



REPORT

LEGISLATIVE REFERENCE BUREAU

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22. DPW—Fleet, 2015

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22. DPW—Fleet

\$28,532,513

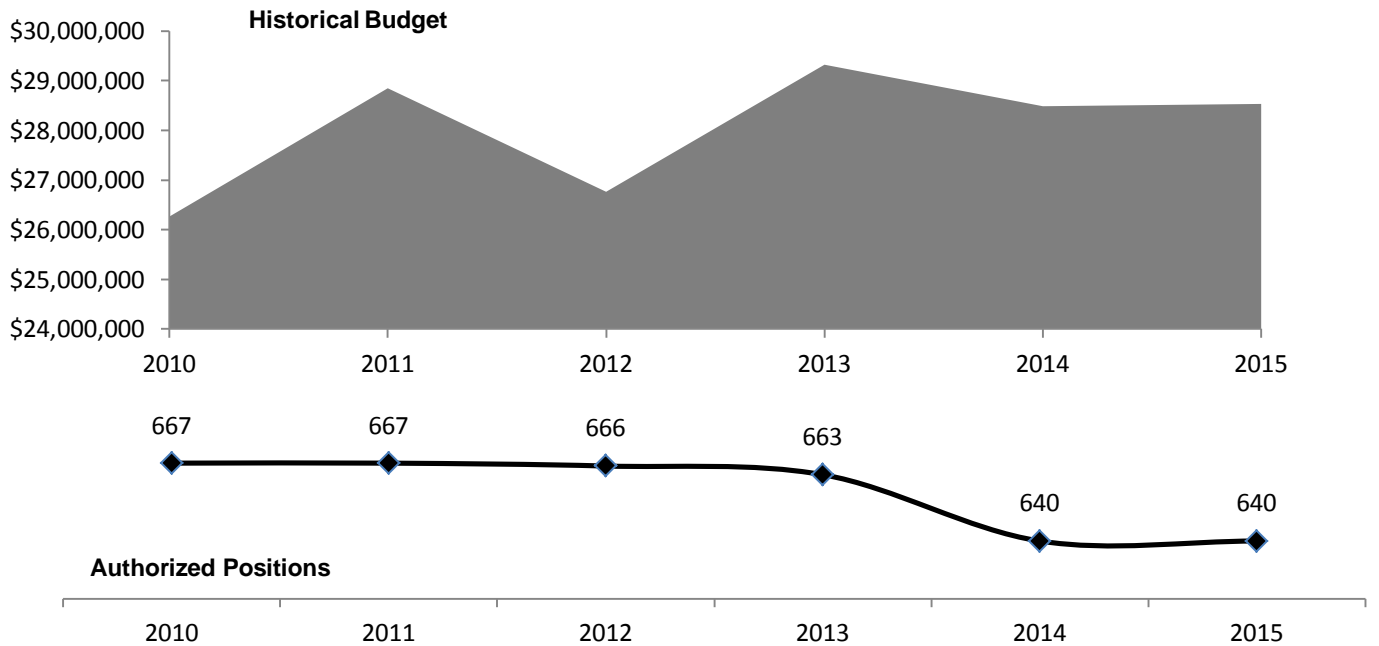
Proposed Department Budget

\$46,378

Nominal Change in Proposed Department Budget

0.16%

Percent Change in Proposed Department Budget

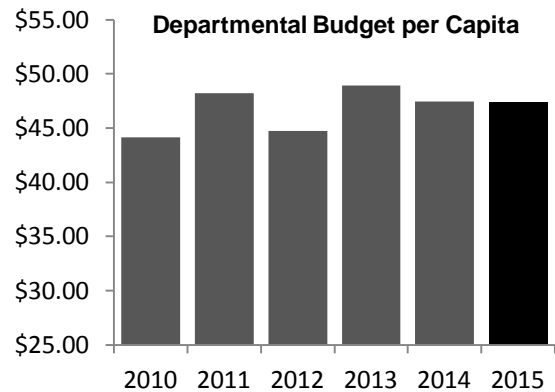
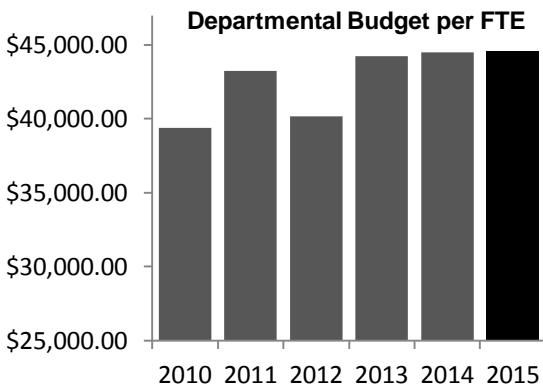


0%
Percent Change in FTE 2014 to 2015 Proposed

0
Nominal Change in FTE 2014 to 2015 Proposed

8
Vacant Positions

55%
% Eligible for Retirement within 10 years



1.31%

Including the 2015 Proposed Budget, the average annual increase in the Fleet Services Section budget since 2002.

