

Metropolitan Water Reclamation District of Greater Chicago

Maintenance & Operations

Executive Director's Budget Recommendations

Brian Perkovich, Acting Director of Maintenance & Operations



2019 Budget

Maintenance & Operations - All Divisions

	Appropriations	Positions
2019	\$196,006,400	921
2018	191,135,500	904
Change	\$4,870,900	17
	2.5%	_

(Including BF-19 Changes)

Note: An additional 27 operational positions are funded by the Stormwater Management Fund for 2019.



👸 2018 Accomplishments

Establish excellence in Maintenance and Operations



- Five of seven WRPs received NACWA Platinum Awards
- 26 consecutive years of 100 percent compliance for the Calumet WRP
- 99.96 percent or higher compliance for all seven plants since 2007

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2018 Accomplishments

Establish excellence in Maintenance and Operations



Began installation of disc filters at the Hanover Park WRP

- Reduce operation and maintenance costs
- Assist with NPDES permit compliance



Optimize chemical intensive processes

- Began installation of an on-demand odor neutralization system for the Thornton Reservoir
- Completed performance testing of the ANITATM Mox system for sidestream deammonification at the Egan WRP, which will treat post-dewatering process centrate, resulting in less pumping to the O'Brien WRP



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2018 Accomplishments

Optimize energy intensive processes

 Rehabilitated six main sewage pump motors at the O'Brien WRP, which staff accomplished by cleaning with dry ice blasting, re-varnishing, and performing electrical testing

 Completed the overhaul of TARP pump #8 at the Mainstream Pumping Station







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2018 Accomplishments

Establish excellence in Maintenance and Operations





Received a commendation from the National Biosolids Partnership (NBP) in recognition of the District's:

- Environmentally sound biosolids management practices
- Commitment to exceeding national standards
- 10 years as an NBP Platinum member, the highest level of certification



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2018 Accomplishments



The O'Brien Water Reclamation Plant has been serving residents since 1928

Today, it runs the largest ultraviolet disinfection operation for a wastewater treatment plant in the U.S.





Optimize chemical intensive processes

- Continue to evaluate and adjust chemical usage in all processes across the District, such as disinfection at the Calumet WRP
- Install new disinfection chemical analyzers; new analyzers will reduce costs by improving the accuracy of chemical residual readings and allow for more efficient use of chemicals at the Hanover Park WRP

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Major Initiatives & Changes

Optimize energy intensive processes

- Realize energy savings in the form of increased digester gas production with the startup of the Westside primary tanks at the Stickney WRP
- Begin a rotating schedule of routine maintenance and bulb replacement for the banks at the O'Brien WRP's ultraviolet disinfection building





Establish excellence in Maintenance and Operations

2019 Schedule for the Asset Management Section:

- Digester CO₂ purging, department-wide
- Oversee the replacement of waste activated sludge pump #3 at the Kirie WRP
- Oversee the replacement of the primary sludge pump at the Egan WRP
- Oversee the replacement of process water pumps at the O'Brien WRP
- Overhaul railroad dump cars at the Stickney WRP

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Major Initiatives & Changes

Establish excellence in Maintenance and Operations

Procuring the right machinery and equipment for the job:

- One pontoon boat for CSO responses
- One front-end loader for the Calumet WRP
- One heavy equipment trailer for the O'Brien WRP
- One compost bagging machine for the Solids Management Section
- Two diesel step van trucks for the Collection System Unit





- Increase the utilization rate of Class A biosolids in local communities to 40 percent of total utilization
- Produce 30,000 tons of composted biosolids
- Develop new and expand existing partnerships with other governmental agencies, including the Illinois State Toll Highway Authority and Illinois Department of Transportation
- Explore revenue-generating channels for composted biosolids, including bagged compost for retail distribution and a streamlined process to deliver smaller bulk quantities of compost to residents



2019 Budget

Construction Fund



Construction Fund

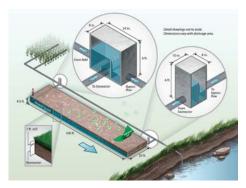
	Appropriations
2019	\$17,912,300
2018	26,080,600
Change	\$(8,168,300)
	(31.3)%

(Including BF-19 Changes)



