



Sanitation District No. 1

Serving Northern Kentucky since 1946





WASTEWATER MANAGEMENT

WASTEWATER SNAPSHOT



Service Area: 191 square miles

Sanitary Sewer Pipe: 1,685 miles

Customer Accounts: 100,241 residential; 10,550 nonresidential

Dry Creek Treatment: 25.3 million gallons per day

Western Regional: 9 million gallons per day

Eastern Regional Treatment: 1.15 millions gallons per day

WASTEWATER SNAPSHOT



- Over the past 10 years, water consumption in Northern Kentucky has decreased by about 1% per year.
- Over time, without changes to the billing structure, this steady decrease in consumption would have an impact of about \$500M over the course of SD1's Clean H2O40 program.

WASTEWATER SNAPSHOT

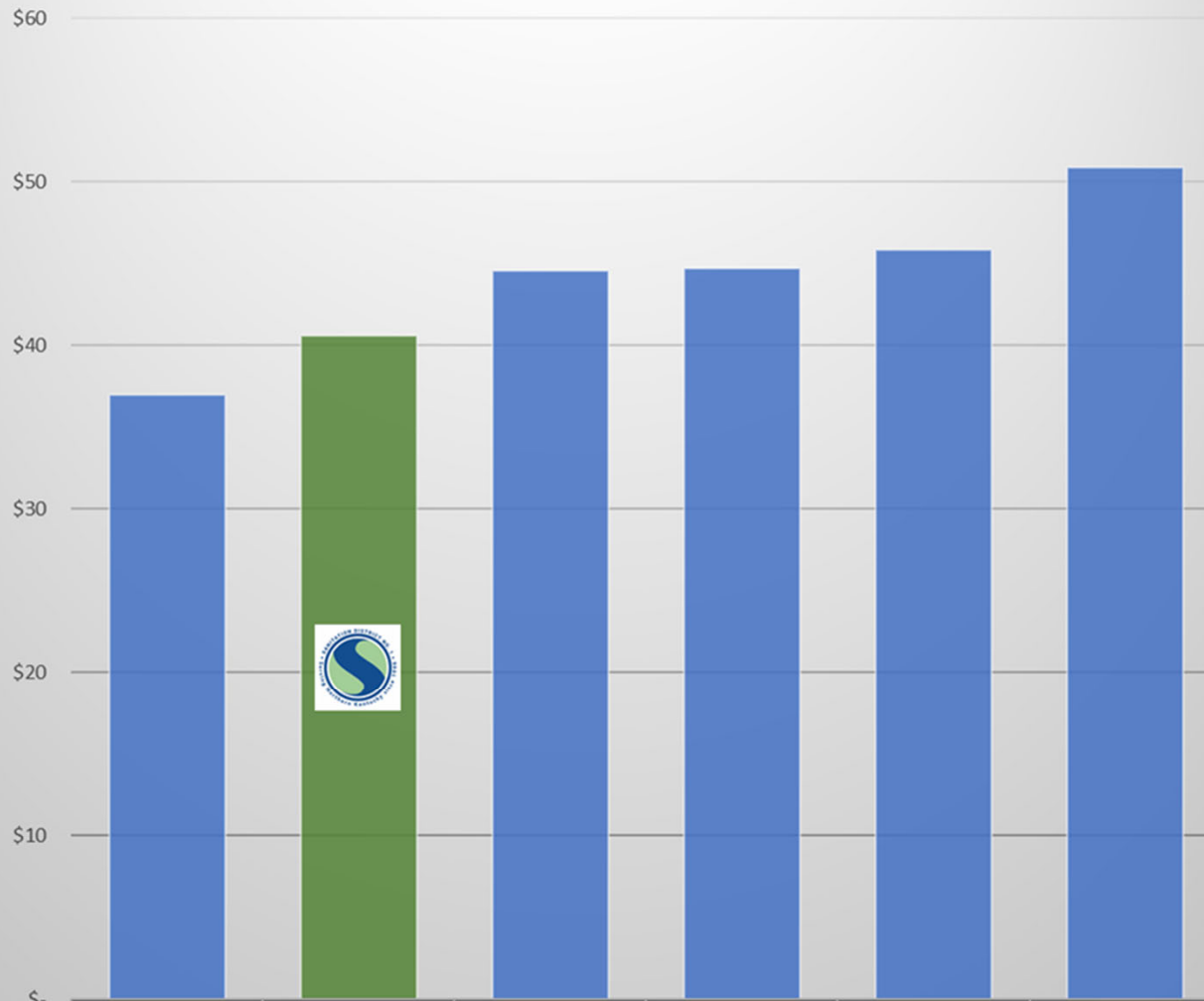


- 4-year renewal of rate restructure.
- Use of a base rate and variable rate to address ongoing consumption decline and more closely align rates with the actual costs of providing sanitary sewer service and.
- As the base rate has gradually increased (from \$16 in FY20 to \$30 in FY24), the variable rate has gradually decreased (from \$8.11 prior to the new structure to \$4.18 in FY24).

