



Committee on Budget and Employment

Executive Director's
2016 Budget Recommendations
November 2015



Maintenance & Operations Department

Executive Director's
2016 Budget Recommendations
November 2015



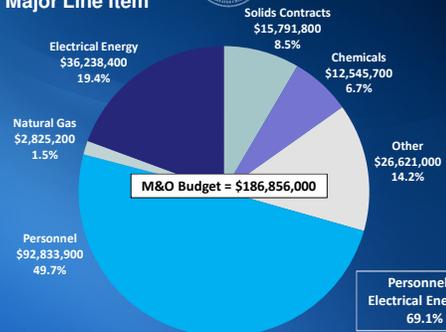
M&O - All Divisions

	Appropriations	Positions
2016	\$186,856,000	953
2015	186,319,700	982
Change	↑ \$ 536,300	↓ 29
	0.3%	

Note: 27 operational positions are funded by the Stormwater Management Fund.



2016 Appropriation by Major Line Item



Major Initiatives & Changes Personnel

- Reviewed the structure of the Engineering staff and organized them based on expertise rather than location
 - Electrical Engineering teams: DCS Systems, Electrical Equipment, and Energy Management/Power Distribution
 - Mechanical Engineering teams: Collection Systems, HVAC Equipment and Processes, and Solids Processing



Major Initiatives & Changes Personnel (continued)

The value of the new structure

- The Engineers will address technical needs in their specialty, department-wide, thereby reducing redundant staffing
- The Master Mechanics will manage day-to-day maintenance scheduling and performance



Major Initiatives & Changes Personnel (continued)

- Implement a plan using internal staff and District-owned equipment (to be procured) for routine landscaping maintenance tasks, such as lawn mowing, hedge trimming, etc.
- Continue to make best use of the Construction Fund and staff engineers to upgrade facilities



Major Initiatives & Changes Electrical Energy

Procurement:

- Continued adherence to the Reverse Auction Model
 - In 2011, the District conducted its first Reverse Auction to procure an electricity supply and realized annual savings of approximately \$10M for 2012 and 2013
 - Executed contract extensions for 2014 and 2015 at a rate below the 2011 pricing
 - In 2014, conducted another Reverse Auction to procure electricity for 2016 and 2017 at a 4.4% price increase over the 2015 rate
 - In 2015, executed an extension for 2017 & 2018 that will lower our annual cost by over \$1.6M below the 2016-2017 rate



Major Initiatives & Changes Electrical Energy (continued)

Curtailment:

- In 2015, selected EnergyConnect, Inc., to provide a voluntary energy curtailment program for a three-year period
- Compensation of \$1,890,000 for 2015-2016, \$944,000 for 2016-2017, and \$1,690,000 for 2017-2018 is expected
- Participation in the program poses no risk to operations



Major Initiatives & Changes Electrical Energy (continued)

Conservation:

- 2014: Entered into an IGA with the Chicago Public Building Commission to perform investment grade energy audits at major District facilities
- 2015: Received and reviewed the final investment grade energy audit report
- 2016: Work with the PBC to implement some of the recommended energy conservation measures



Major Initiatives & Changes Electrical Energy (continued)

Program-wide ECM	Turnkey Price	Annual \$ Savings	Simple Payback	Life Expectancy
Controls Upgrade	\$ 1,733,929	\$276,218	6.3 yrs	15 yrs
Steam Blanket Insulation	\$ 681,064	\$ 50,476	13.5 yrs	20 yrs
LED Interior Lighting Upgrades	\$ 9,305,582	\$480,591	19.4 yrs	22 yrs
Boiler Replacement (125 th Street)	\$ 344,402	\$0	N/A	25 yrs
Totals	\$12,064,977	\$807,285	14.9 yrs	21 yrs



Major Initiatives & Changes Electrical Energy (continued)

- Started implementation of ammonia controls at the CWRP, OWRP, and SWRP, to be completed in spring of 2016, with the goal of saving 25% of aeration air, thereby reducing electrical costs for aeration (15% at the OWRP and SWRP and 5% at the CWRP)
- Sell LPPH power and associated RECs in an open market with an anticipated increase in annual revenue of \$500,000