2018 Accomplishments

Utilize Fulton County property for nutrient control research and demonstration



Installed a drainage tile and bioreactor, a best management practice for reducing nitrogen runoff into surface waters



🙀 2018 Accomplishments

Optimize aeration processes and reduce energy consumption

 Rehabilitated blower #9 at the Calumet WRP



 Completed the turbo blower installation at the Lemont WRP and began installation of an additional turbo blower at the Hanover Park WRP; these blowers improve aeration efficiency, which results in energy savings

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📓 Major Initiatives & Changes

Prioritize projects to ensure the best use of current spending

 Add 23 projects to the 2019 contract schedule based on their alignment with the Strategic Business Plan

Establish excellence in maintenance and operations

- Discharge valve rehabilitation, main sewage pump #5, Stickney WRP
- Grit screw conveyor installation, Calumet WRP
- HVAC system replacements, District-wide
- Pavement rehabilitation, various locations
- Railroad track improvements, Stickney Service Area



Roof restoration, Lockport Powerhouse



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📓 Major Initiatives & Changes

Introduce technology and innovation

 Install an automated online water quality monitoring system at the O'Brien WRP



Pursue the recovery of natural resources

 Continue phosphorus removal feasibility studies for the Calumet, O'Brien, and Stickney WRPs



Metropolitan Water Reclamation District of Greater Chicago

Engineering

Executive Director's Budget Recommendations

Catherine A. O'Connor, Director of Engineering



2019 Budget

Engineering - Corporate Fund

	Appropriations	Positions
2019	\$25,473,300	212
2018	28,322,100	242
Change -	\$(2,848,800)	(30)
	(10.1)%	•

Note: An additional 57 operational positions are funded by the Stormwater Management Fund for 2019.



- The District and the Chicago
 District of the Army Corps of
 Engineers received the
 Outstanding Civil Engineering
 Achievement Award (Mega
 Project) for the McCook Reservoir
 Project from the American Society
 of Engineers-Illinois Section
- Implemented an electronic project management system to manage the District's Capital Improvement Program
 - Improves workflow and efficiency



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Major Initiatives & Changes

- The Engineering Department will continue to implement the Capital Improvement Plan, including the development of the Five Year Capital Plan
 - Construction Projects for 2019*
 - 27 Construction Awards
 - 26 Projects Under Construction
 - 19 Projects Under Development
- The Engineering Department will continue to pursue lowinterest loans and grants to fund the Capital Improvement Program
 - In 2019, the District anticipates receiving \$120 million in State of Illinois Stormwater/Wastewater Revolving Fund loans at an interest rate of 1.84 percent

*As reflected in the Project Lists, including Stormwater bond projects, and Project Fact Sheets included in the BF-19 packet and Capital Improvement Bond Fund and Stormwater Sections of the 2019 Budget Book



Capital Improvements Bond Fund



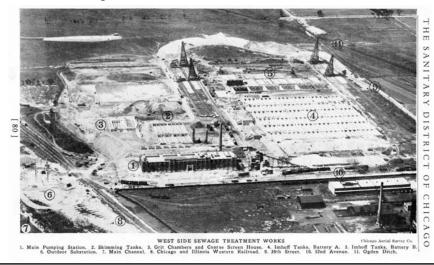
Capital Improvements Bond Fund

	Appropriations
2019	\$248,707,900
2018	312,982,900
Change	\$(64,275,000)
	(20.5)%

(Including BF-19 Changes)



 Completed the installation of nine primary settling tanks, six aerated grit tanks, and associated tunnels and conduits



2018 Accomplishments

- Completed the installation of new TARP pumps and mechanical screens at the Calumet WRP
- Completed rehabilitation of Salt Creek Intercepting Sewer #2
- Completed automation of air valves at the Stickney WRP for improved Enhanced Biological Process Removal





 Completed the McCook Reservoir Expanded Stage 2 Retaining Walls & Slope Stabilization project



 Completed rehabilitation of Pump #8 at the Mainstream Pumping Station

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Major Initiatives & Changes

- Rehabilitate the digester and replace gas piping at the Stickney WRP
- Upgrade the digester sludge heating system and remove boilers at the Calumet WRP
- Install Return Activated Sludge fermentation process at the Calumet WRP, Battery A