FY24 Base Rate: \$30/month

FY24 Variable Rate: \$4.18 per HCF/month

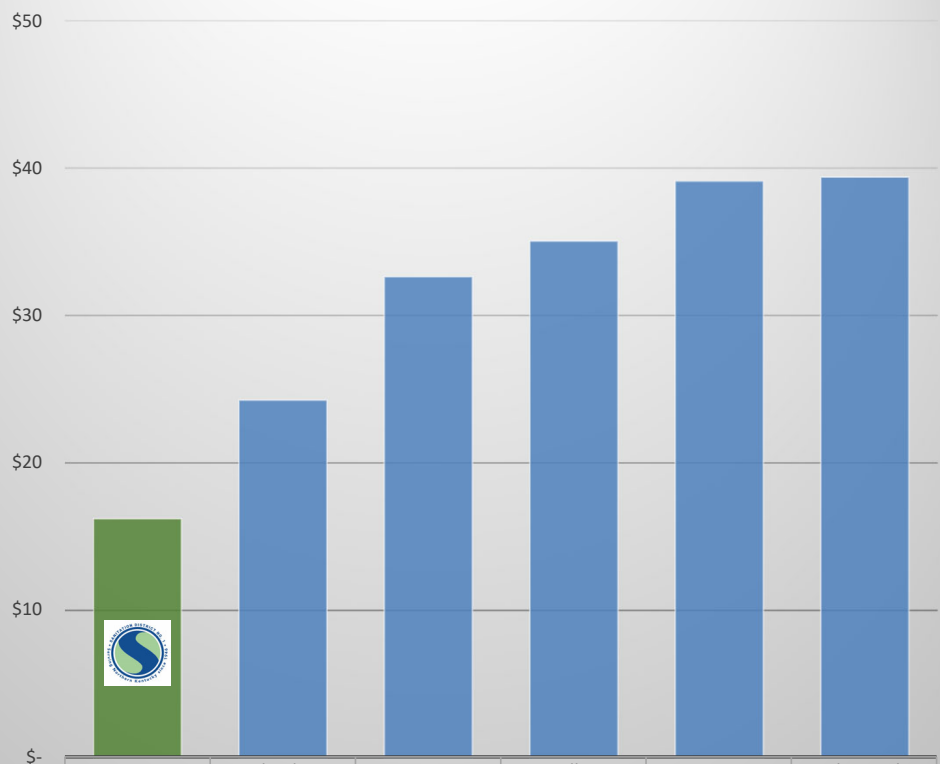
Average Bill 5 HCF per Month (as of 9/2018)



	Columbus	SD1 - FY19 Rates	Indianapolis	Louisville MSD	MSD St. Louis	Cincinnati MSD
Avg. or 5 HCF	\$36.98	\$40.55	\$44.56	\$44.70	\$45.83	\$50.88

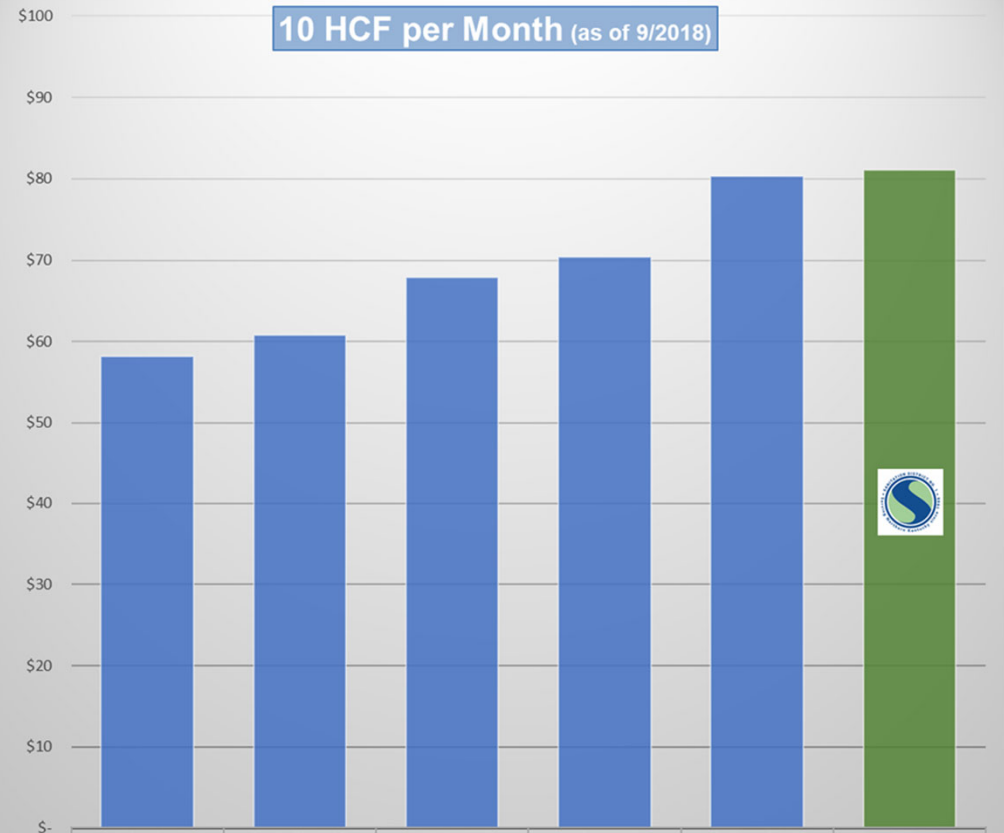


Min. 2 HCF per Month (as of 9/2018)