12.3

Average age of the City's capital equipment, an increase of 0.4 years from February 2013 and 2.8 years from 2009. The optimal average age is 6 years.

3

The number of fully-automated packers Fleet will purchase in 2015, which brings the total number to 15.

60%

Increase in Vehicle Service Technician I & II certifications since reclassification to an incentive-based pay system.

3.26%

Including the 2015 Proposed Budget, the average annual increase in Fleet Operations/Dispatch's budget since 2002.

\$123,058

Anticipated information technology expenditures in 2015. Fleet requested \$109,00 and was budgeted \$85,000.

6

Number of CNG-powered, 25-yard rear-load/recycler packers Fleet will purchase in 2015, bringing to total to 43 by 2015.

\$464,000

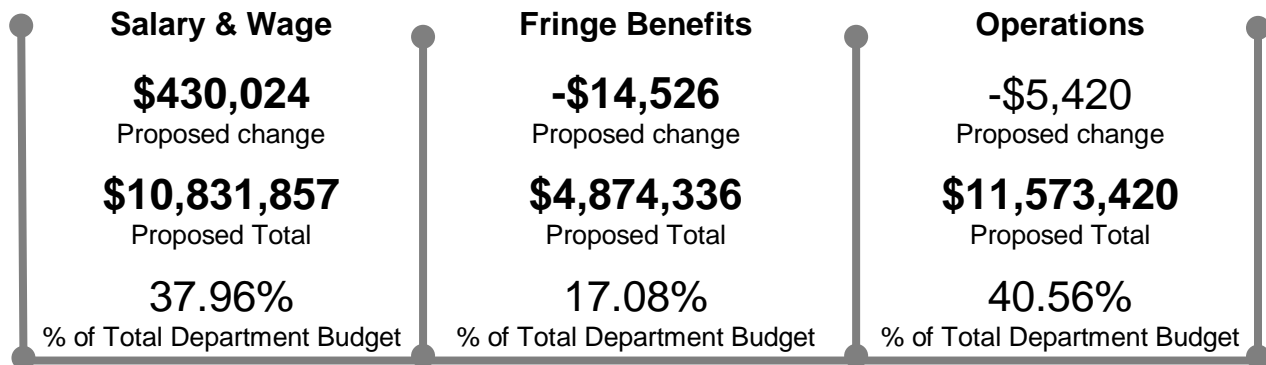
Clean fill costs avoided in 2014, due to Fleet using fill from sewer and water excavation projects.

7.47

Average payback, in years, for a CNG packer to offset the \$39,000 marginal cost.

\$713,973

Reduction in Fleet Dispatch's operating budget between the 2013 Actual and 2015 Proposed Budget, a 10.1% decrease.



I. INITIATIVES AND PROGRAMS.

1. Fleet Services Personnel Reclassification

In 2013, Fleet's Services Welder and Vehicle Service Technician I and II positions were reclassified to an incentive-based pay system. In the new system, pay increases are based on knowledge and certifications earned through the National Institute for Automotive Service Excellence (ASE). Within the first year of the new system, management has indicated that ASE certifications have increase to the following levels:

Table 22.1. Changes in Certifications Since Personnel Reclassification.

Certification	Current Number	Change Since Reclassification
Automotive Master (VST)	26	13
Medium-Heavy Truck Master (VST)	22	17
Dual Master certification (VST)	16	14
Advanced Engine Performance Specialist L-1	16	16
Electronic Diesel Engine Diagnosis Specialist L-2	14	14

Management notes that similar increases in state-sanctioned certifications for welders have also occurred, and that Fleet personnel have shown a greater ability to shift resources from one area to another, increasing productivity without the need to authorize overtime.

2. GPS and AVL Technology.

To date, the City has 554 digital radios installed in various vehicles throughout DPW. Each of these radios has a GPS module which allows the vehicle to be seen when using the Automatic Vehicle Location System. According to management, various updates have been made to the system in 2014 to enhance the speed of retrieving data and using the system. Fleet anticipates that new radios will be installed in most Capital equipment as it is received.