- Rehabilitate pumps at the Mainstream Pumping Station
- Rehabilitate Section 1 of the North Side sludge pipeline





2019 Budget

Stormwater Management Fund



Stormwater Management Fund

	Appropriations	Positions
2019	\$91,410,100	84
2018	65,581,000	57
Change	\$25,829,100	27
	39.4%	_

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2018 Accomplishments

- Authorized Intergovernmental Agreements for 20 Green Infrastructure and 14 Phase II stormwater management projects
- Awarded five flood control and streambank stabilization projects
- Amended the Watershed Management Ordinance to provide for improved compliance opportunities (i.e., created Earthwork/ Foundation Limited permit, off-site volume control practices)
- Conducted monthly technical advisory committee meetings to review improvements to the Watershed Management Ordinance and Technical Guidance Manual

Completed Cherry Creek Flood Control project

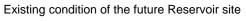


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Major Initiatives & Changes

 Continue Addison Creek Reservoir construction and award Addison Creek Channel Improvements project







Channel improvements will reduce overbank flooding conditions such as the one shown above



Metropolitan Water Reclamation District of Greater Chicago

Monitoring & Research

Executive Director's Budget Recommendations

Edward W. Podczerwinski, Director of Monitoring & Research

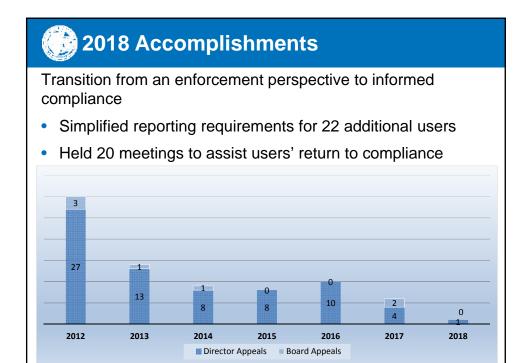


2019 Budget

Monitoring & Research

	Appropriations	Positions
2019	\$31,253,400	302
2018	31,888,700	312
Change	\$(635,300)	(10)
	(2.0)%	

(Including BF-19 Changes)



- Completed odor mitigation conceptual plans at various District locations: SWRP, OWRP, EWRP
- Monitored and analyzed odors at various District locations
- Initiated novel grass fermentation study that could potentially aid carbon supplementation to enhance biological plants biologically removing phosphorus removal at the District's WRPs









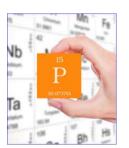
	Stickney WRP	Calumet WRP	Total *
Truckloads	197	242	439
Volume (gallons)	925,000	1,276,000	2,201,000
Tipping Fees Collected	\$46,250	\$63,800	\$110,050

*For 2018 as of October 16, 2018

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2018 Accomplishments

- Completed Phosphorus Removal Feasibility Studies for Kirie, Hanover Park, Egan, and Lemont WRPs
- Awarded contracts for Phosphorus Removal Feasibility Studies for Stickney, Calumet and O'Brien WRPs
- Completed phosphorus recovery evaluation at Calumet WRP







 Implemented instruments that can reach lower detection limits and consolidate analyses to increase efficiency and lower maintenance costs



Ion Chromatography (IC) (chloride, sulfate, fluoride)

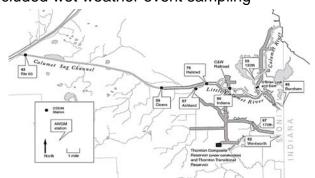


Inductively Coupled Plasma-Mass Spectrophotometer (ICP-MS) (trace metals)



2018 Accomplishments

- Post-Construction Waterway Monitoring in the Calumet River System
 - Assessed the effectiveness of Thornton Composite Reservoir
 - Included wet weather event sampling





 Two M&R teams participated in the first Intelligent Water Systems Challenge at Water Environment Federation's Technical Exhibition and Conference, with one team winning second place



Winning project:
Developing an Intelligent
Advanced Warning
System for Odors at
MWRDGC's Thornton
Composite Reservoir

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Major Initiatives & Changes

- Complete phosphorus removal feasibility studies for the Stickney, Calumet and O'Brien WRPs
- Update long term capital plan
- Complete Sequential Batch Reactor Bio-P test for the Calumet WRP





