



REPORT

LEGISLATIVE REFERENCE BUREAU

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23. DPW— Forestry, 2015

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23. DPW—Forestry

\$13,734,715

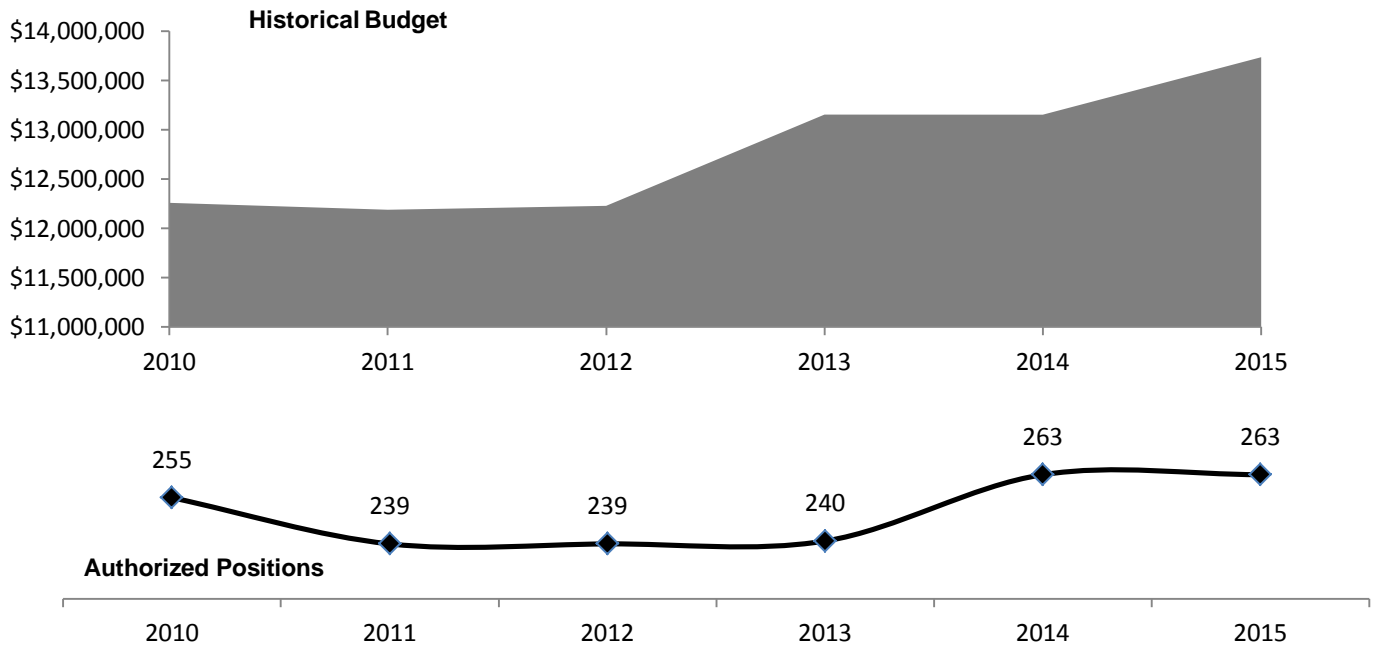
Proposed Department Budget

\$582,847

Nominal Change in Proposed Department Budget

4.43%

Percent Change in Proposed Department Budget



0.0%

Percent Change in FTE 2014 to 2015 Proposed

0

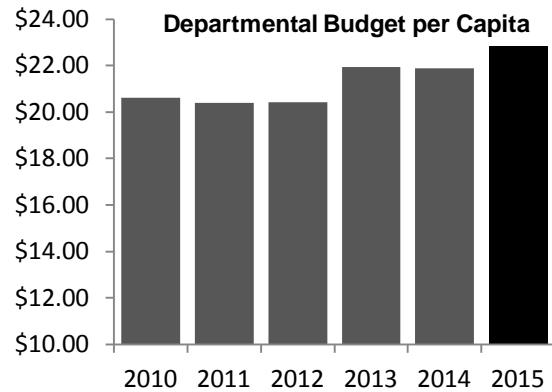
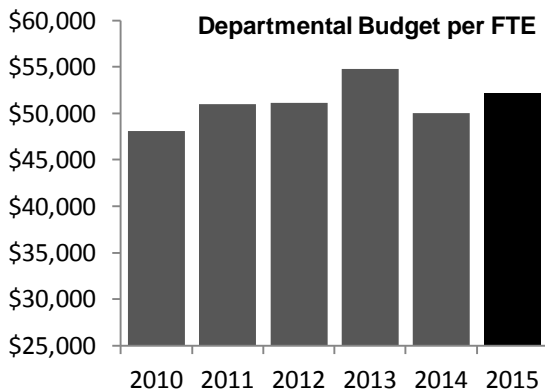
Nominal Change in FTE 2014 to 2015 Proposed

18

Vacant Positions

55%

% Eligible for Retirement within 10 years



4

If adopted, number of times in the past 5 years that Forestry's adopted budget would increase by at least 4%.

27,500

Average number of trees pruned per year between 2008 and 2013, nearly 4,700 trees short of Forestry's desired 6-year pruning cycle.

5

If adopted, number of times in the past 15 years that Forestry's adopted budget would increase by at least 4%.