3. Automated Packers.

The 2015 Proposed Budget includes \$498,000 (\$166,000 marginal cost x 3 packers) in funding for the purchase of 3 additional, fully-automated pieces of equipment that will enable garbage collection to be performed by one person. DPW currently has 12 fully-automated side-loading trucks. Fleet tested automated packers in 2013 to determine operational constraints and determined that these types of packers with CNG engines do not offer sufficient traction for plowing operations, as the CNG tanks place too much weight on the front axles. The new auto-loading packers will have diesel engines, which will allow them to be used for plowing snow.

II. EXPENDITURES.

Table 22.2. Changes in Expenditure Amounts by Account.

Expenditure Account		2013 Actual	2014 Adopted Budget	% Change	2015 Proposed Budget	% Change
Salaries and Wages	Fleet	\$4,596,064	\$4,891,942	6.4%	\$5,214,366	6.6%
	Dispatch	\$6,722,982	\$5,509,891	-18.0%	\$5,617,491	2.0%
Fringe Benefits	Fleet	\$2,097,148	\$2,299,213	9.6%	\$2,346,465	2.1%
	Dispatch	\$2,958,161	\$2,589,649	-12.5%	\$2,527,871	-2.4%
Operating Expenditures	Fleet	\$5,445,799	\$5,093,440	-6.5%	\$5,221,000	2.5%
	Dispatch	\$7,066,373	\$6,485,400	-8.2%	\$6,352,420	-2.1%
Equipment Purchases	Fleet	\$433,745	\$720,600	66.1%	\$720,000	-0.1%
	Dispatch	\$1,872	\$0	-100.0%	\$0	0%
Special Funds	Fleet	\$0	\$0	0%	\$0	0%
	Dispatch	\$0	\$896,000	--	\$532,900	-40.5%
Total Operating Budget	Fleet	\$12,572,756	\$13,005,195	3.4%	\$13,501,831	3.8%
	Dispatch	\$16,749,388	\$15,480,940	-7.6%	\$15,030,682	-2.9%
	Joint	\$29,322,144	\$28,486,135	-2.9%	\$28,532,513	0.2%

Fleet = Fleet Services Section; Dispatch = Fleet Operations/Dispatch Section; Joint = both sections combined.

1. Budget Summary.

Fleet Services Section. The total operating budget in the 2015 Proposed Budget is \$13,501,831, an increase of \$496,636 (3.8%) from \$13,005,195 in the 2014 Adopted Budget. Including the 2015 Proposed Budget, the average annual increase in Fleet Services' adopted budgets since 2002 has been 1.31%.

Fleet Operations/Dispatch Section. The total operating budget in the 2015 Proposed Budget is \$15,030,682, a decrease of \$450,258 (-2.9%) from \$15,480,940 in the 2014 Adopted Budget. Including the 2015 Proposed Budget, the average annual increase in Fleet Operations/Dispatch's adopted budgets since 2002 has been 3.26%.

The total operation budgets for the both sections combined increases of 0.2% from the 2014 Adopted Budget. Including the 2015 Proposed Budget, the average annual increase in Fleet Services' and Fleet Operations/Dispatch's combined adopted budgets since 2002 has been 2.18%.

2. Personnel Costs.

Fleet Services Section.

The 2015 Proposed Budget provides \$7,560,831 for Fleet Services Section personnel costs (net wages and fringes), an increase of \$369,676 (5.1%) from the 2014 Budget. The increase is primarily the result of an increase in the 2015 Adopted Budget for Vehicle Service Technician II positions (\$147,682), the elimination of furloughs (\$59,091) and a decrease in the Reimbursable Services Deduction (\$109,000).

In addition, overtime compensated is increased from \$250,000 in the 2014 Adopted Budget to \$253,750 in the 2015 Proposed Budget, a 1.5% increase. In 2013, the budgeted amount of overtime was reduced, as a large amount of carryover was available due to a light 2012 snow season. This carryover supplemented the budgeted overtime in 2013.

Due to the longer-than-typical snow season in 2014, Fleet Services' overtime is currently \$45,596 (18.2%) greater than budgeted. While it is difficult to predict seasonal demands, management has indicated that it would not be unreasonable to expect another \$100,000 in overtime by the end of 2014. This would represent an expenditure 58.2% greater than the Adopted Budget.

Fleet Operations/Dispatch Section.

The 2015 Proposed Budget provides \$8,145,362 for Fleet Operations/Dispatch personnel costs, an increase of \$45,822 (0.6%) from the 2014 Adopted Budget. Of note, Fleet Operations/Dispatch currently has \$1,377,417 in overtime expenditures compared to \$775,000 budgeted. This is largely due to a heavy snow season, and the Section anticipates more overtime will be used prior to the end of 2014.