- Develop biosolids management strategies for the Egan and Hanover Park WRPs
- Conduct technology and process evaluations: sludge thickening & dewatering and phosphorus recovery



- Complete the seven-year Microbial Source Tracking study for the Chicago Area Waterway System (CAWS)
- Continue to play a key role in the CAWS Chloride Reduction Initiative Work Group
- Continue to participate in the various watershed groups and lead the efforts on a watershed approach for nutrient management



4Q



Major Initiatives & Changes

 M&R will conduct a year-long study to show a correlation between BOD/CBOD to TOC

Advantages of TOC over BOD

Faster data reporting! M&O would have same day results (vs. 5 day) for use in WRP operations.

Green analysis! Elimination of mercury reagent use for Oxygen Demand Index (ODI) analysis to predict BOD concentrations.

TOC is allowed for permit compliance as long as a correlation to BOD has been established (Clean Water Act 40 CFR part 133.104).



Metropolitan Water Reclamation District of Greater Chicago

Finance

Executive Director's Budget Recommendations

Jacqueline Torres, Clerk/Director of Finance



2019 Budget

Finance

	Appropriations	Positions
2019	\$3,649,700	27
2018	3,743,900	28
Change	\$(94,200)	(1)
	(2.5)%	

(Including BF-19 Changes)



- Received an unmodified (clean) opinion for the 2017 Comprehensive Annual Financial Report (CAFR)
- Received the Government Finance Officers Association Award for Excellence in Financial Reporting on the 2017 CAFR for the 43rd consecutive year



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Certificate of Achievement for Excellence in Financial Reporting

Metropolitan Water Reclamation District of Greater Chicago, Illinois

> For its Comprehensive Annus Financial Report for the Fiscal Year Ended December 31, 2016

Chuitophe P. Morill

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2018 Accomplishments

- Completed 13 planned internal audits resulting in assurance of continued compliance, improved operating efficiencies, and recommendations for best practices
- Implemented Government Accounting Standards Board (GASB) pronouncement 75 to improve transparency of Other Postemployment Benefits obligations





- Implemented a new solution to compile and publish the CAFR resulting in improved accuracy and increased efficiency
- Modified the time and attendance and ERP systems to implement the vacation accrual changes for represented employees
- Modified the time and attendance system to implement the new parental leave benefit and to automate requests

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Major Initiatives & Changes

- Seek to implement a travel and expense reimbursement solution to increase compliance, efficiency, and accuracy with employee reimbursement requests and payments
- Utilize new CAFR solution to compile data required for the implementation of GASB pronouncement 87 for the reporting of leases
- Increase the use of straight through and automated clearing house (ACH) processing for vendor payments and investigate use for revenue collections



Metropolitan Water Reclamation District of Greater Chicago

Law

Executive Director's Budget Recommendations

Susan T. Morakalis, General Counsel



2019 Budget

Law

	Appropriations	Positions
2019	\$7,168,700	40
2018	7,502,800	37
Change	\$(334,100)	3
	(4.5)%	_



- Continued to work with the Engineering Department with drafting and negotiating numerous Intergovernmental Agreements with local municipalities to assist in stormwater management efforts
- Obtained numerous temporary and permanent easements and fee simple titles on nearly 400 parcels of land for regional stormwater projects:
 - Addison Creek Reservoir
 - Addison Creek Channel Improvements
 - Lyons Levee
 - Plainfield Road Corridor Study

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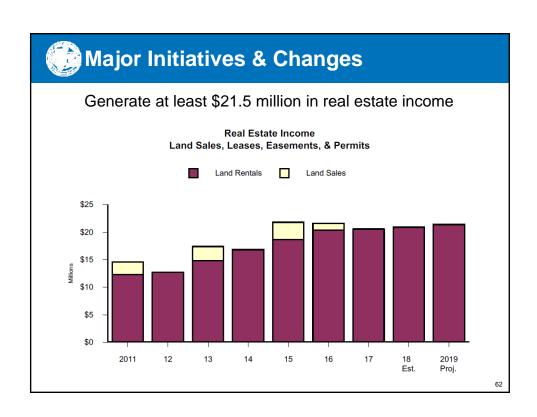


