



Engineering Department Capital Improvement Program October 2015

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Overview

- Capital Improvements Projects
 - Active Projects and Awards in 2016
 - Projects Under Development
- Stormwater projects
 - Active Projects and Awards in 2016
 - Projects Under Development
- CIP Funding
- Stormwater Funding
- SRF

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Capital Improvement Projects



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Current Contracts

**Rehabilitation of the A/B and C/D Service
Tunnels, SWRP \$13,615,000
Substantial Completion 2015**



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Current Contracts

**Wet Weather Treatment Facility &
Reservoir, LWRP \$29,097,000
Substantial Completion 2015**



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Current Contracts

**Revolving Algae Biofilm Reactor Pilot
Project at O'Brien WRP
\$199,409
Substantial Completion 2015**



6

Current Contracts

Disinfection at Calumet WRP - \$30,920,000
Substantial Completion 2015



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Current Contracts

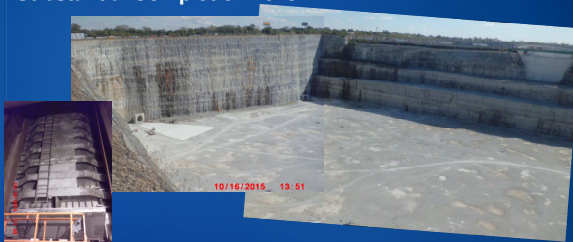
Disinfection at O'Brien WRP - \$59,899,650
Substantial Completion 2015



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Current Contracts

Tollway Dam, Grout Curtain & Quarry Plugs, \$67,775,617
Connecting Tunnels and Gates, \$135,475,200
Final Reservoir Preparation, \$50,763,937
Substantial Completion 2015



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Current Contracts

Sludge Thickening at SWRP - \$162,232,344
Substantial Completion 2016



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Current Contracts

Battery C Airlift & Air Main Rehabilitation
and Diffuser Plate Replacement at SWRP
\$4,881,000
Substantial Completion 2016



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Current Contracts

Membrane Gas Holder Replacement and
Digester Cleaning at EWRP
\$4,364,000
Substantial Completion 2016

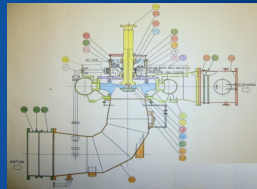


12

Current Contracts



TARP Pump #8 Rehabilitation at MSPS
\$4,533,000
Substantial Completion 2016



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Current Contracts



Phosphorous Recovery Facility, SWRP
\$31,879,000
Substantial Completion 2016

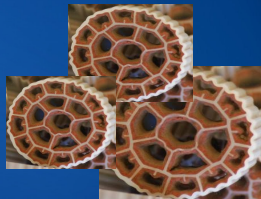


14

Current Contracts



Installation of Sidestream Nitrogen Removal System, EWRP
\$2,675,000
Substantial Completion 2016



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Current Contracts



Westside Preliminary Settling Tanks & Aerated Grit Tanks at SWRP **\$224,790,000**
Substantial Completion 2018

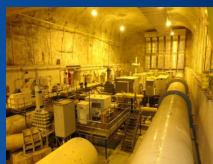


16

Current Contracts



Pump Station Improvements at CWRP
\$35,067,000
Substantial Completion 2018

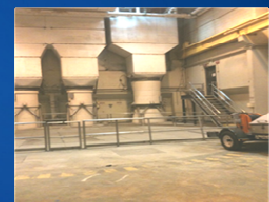


17

Current Contracts



Calumet TARP Screens at CWRP
\$12,754,000
Substantial Completion 2019



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Awards in 2015

D799 Switchgear Replacement at SWRP
\$12,645,300
Estimated Award
– December 2015



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Awards in 2015

Salt Creek Intercepting Sewer 2
Rehabilitation, SSA
\$43,878,100
Estimated Award
– December 2015



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Awards in 2015

Algae Reactor System Pilot Plant for
Nutrient Uptake, OWRP
\$1,400,000
Estimated Award
– December 2015



