

FY2012 BUDGETED	FY2012 EXPENDED	FY2013 BUDGETED	FY2013 EXPENDED	FY2014 BUDGETED	FY2014 EXPENDED	FY2015 BUDGETED	FY2016 DEPT REQ	FY2016 TM REC
17,200	16,737	14,785	14,251	14,000	13,739	14,000	14,000	14,000

CCR report	1	5,500	5,500	5,500	5,500
CCTV Monitoring	1	3,000	3,000	3,000	3,000
Telephone/FIOS (Verizon)	1	5,000	5,000	5,000	5,000
Backflow direct mailing costs	1	500	500	500	500

Total 5340 Communications: **14,000** **14,000**

DESCRIPTION/DETAIL

DPW WATER FILTRATION OPERATING

5420 Office Supplies

FY2012 BUDGETED	FY2012 EXPENDED	FY2013 BUDGETED	FY2013 EXPENDED	FY2014 BUDGETED	FY2014 EXPENDED	FY2015 BUDGETED	FY2016 DEPT REQ	FY2016 TM REC
2,000	1,913	2,000	1,862	2,000	1,635	2,000	2,500	2,500

Pens, paper, toner, fax supplies, chairs,	1	\$2,500					2,500	2,500
File cabinets, ink cartridges, laser jet cartridges								
Labeling/chart printouts and business postage								
					<i>Total 5420 Office Supplies:</i>		2,500	2,500

DESCRIPTION/DETAIL

DPW WATER FILTRATION OPERATING

5423 All Other Supplies and Equipment

FY2012 BUDGETED	FY2012 EXPENDED	FY2013 BUDGETED	FY2013 EXPENDED	FY2014 BUDGETED	FY2014 EXPENDED	FY2015 BUDGETED	FY2016 DEPT REQ	FY2016 TM REC
60,542	57,972	54,275	53,576	63,650	55,385	53,165	53,105	53,105

Laboratory Budget

Performance Evaluation DEP	1	\$300					\$300	\$300
Misc. accessories, expendables	1	\$3,000					\$3,000	\$3,000
EPA/DEP Required Sample Analysis	1	\$10,000					\$10,000	\$10,000
IOC, SEC, THM, HAA5, VOC, TOC, Chlorite	4	\$2,160					\$8,640	\$8,640
UCMR3 mandated analysis (continued)	4	\$1,500					\$6,000	\$6,000
Inorganic Chemicals, KI, acids, reagents	1	\$4,000					\$4,000	\$4,000
Biological supplies, media	4	\$1,250					\$5,000	\$5,000
Microbiology cultures for QC	4	\$100					\$400	\$400
Instrumental Supplies, analytical kits	1	\$1,930					\$1,930	\$1,930
FEDEX for overnight sample shipments	1	\$3,000					\$3,000	\$3,000
Organic Chemicals, dyes, indicators, etc.	1	\$660					\$660	\$660
pH meter, supplies, standards, probes	1	\$1,500					\$1,500	\$1,500
Chemtrec chlorine analyzers (maintenance)	6	\$200					\$1,200	\$1,200

General Plant Items

Cleaning supplies, brooms, mops, pads	1	\$1,500					\$1,500	\$1,500
Paper products (TP, C-fold towels etc.)	1	\$1,000					\$1,000	\$1,000
Safety supplies, replacement masks, filters	1	\$1,000					\$1,000	\$1,000
Fire /Safety Inspections (extinguishers)	1	\$500					\$500	\$500
Misc. items, batteries, flashlights, gloves,	1	\$500					\$500	\$500
First Aid kit supplies	6	\$100					\$600	\$600
Hazardous chemical disposal	1	\$500					\$500	\$500
Shop Tools	1	\$1,000					\$1,000	\$1,000
Nitrogen gas, Propane	1	\$875					\$875	\$875

Total 5423 All Other Supplies and Equipment: 53,105 53,105

DESCRIPTION/DETAIL

DPW WATER FILTRATION OPERATING

Chemicals

FY2012 BUDGETED	FY2012 EXPENDED	FY2013 BUDGETED	FY2013 EXPENDED	FY2014 BUDGETED	FY2014 EXPENDED	FY2015 BUDGETED	FY2016 DEPT REQ	FY2016 TM REC
422,500	415,108	449,512	432,420	456,039	450,971	483,398	469,550	469,550

Total Chemicals: **469,550** **469,550**

All chemical pricing is level funded

Tewksbury Water Plant Chemical Budgeting Using Tank Fill Counts/Deliveries
Historical Analysis of Actual Use of Chemicals

Chemical Name	Amount each fill	Units	FY14	FY13 Actual amount Used	FY12	FY11	Fill/Delivery (Expected)
NaChlorite	4000	gallons	7	7	6	8	7
Alum	4000	gallons	12	15	13	12	14
Hypo	4000	gallons	10	11	10	10	10
HCl	1000	gallons	6	6	6	6	6
Silly Acid	55	gallons	54	61	55	58	59
25% NaOH	4000	gallons	11	13	12	9	12
ZOP	1000	gallons	0	1	1	0	1
PAC	5	bags	5	8	9	10	5
GAC	70000	pounds	1	1	1	1	1
DE	40	bags	10	9	10	8.5	10

This method is based on fill counts of chemical deliveries

Based on actual amount of each chemical used and historically how many deliveries or fills used.

One cycle of each chemical (where applicable) is added for contingency of a hot summer, high usage or low amount at end of year.

Depending on usage and how much chemical is left at the end of the year will determine if the extra fill is needed.

Certain chemicals such as GAC and ZOP will not have overages due to the nature of the usage.