Min. or 2 HCF	SD1 - FY19 Rates	Columbus	MSD St. Louis	Louisville MSD	Cincinnati MSD	Indianapolis
	\$16.22	\$24.26	\$32.63	\$35.05	\$39.12	\$39.40

10 HCF per Month (as of 9/2018)



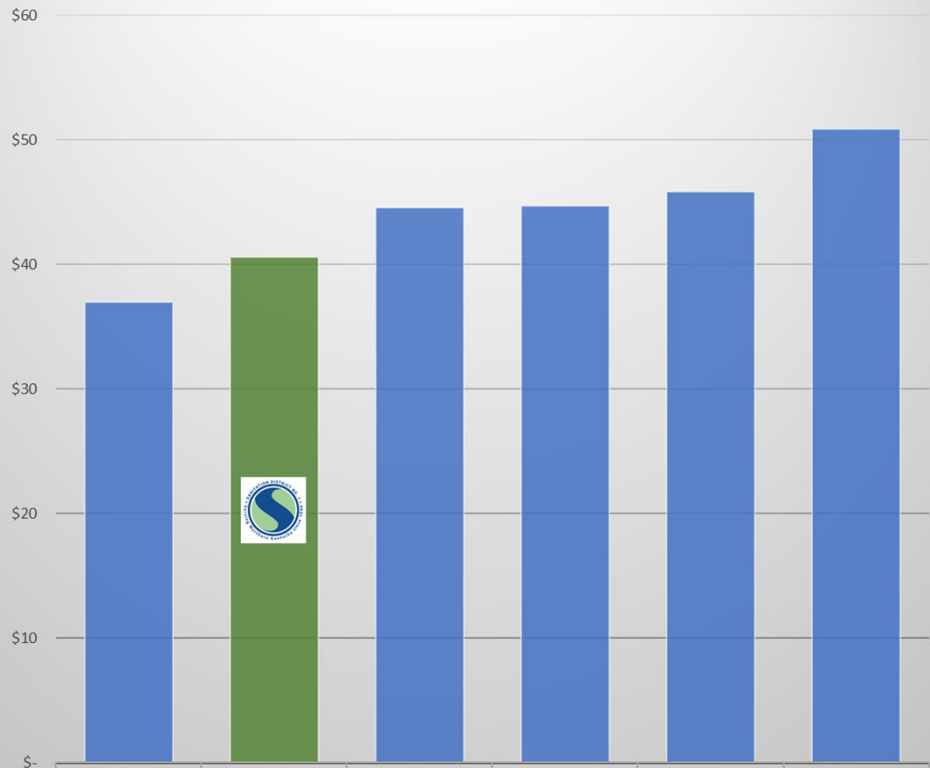
10 HCF	Columbus	Louisville MSD	MSD St. Louis	Indianapolis	Cincinnati MSD	SD1 - FY19 Rates
	\$58.18	\$60.79	\$67.83	\$70.37	\$80.27	\$81.10

4-Year Rate Restructure

FISCAL YEAR	BASE RATE	VARIABLE RATE
2019	--	\$8.11
2020	\$21	\$7.25
2021	\$25	\$6.05
2022	\$30	\$5.24
2023	\$34	\$4.72
2024	\$38	\$4.18

