



We Are Columbia

INTER OFFICE MEMORANDUM

TO: Honorable Mayor Stephen K. Benjamin and Columbia City Council

FROM: Teresa Wilson, City Manager

CC: Missy Gentry, Assistant City Manager
Jeff Palen, Assistant City Manager
Missy Caughman, Director of Budget and Program Management
Joey Jaco, Director of Utilities and Engineering

SUBJECT: 2016/2017 Water and Sewer CIP Revisions

DATE: June 16, 2016

On April 12, 2016 staff presented the preliminary rate study results with 3 scenarios providing a \$120M CIP (Scenario 1), \$140M CIP (Scenario 2), and \$110M CIP (Scenario 3). Each scenario presented an alternative for a 0% rate increase year one (scenarios 1A, 2A, and 3A) and a “smoothing” alternative to prevent higher rate increases or rate spikes in the future (scenarios 1B, 2B, and 3B). Below are the scenarios and projected annual increases from the rate study.

Scenario 1	Scenario 2	Scenario 3
<p>\$120 Million Annual CIP</p> <ul style="list-style-type: none">• \$40 Million – Water• \$80 Million - Sewer	<p>\$140 Million Annual CIP</p> <ul style="list-style-type: none">• \$60 Million – Water• \$80 Million – Sewer	<p>\$110 Million Annual CIP</p> <ul style="list-style-type: none">• \$30 Million – Water• \$80 Million - Sewer
<ul style="list-style-type: none">• 1A = % increases required to meet 2.0 coverage and 138% of O&M• 1B = Smoothing of revenue increases over 5 year plan	<ul style="list-style-type: none">• 2A = % increases required to meet 2.0 coverage and 138% of O&M• 2B = Smoothing of revenue increases over 5 year plan	<ul style="list-style-type: none">• 3A = % increases required to meet 2.0 coverage and 138% of O&M• 3B = Smoothing of revenue increases over 5 year plan



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LINE	DESCRIPTION	1A	1B	2A	2B	3A	3B
1	Fiscal Year 2017 Revenue Increase	0.0%	4.0%	0.0%	4.0%	0.0%	4.0%
2	Fiscal Year 2018 Revenue Increase	5.7%	7.0%	6.9%	8.0%	5.1%	6.0%
3	Fiscal Year 2019 Revenue Increase	13.5%	7.0%	15.1%	9.0%	12.7%	7.0%
4	Fiscal Year 2020 Revenue Increase	7.7%	7.5%	8.9%	9.0%	7.1%	6.5%
5	Fiscal Year 2021 Revenue Increase	6.5%	7.0%	7.5%	8.0%	6.1%	6.5%

Staff's recommendation was to move forward with Scenario 2B including recommended 4% rate increase for Fiscal Year 16/17 to provide \$140 million CIP with \$60 million for water and \$80 million for sewer as presented. The \$60 million in water improvements includes funding for additional water quality projects and funding to begin a program for AMI/AMR. The revenues generated from the proposed 4% rate increase were intended to be applied to the Water and Sewer Capital Improvement Program and would allow the City to issue less debt to fund the capital improvement program which would result in less debt service in future years. This was presented to City Council on May 3, 2016 in the evening meeting and Council provided direction to move forward with the recommendation.

On June 7, 2016 City Council voted first reading to approve the proposed budget without the 4% rate increase. As a result of the direction to move forward without a rate increase and reduce the magnitude of projected future rate increases, it is recommended to move forward with Scenario 1A. This reduces the CIP from \$140M to \$120M including \$40M for water projects and \$80M for sewer projects. The recommended CIP changes include:

- Reducing the first year AMR/AMI budget from \$12M to \$2M. This will allow for the completion in FY 16/17 of the feasibility study which was recently approved and preparation for implementation in FY 17/18.
- Reducing the expansion projects by \$10M. This is in line with the CIP prioritization of water capital projects. Attached are prioritization categories as presented in the March 2015 "All About Water & Sewer" Presentation.
- No changes to the previously recommended water quality projects.
- No changes to previously recommended wastewater projects.