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Awards in 2015

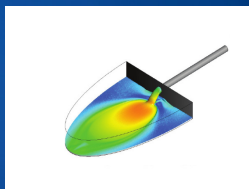
Digester Gas Utilization Facilities, CWRP
\$14,200,000
Design Award – November 2015
Estimated Award of Construction - 2016



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Awards in 2016

McCook Reservoir Des Plaines Inflow
Tunnel
\$139,000,000
Estimated Award
– January 2016



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Awards in 2016

Glenbrook Sanitary Sewer Rehabilitation,
NSA
\$2,000,000
Estimated Award
– January 2016



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Awards in 2016

Rehabilitation of Bridges, NSA

\$1,173,600

– January 2016



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Awards in 2016

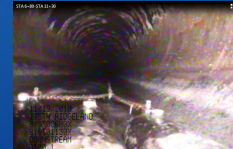
Calumet Intercepting Sewer 19F

Rehabilitation, CSA

\$12,000,000

Estimated Award

– February 2016



26

Awards in 2016

**A/B and C/D Service Tunnel & Connecting
Tunnel Rehabilitation - Phase II, SWRP**

\$22,000,000

– February 2016



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Awards in 2016

**Conversion of Old GCTs to the WASSTRIP
Process, SWRP**

\$15,000,000

Estimated Award

– March 2016



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Awards in 2016

**Membrane Aerated Biofilm Reactor Pilot
Plant, HPWRP**

\$800,000

Estimated Award

– July 2016



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Awards in 2016

Organic Waste Receiving Facility, CWRP

\$7,400,000

Estimated Award

– Summer 2016



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Projects Under Development Capital Improvements



Project Name	Construction Cost	Award
Upper Des Plaines Intercepting Sewer 11D, Ext. C Rehab.	\$5,500,000	2017
Odor Control Facilities, CWRP	\$20,000,000	2017
39th Street Conduit Rehabilitation - Phase II, SSA	\$24,700,000	2017
Upper Des Plaines Intercepting Sewer 11D Rehabilitation	\$5,500,000	2017
Upper Des Plaines Intercepting Sewer 14B Rehabilitation	\$6,700,000	2018
North Shore 1 Rehabilitation, NSA	\$21,500,000	2018
Phosphorus Recovery System, CWRP	\$10,000,000	2018
Digester Gas Utilization Facilities, SWRP	-	2018
Organic Waste Receiving Station, SWRP	\$10,000,000	2018
Odor Control Facilities, SWRP	\$20,000,000	2018
Biosolids Processing Facility, CWRP	\$48,000,000	2019
Odor Control Facilities, NSA	\$20,000,000	2020
TOTAL FUTURE AWARDS	\$191,900,000	

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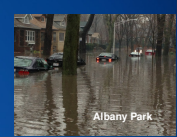
Stormwater Projects



Addison Creek



Burbank



Albany Park



Park Ridge



Maine Township

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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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Current Contracts



Streambank Stabilization Project for I&M Canal Tributary D

\$1,124,000

Substantial Completion 2015



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Current Contracts



Streambank Stabilization Project for Higgins Creek and McDonald Creek

\$2,245,787

Substantial Completion 2015



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Current Contracts



Flood Control Project for Upper Salt Creek, Palatine

\$1,349,940

Substantial Completion 2016



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Current Contracts

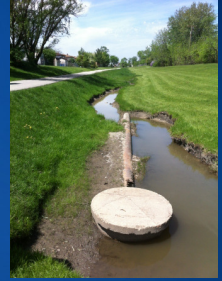
**Flood Control / Streambank Stabilization
Project on Tinley Creek in Crestwood, IL**
\$7,222,220
Substantial Completion 2016



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Awards in 2016

**Streambank Stabilization Project on Tinley
Creek**
\$793,375
Estimated Award
– March 2016



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Awards in 2016

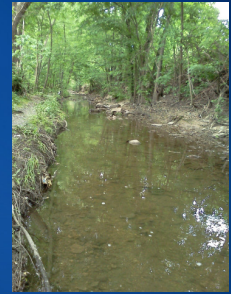
**Streambank Stabilization Project for the
West Fork of the North Branch of the
Chicago River**
\$449,000
Estimated Award
– April 2016