Major Initiatives & Changes Bio-Solids

- Install a co-composting facility at LASMA to produce 10,000 tons of compost in 2016, resulting in annual savings of \$250,000 in solids processing, with a plan to double production in 2017
- Install a co-composting facility at CALSMA in 2017 to produce 25,000 tons of compost, resulting in annual savings of \$1 million in solids processing



Major Initiatives & Changes Chemicals

- Continued elimination of centrifugation at the CWRP to achieve annual cost savings in electricity, chemicals, and personnel of approximately \$2 million
- Continued optimization of centrifugation at SWRP and EWRP



Construction Fund

Appropriations

2016	\$32,930,400
2015	37,910,700
Change ↓	\$ 4,980,300
	(13.1%)



Construction Fund Projects Completed or Near-completion in 2015

- Expansion of the storeroom building at the OWRP (~\$2.2M)
- Acquisition of composting equipment (a windrow turner and screener) for the District's biosolids program (~\$1.1M)
- Acquisition of ammonia control equipment at various locations (~\$1.1M)
- Installation of a greenhouse at the OWRP (~\$490,000)
- Painting and carpet installation, MOB (~\$428,000)



Construction Fund 2016 Awards

- Procure Membrane Aerated Biofilm Reactor Cassettes for Pilot Plant, HPWRP, \$800,000
- F&D Equipment for Phosphorus Removal, KWRP, \$450,000
- Replace Waterways Telemetry, MOB, \$400,000
- Rehabilitate the Old M&R Laboratory Building, CWRP, \$75,000
- Replace Security Gate and Fence, LPH, \$50,000



Engineering Department

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Engineering - Corporate Fund

	Appropriations	Positions
2016	\$27,353,600	244
2015	27,286,800	242
Change	\$ 66,800	2
	0.2%	



Summary of 2015 Accomplishments

- Revenue ~ \$1.4 million from sewer service agreements
- Revenue ~ \$1.5 million from extraterritorial impact fees
- Updated the Technical Guidance Manual for Watershed Management Ordinance (WMO) compliance
- Hosted WMO training for authorized municipalities (2 events)
- Hosted I/I Control Program compliance training (6 events)
- Continued to host Advisory Technical Panel meetings with community stakeholders for I/I Control Program implementation
- Recovered costs for administering the WMO through permit fees
- Achieved 100% compliance with the former I/I program



Capital Improvements Bond Fund

	Appropriations
2016	\$288,292,000
2015	453,072,500
Change	\$164,780,500
	(36.4%)



Major Initiatives & Changes

Add Value

- Recover valuable resources and reduce the consumption of energy by improving treatment processes
- Stabilize Capital Improvement Program project expenditures
- Fully utilize digester gas to:
 - reduce the energy demand from outside sources
 - reduce the carbon footprint and air pollutants from conventional sources
- Develop a program for receiving organic waste streams for co-digestion, that both increases energy production and reduces waste products going to landfills



Major Initiatives & Changes (continued)

Excellence

- Strive for best-in-class in performance for budgeting & scheduling
- Post-construction, contracts are reviewed to document best practices to foster continuous improvement
- Apply comprehensive metrics to manage Capital Improvement Program projects for best-in-class performance
- Continue to lead the industry and exceed contractor expectations by promptly processing and paying invoices for completed work, in less than 30 days after submittal



Major Initiatives & Changes (continued)

Resource Recovery

- Recover phosphorus and return to the economy:
 - Multiple environmental benefits
 - Recover and reuse phosphorus in lieu of phosphate rock
 - Avoid energy required to mine and transport
- Optimize use of digester gas



Major Initiatives & Changes (continued)

Resource Recovery (continued)

- Remove nutrients from the waste stream
 - Reduce energy use in treatment
 - Benefit downstream receiving waters and ecosystems
- Explore effluent use to industry
 - Significant reduction in energy footprint
 - Economic benefit to our community
 - Conserve potable water

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Significant Construction Completions - 2015

- McCook Reservoir Expanded Stage 2 Overburden Removal, SSA
- Disinfection Facilities, CWRP, OWRP
- Wet Weather Treatment Facility, Lemont WRP
- Thornton Composite Reservoir, CSA
 - Tolway Dam, Grout Curtain & Quarry Plugs
 - Connecting Tunnels and Gates
 - Final Reservoir Preparation