\$28,064

Projected annual savings by switching to a 3-year emerald ash borer treatment cycle.

8

Forestry's anticipated 2015 pruning cycle, in years. Management's desired pruning cycle is 6 years.

\$60,000

Anticipated savings in tipping fees in 2015 as a result of diversion of wood material to local lumber mills.

40.6%

Decrease in Forestry's proposed equipment budget to partially offset pruning increases.

-\$223,500

Difference between Forestry's requested and proposed *In Rem/Vacant Lot Property Management* special fund.

\$273

Additional per-stump cost for the City to grind stumps, as compared to contracted stumping.

\$537,000

Additional funding for tree pruning in 2015. A majority of this amount comes from the Sewer Maintenance Fund.

Salary & Wage	Fringe Benefits	Operations
\$109,204 Proposed change	-\$88,857 Proposed change	\$477,000 Proposed change
\$7,009,114 Proposed Total	\$3,154,101 Proposed Total	\$1,334,500 Proposed Total
51.03% % of Total Department Budget	22.96% % of Total Department Budget	9.72% % of Total Department Budget

I. INITIATIVES AND PROGRAMS.

1. Tree Pruning

Forestry management has a “desired” pruning cycle of 3 years for trees under 12 inches in diameter and 6 years for trees greater than 12 inches in diameter. According to management, these standards were established through a comprehensive pruning study conducted in 1994 and deemed most efficient based on Milwaukee’s street tree population characteristics. In 2004, this approach was abandoned due to budget constraints.

A 6-year pruning cycle requires the pruning of approximately 32,350 trees annually. Management estimates its current pruning cycle is approximately 8 years. Using a 3-year rolling average of trees pruned annually, the City’s capacity to prune its street tree population has declined by 28.8% since 2008. Using these figures, Forestry’s current pruning cycle may be closer to 9 years. Between 2008 and 2013, Forestry has averaged approximately 27,500 trees pruned per year, which is approximately a 7-year pruning cycle.

Table 23.1. Trees Pruned Annually, Three-Year Rolling Average.

Years*	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015
Avg. Annual # Trees Pruned	30,172	27,998	26,478	24,933	23,699	21,495

*Years 2014 and 2015 estimated.

Forestry carried a backlog of 14,803 trees from 2013 into 2014. As of the May 2014 Capital Improvements Committee meeting, management projected to prune 19,342 trees in 2014 and carry a backlog of 27,400 trees into 2015. The 2015 Proposed Budget includes an additional \$537,000 for tree pruning. To partially offset this allocation, the 2015 Proposed Budget reduces Forestry’s equipment budget by \$87,000 and transfers an additional \$300,000 from the Sewer Maintenance Fund.

2. Tree Planting

Forestry maintains a goal of replacing a tree within one year of removal. Approximately 98% of all sites capable of supporting street trees in Milwaukee are occupied with trees at any given time. Of these 194,000 trees, approximately 1.8% to 2% are removed and replaced annually.

According to management, between 2009 and 2013, the Section’s replacement-to-removal ratio has been 1.08, meaning that 1.08 trees are planted for every tree removed. Examining the period of 2011 to 2013, however, shows that the replacement to removal ratio has dropped to 0.85. Management has indicated that this is due to Urban Forestry Specialist vacancies and higher than average tree removals relating to local and state paving projects.

The higher ratio between 2009 and 2013 may also be due, in part, to higher than average tree planting number in 2009 (6,187) and 2010 (4,166), as a result of boulevard tree plantings as part of the Sustainable Boulevards program. Forestry averages approximately 3,600 trees planted per year and planted 3,667 in 2013. Tree removal statistics are provided in Table 23.2.

Table 23.2. Trees Removed Annually.

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016
Mortality (2014-15 estimated)	3,098	3,244	3,845	3,108	3,934	4,472	3,600	3,600	3,600
Construction-Related (2015 estimated)	377	342	211	417	596	683	669	650	650
Total	3,475	3,586	4,056	3,525	4,530	5,155	4,269	4,250	4,250

3. Stump Removal.

The 2015 Proposed Budget includes \$360,000 for contract removal of approximately 1,300 stumps, or approximately \$277 per stump. For comparison, the 2014 Proposed Budget included approximately \$1.1 million in operating funding for the removal of approximately 2,000 stumps, or approximately \$550 per stump. The 2013 and 2014 Budgets provided capital funding of \$400,000 and \$200,000 respectively for contracted stump removal.

To date, DPW projects a backlog of 3,155 stumps to be carried over from 2014. Between 2008 and 2013, Forestry has had an average annual stump backlog at year end of 1,365. Using a 3-year rolling average, and using 2014-2016 projections, this average increases to over 2,800. Forestry's average annual stump backlog has increased by over 105% between 2008 and 2013, using a rolling 3-year average. Table 23.4 provides additional information relative to Forestry's stump removal activities.

Table 23.3. Annual Stump Backlog, Three-Year Rolling Average.

Years*	2008-'10	2009-'11	2010-'12	2011-'13	2012-'14	2013-'15	2014-'16
Avg. Annual Backlog	894	1471	1,967	1,835	2,160	2,455	2,855

*Years 2014 to 2016 estimated.

Table 23.4. Stumps Removed and Annual Year-End Backlog, 2008-2016.