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Awards in 2016

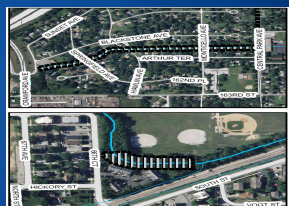
**Streambank Stabilization Project on Oak
Lawn Creek**
\$4,050,000
Estimated Award
– May 2016



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Awards in 2016

**Streambank Stabilization Project along
Midlothian Creek**
\$307,000
Estimated Award
– June 2016



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Awards in 2016

**Streambank Stabilization Project for
Addison Creek**
\$720,000
Estimated Award
– June 2016



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Awards in 2016

Flood Control Project on the East Branch of Cherry Creek in Flossmoor

\$2,636,771

Estimated Award

– July 2016



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Awards in 2016

Flood Control Project at Arrowhead Lake in Palos Heights

\$1,087,000

Estimated Award

– July 2016



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Awards in 2016

Melvina Ditch Reservoir Improvements

\$20,107,405 (50% funded by MWRD, remainder by IEPA grant)

Estimated Award

– August 2016



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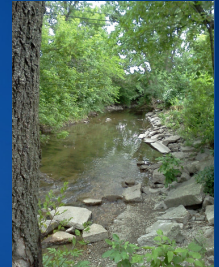
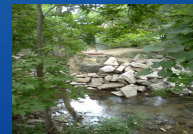
Awards in 2016

Streambank Stabilization Project on Melvina Ditch

\$10,600,000

Estimated Award

– August 2016



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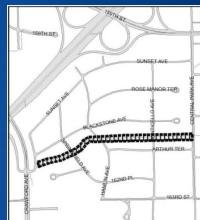
Awards in 2016

Streambank Stabilization Project along Calumet Union Drainage Ditch

\$1,568,329

Estimated Award

– September 2016



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Awards in 2016

Flood Control Project for Deer Creek

\$3,439,529

Estimated Award

– October 2016



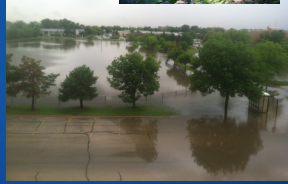
48

Awards in 2016

Flood Control Project on Farmers and Prairie Creeks

\$13,760,000

Estimated Award
– December 2016



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Awards in 2016

Buffalo Creek Reservoir Expansion

\$17,872,400

Estimated Award
– December 2016



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Awards in 2016

Flood Control Project on the Des Plaines River in Lyons

\$6,500,000

Estimated Award
– December 2016



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Projects Under Development Stormwater



Project Name	Construction Cost	Award
Flood Control Project, W. Fork of the N. Branch of the Chicago River (67 Structures Protected)	\$6,600,000	2017
Addison Creek Reservoir (total of 1,678 Structures Protected with Channel work)	\$112,931,000	2017
Addison Creek Channel Improvements	\$43,069,000	2019
TOTAL FUTURE AWARDS		\$162,600,000

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Green Infrastructure



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

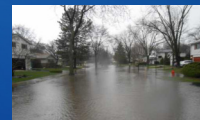


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Green Infrastructure



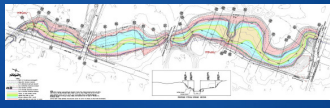
Project Description	Total Construction Cost	MWRD Funding	Award
Wilmette Green Alleys	\$836,561	\$130,000	2015
Northbrook - Wescott Park Stormwater Reuse	\$10,775,000	\$475,000	2016
Dearborn Homes	\$1,547,695	\$1,547,695	2016



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Stormwater Phase I Shovel-Ready Projects

Project Description	Total Construction Cost	MWRD Funding	Award
Albany Park Diversion Tunnel	\$57,025,845	\$25,000,000	2016
Centerpoint Preserve Riparian Area Restoration	\$3,000,000	\$1,000,000	2016
Glenwood Levee	\$5,770,000	\$3,870,000	2017