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TARP

- Thornton Composite Reservoir
 - Completed in 2015
 - 7.9 BG storage of combined sewage located in the North Lobe of the Thornton Quarry
 - 3.1 BG Transitional Reservoir for storage of Thorn Creek floodwater maintained in West Lobe until 2020
- McCook Reservoir
 - 2016 Award of Des Plaines Inflow Tunnel construction
 - Stage 1 – 3.5 BG – 2017 completion
 - Stage 2 – Additional 6.5 BG – 2029 completion

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Significant 2016 Awards

- Conversion of Old GCTs to WASSTRIP Process
- Aeration Tanks Air Valves Automation in Batteries A, B, C, and D, SWRP
- Glenbrook Sanitary Sewer Rehabilitation
- Buffalo Creek Reservoir Expansion
- McCook Reservoir, Des Plaines Inflow Tunnel
- Organic Waste Receiving Facility, CWRP
- Digester Gas Utilization Facilities, CWRP

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Notable Design Initiatives

- Digester Gas Utilization Processes at SWRP
- Organic Receiving Station at SWRP
- WASSTRIP enhanced P Removal at SWRP
- Effluent Re-use Force Mains at SWRP
- Odor Control at all Facilities
- Fine tuning of automation at all Facilities

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Capital Improvement Program Project Performance

In-Progress Construction Projects in 2015				Completed Construction Projects in 2015			
Beginning Year	Number of Contracts	Percent of Original \$	Percent of Original Time	Beginning Year	Number of Contracts	Percent of Original \$	Percent of Original Time
2009	2	103%	331%	2009	1	108%	132%
2010	3	101%	138%	2010	2	112%	242%
2012	1	102%	231%	2012	3	101%	166%
2013	7	102%	106%	2013	5	102%	146%
2014	9	100%	117%	2014	1	103%	131%
2015	8	100%	103%				

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Stormwater Management Fund

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Stormwater Management Fund

	Appropriations	Positions
2016	\$40,418,900	59
2015	46,588,800	59
Change	↓ \$ 6,169,900 (13.2%)	⇒ 0

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Heritage Park Flood Control Facility



Stormwater Program

Program Component	Current Number of Projects	Structures Protected / Removed	Construction / Acquisition Cost (\$Million)	MWRD Cost (\$Million)
Phase I	32	3,931	\$344	\$314
Phase II Shovel Ready	18	2,140	\$68	\$36
Phase II Preliminary Engineering	12	TBD	TBD	TBD
Green Infrastructure	15	366	\$31	\$9
Flood Prone Property Acquisition	3	69	\$27	\$9
Totals	80	6,506	\$470	\$368

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Stormwater Projects

Project Description	Structures Protected	Estimated Construction Cost	Estimated Award
Flood Control Project at Arrowhead Lake in Palos Heights	70	\$1,087,000	July 2016
Melvina Ditch Reservoir Improvements	512	\$20,107,405	Aug 2016
Streambank Stabilization Project on Melvina Ditch	40	\$10,600,000	Aug 2016



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Stormwater Projects

Project Description	Structures Protected	Estimated Construction Cost	Estimated Award
Flood Control Project for Deer Creek	270	\$3,439,529	Oct 2016
Flood Control Project on the Des Plaines River in Lyons	204	\$6,500,000	Dec 2016
Buffalo Creek Reservoir Expansion	107	\$17,872,400	Dec 2016
Flood Control Project on Farmers and Prairie Creeks	128	\$13,760,000	Dec 2016



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Green Infrastructure

Project Description	Structures Protected	Total Construction Cost	MWRD Funding	Award
CPS Green Infrastructure 2015	6	\$9,000,000	\$3,000,000	2015
Blue Island Green Infrastructure	12	\$697,030	\$697,030	2015
Evanston Civic Center Parking Lot	102	\$1,519,000	\$750,000	2015




Green Infrastructure

Project Description	Structures Protected	Total Construction Cost	MWRD Funding	Award
Wilmette Green Alleys	160	\$836,561	\$130,000	2015
Northbrook - Wescott Park Stormwater Reuse	70	\$10,775,000	\$475,000	2016
Dearborn Homes	12	\$1,547,695	\$1,547,695	2016




Flood Prone Property Acquisitions

Municipality	# of Structures to be Removed	Total Cost	MWRD's Contribution (%)	Completion Date
Glenview	17	\$11,000,000	72.73%	2015
Des Plaines	13	\$3,999,810	23.75%	2016
Riverside Lawn	39	\$12,000,000	TBD	2016