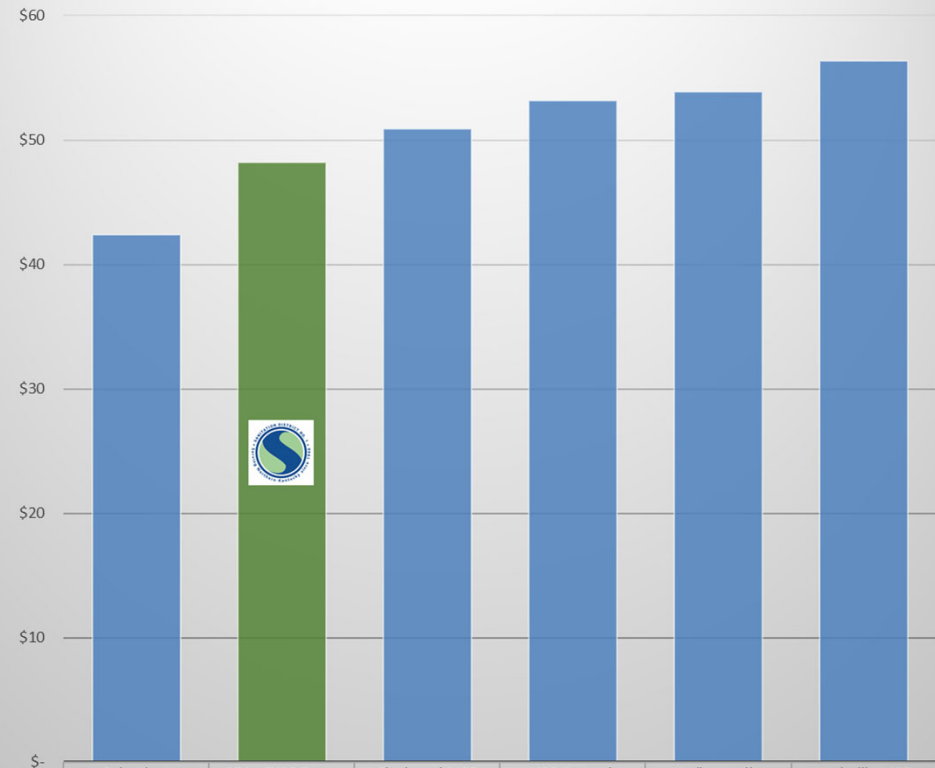


Average Bill 5 HCF per Month (as of 9/2018)



Avg. or 5 HCF	Columbus	SD1 - FY19 Rates	Indianapolis	Louisville MSD	MSD St. Louis	Cincinnati MSD
	\$36.98	\$40.55	\$44.56	\$44.70	\$45.83	\$50.88

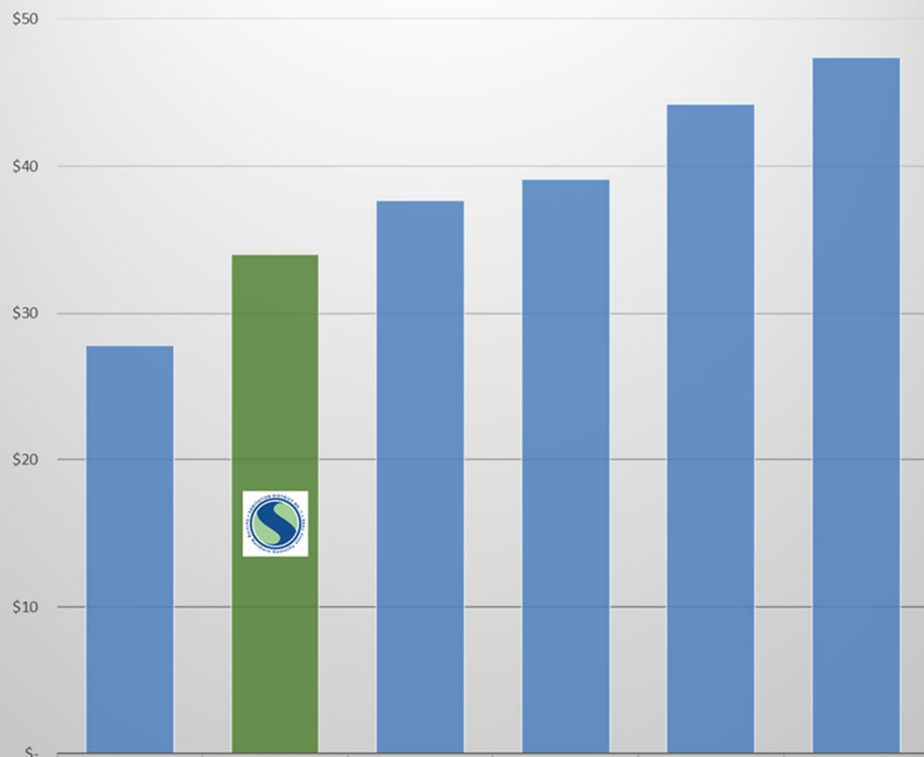
Average Bill 5 HCF per Month (as of 7/2022)



Avg. or 5 HCF	Columbus	SD1 - FY23 Rates	Cincinnati MSD	MSD St. Louis	Indianapolis	Louisville MSD
	\$42.40	\$48.16	\$50.88	\$53.16	\$53.88	\$56.34