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Stormwater Phase II Shovel-Ready Projects

Project Description	Total Construction Cost	MWRD Funding	Award
Des Plaines 12 - River Rd./Jarvis St. Storm Sewers	\$2,000,000	\$1,500,000	2014
Glenview 1 - East of Harms PS and Storm Sewers	\$10,981,850	\$6,000,000	2014
Hoffman Estates 1 - Jones Rd. & Highland Blvd. Storm Sewer	\$1,136,555	\$824,002	2014



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Stormwater Phase II Shovel-Ready Projects

Project Description	Total Construction Cost	MWRD Funding	Award
Westchester 1 - Mayfair Reservoir Expansion	\$2,587,000	\$2,121,000	2014
Winnetka 4 - Storm Sewers and Berms NW Winnetka	\$6,176,615	\$2,000,000	2014
CCDTH 2 - Roberts Road, 87th-79th	\$2,385,294	\$1,250,000	2015



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Stormwater Phase II Shovel-Ready Projects

Project Description	Total Construction Cost	MWRD Funding	Award
Elk Grove Village 1 - Busse Woods Dam Modification	\$1,900,000	\$1,125,000	2015
Franklin Park 5 - Silver Creek Improvements	\$4,175,770	\$3,525,000	2015
Northbrook 2 & 5 - Cherry Lane and Shermer Rd. Storm Sewers	\$2,100,000	\$1,050,000	2015



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Stormwater Phase II Shovel-Ready Projects

Project Description	Total Construction Cost	MWRD Funding	Award
Willow Springs 1 - Ravine Ave. Improvements	\$138,754	\$95,000	2015
Brookfield 1 - Prairie/ Washington PS Improvements	\$1,900,000	\$1,000,000	2015
Lansing 1 - Stony Island Ave. Ditch Improvements	\$1,385,485	\$1,172,500	2015



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Stormwater Phase II Shovel-Ready Projects

Project Description	Total Construction Cost	MWRD Funding	Award
Lemont 1 - New Culvert I&M Canal	\$473,000	\$325,000	2015
Niles 1 - Cleveland Ave. Relief Sewer	\$7,623,000	\$2,000,000	2015



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Stormwater Phase II Preliminary Engineering



Project Title	Project Description
Flood Control Project on Natalie Creek in Midlothian, IL	Reduce impact of overbank flooding from 153rd and Lavergne to 146th and Pulaski
Flood Control Project on Midlothian Creek in Robbins, IL	Reduce impact of overbank flooding in the vicinity of 138th and Kedzie
Flood Control Project on Willow Road at McDonald Creek Tributary A in Prospect Heights, IL	Address flooding across Willow Road and adjacent roadways at McDonald Creek Tributary A
Flood Control Project Central Road, from the Des Plaines River to Greenwood Road	Provide improved conveyance for SW along Central Road to Des Plaines River and possible storage.

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Stormwater Phase II Preliminary Engineering



Project Title	Project Description
Flood Control Project on 1st Avenue from Roosevelt Road to Cermak Road	Improve drainage along 1st Avenue and provide new outlet to Des Plaines River
Flood Control Project in the Worth Woods Subdivision in Worth, IL	Improve drainage outlet to Stony Creek and/or provide upstream storage
Flood Control Project on Calumet-Sag Tributary C in Bremen Township and Midlothian, IL	Address roadway and residential flooding and bank erosion along Cal-Sag Trib C w/ SW conveyance and/or storage improvements
Flood Control Project in the vicinity of 135th St & Central Ave. in Crestwood, IL	Improve drainage by modifying existing berm and installing new outlet

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Stormwater Phase II Preliminary Engineering



Project Title	Project Description
Flood Control Project in the vicinity of 131st St. & Cypress Drive in Palos Heights, IL	Improve existing drainage outlet to Navajo Creek and create upstream storage
Flood Control Project in the Washington St. Area of Blue Island, IL	Provide green and grey infrastructure improvements in public ROW
Flood Control Project along Plainfield Road from Willow Springs Road to East Avenue	Address local SW flooding in areas tributary to Plainfield Road through improved conveyance and storage
Flood Control Project at 61st Ave and 36th St in Cicero, IL	Underground detention facility, either under public right-of-way or in nearby Kolar Park