Year*	2008	2009	2010	2011	2012	2013	2014	2015	2016
New Stumps to Grind	3,064	2,460	3,432	3,208	3,621	4,096	4,058	3,300	3,300
Carry-Over		452	482	1,749	2,182	1,969	1,355	3,155	2,855
Stumps Ground, City	2,612	2,490	2,165	2,315	2,684	3,108	1,348	2,300	2,300
Stumps Ground, Contract	0	0	0	460	1,150	1,602	910	1,300	1,300
TOTAL GROUND	2,612	2,490	2,165	2,775	3,834	4,710	2,258	3,600	3,600
Yearend Backlog	452	482	1,749	2,182	1,969	1,355	3,155	2,855	2,555

*Years 2015-2016 Projected.

4. Waste Diversion.

Since 2013, all solid wood logs and wood pieces generated during the removal of street trees have been diverted to Kettle Moraine Hardwoods (KMH) in Hartford, WI. In 2014, a Wood Utilization RFP resulted in agreements with KMH and a new start-up in Milwaukee, Bay View Lumber, LLC.

According to management, in 2013, the City saved approximately \$40,000 in avoided tipping fees through its agreement with KMH, and anticipates saving approximately \$60,000 in both 2014 and 2015. Forestry does not anticipate it will be able to sell merchantable logs, as only 30% of logs diverted to KMH in 2013 were of a quality that could be sawed into dimensional lumber.

5. Installment Payments for Tree Removal

On March 21, 2013, the Common Council adopted an ordinance (Common Council File Number 120636) to provide property owners who are charged for the ordered removal of hazardous trees from their properties by City contractors with the option of paying for the trees' removal over the 6 subsequent property tax bills, similar to the option provided for the payment of special assessments.

Previously, the charges for the ordered removal of hazardous trees from private property by City contractors were placed on the tax roll as special charges and payment was due in full in the year property taxes are due. The 2015 Proposed Budget provides \$75,000 in capital funding to provide expenditure authority for this program.

In 2013, 5 residents participated in the program at a total cost of \$3,313. Thus far in 2014, 28 property owners have requested applications for deferred payment, and 7 have elected for deferred payment at a total cost of \$13,050. Table 23.5 provides a summary of Forestry's hazard tree program.

Table 23.5. Summary of Hazard Tree Program Statistics, 2009 to 2014.

Year	Properties Cited	Abated by City Contractor	Total Assessment Cost
2009	649	127	\$52,633
2010	519	161	\$66,127
2011	358	142	\$73,881
2012	411	114	\$70,370
2013	318	127	\$88,918
2014	411*	87	\$40,978
Average	444	126	\$65,485

*Includes 129 ash trees cited for emerald ash borer in September 2014.

6. Emerald Ash Borer Treatment

Forestry recently completed its 6th year of emerald ash borer treatments. Approximately 32,000 of the City's 193,000 street trees (16.3%) are ash. Management notes that in 2012, the University of Wisconsin Department of Entomology conducted an analysis of Milwaukee's

treated ash trees and found that the City's treatment program has a high rate of efficacy, in terms of foliar insecticide concentration 2 years after treatment.

In the first 6 years of the EAB treatment program, Forestry's policy has been to treat only trees greater than 8 inches in diameter. Management notes that in the 2015 Proposed Budget, funding for treatment has been increased slightly to support treatment of the approximately 3,449 trees which, in the Section's 2009 inventory, were 7 inches in diameter or smaller and may have "grown into" the 8-inch treatment size. Forestry estimates that approximately half of the nearly 3,500 trees will be treated in 2015.

Additionally, Forestry is planning on implementing a new policy in 2015, whereby if an EAB-infested ash tree is discovered on City property, all surrounding untreated ash trees will be removed. Approximately 1,365 ash street trees have been removed since 2009, for various reasons. Management notes that 340 ash trees were removed in 2012, 351 in 2013, and 137 year-to-date in 2014.

Finally, Forestry has analyzed the cost-efficiencies of expanding its treatment cycle from one dose every 2 years to one dose every 3 years, as numerous researchers have found that, at appropriate doses, treating ash trees every 3 years may be as effective as treating every 2 years. Tables 23.6 and 23.7 provide a comparison of estimated 2- and 3-year treatment costs.

Table 23.6. Two-Year Treatment Cycle Cost Analysis.

2-Year Cycle	Labor	Chemical	Supplies	Total Cost
Year 1	\$484,191	\$475,000	\$75,000	\$1,034,191
Year 2	\$484,191	\$475,000	\$75,000	\$1,034,191
<i>Sub-Total</i>	<i>\$968,382</i>	<i>\$950,000</i>	<i>\$150,000</i>	<i>\$2,068,382</i>
Year 3	\$484,191	\$475,000	\$75,000	\$1,034,191
Year 4	\$484,191	\$475,000	\$75,000	\$1,034,191
<i>Sub-Total</i>	<i>\$968,382</i>	<i>\$950,000</i>	<i>\$150,000</i>	<i>\$2,068,382</i>
Year 5	\$484,191	\$475,000	\$75,000	\$1,034,191
Year 6	\$484,191	\$475,000	\$75,000	\$1,034,191
<i>Sub-Total</i>	<i>\$968,382</i>	<i>\$950,000</i>	<i>\$150,000</i>	<i>\$2,068,382</i>
6-Year total	\$2,905,146	\$2,850,000	\$450,000	\$6,205,146

Table 23.7. Three-Year Treatment Cycle Cost Analysis.