Other projects are being prioritized



Major Initiatives & Changes

- Continue engineering design for Phase I projects from the DWPs and begin construction of projects that have completed final design and have been approved by the Board of Commissioners
- Continue post-award engineering for performance monitoring of native plantings installed along Higgins Creek, McDonald Creek, and I&M Canal Tributary D
- Further develop the District's Green Infrastructure Program (GIP)



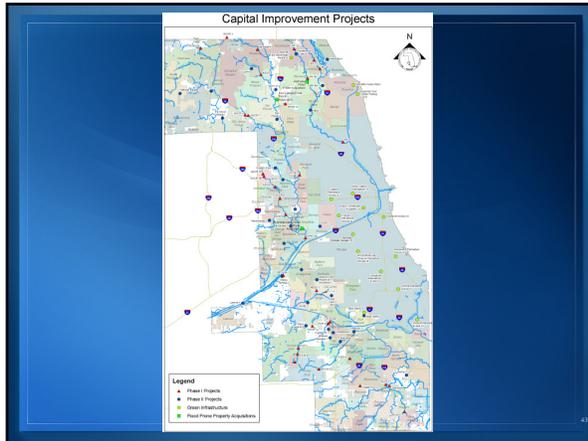
Major Initiatives & Changes (continued)

- Continue the SSMP to reduce flooding in urbanized areas
- Expand the online content related to the Chicago Area Waterway System and the SSMP to provide educational materials, as well as general information regarding the management of the system before, during, and after a storm



Major Initiatives & Changes (continued)

- Continue preliminary design, final design, and construction of Stormwater Management Phase II projects, which will focus on localized flooding problems
- Support funding partnerships for CIBF-budgeted projects: the construction of the Glenwood Floodwall, Addison Creek Alternative 7-B, Chicago Public Schools Green Infrastructure, and Albany Park Tunnel




Monitoring & Research Department

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Monitoring & Research Department

	Appropriations	Positions
2016	\$29,870,000	307
2015	28,432,700	297
Change	↑ \$ 1,437,300	↑ 10
	5.1%	

- 
- ### Major Initiatives & Changes
- Strategic Goal: Add Value
 - Completed redesign of Industrial Waste Division
 - Continue redesign of Analytical Laboratories and Environmental Monitoring & Research Divisions
 - Develop and implement targeted odor control strategies
 - Continue formulation of District-wide odor management plan
 - Early focus on Calumet WRP
 - Utilize Fulton County property for nutrient control technology
 - Continue to develop research program to inform and support IL Nutrient Loss Reduction Strategy

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- ### Major Initiatives & Changes (continued)
- Strategic Goal: Excellence
 - M&R will maintain optimal output of analytical support during Lue-Hing R&D Complex HVAC renovation
 - Further Lue-Hing R&D Complex facility improvements are needed to maintain excellence
 - M&R is pursuing automation in its laboratories and in its enterprise databases to enhance efficiency

- 
- ### Major Initiatives & Changes (continued)
- Strategic Goal: Resource Recovery
 - Leverage relations with industrial sector to identify resource recovery opportunities
 - Lead development of strategies to optimize enhanced biological phosphorus removal at WRPs
 - Initiate implementation of Biosolids Master Plan at Calumet WRP and continue to expand the plan to other WRPs



Major Initiatives & Changes (continued)

- Strategic Goal: Leading Partnerships
 - Partner with academics, WERF, leading POTWs to develop sustainable solutions to future water quality goals
 - Lead point source sector in implementation of statewide nutrient loss reduction strategy
 - Develop partnerships with Illinois' agricultural sector, colleges, and universities to study and promote nutrient loss reduction
 - Continue partnerships with Argonne National Laboratories and universities to provide high quality science to inform development of policy and planning vision for waterways



Finance Department

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Finance Department

	Appropriations	Positions
2016	\$3,677,200	29
2015	3,572,900	29
Change	↑ \$ 104,300	⇒ 0
	2.9%	



Major Initiatives & Changes

- Continue to obtain unmodified external audit opinions and improve transparency in reporting
 - Develop quarterly balance sheet and dashboard reports
- Continue to promote cost-effective solutions and optimize operations through automation
 - Enhance iPACS system with eSurcharge module
 - Assist with the implementation of the new real estate system
 - Implement SAP Accounts Receivable module