3. Operating Expenditures.

Fleet Services Section.

Operating expenditures in the 2015 Proposed Budget for Fleet Services Section are \$5,221,000, an increase of \$127,560 (2.5%) from the \$5,093,440 provided in the 2014 Adopted Budget. The increase can primarily be attributed to a \$145,560 (4.1%) increase in the Tools & Machinery Parts account associated with past and anticipated snow and ice operations. Of the \$5.2 million, the Section is anticipating it will spend approximately \$3.3 million on various vehicle parts for DPW vehicles and \$300,000 for MPD vehicles.

In 2014, Fleet Services ceased billing the Milwaukee Police Department (MPD) for repair of MPD vehicles, resulting in an additional \$1.2 million in Fleet Services' expenditures, including – according to the Section – \$600,000 in salaries and estimated fringe benefits, \$300,000 in parts and \$300,000 in repair services.

Also of note, Fleet Services has indicated that funds from its Information Technology Services account are used to pay various companies' yearly licensing fees to use their products and receive support throughout the year. These are provided in Table 22.3, below.

These fees (provided by management) exceed not only Fleet Services' 2015 Proposed Budget

(\$85,000), but its requested Information Technology Services budget (\$109,000), as well. Because Fleet staff cannot maintain the equipment in the fleet without having the software programs and continuous support identified above, Fleet Services does not anticipate dropping any of these services.

Table 22.3. Information Technology Services Expenditures, 2014.

Description	Amount
Asset Works (fleet maintenance system)	\$61,347
Fuel Focus (fuel dispensing and accounting)	\$17,764
Fuel system upgrades	\$18,915
Oracle (database)	\$7,268
MSI Data (dispatching and AVL system)	\$17,764
Total	\$123,058

Fleet Operations/Dispatch Section.

The 2015 Proposed Budget provides \$6,352,420 for Fleet Operations/Dispatch operating expenditures, a decrease of \$132,980 (-2.1%) from the 2014 Budget. The decrease is primarily the result of a \$126,300 (-2.3%) decrease in energy.

Between 2013 actual expenditures and the 2015 Proposed Budget, the Fleet Operations/Dispatch operating budget has been reduced by 10.1% (\$713,973), primarily as a result of reductions in both vehicle rental (\$362,557) and energy (\$336,396).

4. Equipment Purchases.

Fleet Services Section.

The 2015 Proposed Budget provides \$720,000 for Fleet Services equipment purchases, approximately the same amount as in 2014. If a piece of replacement equipment is less than \$50,000, it is budgeted in the operating expenses for the Fleet Services Section. Equipment purchases over \$50,000, with a life expectancy of at least 10 years, are budgeted under capital expenditures.

Notably, Fleet Services' plans on purchasing 6 CNG-powered, 25-yard rear-load/recycler packers in 2015. Management has also indicated that as other equipment purchases are made, Fleet will perform cost-benefit analyses in an effort to purchase the most effective and efficient vehicles possible. For instance, between 2008 and 2011 Fleet Services purchased hybrid cars using various grants. Because these cars were partially grant-funded and traveled a high number of miles per year, the payback was relatively short. DPW's current inventory of hybrid or alternative energy vehicles is provided in Table 21.4.

Table 22.4. Current and Anticipated City-Owned Alternative Energy Vehicles.

Type of Equipment	Current # Units	Anticipated # by 2015	Average Payback Time (yrs.)
CNG Packers	21	43	7.47
CNG Cars	3	3	9.7
CNG Cargo Van	5	5	--
Hybrid Cars	16	16	3
Hybrid SUVs	19	19	4

- CNG Packers:** The cost of CNG climbed from \$0.878 in 2013 to \$1.462 in 2014 – a 66.5% increase – while diesel dropped 4.1% from \$3.575 in 2013 to \$3.428 in 2014. Based on these costs, Fleet estimates that each CNG refuse packer will save the City \$5,220 in fuel costs vs. diesel packers in 2014. The marginal cost of a CNG Packer is \$39,000.
- CNG Cars:** The City's three CNG cars have a marginal cost of approximately \$7,000 each. According to management, experience indicates that each CNG car will save the City approximately \$720 in fuel costs per year compared to gasoline cars.
- Hybrid Cars:** Each hybrid car owned by the City has a marginal cost of about \$3,000 and averages about 38-39 MPG, compared to approximately 27-28 MPG with gasoline cars. Management has indicated that concerns over the maintenance cost of hybrid cars may affect cost savings.
- Hybrid SUVs:** Each hybrid SUV has a marginal cost of approximately \$6,000 and averages 23-26 MPG, compared to about 12 MPG for a comparable gasoline-powered SUV. Management also has maintenance concerns with hybrid SUVs.