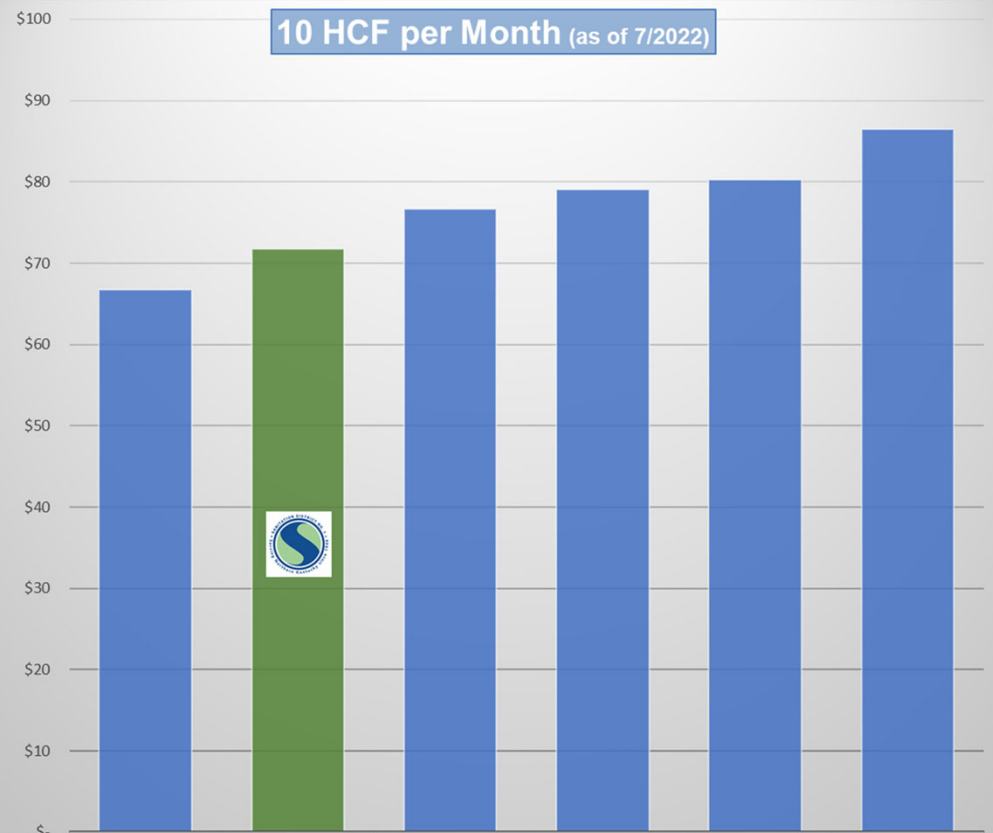


Min. 2 HCF per Month (as of 7/2022)

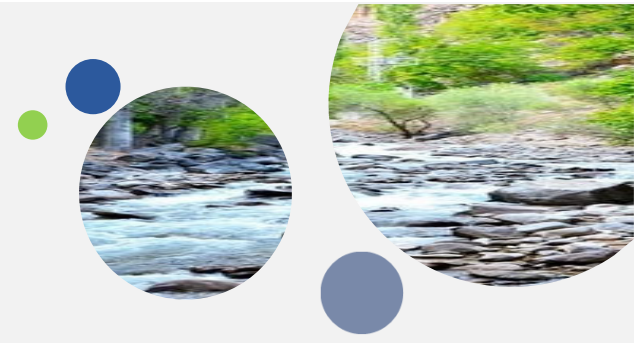


Min. or 2 HCF	Columbus	SD1 - FY23 Rates	MSD St. Louis	Cincinnati MSD	Louisville MSD	Indianapolis
	\$27.82	\$34.00	\$37.65	\$39.12	\$44.18	\$47.35

10 HCF per Month (as of 7/2022)



10 HCF	Columbus	SD1 - FY23 Rates	Louisville MSD	MSD St. Louis	Cincinnati MSD	Indianapolis
	\$66.70	\$71.76	\$76.61	\$79.01	\$80.27	\$86.51



CLEAN H₂O⁴⁰

CLEAN H₂O40

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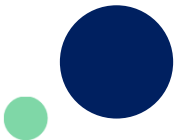
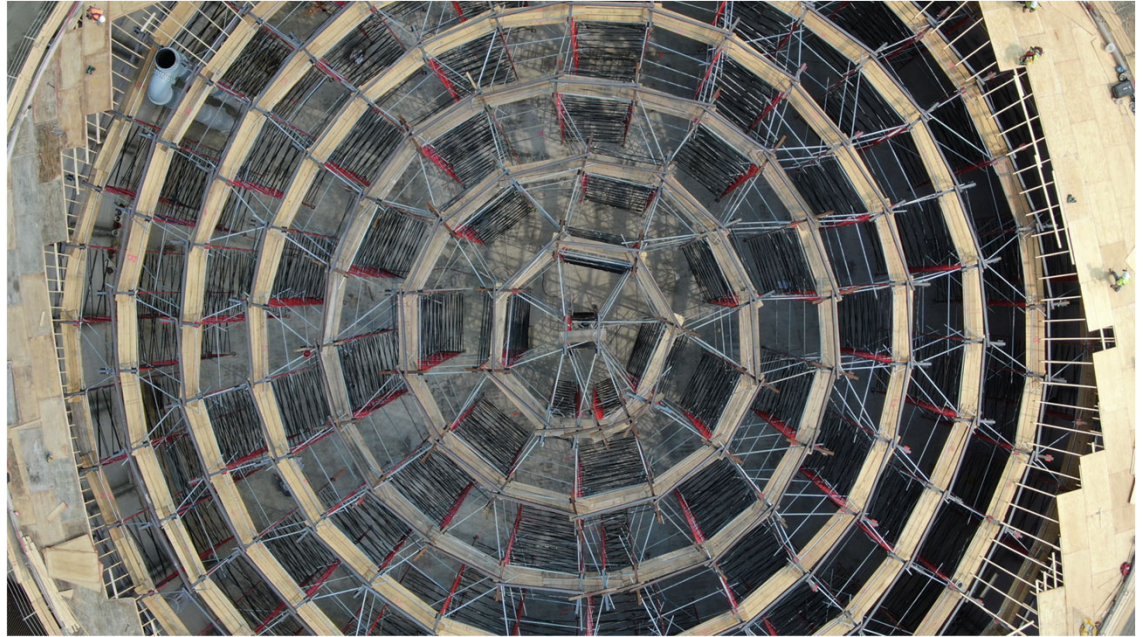
CLEAN H₂O40