Law Department

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Law Department

	Appropriations	Positions
2016	\$7,844,100	38
2015	7,765,800	37
Change	↑ 78,300	↑ 1
	1.0%	



Major Initiatives & Changes

- Implement the Comprehensive Land Use Policy approved by the USEPA
- Roll out the Geographical Information System for the inventory, information, and tracking of the District's real estate holdings
- Seek the passage of a Resource Recovery Ordinance to maximize the beneficial reuse of recovered resources for the production of renewable energy and to promote sustainability

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Procurement & Materials Management Department

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Procurement & Materials Management Department

	Appropriations	Positions
2016	\$8,682,100	63
2015	8,645,100	63
Change	↑ \$ 37,000	→ 0
	0.4%	

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Major Initiatives & Changes

- Continued focus on improving P&MM's level of services to our internal and external customers
- Continued efforts to simplify the SAP procurement process with increase functionality and utilization
- In collaboration with M&O will evaluate alternatives to market electricity generation capacity at the Lockport Powerhouse
- Purchase recyclable plastic pallets for the storerooms

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General Administration

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General Administration

	Appropriations	Positions
2016	\$17,741,500	121
2015	16,042,000	119
Change	↑ \$ 1,699,500	↑ 2
	10.6%	

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Major Initiatives & Changes

Administrative Services Division

- Continuing enhancement of the District's budget presentation and receipt of the GFOA's Distinguished Budget Award
- Develop and implement a County-wide drug collection program with the Sheriff's Office
- Continued reduction of fleet vehicles not meeting minimum usage levels
- Implement emergency public address system in collaboration with HR

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Major Initiatives & Changes (continued)

Administrative Services Division

- Rehabilitation and maintenance projects at the MOB Complex include: modernization of elevators, expansion of Building Automation System (BAS), carpet replacement and painting of the third floor MOB, replacement of the mixed air heating unit, installation of a heating unit and ductwork reconfiguration, and replacement of an electric water heater at MOBA

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Major Initiatives & Changes (continued)

Diversity Section

- 2016 Study Session to review Construction and Professional Services programs and other initiatives for possible inclusion in the District's Affirmative Action Ordinance
- Development of MBE/WBE/SBE Reports of Awards and Payments in EMS PRISM compliance management software

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Major Initiatives & Changes (continued)

Diversity Section

- Continued expansion of public outreach, vendor certifications, and contract monitoring is planned for 2016
- 2015 Accomplishments:
 - 2 District-sponsored vendor outreach events
 - Initial PRISM Rollout with Prime and Subcontractors
 - Worked collaboratively with 28 Assist Agencies in their outreach efforts
 - *Received an award for Agency of the Year from Cosmopolitan Chamber of Commerce*
 - *Added 96 new vendors to the District's Vendor List*

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Major Initiatives & Changes (continued)

Office of Public Affairs

- Use a variety of strategies (press releases, events, brochures, web content, social media, video, etc.) to continue to promote the District's achievements, inform the public about our work and areas of responsibility, and encourage public involvement in improving water quality and preventing flooding
- Host and participate in groundbreakings, ribbon-cuttings, and other events
- Continue to implement biosolids marketing strategy

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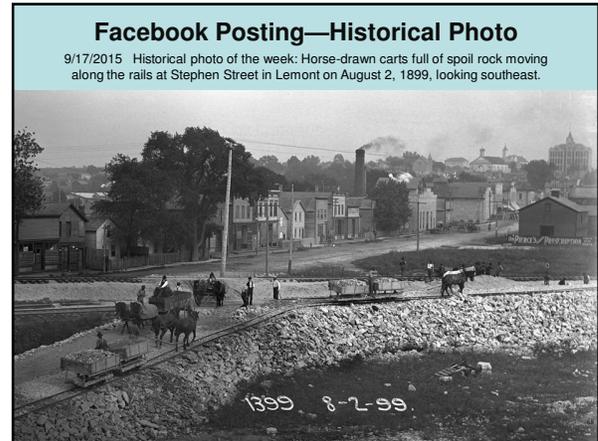


Major Initiatives & Changes (continued)

Office of Public Affairs

- Support the District's relationship with key stakeholders: municipalities, industrial and tax-exempt users, non-governmental organizations, regulatory agencies, local, state, and federal governments
- Produce new materials and videos to be used for educational purposes

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96 Likes 122 shares 25 comments

Metropolitan Water Reclamation District of Greater Chicago
Page Liked · September 17 ·

Historical photo of the week: Horse-drawn carts full of spoil rock moving along the rails at Stephen Street in Lemont on August 2, 1899, looking southeast.