2018 Accomplishments

- Handled seven lawsuits in the U.S. District Court
- Implemented a Multi-Project Labor Agreement with Cook and Lake Counties and a Project Labor Agreement with Will and Grundy Counties for District projects at the Lockport Powerhouse and Controlling Works



- Increase real estate rental income
- Work with the Finance and Monitoring & Research
 Departments to develop a more efficient process for keeping users current in their User Charge fees
- Ensure employees are attending professional development conferences and seminars and receiving the proper training to handle the vast array of the District's many complex legal matters
- Continue the District's leadership role in the Local Government Law Consortium





Metropolitan Water Reclamation District of Greater Chicago

Procurement & Materials Management

Executive Director's Budget Recommendations

Darlene A. LoCascio,
Director of Procurement & Materials Management



2019 Budget

Procurement & Materials Management

	Appropriations	Positions
2019	\$9,786,100	63
2018	9,466,700	63
Change	\$319,400	_
	3.4%	



🍰 2018 Accomplishments

Secured the electricity supply price for 2020 at \$0.02744 per kilowatt-hour (kWh), for a total unit price of \$0.02968 per kWh, including a bandwidth of 100 percent



2018 Accomplishments

- Enhanced the RFP evaluation team to include other departments in the selection of engineering consultants and attorneys; legal firms were added to the vendor database, classified by specialized areas
- Completed purchase of recyclable plastic pallets to replace wooden pallets in the storerooms



- Develop a request for qualifications for engineering consulting firms and search criteria for the vendor information database
- Enhance the vendor online application process by allowing vendors to update their profile information
- Replace lighting using energy efficient fixtures in the Egan WRP storeroom

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2019 Budget

Metropolitan Water Reclamation District of Greater Chicago

General Administration

Executive Director's Budget Recommendations

Eileen M. McElligott, Administrative Services Officer Regina D. Berry, Diversity Administrator Allison Fore, Public and Intergovernmental Affairs Officer





General Administration

	Appropriations	Positions
2019	\$19,717,900	119
2018	16,725,400	121
Change	\$2,992,500	(2)
	17.9%	·

(Including BF-19 Changes)

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Administrative Services



- The Budget Office implemented WDesk budget publishing application to manage the production the budget books, resulting in a more efficient process
- 2018 Budget received 34th consecutive GFOA Distinguished Budget Presentation Award



Illinois
For the Fiscal Year Beginning
January 1, 2018

Christopher P. Morrill

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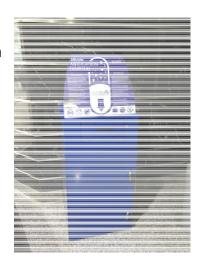


2018 Accomplishments

Provided medical disposal options

- Continued in-house drug collection and disposal program 446.8 lbs. collected in 2017 334.3 lbs. collected in 2018 YTD
- Continued partnership with Cook County Sheriff's Office to collect and dispose of used medications County-wide

7,887.5 lbs. collected since June 2016





🐊 2018 Accomplishments

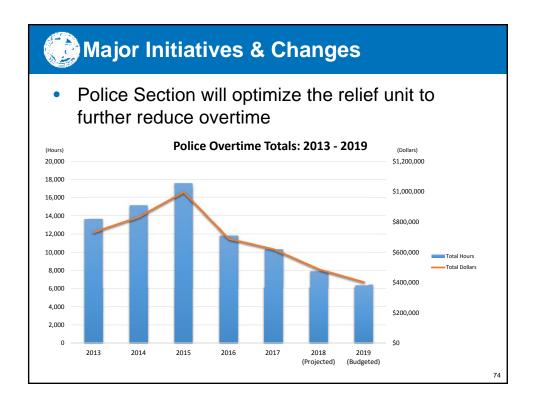
Completed projects to improve the Main Office Building

 Roof resurfacing project to extend the life of the Main Office Building roof for an additional 10 years





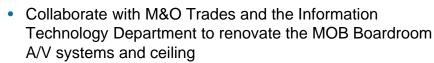
 Began a project to modernize the elevator system at the Main Office Building. Projected completion in the first quarter





2019 MOBC Building Projects

- Remove and install supply and return fan at MOBA
- Remove and replace original chillers from 1985
- Paint and carpet replacement at the MOB







Diversity



Hosted two Minority/Women/Small Business Entity outreach events targeted towards professional service contractors and construction contractors