Typical-Year SSO Elimination Goals

- ✓ July 2023 – Eliminate 20% of TY SSO
- July 2029 – Eliminate 75% of TY SSO
- July 2034 – Eliminate 90% of TY SSO
- January 2040 – Eliminate 100% of TY SSO

Typical-Year CSO Elimination Goals

- ✓ July 2023 – Capture 67% of TY Combined System Flow
- July 2029 – Capture 75% of TY Combined System Flow
- July 2034 – Capture 80% of TY Combined System Flow
- January 2040 – Capture 85% of TY Combined System Flow



A background of numerous colorful balloons in shades of red, orange, yellow, green, blue, and purple, creating a festive and celebratory atmosphere.

CLEAN H₂O⁴⁰

**PHASE 1
COMPLETE!!!**



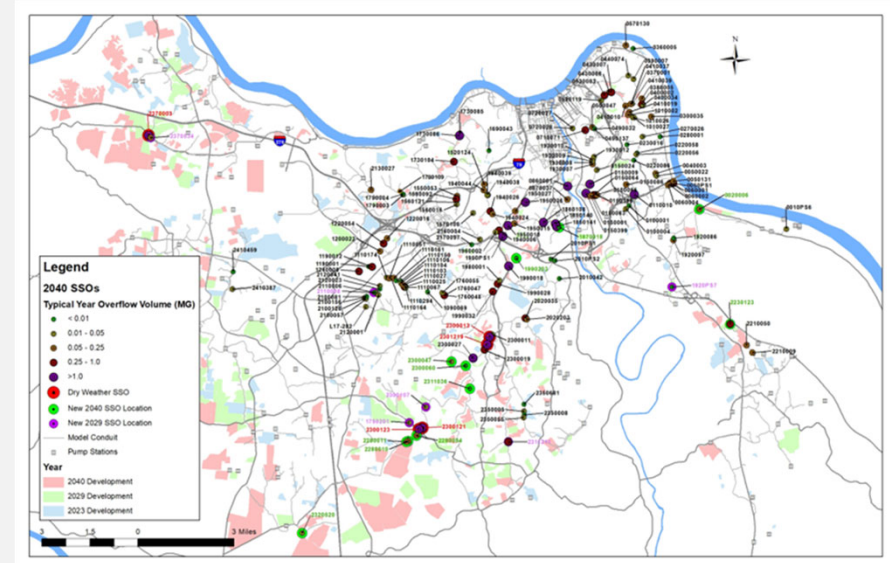
CLEAN H₂O⁴⁰



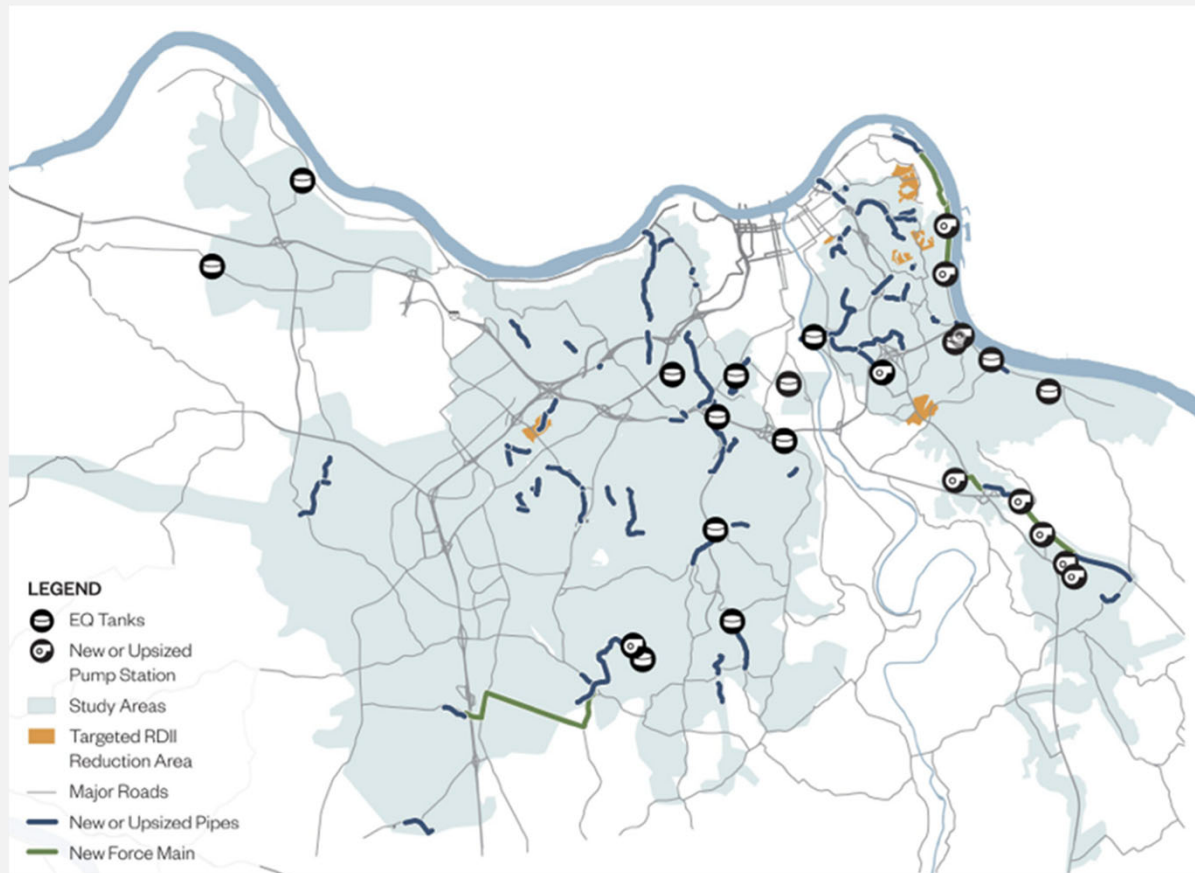
**PHASE 2
UNDERWAY**

THE SSO PROBLEM

- Achieve SSO volume reduction milestones.
 - 2029 – 75%
 - 2034 – 90%
 - 2040 – 100%
- Eliminate all SSOs in typical year by 2040.