It is important to note that as the fleet ages, vehicles require more maintenance and costlier repairs, resulting in increased downtime, negatively affecting the delivery of City services. In addition, Fleet Services Section has no intent of keeping vehicles and equipment that have been replaced. As new equipment is placed in service, used equipment is retired from service and sold as surplus.

Year-to-date, 142 pieces of new equipment had been received, including 64 units for DPW and 43 for the Police Department. In addition, 94 pieces have been sold or disposed of by Fleet Services year-to-date, for a net increase of 48 pieces. At this point in 2014, the City has received \$149,347 from the sale of this equipment.

Fleet Operations/Dispatch Section.

None.

5. Special Funds.

None.

Table 22.5. Vehicles Placed Into Service and Sold by Fleet Services, 2013 and YTD 2014.

Funding Source	Placed, 2013	Placed, 2014	Sold, 2013	Proceeds, 2013	Sold, 2014	Proceeds, 2014
DPW	69	64	71	\$192,473	62	\$138,775
Forestry	2	5	1	\$0	0	\$0
HACM	7	1	11	\$17,194	0	\$0
Infrastructure	2	11	0	\$0	0	\$0
MPD	47	43	36	\$25,989	27	\$6,162
Parking Fund	9	6	0	\$0	1	\$1,885
Port of Milwaukee	0	0	1	\$0	1	\$1,290
Sewer Mnt. Fund	2	3	0	\$0	0	\$0
Water	7	9	5	\$1,316	3	\$1,235
Total	145	142	125	\$236,971	94	\$149,347

Table 22.6. Proposed Replacement Equipment Purchases, Fleet Services, 2015.

Type of Equipment	2014 Adopted Budget		2015 Proposed Budget		% Change, Cost
	# Units	Cost	# Units	Cost	
Cars, Compact	0	\$0	6	129000	--
Cars, Compact Hybrid	6	\$132,000	0	\$0	100.0%
Pickup Truck, 4400 lb. 4x2	4	\$80,000	4	\$88,000	10.0%
Pickup Truck, 8600 lb. 4x2	7	\$175,000	6	\$150,000	-14.3%
Pickup Truck, 9200 lb. w/plow	0	\$0	1	\$41,000	--
Truck, Platform, 11,000 lb	2	\$80,000	1	\$45,000	43.8%
Truck, Van, Cargo, 6000 lb.	3	\$75,000	3	\$75,000	0%
Truck, Van, Cargo, 9500 lb.	5	\$135,000	5	\$135,000	0%
Computer Hardware	32	\$32,500	23	\$46,000	41.5%
Engine Diagnostic Analyzer	1	\$6,000	1	\$6,000	0%
Scanner	1	\$5,100	1	\$5,000	-2.0%
Total	61	\$720,600	51	\$720,000	-0.1%

III. PERSONNEL.

Table 21.7. Changes in Full-Time Equivalent (FTE) and Authorized Positions.

Position Category		2013 Actual	2014 Adopted Budget	Change	2015 Proposed Budget	Change
O&M FTEs	Fleet	95.5	102.7	7.2	102.7	0
	Dispatch	93.0	105.0	12	105.0	0
Non-O&M FTEs	Fleet	10.5	3.3	-7.2	2.0	-1.3
	Dispatch	0	0	0	0	0
Total Authorized Positions*	Fleet	131	131	0	131	0
	Dispatch	532	509	-23	509	0
	Joint	663	640	-23	640	0

*Includes auxiliary positions. Fleet = Fleet Services Section; Dispatch = Fleet Operations/Dispatch Section; Joint = both sections combined.

1. Personnel Changes.

The total number of authorized positions in the Fleet Services Section under the 2015 Proposed Budget is 131, the same as in the 2014 and 2013 Adopted Budgets.

The total number of authorized positions in the Fleet Operations/Dispatch Section under the 2015 Proposed Budget is 509, the same as in the 2014 Adopted Budget.

2. Vacancies.

Table 22.8. Fleet Services Vacant Positions.

#	Title of Position	Date Vacant	Estimated Fill Date
1	Office Assistant	January 2014	Unknown, anticipated reclass. to Equipment Service Writer
1	Equip. Parts Assistant	June 2014	Pending F&P Approval
1	Tire Repair Worker II	Jun 2014	F&P Approved, Hiring
2	Garage Attendants	July 2014	1 F&P Approved, Hiring 1 Pending F&P Approval
1	Vehicle Service Tech I	August 2014	Pending F&P Approval

Table 22.9. Fleet Operations/Dispatch Vacant Positions.