Like Comment Share

96 people like this. Most Recent

122 shares

- Bob Anderson Joel Hukill · Like · Reply · 1 · September 17 at 4:40pm
- Sheree Flanagan That is amazing Betty Udell · Like · Reply · 2 · September 17 at 7:38pm
- Betty Udell I love this town! · Like · Reply · 1 · September 17 at 7:58pm
- Jamie Bambalas Great photo thanks for sharing!!! Love how you can see the old HS at the top of the hill still there today! · Like · Reply · 2 · September 17 at 8:18pm

Some of the 122 Shares inspired great conversation with other groups with modern day comparisons and more historical photos.

Kevin Murphy shared a photo to the group Long Time Lemonters · September 18 ·

Metropolitan Water Reclamation District of Greater Chicago · September 17 ·

Historical photo of the week: Horse-drawn carts full of spoil rock moving along the rails at Stephen Street in Lemont on August 2, 1899, looking southeast.

27 people like this.

- Eric Oswald Do you?
- Kevin Murphy In trying to get a reference to the exact location by Sean Long · September 18 at 8:56am
- Eric Oswald Historical Stephen and canal at Long · September 18 at 8:56am
- Kevin Murphy No. In north of the post office the tracks may be where the Long · September 18 at 8:56am
- Eric Oswald In my introduction. It was a guess · September 18 at 8:56am
- John Hennessy Thanks to on the corner of Talcott and Chicago. Maybe the August 2nd of 1899. Not sure about 1899 · September 18 at 8:56am

Information Technology Department

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Information Technology Department

	Appropriations	Positions
2016	\$17,313,700	77
2015	16,680,700	70
Change	↑ \$ 633,000	↑ 7
	3.8%	



2015 Accomplishments

- Upgraded the HD video conferencing system
- Implemented new IT Infrastructure strategy
- Completed migration to Switched Ethernet (ASE) increasing available performance and bandwidth
- Completed multi-functional device upgrade and consolidation
- Completed Datacenter consolidation and relocation

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2015 Accomplishments (continued)

- Continued migration of the District's email system to Office 365
- Continued Real Estate Management/GIS project initiation
- Continued implementation of performance management dashboards

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Major Initiatives & Changes

- Evaluate and align ITD's strategic plan to promote the District's Strategic Plan
- Implement an agile application development platform
- Continue development and deployment of mobile applications
- Facilitate continuous improvement of management of District IT assets and IT support function

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Major Initiatives & Changes (continued)

- Implement a project management methodology for all IT related projects
- Standardize an IT incident response framework
- Conduct an ITD organizational realignment

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Human Resources Department

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Human Resources Department

	Appropriations	Positions
2016	\$60,620,200	73
2015	60,072,100	74
Change	↑ \$ 548,100	↓ 1

0.9%

The OPEB annual funding amount in 2015 was \$5 million. Per the OPEB advanced funding policy, the 2016 contribution will also be \$5 million.

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Major Initiatives & Changes

- Develop and administer 45 Civil Service examinations
- Investigate options to maintain competitive, financially responsible benefit levels for employees and retirees
- Deliver training to help supervisors develop in their roles as coaches in the disciplinary process
- Implement a new applicant tracking system to meet new federal reporting requirements and assist in monitoring the success of our minority and female outreach activities
- Identify key cost drivers in the workers' compensation program and develop programs to address the costs



Board of Commissioners

Executive Director's
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Board of Commissioners

	Appropriations	Positions
2016	\$4,260,000	38
2015	4,177,600	37
Change	↑ \$ 82,400	↑ 1
	2.0%	



Major Initiatives & Changes

Board of Commissioners

- Establish policies and programs for the District
- Promote the District's Legislative Program with the state and federal governments
- Provide a forum to encourage community participation



Major Initiatives & Changes (continued)