3-Year Cycle	Labor	Chemical	Supplies	Total Cost
Year 1	\$322,794	\$633,333	\$50,000	\$1,006,127
Year 2	\$322,794	\$633,333	\$50,000	\$1,006,127
Year 3	\$322,794	\$633,333	\$50,000	\$1,006,127
<i>Sub-Total</i>	<i>\$968,382</i>	<i>\$1,899,999</i>	<i>\$150,000</i>	<i>\$3,018,381</i>
Year 4	\$322,794	\$633,333	\$50,000	\$1,006,127
Year 5	\$322,794	\$633,333	\$50,000	\$1,006,127
Year 6	\$322,794	\$633,333	\$50,000	\$1,006,127
<i>Sub-Total</i>	<i>\$968,382</i>	<i>\$1,899,999</i>	<i>\$150,000</i>	<i>\$3,018,381</i>
6-Year total	\$1,936,764	\$3,799,998	\$250,000	\$6,036,762

Using the above analysis, over a 6-year period, Forestry would save nearly \$1 million in labor costs (approximately \$161,000 per year) and \$200,000 in injection supplies (approximately \$33,000 per year). These savings are partially offset, however, by a \$950,000 increase in chemical costs (\$158,000 per year). The total per-year savings is \$28,064.

Regardless of whether injected on a 2-year or a 3-year cycle, EAB will continue to be a challenge for the foreseeable future. However, industry experts have for a number of years and through numerous peer-reviewed studies demonstrated that treatment is more cost-effective than preemptively removing ash trees. More passive management strategies have very little upfront cost, but may expose the City to significant costs and public safety risks in the near future and would have catastrophic effects on the tree canopy. A moderate management strategy would balance the costs of implementation, the likelihood of uncontrolled infestation, property owner expectations and neighborhood aesthetics.

II. EXPENDITURES.

Table 23.8. Changes in Expenditure Amounts by Account.

Expenditure Account	2013 Actual	2014 Adopted Budget	% Change	2015 Proposed Budget	% Change
Salaries and Wages	\$7,489,651	\$6,899,910	-7.9%	\$7,009,114	1.6%
Fringe Benefits	\$3,520,136	\$3,242,958	-7.9%	\$3,154,101	-2.7%
Operating Expenditures	\$821,571	\$857,500	4.4%	\$1,334,500	55.6%
Equipment Purchases	\$163,844	\$214,500	30.9%	\$127,500	-40.6%
Special Funds	\$1,157,644	\$1,937,000	67.3%	\$2,109,500	8.9%
Total Operating Budget	\$13,152,846	\$13,151,868	0.0%	\$13,734,715	4.4%

1. Budget Summary.

The total 2015 Proposed Budget is \$13,734,715, an increase of \$582,847 (4.4%) from the 2014 Adopted Budget amount of \$13,151,868. If adopted as proposed, this would mark the fourth time in the last 5 years that Forestry's adopted budget has increased by at least 4% from the previous year's adopted budget, but only the fifth time in the last 15 years. Including the 2015 Proposed Budget, the average increase in Forestry's budgets since 2002 is 2.03%.

2. Personnel Costs.

Personnel costs in the 2015 Proposed Budget are \$10,163,215, an increase of \$20,347 (0.2%) from the 2014 Adopted Budget. Salaries and wages increase \$109,204 (1.6%). Fringe benefits decrease \$88,857 (-2.7%).

3. Operating Expenditures.

Operating Expenditures in the 2015 Proposed Budget are \$1,334,500, an increase of \$477,000 from the 2014 Adopted Budget amount of \$857,500. The changes can be primarily attributed to

a \$537,000 increase in the Other Operating Services account for increased pruning.

In addition, the Forestry Section's Vehicle Rental account is projected to decrease by \$26,200 (63.6%) from the 2014 amount of \$41,200. According to management, passenger vehicles are rented to replace the small pick-up trucks assigned to Forestry management and field inspection staff during the summer, during which these vehicles are used by interns injecting ash street trees. This account is also used to supplement City-owned passenger vehicles placed out of service due to age and condition, and subsequently not replaced.

The variation in account expenditures from 2014 to 2015 is believed to be primarily attributed to rental vehicles being charged to the respective program account (i.e. Emerald Ash Borer Capital Improvement account) that necessitates rental vehicle use.

4. Replacement Equipment Purchases.

Replacement Equipment purchases in the 2015 Proposed Budget are \$127,500, a decrease of \$87,000 (40.6%) from the 2014 Budget. This decrease was intended to offset part of the increase in operating expenditure attributed to increased pruning efforts. The Replacement Equipment Purchases for 2015 are provided in Table 23.9.

Table 23.9. Major Equipment Purchases, 2015.

Account	2014		2015		% Change
	Amount	Units	Amount	Units	
Trailers, Work Shanty	\$25,500	3	\$15,500	1	-39.2%
Computer Work Stations	\$22,000	16	\$0	16	-100%
Turf Maintenance Equipment	\$105,000	3	\$50,000	2	-52.4%
Skid Loader with Attachments	\$45,000	1	\$45,000	1	0%
Articulated Tree Loader Attachment	\$17,000	1	\$17,000	1	0%

5. Special Funds

Table 23.10. Change in Special Funds.