Prediction of Chemical Use and Expected Cost \$

Chemical Name	Amount	Units	Fills	Cost /fill FY15	Total Cost	Add 1 fill	Total Used \$
NaChlorite	1500	gallons	7	\$8,339	\$58,375	\$8,339	\$66,714
Alum	4000	gallons	14	\$3,850	\$53,900	\$3,850	\$57,750
Hypo	4000	gallons	10	\$2,150	\$21,500	\$2,150	\$23,650
HCl	1000	gallons	6	\$1,607	\$9,642	\$1,607	\$11,249
Silly Acid (Fluoride)	55	gallons	59	\$213	\$12,567	\$213	\$12,780
25% NaOH	4000	gallons	12	\$2,800	\$33,600	\$2,800	\$36,400
ZOP (Corrosion Inhibitor)	1000	gallons	1	\$3,875	\$3,875	\$0	\$3,875
PAC	5	bags**	5	\$1,305	\$6,525	\$1,305	\$7,830
GAC (two filters per year)	70000	pounds	1	\$77,826	\$77,826	\$0	\$77,826
DE	40	bags*	10	\$13,556	\$135,560	\$13,556	\$149,116

\$413,370 \$33,806

*DE comes in 1000 lb. super sacks

**PAC comes in 900 lb. supersacks

FY16 budgeted: \$447,190

Contingency for rise in Chemical cost 5% across the board increase: **\$22,360**

FY16 budgeted: \$469,550

DESCRIPTION/DETAIL

DPW WATER FILTRATION OPERATING

Residual Disposal

FY2012 BUDGETED	FY2012 EXPENDED	FY2013 BUDGETED	FY2013 EXPENDED	FY2014 BUDGETED	FY2014 EXPENDED	FY2015 BUDGETED	FY2016 DEPT REQ	FY2016 TM REC
49,000	49,000	54,874	45,279	56,392	52,795	60,107	62,625	62,625

Total Residual Disposal: 62,625 62,625

Residuals Calculation:

Based on typical 870 Million Gallons of water production and producing 35 mg/L of total settling solids from the pretreatment.
 The plant will use about 400,000 lbs. of DE which will remove 358,774 (+/-) lbs of solids.
 The typical sludge has a moisture content of about 33%. Therefore the 758,774 lbs of solids will yield 2,299,316 lbs of wet cake.
 Amount generated: 1,150 +/- tons of wet cake per year.

Unit load (Dumpster) consist of 5-6 runs. Each run @ 3 tons +/-, for a total of 15-18 tons +/- per pull

1150	\$26.50	Tipping fee/Ton	\$30,475.00			
69	\$350.00	Hauling/Pull	<u>\$24,150.00</u>	or	\$4,552.08 per month	\$54,625.00
			\$54,625.00			

Since water quality is unpredictable extra money is budgeted for water containing heavy solid (TSS). \$3,750.00

Based on (4) additional pulls

Additional dried sludge is produced when process/storage tanks for sludge are cleaned. \$4,250.00

Based on (5) pulls

This is the last year for the present disposal contract.

DESCRIPTION/DETAIL

DPW WATER FILTRATION OPERATING

Water Assessment

FY2012 BUDGETED	FY2012 EXPENDED	FY2013 BUDGETED	FY2013 EXPENDED	FY2014 BUDGETED	FY2014 EXPENDED	FY2015 BUDGETED	FY2016 DEPT REQ	FY2016 TM REC
7,710	7,710	7,473	7,473	8,000	6,911	8,000	8,000	8,000

Mandatory fee charged by DEP based on previous years reported water volumes

8,000 8,000

Total Water Assessment:

8,000 8,000

DESCRIPTION/DETAIL

DPW WATER FILTRATION OPERATING

5580 Uniform Allowance

FY2010 BUDGETED	FY2010 EXPENDED	FY2011 BUDGETED	FY2011 EXPENDED	FY2012 BUDGETED	FY2012 EXPENDED	FY2013 BUDGETED	FY2014 DEPT REQ	FY2014 TM REC
-	-	1,800	1,552	1,800	588	-	-	-

Total 5580 Uniform Allowance: - -

DESCRIPTION/DETAIL

DPW WATER FILTRATION OPERATING

5703 Dues and Memberships

FY2012 BUDGETED	FY2012 EXPENDED	FY2013 BUDGETED	FY2013 EXPENDED	FY2014 BUDGETED	FY2014 EXPENDED	FY2015 BUDGETED	FY2016 DEPT REQ	FY2016 TM REC
700	697	468	468	700	481	700	700	700

Professional Water and Microbiology organizations and publications incl: American Water Works Association, 700 700
 New England Water Works Association, Massachusetts Water Works Association for Chief Operator and Chemist

Total 5703 Dues and Memberships: 700 700

DESCRIPTION/DETAIL

DPW WATER FILTRATION OPERATING

5790 Staff Development/Training

FY2012 BUDGETED	FY2012 EXPENDED	FY2013 BUDGETED	FY2013 EXPENDED	FY2014 BUDGETED	FY2014 EXPENDED	FY2015 BUDGETED	FY2016 DEPT REQ	FY2016 TM REC
2,951	2,726	3,300	3,089	2,500	2,500	2,500	3,000	3,000

Staffing education for renewal of drinking water license.

3,000

3,000

This is a renewal year for all staff for both drinking water licenses and backflow licenses.

Total 5790 Staff Development/Training:

3,000

3,000

DESCRIPTION/DETAIL

DPW WATER FILTRATION
5833 Capital Outlay

FY2012 BUDGETED	FY2012 EXPENDED	FY2013 BUDGETED	FY2013 EXPENDED	FY2014 BUDGETED	FY2014 EXPENDED	FY2015 BUDGETED	FY2016 DEPT REQ	FY2016 TM REC
19,837	19,468	-	-	-		-	-	-

Total 5833 Capital Outlay: - -