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These changes reflect an emphasis in FY 16/17 on water quality projects and those wastewater projects related to the Consent Decree deliverables, with less emphasis on expansion projects. While this approach is in line with how we should be prioritizing projects, it is important to acknowledge that we may have to work to mitigate any impact to proposed development as a result of the reduction in a few expansion projects. In addition, it will be important for Council consideration of future rate increases as outlined in the Scenario 1A proposal above.

Enclosed please also find a project summary that details water quality projects to be designed and/or completed in FY 16/17 as well as significant accomplishments to date in water and wastewater. I look forward to working with Council and staff in the upcoming year to design and complete water quality projects that will demonstrate significant improvements in impacted neighborhoods and communities; continue our focus on Consent Decree deliverables; and prepare for another review of rates that will ensure our ability to expand services as needed throughout the City

The budget revisions as outlined that reflect a 0.0% rate increase in FY 16/17 have been incorporated into the budget ordinance for second reading that is on the June 21st Council agenda. The ordinance reflecting a rate increase has been removed.

Thank you and please let me know if you have any questions.

Attachments:

1. Revised 16/17 CIP
2. City of Columbia Water & Sewer CIP Highlights
3. CIP Priorities from March, 2015 "All About Water & Sewer" Presentation.

Attachment 1:

Revised 16/17 CIP

FY16-17 Water Draft CIP						
Project	Description	Type of Improvement	CD Related	Council District	ORIGINAL PROPOSAL FY 16/17 - \$140M	REVISED FY 16/17 - \$120M
WM4354	AMR/AMI Business Case Evaluation (Engineering Only)	Other	N/A	1-4 and Outside City Limits	\$ -	\$ -
WMXXXX	AMR/AMI (5 Annual Phases)	Other	N/A	1-4 and Outside City Limits	\$ 12,000,000.00	\$ 2,000,000.00
				Other Total	\$ 12,000,000.00	\$ 2,000,000.00
WM3355	Utility Conflicts (Annual)	System Expansion	N/A	1-4 and Outside City Limits	\$ 1,500,000.00	\$ 1,500,000.00
WM3358	Pay Difference Agreements Various Subdivisions (Annual)	System Expansion	N/A	1-4 and Outside City Limits	\$ 150,000.00	\$ 150,000.00
WM363702	10,000 LF of 16 inch and 5000 LF of 12 inch from Stonewall Court to Proposed New Chapin Tank at Broom Straw	System Expansion	N/A	Outside City Limits	\$ 2,300,000.00	