Fund	2013 Actual	2014 Adopted Budget	% Change	2015 Proposed Budget	% Change
Vacant Lot Maintenance	\$1,157,644	\$715,000	-38.2%	\$0	-100%
<i>In Rem</i> Property Management	\$0	\$1,222,000	--	\$0	-100%
<i>In Rem</i> /Vacant Lot Property Management*	\$1,275,662	\$2,109,500	65.4%	\$2,109,500	0%

*The 2013 amount for this account was compiled from Forestry and Sanitation's Vacant Lot Maintenance accounts. The 2014 amount was compiled from Forestry and Sanitation's Vacant Lot Maintenance accounts and Forestry's *In Rem* Property Management account. 2013 and 2014 figures do not reflect actual budgeted amounts for Forestry, but are provided for comparison with the 2015 Proposed Budget.

The 2015 Forestry Proposed Budget consolidates funding from the Vacant Lot Maintenance Special Fund into the *In Rem*/Vacant Lot Property Management Special Fund. Sanitation's Vacant Lot Maintenance Special Fund (\$172,500) has also been consolidated into this account.

This Fund will be used for the maintenance of City-owned vacant lots and *in rem* properties, primarily for mowing and snow removal. Between the 3 accounts, funding in the 2015 Proposed Budget does not change from the 2014 Adopted Budget. This account will be used to fund 16 mow cycles and various snow and debris removal activities on over 3,000 city-owned vacant lots and over 1,200 improved properties. Forestry's estimated average maintenance cost for vacant lots is \$415 and for improved lots is \$521, per year. The 2015 Proposed Budget amount reflects an anticipated 330 additional improved properties in 2015.

III. PERSONNEL.

Table 23.11. Changes in Full-Time Equivalent (FTE) and Authorized Positions.

Position Category	2013 Actual	2014 Adopted Budget	Change	2015 Proposed Budget	Change
O&M FTEs	139.55	145.93	4.6%	150	2.8%
Non-O&M FTEs	30.95	35.57	14.9%	22.1	-37.9%
Total Authorized Positions	240	263	9.6%	263	0.0%

1. Personnel Changes.

The total number of authorized positions in the Forestry Section under the 2015 Proposed Budget is 263, the same number of positions authorized in the 2014 Adopted Budget.

The 9 Non-O&M City Laborer FTEs associated with the Dombrowski Landscape Management Training Initiative have been eliminated in the 2015 Proposed Budget.

There are 42 Urban Forestry Laborer (seasonal) positions in the 2015 Proposed Budget. It is anticipated that funding for the Transitional Job program will support 30 workers for approximately 6 months of seasonal employment.

2. Vacancies.

Currently the Forestry Section has 18 vacant positions which are shown in Table 23.12.

Table 23.12. Forestry Vacant Positions.

#	Title of Position	Date Vacant	Estimated Fill Date
1	Urban Forest Manager	9/15/2014	F&P Approved
1	Urban Forestry Technician	9/26/2014	Pending F&P Approval
16	Urban Forestry Specialist	Varies	13 Trainees planned to be promoted by 12/31/14

Historically, Forestry experiences a turnover of approximately 10 Urban Forestry Specialists (UFS) annually. Currently, the Section has 93 of 109 UFS positions filled and has a training crew of 13 scheduled to test for UFS positions in November 2014, resulting in a year-end staffing level of approximately 106 UFS.

The Proposed Budget does not provide funding specifically for UFS Trainees, nor does it Forestry anticipate it has the capacity to fund a training crew every year. Management notes that it typically carries 10 to 20 UFS vacancies over the course of a 2-year time span, which has an impact on operations and productions capability.

IV. SPECIAL PURPOSE ACCOUNTS (SPA).

None

VI. REVENUES.

The Proposed Budget estimates that approximately \$930,000 will be generated in revenues in 2015, a 6.5% (\$65,000) decrease from 2014. Details are provided in Table 23.13, below.

Table 23.13. Changes in Revenue by Category.

Revenue Account	2013 Actual	2014 Adopted Budget	% Change	2015 Proposed Budget	% Change
Snow Removal	\$352,200	\$150,000	-57.4%	\$200,000	33.3%
Weed Removal	\$650,400	\$600,000	-7.7%	\$600,000	0.0%
Miscellaneous Forest Charges	\$133,500	\$130,000	-2.6%	\$130,000	0.0%
Litter Nuisance	\$61,700	\$115,000	86.4%	\$0	-100.0%
Total	\$1,197,800	\$995,000	-16.9%	\$930,000	-6.5%

Miscellaneous revenues are generated through the sale of plant materials from the nursery, charges for removal and replacement of damaged and hazardous trees, and administrative fees for encroachments. Additionally, the litter nuisance revenue account was for DNS-ordered cleanups administered by DPW. In 2014, this account was given to DNS, and DPW will no longer be involved with the litter nuisance process.

In addition to the above accounts, DPW – Operations receives a transfer from the Sewer Maintenance Fund for leaf collection and street sweeping services, as well as Forestry tree production, planting and pruning services. In the 2015 Proposed Budget, this transfer is \$15,059,000, the same as in 2014.