- Total projected SSO elimination: 242MG



THE SSO SOLUTION



2029 SSO PLAN

- **Licking River Siphon EQ Tank**
Estimated Overflow Reduction: 5MG | Cost/gallon: \$4.10
- **Licking River Siphon Conveyance**
Estimated Overflow Reduction: 5MG | Cost/gallon: \$1.48
- **Lakeview EQ Tank**
Estimated Overflow Reduction: 6.5MG | Cost/gallon: \$3.70
- **W6 Pump Station and Conveyance Piping**
Estimated Overflow Reduction: 9.8MG | Cost/gallon: \$2.71
- **Bullitsville Pump Station Improvements**
Estimated Overflow Reduction: 1MG | Cost/gallon: \$9.97



2029 SSO PLAN (cntd.)

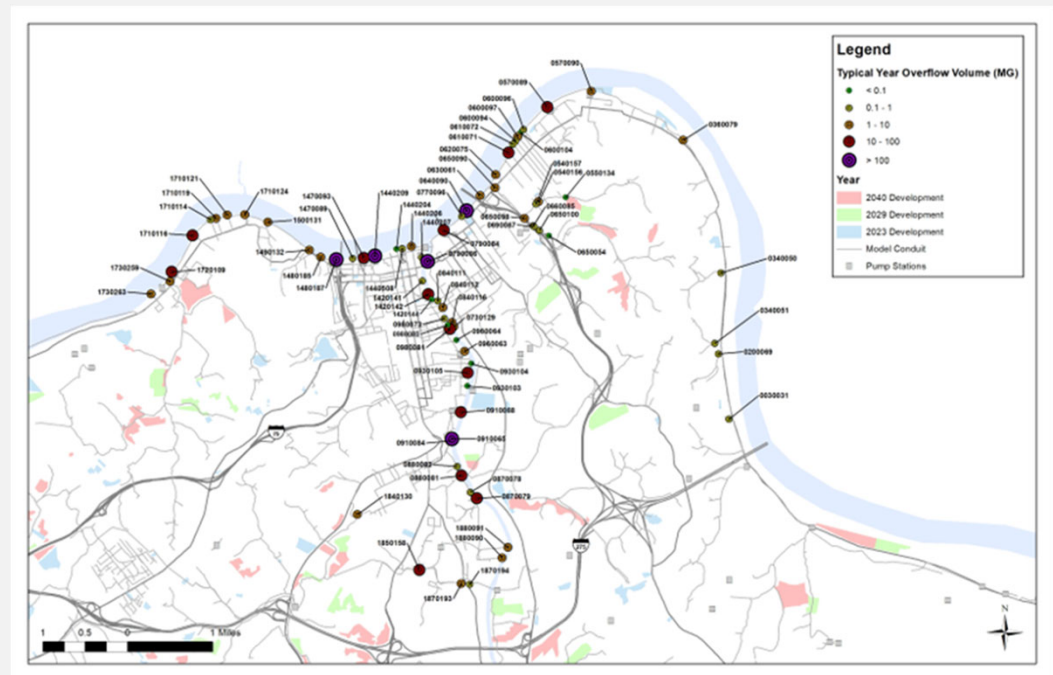
- Waterworks Road Conveyance, Part I
Estimated Overflow Reduction: 1MG | Cost/gallon: \$5.41
- Waterworks Road Conveyance, Part II
Estimated Overflow Reduction: 1MG | Cost/gallon: \$3.47
- Bromley Crescent Springs Conveyance
Estimated Overflow Reduction: 1.3MG | Cost/gallon: \$5.60