WM3767	2,000 LF of 18" WM from Rimer Pond Rd along Longtown Rd & 9,800 LF of 12" along Longtown Rd	System Expansion	N/A	Outside City Limits	\$ 2,000,000.00	
WM3870	3,000 LF 16" WM & 4,500 LF of 12" along Longtown Road West	System Expansion	N/A	Outside City Limits	\$ 1,000,000.00	\$ 1,000,000.00
WM4140	Horseshoe BPS Improvements	System Expansion	N/A	2	\$ 4,500,000.00	\$ -
WM4281	Hardscrabble Road Widening Waterline Relocation	System Expansion	N/A	Outside City Limits	\$ 6,900,000.00	\$ 6,900,000.00
WM4315	Bull Street Water System Improvements	System Expansion	N/A	2	\$ 2,000,000.00	\$ 2,000,000.00
WM4323	Unforeseen Projects	System Expansion	N/A	1-4 and Outside City Limits	\$ 1,300,000.00	\$ 100,000.00
WM4348	16" Water Main Along Shop Road Extension	System Expansion	N/A	Outside City Limits	\$ 1,500,000.00	\$ 1,500,000.00
WMXXXX	Water Main Improvements Along Woodthrush (Chapin Area)	System Expansion	N/A	Outside City Limits	\$ 400,000.00	\$ 400,000.00
				System Expansion Total	\$ 23,550,000.00	\$ 13,550,000.00
WM3001	Water Quality Projects City Wide (Services & 2-inch water line replacement) (Annual)	Water Quality	N/A	1-4 and Outside City Limits	\$ 2,800,000.00	\$ 2,800,000.00
WM307702 & WM3924	Sumter Street (Cottontown Area) Water System Improvements	Water Quality	N/A	1	\$ 2,500,000.00	\$ 2,500,000.00
WM3078	Washington Park Subdivision Waterline Replacement	Water Quality	N/A	Outside City Limits	\$ 750,000.00	\$ 750,000.00
WM3906	Satchel Ford (Including work from WM3043)	Water Quality	N/A	Outside City Limits	\$ 1,500,000.00	\$ 1,500,000.00
WM3923	Earlwood Area Water System Improvements (Engineering Only)	Water Quality	N/A	1	\$ 800,000.00	\$ 800,000.00
WM3993	Covenant Road and Harrison Road Area Water System Improvements	Water Quality	N/A	2 & 3	\$ 2,500,000.00	\$ 2,500,000.00
WM4000-02	Lake Katherine Waterline Improvements Phase 2(Annual Rehab)	Water Quality	N/A	4	\$ 3,500,000.00	\$ 3,500,000.00
WM409203	Lincolnshire III	Water Quality	N/A	Outside City Limits	\$ 800,000.00	\$ 800,000.00
WM4375	Booker Washington Heights (Engineering Only)	Water Quality	N/A	2 & 3	\$ 500,000.00	\$ 500,000.00
				Water Quality Total	\$ 15,650,000.00	\$ 15,650,000.00
WM3774 & WM4231	Canal Clearwell and High Service Rooms 2 & 3 Improvements	Water Treatment Plant	N/A	2	\$ 8,000,000.00	\$ 8,000,000.00
WM4373	Canal WTP West Filter Building Repairs	Water Treatment Plant	N/A	2	\$ 800,000.00	\$ 800,000.00
				Water Treatment Plant Total	\$ 8,800,000.00	\$ 8,800,000.00
				Water Sub-Total	\$ 40,000,000.00	\$ 40,000,000.00