VI. CAPITAL PROJECTS.

The 2015 Proposed Budget includes \$3,655,000 in funding for 6 capital projects, an increase of \$445,000 (13.9%) from the 2014 Budget. Approximately half of the increase is related to the Vacant Lot Beautification program which was moved from the Department of City Development to Forestry. Capital projects for 2015 are summarized in Table 23.14 and the discussion that follows.

One of the key issues facing the City with respect to its urban forest is the discovery of emerald ash borer. The presence of the emerald ash borer has been confirmed in Milwaukee and will require the City to implement strategies for managing and maintaining its tree canopy. If left unmanaged, the emerald ash borer will likely kill thousands of trees each year.

The management strategy will have implications for Forestry's operations; impacting tree removal, stumping, tree planting and production, and the management of hazardous trees on private property. Management options include the preventative treatment of individual trees, removal of only infested trees, pre-emptive removal of all ash trees and selective removal. An approach that combines preventative treatment with the strategic removal of ash trees could allow for an orderly, fiscally-sustainable transition to a resistant tree species.

Forestry has developed and implemented a proactive treatment strategy which is discussed further in the Emerald Ash Borer Readiness and Response section.

Table 23.14. Capital Program Summary, 2015.

Program	2014 Actual Budget	2015 Proposed Budget	Increase (decrease)	% Chng.	6-year Request
Tree Planting and Production	\$1,483,000	\$1,520,000	\$37,000	2.5%	\$10,194,000
Concealed Irrigation & General Landscaping	\$500,000	\$500,000	\$0	0%	\$3,000,000
Emerald Ash Borer Readiness & Response	\$952,000	\$1,000,000	\$48,000	5.0%	\$5,904,000
Stump Removal	\$200,000	\$360,000	\$160,000	80.0%	\$2,160,000
Hazardous Tree Removal	\$75,000	\$75,000	\$0	0%	\$450,000
Vacant Lot Beautification ¹	\$0 ¹	\$200,000	\$200,000	----	----
Total	\$3,010,000	\$,000	\$445,000	13.9%	\$21,708,000 ²

¹ The Vacant Lot Beautification program was moved to Forestry from DCD. The program received \$200,000 in the DCD capital budget in 2014

² The total does not include projects that were not funded in 2015. The total 6 year capital request for Forestry is \$27,483,000.

Tree Planting and Production, \$1,520,000.

This program funds the production and replacement of trees removed in street construction projects, replacement of dead or diseased trees, and the planting of new trees on boulevards. Since 2010, this program has been funded by the Storm Water Management fee. The transfer from the Sewer Maintenance Fund is also used to fund certain tree related activities in Forestry's operating budget.

In 2015, this account will be partially funded (\$300,000) with general obligation debt. Revenues from the Sewer Fund transfer that would normally have been used to fund this program will be used to provide increased support for pruning activities in the operational budget.

DPW requested funding for 5,151 trees in this capital program. (An additional 900 trees were requested in a separate capital program which did not receive funding.) The 2015 Proposed Budget provides \$1,520,000 for this program, an increase of \$37,000 (2.5%) from the 2014 Budget and a decrease of \$174,000 (10.3%) from the requested amount.

Table 23.15. Tree Planting Request Summary.

Request Year	2011	2012	2013	2014	2015
Dead or Diseased	3,244	3,845	3,108	3,934	4,472
Related to Paving	211	417	506	277	669
Ash Tree Transition Plan ²					900 ²
New Trees, Sustainable Boulevard Plan	2,450	700 ¹	--	--	--
Total Requested Trees	5,905	4,962	3,704	4,211	6,041

¹ Not funded in the 2012 Budget.

² The 900 trees in the Ash Tree Transition Plan are not included in the regular Tree Planting and Production capital account and are not funded in the 2015 Proposed Budget.

Stump Removal.

DPW began 2014 with a backlog of over 1,300 stumps. Historically, the backlog averages around 400 stumps. The Forestry Section cited reductions in Urban Forestry FTE's and funding for seasonal employees, and vacancies held open in 2010 and 2011 as contributing factors to the stump backlog. The 2013 and 2014 Budgets provided capital funding of \$400,000 and \$200,000 respectively for contracted stump removal.

The department estimates that it can remove approximately 2,300 stumps each year with its existing staff. If tree mortality remains relatively constant, the year-end backlog of stumps will increase by over 1,000 each year unless funding is provided to contract for additional removals. The contracted price for stumps is estimated at about \$275 per tree, but it can vary with the diameter size of the stumps that are on a particular contract. The 2014 year-end backlog is expected to be about 1,155 stumps.

Because new trees are generally planted in the same locations where the trees were removed the year before, stump removal is a necessary part of site preparation. If the stumps are not removed in a timely manner, tree replacement will be delayed. The demands for stumping operation are expected to increase in the near future because of the emerald ash borer infestation. The 3-year average for tree removal (mortality and construction related) is 4,400 trees, an increase of approximately 365 from the previous 3-year average.

The current 3-year average for paving related tree removals (2011-2013) is 565 an increase of 82% from the 2008-2010 3-year average. Increases in the paving program do not directly affected stumping activities because stumping is a bid item on the paving contracts.

Concealed Irrigation and General Landscaping, \$500,000.

This program is not funded by the Storm Water Management Fee. This program replaces infrastructure related to irrigation and landscaped boulevard medians in conjunction with the City's paving program. The program does not directly correlate to increases in state/federal-aided paving because not all arterials have boulevards.