#	Title of Position	Date Vacant	Estimated Fill Date
1	Equipment Operations & Training Manager	September 2014	F&P Approved, Hiring (Oct. 2014)
1	Equipment Operations Supervisor I	October 2014	F&P Approved, Hiring (Oct. 2014)

V. SPECIAL FUNDS.

There are no Special Funds in the Proposed 2015 Fleet Services Budget.

As part of the Mayor's Strong Neighborhoods Plan, \$896,000 was budgeted in 2014 in the In-House Demolition Program Special Fund. This account was intended to fund the demolition of 100 *in rem* houses using City staff. The cost of clean fill (\$464,000) was included in this amount, but DPW was able to obtain clean fill at minimal cost through the recycling of soil and stone material from Water and Sewer excavation work. As a result, this expense was not incurred in 2014 and not fully funded in 2015. DPW anticipates that in 2015, some clean fill may be needed during approximately 3 winter months (enough fill for about 25 demolitions).

Table 22.10. In-House Demolition Program Special Fund Expenditures, 2014 and 2015.

Cost	2014, Estimated	2014, Actual	2015, Estimated
Disposal	\$481,664	\$316,092	\$361,200
Clean Fill	\$464,000	\$0	\$122,000
Equipment Rental	\$42,400	\$45,000	\$45,000
Total	\$988,064	\$361,092	\$528,200

IV. SPECIAL PURPOSE ACCOUNTS (SPA).

None.

VI. REVENUES.

Fleet estimates that \$4,610,000 will be generated in revenues in 2015. This is a \$97,000 (2.1%) increase from 2014. Revenue is generated from billing reimbursable services that include reimbursements from other departments for various repairs, fuel, equipment utilization and services. Table 21.11 summarizes Fleet-related revenue accounts.

Table 22.11. Summary of Revenues.

Revenue Account	2013 Actual	2014 Adopted Budget	% Change	2015 Proposed Budget	% Change
Building & Fleet Services	\$1,676,000	\$1,533,000	-8.5%	\$1,533,000	0.0%
Services to Water-Soil Dumping	\$345,700	\$300,000	-13.2%	\$345,000	15.0%
Services to Water-Other	\$1,009,400	\$900,000	-10.8%	\$950,000	5.6%
Equipment Rental-Sewer Service	\$1,742,400	\$1,750,000	0.4%	\$1,740,000	-0.6%
Miscellaneous (CNG Sales)	\$57,800	\$30,000	-48.1%	\$42,000	40.0%
Total	\$4,831,300	\$4,513,000	-6.6%	\$4,610,000	2.1%

VII. CAPITAL PROJECTS.**Major Capital Equipment, \$7,080,000.**

This program provides for equipment whose cost exceeds \$50,000 and has a life expectancy of at least 10 years. The program focuses on equipment replacement for garbage and recycling collection, snow and ice control, and pick-up and dump trucks for use as pool equipment.

Funding for this program decreases by \$437,000 (5.8%) from the 2014 Budget. A portion of the reduction is related to the Strong Neighborhoods Plan. In 2014, an additional \$707,000 was included in the Fleet budget to purchase equipment to demolish vacant houses. (See project update on page 21.13)

The 2015 Proposed Budget omits 4 dump trucks with underbody plows, and adds one vacuum truck to the department's request. Table 21.13 shows the vehicles requested by the department and a prioritized list of vehicles based on the funding available in the Proposed Budget. Actual equipment purchases may be different depending fleet performance. Average annual funding for this program since 2002 is \$5.7 million.

The current average age of capital equipment is 12.3 years, an increase of 0.4 years from February 2013. The optimal average age based on the average useful life of equipment is 6.0 years. The average age of the capital fleet in 2009 was 9.5 years. The age of the fleet is of concern because older vehicles cost more to operate. They typically require more extensive repairs, experience more down time and are less fuel-efficient than newer vehicles.

Table 22.12. Capital Program Summary, 2015.

Program	2015 Proposed Budget	2014 Actual Budget	Increase (decrease)	% Chng.	6-year Request
Major Capital Equipment	\$7,080,000	\$7,517,000	(\$437,000)	-5.81%	\$50,030,000

Table 22.13. Types of Vehicles Requested and Proposed for 2015.