Events were attended by over 400 subcontractors, 70 prime contractors, other local government agencies, and assist agencies such as the AACA



2018 Accomplishments

Participate in industry leadership roles

Regina Berry re-elected to Board of Directors for the American Contract Compliance Association





• African American History Month Lunch and Learn Series with Children from Leland Elementary School in Chicago, Illinois





2018 Accomplishments

- Hosted the Annual African American History Celebration
 - Honored current and former nationally elected officials
 - Honored the late Commissioner Timothy Bradford







- Establish Veteran Business Enterprise Program
- Three percent VBE goals will be added to District contracts where feasible





Major Initiatives & Changes

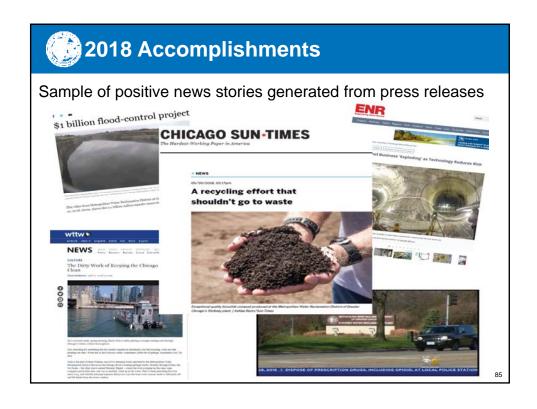
- Increase the number of MBE, WBE, and SBE vendors on the District's vendor list
- Host contract specific outreach events





Public Affairs









🙀 2018 Accomplishments

Designed and worked with the Maintenance & Operations Department to construct a booth at the Chicago Flower and Garden Show at Navy Pier to showcase Green Infrastructure and compost initiatives to 40,000 attendees





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2018 Accomplishments

Created a 10 minute O'Brien WRP video in-house by recording, filming, and editing footage. This video was shown to the 900 visitors taking the Open House Chicago tours and will continue to be used at the plant. https://youtu.be/GThEN_T113q

 Link to 30 second sample drone footage https://youtu.be/njplgkgubXM





Professional photography used for the 2019 Budget Book







Collaborate with departments to design and modify space at the Stickney WRP for a new Community Education Center (CEC) to help educate all ages in a controlled, designated environment





- Multiple disciplines from throughout the District as well as representatives from other agencies will be invited to serve as speakers and lead interactive sessions
- Public Affairs will work with schools, students, parents, and community members to create a learning environment focused on STEAM (science, technology, engineering, arts, and math) careers



Major Initiatives & Changes

Continue to develop and distribute educational materials

- Work on a new agency brochure and accompanying video
- Produce a 2019 calendar for distribution
- Develop a new children's booklet







Celebrate the District's 130th Anniversary by scheduling exhibits throughout Cook County, featuring historical photos, and creating an accompanying booklet.







Major Initiatives & Changes

WEFTEC 2019 | Chicago | September 28 – October 4, 2019

- Coordinate inaugural Water Village
 - Partner with the Chicago Department of Water Management and others to celebrate the 150th anniversary of Chicago's water tower as well as the District's 130th Anniversary
 - Pursue setting up water-related exhibits and scheduling speakers for a general audience



- Schedule special tours
- Assisting with Water Palooza and rain garden construction activities



- Enhance the use of current technology platforms
- Public Affairs will improve and expand drone operations:
 A new drone will allow for photos and video to be taken during freezing temperatures and during rain events
- Continue to engage the public through social media:
 - Facebook (3,600)
 - Twitter (2,970)
 - LinkedIn (2,200)
 - Instagram (290*)
 - YouTube (136)

*New in 2018



Q.F



2019 Budget

Metropolitan Water Reclamation District of Greater Chicago

Information Technology

Executive Director's Budget Recommendations

John H. Sudduth, Director of Information Technology





Information Technology

	Appropriations	Positions
2019	\$18,432,300	74
2018	17,052,500	73
Change	\$1,379,800	1
	8.1%	_

(Including BF-19 Changes)



2018 Accomplishments

- Completed the upgrade of network infrastructure at the Main Office Building and the Stickney, Calumet, and Egan Water Reclamation Plants
- Implemented a cyber security awareness program to better inform District staff of cyber threats (in-person training of 1,200+ District staff)