This program was funded as requested. Proposed funding in 2015 will allow for the replacement of approximately 100 taps, including 30 taps along boulevard segments scheduled for repaving and 70 taps at various locations city-wide based on age and condition.

Tree mortality has generally remained between 1.5% and 2.0 % since the City instituted a bed-only irrigation policy nearly a decade ago.

Emerald Ash Borer (EAB) Readiness and Response, \$1,000,000.

This program is funded by the Storm Water Management Fee. This program received \$16,000 more than the requested amount and is \$48,000 (5.0%) greater than the 2014 Budget. The increase will support the treatment of smaller diameter ash trees which were initially untreated but that have grown into the treatment class.

There are approximately 570,000 ash trees within the City limits. Approximately 32,500 (5.7%) are street trees in the public right of way. Since 2009, \$5.4 million has been allocated to inoculate 27,000 ash trees against the emerald ash borer. One half of the City's ash trees, 8" or larger, will be inoculated each year as the City transitions to resistant species. As smaller diameter trees grow into the 8" class, they will be inoculated if they are healthy and not structurally deficient. The department's inventory has approximately 3,500 trees that are under 7" in diameter and could grow into the treatment class.

Some research indicates that inoculation may be more effective than previously believed and that injections may be effective for up to three years. The department estimates that increasing the injection cycle from 2 years to 3 years would increase the amount of chemical that is required over the long run by one third, partially offsetting labor savings that may be realized.

Emerald Ash Borer continues to spread in Southeast Wisconsin. An active infestation on private property within the City limits was confirmed by the Wisconsin Department of Agriculture, Trade and Consumer Protection in July 2012. EAB is currently active in 3 areas of the City; in the vicinity of 80th and Mill Road, 84th and Adler, and 49th and Hampton. No EAB activity has been detected in treated ash street trees. A total of 828 ash street trees were removed in the last 3 years, 340 in 2012, 351 in 2013 and 137 so far in 2014.

Forestry has surveyed private trees in the vicinity of known EAB infestations and has notified property owners of trees confirmed or symptomatic for EAB. An ordinance change in 2013 allows hazardous tree removal charges to be considered a special assessment. This gives property owners the option of paying the bill in full or spreading any unpaid balance across 6 subsequent property tax bills. Property owners for whom the unexpected removal of ash trees is

a financial hardship will benefit from this provision. The 2015 Proposed Budget provides funding in the Hazardous Tree Removal account to fund the ordinance change. The number of properties cited for hazardous trees so far in 2014 (411) is significantly higher than in all of 2013 (318) but significantly lower than in 2009 or 2010 (649 and 519 respectively).

Forestry has performed extensive outreach, attempting to notify property owners with ash trees and providing educational materials regarding treatment and removal options. Infested trees quickly lose structural integrity and pose a significant risk of personal injury or property damage, necessitating prompt removal.

Hazardous Tree Removal, \$75,000.

The 2015 Proposed Budget funds the Hazardous Tree Removal capital account which was created in the 2014 Budget with \$75,000 in cash. This account provides a funding source for the 2013 ordinance change which allows property owners to spread the cost of removing hazardous trees on their property over 6 property tax bills. The ordinance was generally modeled after paving and sidewalk assessments. However in the case of hazardous tree removals, the property owner must decide before the work is done if he or she will defer payment. If payment deferral is selected, there is no penalty for early repayment.

Vacant Lot Beautification, \$200,000.

Funding for this capital account, which is part of the Mayor's Strong Neighborhood Investment Plan, has been moved from the Department of City Development to DPW Operations Forestry Section.

This account was created in 2014 to provide funds to install a variety of improvements on vacant lots, including grass, shrubs, trees, raised garden beds and fencing. DCD estimated that, with the proposed level of funding, between 80 and 100 lots can be improved at an average cost of \$2,000 to \$2,500. There are currently 4 design templates for vacant lot beautification that are being utilized. The templates were developed jointly by Forestry and DCD. In 2014 Forestry provided assistance with administering contract landscape improvements. This role is expected to continue in 2015.

2. Unfunded Capital Requests.

Ash Tree Transition Plan \$900,000

The 2015 Proposed Budget does not include funding for the Ash Tree Transition Plan. There are approximately 5,000 ash trees in the City's street right of ways that have not been inoculated because they are too small or have structural deficiencies. These trees are expected to be infested by the emerald ash borer within the next few years. Funding would have provided for the contract removal and replacement of 900 ash trees in 2015. The number of trees at risk may decrease as smaller diameter trees get large enough to be included in the treatment class.

Forestry Headquarters Modifications \$125,000.

The 2015 Proposed Budget does not include funding to make modifications and repairs at the Forestry Headquarters. This capital account would have funded on-going maintenance at Forestry facilities including some upgrades to accommodate additional staffing for maintaining

vacant and in-rem properties. The Capital Improvements Committee recommended \$50,000 of funding.

3. Project Updates.

Sustainable Boulevard Program.

The department considers this project complete.

4. Future Capital Requests.

There are no out-year capital requests except those relating to currently--funded programs.