Description of unit	Requested Units	Proposed Units	Estimated Unit Cost
Backhoe/Loader	1	1	\$129,000
Sweeper	2	2	\$196,000
Tractors			
Light, Multi-Purpose	2	2	\$100,000
Front End Wheel Loader	1	1	\$155,000
Trucks			
Aerial, 50 Ft, Utility Body	1	1	\$180,000
Chipper, Brush	3	3	\$53,000
Digger Derrick	1	1	\$220,000
Dump, 16 yard, Tri-Axle	2	2	\$155,000
Dump, 2 Yard w/ Crane	6	6	\$52,000
Dump, 5 Yard w/Underbody Plow	10	6	\$170,000
Dump, 24 Yard, Chip Body	1	1	\$110,000
Packer, 27 Yard, Automated Recycle	3	3	\$380,000
Packer, 25 Yard, Rear load/Recycle	7	7	\$285,000
Packer, 31 Yard Top Load	1	1	\$265,000
Road Patcher	1	1	\$250,000
Vacuum Truck		1	\$280,000
Total Number of Units	42	39	

Engine Failures

In 2013, DPW experienced major repair expenses on newer equipment that is subject to the new emission standards that went into effect in 2010. There were 28 major engine failures, mostly on 2010 and newer trucks. Historically, the average number of failures has been between 4 and 6 annually and typically occurred on older equipment. The most common cause of the failures is an emission-related component called an exhaust gas recirculation (EGR) cooler, which is highly sensitive to engine coolant levels.

In 2013, 10 of the failures resulted in the need for complete engine replacements. The remaining engines required partial rebuilds or in-chassis overhauls. The total cost of engine failures in 2013 was \$430,000. DPW took several corrective measure, including making changes to preventative maintenance procedures, intense monitoring of coolant condition and changes with the coolant itself. DPW is also working with drivers on preventative measures. So far in 2014, there have been 11 major engine failures. Only 2 engines required complete

engine replacement. Repair costs to date are \$143,000. It is not known how the new emission standards will affect the overall service life of vehicles.

CNG

DPW is continuing to transition its garbage and recycling packers to compressed natural gas (CNG) engines. DPW currently has 21 CNG-powered packers in use. Twenty two additional packers will be delivered in mid-November. The marginal cost of the CNG engines is \$39,000, an increase of \$3,000 (8.3%) since last year.

In 2014, DPW projected that each CNG packer would save approximately \$6,500 in fuel costs annually. Price changes for both CNG and diesel have narrowed the cost gap. Projected fuel savings for 2015 are \$5,220 for each CNG packer. If the City has to pay the full cost of a CNG packer (no grant funding) the payback period on fuel related savings is 7.5 years.

Ventilation and code upgrades are required at all repair facilities to accommodate CNG vehicles. DPW has been able to use CMAQ grant money to make many of the necessary upgrades. The grants typically have an 80/20 cost share. Central Garage is the only repair facility that still requires upgrades. An engineering study would be required to determine the cost to make the facility code compliant; however, DPW estimated in 2013 that the facility may need \$1.25 million in upgrades.

A CMAQ grant was received in 2014 for a CNG dispensing project which would make the CNG pumps at Ruby Garage available 24/7. It is anticipated that the project will be constructed in 2016. No new CNG related grant funding is anticipated in 2015.

Automated Packers

The Proposed Budget includes \$1.14 million (\$380,000 each) for the purchase of 3 additional, fully-automated pieces of equipment that will enable garbage collection to be performed by one person. The marginal cost for automated packers is \$166,000 (unchanged from last year). DPW currently has 6 fully-automated side loading trucks which it tested to determine operational constraints. DPW has determined that these particular packers with CNG engines are not effective when used for plowing snow, due to the excessive weight on the front axle caused by the CNG storage tanks. Future auto-loading packers will have diesel engines, which will allow better traction when used for plowing.

2. Unfunded Capital Requests.

There are no unfunded requests for 2015.

3. Project Updates.

Strong Neighborhoods Plan

The 2014 Budget provided \$707,000 for the purchase of equipment to demolish vacant houses. The equipment included an excavator (\$298,000), a trailer (\$59,000), a skeleton bucket (\$10,000) and 2 quad axle dump trucks (\$340,000).

The actual cost of the excavator was \$227,000. Demolition work began on February 5, 2014.

As of September 3, 2014, 58 demolitions have been completed. Twenty-eight more are expected by the end of the year. The department expects to reach its goal of 100 structures by February 5, 2015. Most of the equipment purchased for demolition can be repurposed once demolition activities are completed. The excavator has several alternate uses, including pavement removal, moving dirt at the Municipal Nursery, or stationary duties at DPW Field Headquarters.

Two-Way Radio Replacement & AVL/GPS Initiative.

This program provided funding to replace obsolete 2-way radio equipment with equipment that uses the Police Department's M/A-COM Communication Infrastructure (Open Sky). This project has received \$1.7 million in funding since 2009.