FY16-17 Wastewater Draft CIP						
Project	Description	Type of Improvement	CD Related	Council District	Proposed 5 Year CIP	
					ORIGINAL PROPOSAL FY 16/17 - \$140M	REVISED FY 16/17 - \$120M
SS695401	I-20 Crane Creek Sewer Improvements (Ongoing)	Capacity		1 & Outside	\$ 3,000,000.00	\$ 3,000,000.00
SS7301	Bull Street	Capacity	No	2	\$ 2,000,000.00	\$ 2,000,000.00
SS733702	East Rocky Branch Improvements Phase II	Capacity	Yes	2, 3, & Outside	\$ 200,000.00	\$ 200,000.00
SS7338	Lower Crane Creek Storage - Phase 1	Capacity	Yes	1, 2, & Outside	\$ 11,000,000.00	\$ 11,000,000.00
SS7347	Shop Road Sewer Extension for Industrial Dev	Capacity	No	Outside	\$ 2,000,000.00	\$ 2,000,000.00
SS7383	Lower Crane Creek Storage - Phase 2 PS and Access Bridge	Capacity	Yes		\$ 1,000,000.00	\$ 1,000,000.00
				Capacity Total	\$ 19,200,000.00	\$ 19,200,000.00
SS6000	Sewer Service for City Annexations	Extension	No	System-wide	\$ 200,000.00	\$ 200,000.00
SS7274	Richard Street - Phase II	Extension	No	3	\$ 800,000.00	\$ 800,000.00
				Extension Total	\$ 1,000,000.00	\$ 1,000,000.00
SS7236	CD Program Management	Other	Yes	System-wide	\$ 5,300,000.00	\$ 5,300,000.00
SS7286	CE Projects not yet Defined	Other	No	System-wide	\$ 3,000,000.00	\$ 3,000,000.00
SS7288	Unforeseen & Miscellaneous Projects	Other	No	System-wide	\$ 3,000,000.00	\$ 3,000,000.00
				Other Total	\$ 11,300,000.00	\$ 11,300,000.00
SS6786	Annual Gravity Sewer MH Lining and Replacement	Rehab	Yes	System-wide	\$ 1,850,000.00	\$ 1,850,000.00
SS6857	Olympia Subdivision (SSES Study)	Rehab		2, 3, & Outside	\$ 3,000,000.00	\$ 3,000,000.00
SS6966	Annual Rehab on lines less than 15"	Rehab	Yes	System-wide	\$ 4,500,000.00	\$ 4,500,000.00
SS7172	Rehabilitation/Replacement Harbison #2, Mallard Point and Animal Shelter Pump Station	Rehab		1, 3, & Outside	\$ 1,800,000.00	\$ 1,800,000.00
SS7229	Annual Phase I SSES Assessment	Rehab	#N/A	System-wide	\$ 750,000.00	\$ 750,000.00
SS7262	Flow Study/Rehabilitation/Replacement of Three Rivers and Colonial Life Pump Station	Rehab	Yes	2 & Outside	\$ 300,000.00	\$ 300,000.00
SS7279	Smith Branch 02 SSES	Rehab	Yes	2	\$ 6,000,000.00	\$ 6,000,000.00
SS7287	Identification of future SSES areas and Implementation	Rehab	Yes	System-wide/undetermined	\$ 1,500,000.00	\$ 1,500,000.00
SS7292	Zoom Camera Rapid Assessment	Rehab	Yes	System-wide	\$ 750,000.00	\$ 750,000.00
SS7293	Trunk Sewer Lining & Replacement (Projects Not Defined)	Rehab	Yes	System-wide/undetermined	\$ 600,000.00	\$ 600,000.00
SS7323	Food Lion Pump Station Improvements	Rehab	Yes	2	\$ 1,000,000.00	\$ 1,000,000.00
SS7324	Bendale Pump Station Improvements	Rehab	Yes	2	\$ 500,000.00	\$ 500,000.00
SS7325	Starlite Pump Station Improvements	Rehab	Yes	3 & Outside	\$ 1,300,000.00	\$ 1,300,000.00
SS7384	Pumping Station Upgrades not yet Defined	Rehab	Yes		\$ 700,000.00	\$ 700,000.00
				Rehab Total	\$ 24,550,000.00	\$ 24,550,000.00
SS717101	Construct and Upgrade Metro Dike	Structure		System-wide	\$ 1,600,000.00	\$ 1,600,000.00
SS7381	Metro WWTP Operations Center Building	Structure	No		\$ 250,000.00	\$ 250,000.00
SS7382	Wastewater Maintenance and Storage Building	Structure	No		\$ 250,000.00	\$ 250,000.00