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Stormwater Master Plans



Project Title	Project Description
Stormwater Master Plan for the Little Calumet River/Cal-Sag Channel Drainage Area	Pilot Study for South Suburban Mayors and Managers Assoc.
Stormwater Master Plan for Harwood Heights	Pilot Study for West Central Municipal Conference
Stormwater Master Plan for Northbrook	Pilot Study for Northwest Municipal Conference
Stormwater Master Plan for the Roberts Road Drainage Area	Pilot Study for Southwest Conference of Mayors
Stormwater Master Plan for the Drainage area encompassing 8th Ward and surrounding Wards	Pilot Study for City of Chicago

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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				

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CIP funding



- We believe that majority of our funding for the capital program can be achieved with loans from the IEPA. Only projects that do not meet their program requirements and some professional engineering fees will be funded by bond sale proceeds.
- The District will achieve substantial interest cost savings. The IEPA subsidized interest rate for 2016 is 1.86% which represents about 50% of the bond market interest rate. Interest savings for a 20 year loan versus bonds issued in the capital markets is estimated at \$45 million over the life of each \$200 million borrowing at current market rates. Additional savings are legal and professional fees for each bond sale, and the interest cost for holding the capital funds until spending on the project is completed.
- The IEPA has committed to funding \$200 million annually for the foreseeable future (more than 5 years).

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Stormwater Program Funding

- Current Funding Policy – 2 cents operating / 3 cents capital
- Equates to 1.9 cents for 2015 levy (5 cents authorization)
- Program Demand is High
- Program is unsustainable with levy growth plan of 5% per year and policy limits on capital spending
- The District Strategic Plan focuses on flooding as the number one issue the District will face in the next 5 years.
- Allocating more money to the Stormwater capital program will lead to a more resilient Cook County.

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Stormwater Management Fund Proposed Budgetary Policy Revision

“The maximum property tax levy of five cents per \$100 of EAV for the Stormwater Management Fund shall be allocated at a maximum two cents per \$100 of EAV to fund operations and maintenance expenditures, and a maximum three cents per \$100 of EAV to **the remainder of the levy shall** fund direct cash outflows for capital and capital-related expenditures and the interest and redemption of general obligation bond issues for capital projects.”

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Stormwater Management CIP 30-year Forecast

- Number One Issue in Cook County
 - Strategic Business Plan
 - Phase I \$400 Million
 - Phase II \$450 Million
 - Green Infrastructure \$275 Million
 - Flood Prone Property Acquisition \$75 Million
 - Fourth Reservoir Plan \$1,000 Million
- Total >> \$2.2 Billion

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Current Levy Amounts

(millions of dollars)	2015	2016	2017	...	2021	2022
Levy	24.1	25.3	29.0		35.3	37.0
PAYGO Capital	11.2	8.3	10.0		0.3	-1.6
Total Available for Capital Project Spending	61.2	58.3	60.0		0.3	0.0

- The current levy amount restricts borrowing to fund the capital program to a total of \$350 million and annual borrowing ends in 2021.
- In subsequent years, limited to \$100 million in borrowing every 8-10 years.

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Proposed Levy

(millions of dollars)	2015	2016	2017	...	2021	2022
Levy	24.1	34.3	40.9		77.3	80.0
PAYGO Capital	11.2	17.3	21.9		43.2	42.4
Total Available for Capital Project Spending	61.2	68.5	71.9		92.5	88.6

- The 2016 levy of \$34.3 million increases to \$77.3 million in 2021. This increase does not violate any statutory or Board policy limits. The total proposed 2016 levy increase is 3.3%.
- The current levy rate will allow capital funding of \$600 million over 30 years. Levy growth is assumed at 5% per year, which results in a levy of 64% of the maximum levy after 30 years.
- The proposed levy rate will allow capital funding of \$2.4 billion over 30 years.

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Recommendations

- Change Levy allocation policy
- Set levy increase policy

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Discussion

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