Not all DPW equipment has a communications radio installed. Radios are normally installed in certain larger vehicles such as dump trucks, sweepers, refuse trucks, aerial lifts, and backhoes. Radios are rarely installed in cars, pickups or vans. Installations have been made in 554 vehicles, including vehicles in Fleet, Water and Parking. There are approximately 15 radios that are in storage until the intended vehicles are delivered. New radios are being installed in most capital equipment as it is received. Radios are now being installed in Sewer equipment.

GPS is available on any vehicle that has an Open Sky radio installed. The automatic vehicle locator (AVL) system is now operational. DPW is working with the vendor to improve it and add additional features. In 2014, enhancements were made to speed the retrieval of data. A new server will be installed prior to year end to allow the system to operate faster. The system has been used by managers to verify the location of their workforce and to evaluate the speed at which tasks are carried out.

Central Repair Garage, Back Lot.

The 2014 Proposed Budget provided funding for this project in DPW's Facilities Exterior Program. The area behind the Central Repair garage on Canal Street has poor drainage and is prone to flooding. During heavy rain events, storm water runoff containing oil and fuel remnants flows over the Hank Aaron State Trail and into the Menomonee River. In 2012, DPW requested \$573,000 to repave the back lot. Paving of the lot began in late September 2014 and is expected to be completed by mid-October.

4. Future Capital Requests.

None.

VIII. ISSUES TO CONSIDER.

1. The long-term effect of CNG vehicles on maintenance costs and vehicle replacement cycles is unknown. The City has been budgeting approximately \$6 million per year for the replacement of major capital equipment. The department typically requests nearly twice that amount, basing its request on the age of the fleet and industry recommended replacement cycles. CNG packers are expected to save nearly \$5,220 in fuel costs annually, but if they don't last as long as vehicles with diesel engines or if they require significantly more maintenance, those savings will be offset by higher replacement and maintenance costs.

The average age of all Capital equipment has risen from 11.9 years in 2013 to 12.3 years in 2014. The average age of all O&M equipment (2,169 units costing less than \$50,000 each) is currently 12.0 years, but expected to climb to 12.4 years in 2015.

2. A new pay plan for ODWs goes before the Finance and Personnel Committee on October 8. The recommended changes in the pay plan for ODWs will offer pay increases based on the task being completed. For instance, more complicated jobs requiring more training will be paid at higher rates. The current system pays laboring jobs and driving jobs the same rate. According to management, by implementing a task-based pay system, more experienced drivers and operators will be encouraged to pick more difficult jobs, improving productivity and morale.

3. Sanitation as a total of 194 ODWs budgeted in 2015, with an additional 218 auxiliary ODW positions. Fleet has 55 ODWs budgeted in 2015, with an additional 102 auxiliary ODW positions. Fleet has indicated that approximately 65 auxiliary ODWs are currently utilized throughout the year. The remaining positions are filled as needed during snow control operations.

4. In October 2013, Fleet reported approximately 25 more major engine failures than usual in a typical year, mostly in newer trucks. Fleet staff found that newer engines in heavy-duty truck have been experiencing engine problems nationally at a higher rate than engines of earlier generations. Management notes that these failures appear to be driven by changes in technology which demand higher performance from vehicles' cooling systems.

If coolant levels are not properly maintained, engine components are damaged over time, resulting in large and costly repairs. To fix this issue, Fleet changed its preventative maintenance procedures, increased monitoring of coolant conditions and made changes with the coolant itself.

In the last year, Fleet has noticed a decrease in major engine failures, from 28 in 2013 to 11 thus far in 2014. Ten of the failures in 2013 resulted in the need for complete engine replacements, which cost between \$20,000 and \$30,000 each. The remainder of the repairs required partial rebuilds or in-chassis overhauls, which cost about \$5,000 to \$20,000, depending on the amount of damage. It is estimated that the total cost of engine failures in 2013 was \$430,000.

By contrast, the 11 engine failures in 2014 consisted of 2 complete engine replacements and 9 in-chassis overhauls or partial rebuilds, at a total estimated cost of \$143,000, to date. To further mitigate the issue, Fleet is continuing to train staff and educate drivers on the new systems, and remind them of their daily responsibilities regarding maintaining the equipment.

5. Fleet continues to work with other public and private entities to promote the sale of CNG from the 2 City-owned fueling facilities. Customers include MPS, SBC Global, Remy Battery, Peapod and Lowes. In 2015, Facilities is planning an expansion to the Ruby CNG station that will move the retail pumps from the rear of the yard to an open space, allowing 24/7 availability.

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