- Decommissioned antiquated waterway phone lines
- Consolidated four voicemail systems into one centralized system
- Upgraded the analog PBX phone system to a digital system



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Major Initiatives & Changes

- Implement a modern web content management system that streamlines storing and delivering web content (e.g., images, videos, department pages, etc.)
- Develop a framework for deploying web services and data integration technologies to streamline access to various hosted data systems and applications
- Continue to improve customer service via the Information Technology Service Management system, including providing a service catalog and real-time insight into all service tickets



Metropolitan Water Reclamation District of Greater Chicago

Human Resources

Executive Director's Budget Recommendations

Beverly K. Sanders, Director of Human Resources



2019 Budget

Human Resources

	Appropriations	Positions
2019	\$60,108,000	93
2018	59,226,400	91
Change	\$881,600	2
	1.5%	<u></u>



- Implemented a new applicant tracking system
- Updated the Emergency Operations Plan, the Business Continuity Plan, and Critical Operations Guidance documents

Developed, implemented, and supported training

initiatives



Major Initiatives & Changes

- Implement a new employee benefits platform
- Separate sections for Risk Management and Safety functions
- Conduct a total compensation study





Metropolitan Water Reclamation District of Greater Chicago

Board of Commissioners

Executive Director's Budget Recommendations

Nicholas O'Connor, Administrative Aide to President Mary Ann Boyle, Treasurer



2019 Budget

Board of Commissioners

	Appropriations	Positions
2019	\$5,266,700	38
2018	5,145,200	38
Change	\$121,500	→ -
	2.4%	,



- On May 24, 2018, Fitch Ratings affirmed the District's AAA rating
- Investment interest income earned for the year was approximately \$13.5 million, resulting in a 58 percent increase from 2017
- As of December 31, 2017, the Retirement Fund's funded ratio was 58.3 percent, and the OPEB Trust Fund's funded ratio was 63.2 percent

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Major Initiatives & Changes

- The services of an Inspector General are included in the budget for Professional Services
- Commit to excellence through responsible management of assets, maintenance of compliance with federal laws and state statutes, and fulfillment of pension and OPEB funding policy goals
- Maintain the District's high credit ratings



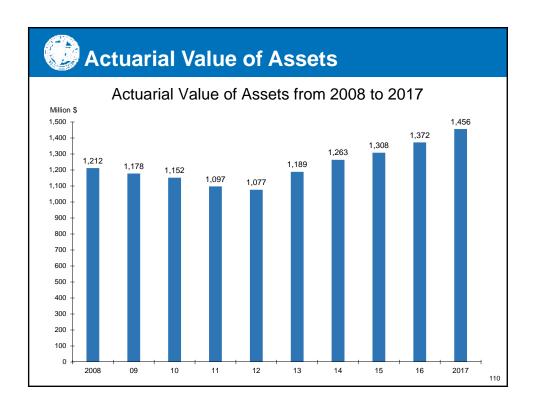
Metropolitan Water Reclamation District of Greater Chicago

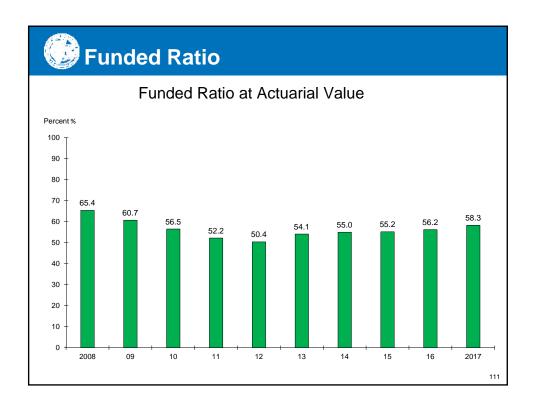
Retirement Fund

Executive Director's Budget Recommendations

Susan Boutin
Executive Director, Metropolitan Water Reclamation District Retirement Fund







As of December 31, 2017	
Actuarial Value of Assets	\$1.46 billion
Total Actuarial Liability	\$2.50 billion
Funded Ratio	58.3%
2018 Actuarially Determined Contribution	\$65.0 million
2019 Expected Employer Contribution	\$87.3 million