VII. ISSUES TO CONSIDER.

1. Forestry's 2015 Capital Improvements Deduction account has decreased by \$452,946 (26%) from the 2014 Budget. According to management, Forestry's capital deduction reflects the anticipated salary charges to Forestry Capital based on 5 years' experience. Because of the significant reduction from Forestry's 2014 budget, the Forestry Section has been budgeted a \$231,453 "other" reduction. Management has indicated that this will challenge Forestry to keep salary expenditures within the 2015 Proposed Budget amount. The Section will likely meet this challenge through a vacancy rate higher than the rate allotted in its Personnel Cost Adjustment budget.

Given that DPW-Operations has already exceeded its snow and ice operations budget by \$2.8 million, and given that vacant positions DPW-wide have historically been held to offset higher-than-anticipated snow and ice expenditures, Forestry-related services may be affected in 2015.

2. As of September, revenues from weed removal charges are \$77,000 greater than the same time in 2013. This is likely the result of a change in the weed notice threshold from 9 inches to 7 inches. Management projects that revenues will be approximately \$750,000 by year-end, or approximately \$100,000 more than 2013.

Management also notes that, as a result of the change in threshold, it has changed the number of mowing cycles for contractors conducting vacant lot maintenance from 8 to 16. In the 2014 Budget, Forestry anticipated an additional \$55,000 would be needed for these additional mowings, but that this amount would be offset by revenue generated from charges imposed on properties not in compliance with the new ordinance.

3. Two (1.5 FTEs) Urban Forestry Technicians were added in Forestry's 2014 Budget as part of the Mayor's Strong Neighborhoods Plan. These positions were to provide property management related to *in rem* properties. According to the 2014 Proposed Budget, the Forestry Section estimated it would be responsible for maintaining over 2,700 *in rem* properties (with homes or improved properties on the land) by the end of 2014. Management has indicated it is currently responsible for 1,283 improved lots.

In 2013, management had also noted that one FTE could manage approximately 1,350 properties.

4. Forestry does not anticipate that its additional allocation of \$537,000 in its Other Operating Services account will alone be sufficient for the Section to meet its 6-year pruning cycle goal. Management has indicated that the number of trees pruned with this allocation will be dependent on the number of Urban Forestry Specialists freed up by contracting other maintenance services and contractor bid prices.

The Section's best estimate is 3,500 additional trees. Forestry has indicated that based on its pruning capacity between 2011 to 2013, it expects to fall approximately 7,200 trees short of its desired pruning cycle. With the addition of transitional workers, Forestry should be able to free up additional Urban Forestry Specialists for pruning activities.

5. In 2013, Forestry partnered with several local companies and organizations for vacant lot and *in rem* property maintenance. These include:

- Milwaukee Community Services Corp (CBO)
- Running Rebels (CBO)
- River Works (CBO)
- TL Reese (SBE)
- Anderson Landscaping (SBE)
- All Seasons Landscaping (SBE)

2014 partners include:

- River Works – Debris Removal (CBO)
- All Seasons Landscaping (SBE)
- TL Reese (SBE)
- Anderson landscaping (SBE)

In 2014, DPW hosted 3 mixers with small SBEs, CBOs and general contractors for collaboration on city lot maintenance and other DPW division services. According to management, performance by SBEs and CBOs to date has been satisfactory, and Forestry will continue to seek opportunities for SBE and CBO participation.

6. The Dombrowski Training Program was completed at the end of May 2014. Of the 25 participants who graduated from the program, 15 were placed in temporary laborer positions on June 1. Twelve of these individuals are still working with Forestry; these positions will be funded for 6 months. An additional 5 participants were hired by private landscape companies.

Management has indicated that 65% of the program's participants were African American men, 10% were African American women, 20% were Caucasian men and 5% were Hispanic.

ARRA money had previously funded 2 additional "Diversity in Urban Forestry" training crews in 2010 and 2011. According to management, in the first class of 25 participants, 13 completed the program and 8 were employed by private employers. The second training class of 15 had 6 placements, including 3 that were hired by the City in the Urban Forestry Specialist title.

7. Management has indicated that the Forestry Section will be evaluating options for contracting the following operations to provide Urban Forestry Specialist capacity to continue pruning throughout the spring, summer and fall seasons:

- Boulevard Mowing and litter pick-up - No contract experience
- Trunk Drops -No contract experience

Forestry has also noted that the reduction in its 2015 requested Professional Services budget from \$25,000 to \$5,000 in the Proposed Budget effectively precludes it from contracting with a consulting firm for operations or resource assessment needs, or for specialized training, including electrical hazard awareness, CPR, Line Clearance Qualification, Tree Risk Assessment, etc.

8. DPW recently announced it is soliciting an RFP for a “Dutch Elm Disease Historical Urban Tree Canopy and Benefit Loss Assessment.” According to management, DPW was awarded a \$25,000 Urban Forestry Grant from the Wisconsin Department of Natural Resources in 2014 to assist with the costs of this project. A service contract has been awarded to a successful vendor to conduct a historical urban tree canopy assessment using aerial imagery from 1956 – when Dutch Elm Disease (DED) was first detected in Milwaukee – and subsequent decades to the present to quantify ecosystem benefits losses, particularly stormwater impacts associated with the documented loss of over 130,000 American elm trees.

The study also includes an economic analysis to estimate costs incurred in managing DED, and the results will be used to develop a decision matrix for future major forest pest management in Milwaukee, such as EAB. The \$25,000 in funding requires a 50% local match.

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