				Structure Total	\$ 2,100,000.00	\$ 2,100,000.00
SS6099	Sewer Utility Conflicts	Upgrade	#N/A	System-wide	\$ 1,200,000.00	\$ 1,200,000.00
SS728401	Liquid Treatment Train 1 Upgrades (Phase 1 - Aeration)	Upgrade		System-wide	\$ 18,000,000.00	\$ 18,000,000.00
SS7285	Thickening & Dewatering Improvements - Biosolids MP	Upgrade	No	System-wide	\$ 1,000,000.00	\$ 1,000,000.00
SS7333	SCADA Upgrades Required at Pump Stations per TSOMP	Upgrade	Yes	System-wide	\$ 600,000.00	\$ 600,000.00
SS7333	Force Main Condition Assessment	Upgrade	Yes	System-wide	\$ 1,050,000.00	\$ 1,050,000.00
				Upgrade Total	\$ 21,850,000.00	\$ 21,850,000.00
				Wastewater Sub-Total	\$ 80,000,000.00	\$ 80,000,000.00
				Water & Wastewater Total	\$ 140,000,000.00	\$ 120,000,000.00
					ORIGINAL PROPOSAL FY 16/17 - \$140M	REVISED FY 16/17 - \$120M

Attachment 2:

CIP Highlights



Water & Sewer CIP Highlights & Map

Project Key

Major Capital Improvement Projects*

Water System

Sewer System

COMPLETED

1. Canal Water Treatment Plant high service & raw water pump improvements
2. Broad River Rd water line
3. Chapin booster pump station

24. Crane Creek sewer bypass
25. Innovista District infrastructure upgrades (Phases 1 & 2)
26. Major pump station upgrades: Broad River, North Columbia, Saluda River, West Columbia

TO BE COMPLETED FY 16/17

4. Canal Water Treatment Plant raw water, dredging & sedimentation basin improvements
5. Lake Murray Water Treatment Plant disinfection & pumping improvements
6. AMR / AMI feasibility study
7. Chapin waterline improvements
8. Water tanks: Genstar, Killian Rd, Ballantine

27. Metro Wastewater Treatment Plant anaerobic digester rehabilitation
28. Major sewer system assessment
29. Sewer pump station upgrades: Clearwater, Colonial Life, Meadowland, Prescott Manor, Shady Lane, Swandale, Yacht Cove

BEGINNING FY 16/17

9. Canal Water Treatment Plant clearwell & high service pump improvements
10. AMR / AMI implementation work plan
11. Hardscrabble Rd water improvements
12. Longtown Rd West water main

30. Metro Wastewater Treatment Plant biosolids dewatering improvements
31. Metro Wastewater Treatment Plant liquid treatment train upgrades
32. Crane Creek sewer improvements
33. Sewer pump station upgrades: Animal Shelter, Bendale, Food Lion, Harbison #2, Mallard Point, Starlite

Nighborhood Capital Improvement Projects* Beginning FY 16/17

Water System

Sewer System

13. Booker Washington Heights water improvements
14. Covenant Rd & Harrison Rd area water improvements
15. Earlwood area water improvements
16. Lake Katherine water improvements
17. Lincolnshire area water improvements
18. North Main streetscaping
19. Rosewood area water quality improvements
20. Satchel Ford area water improvements
21. Shop Rd water main extension
22. Sumter St (Cottontown) water improvements
23. Washington Park waterline replacement

34. Lake Katherine from Gills Creek to Beltline sewer rehab
35. North Main streetscaping
36. Olympia area sewer improvements
37. Richard Street sewer extension
38. Rocky Branch sewer evaluation study
39. Rosewood Dr south to Gills Creek sewer rehab
40. Saluda Basin sewer rehab
41. Shop Rd sewer extension
42. Smith Branch sewer evaluation study
43. Trenholm Rd & Shandon areas sewer rehab

*** Note: This does not include all projects. Work plan subject to change.**

The complete FY16/17 Water & Sewer CIP can be found online at

www.columbiasc.net/utilities-engineering.

Additional sewer projects can be found online at www.CleanWater2020.com.