Treasury

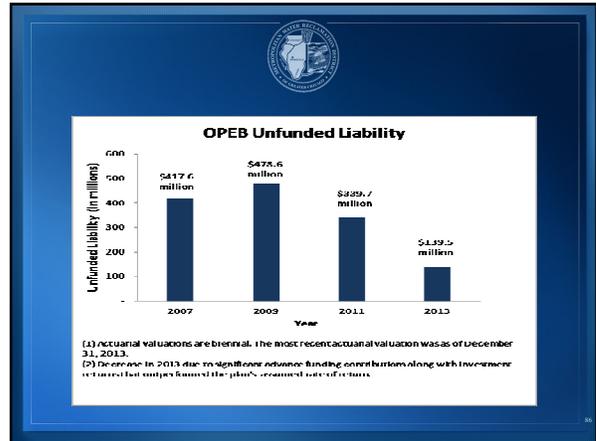
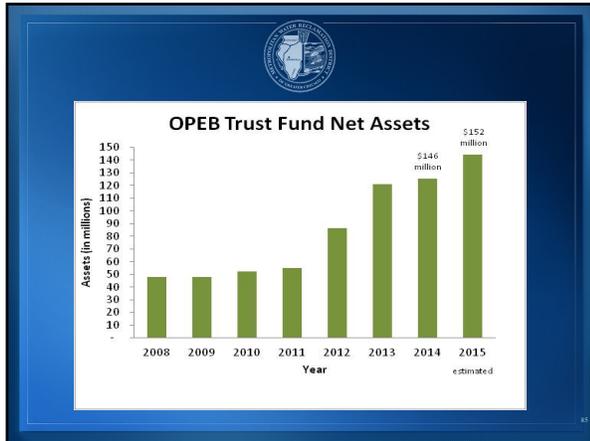
- Continue to focus on the capital spending affordability program and the maintenance of operating fund reserves
- Create guidelines to define disclosure requirements for bond issues and post-issuance compliance regulations
- Take an active role in the financial planning for the Local Government Loan Program initiative, which will positively influence and enable local municipalities to implement water quality improvement and flood control projects



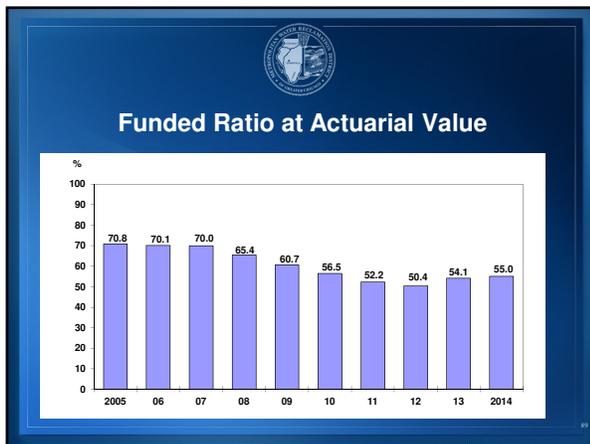
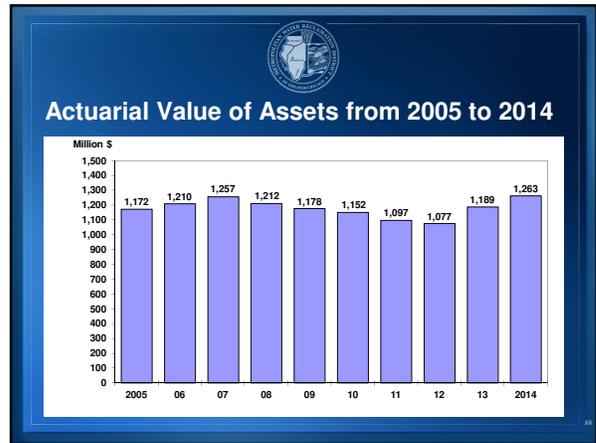
Major Initiatives & Changes (continued)

Treasury

- Collaborate with the Information Technology Department to automate the State Revolving Loan Fund preliminary loan accounting and reporting process for use by the Treasury Section and Finance Department




Retirement Fund
 Executive Director's
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District Retirement Obligations

As of December 31, 2014

Actuarial Value of Assets	\$ 1.3 billion
Total Actuarial Liability	2.3 billion
Funded Ratio	55.0 %

2015 Actuarially Determined Contribution	\$62.6 million
2016 Expected Employer Tax Levy	\$70.8 million



Questions?

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