Clean Water 2020

Columbia's Clear Vision For Clean Water

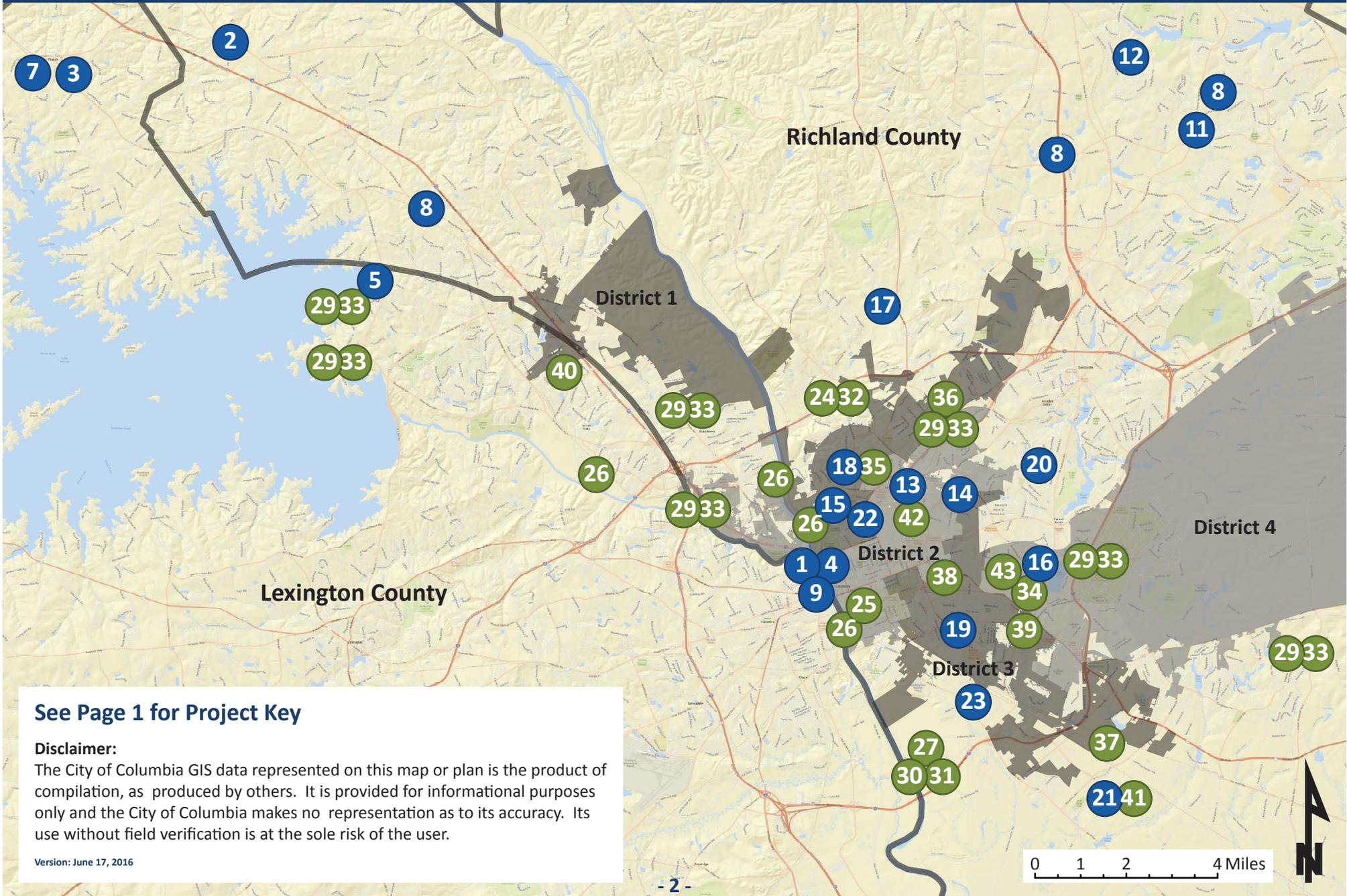


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Water & Sewer CIP Highlights & Map

Fiscal Year 2016/2017



Attachment 3:
CIP Prioritization

Prioritization Of Water CIP Projects

- 1) Regulatory Compliance (WTP & Distribution)
- 2) Fire Protection
- 3) Water Quality Improvements
- 4) Water Treatment Plant Upgrades (Non-regulatory)
- 5) System Expansion & Contractual Obligations



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Prioritization Of Wastewater CIP Projects

- 1) Regulatory Compliance & Consent Decree Requirements
- 2) Rehabilitation Of Critical Collection System & WWTP Assets
- 3) Capacity Enhancement (Correction of Capacity Limited Areas)
- 4) System Expansion & Contractual Obligations



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