Total Phase II SSO Project Cost: \$647.6M

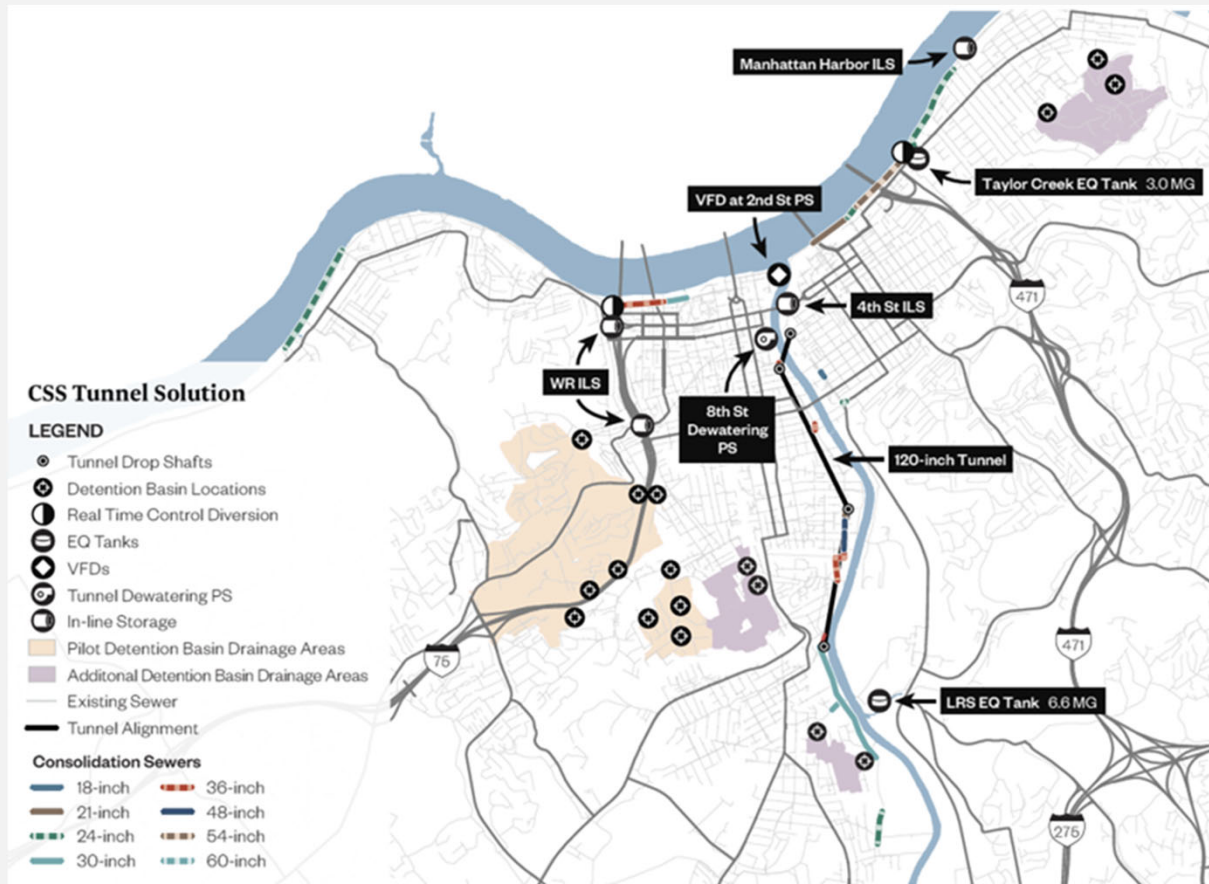


THE CSO PROBLEM

- Achieve percent capture milestone reductions.
 - 2029 – 75% recapture
 - 2034 – 80% recapture
 - 2040 – 85% recapture
- Need to reduce CSO volume by about one billion gallons by 2040.



THE CSO SOLUTION

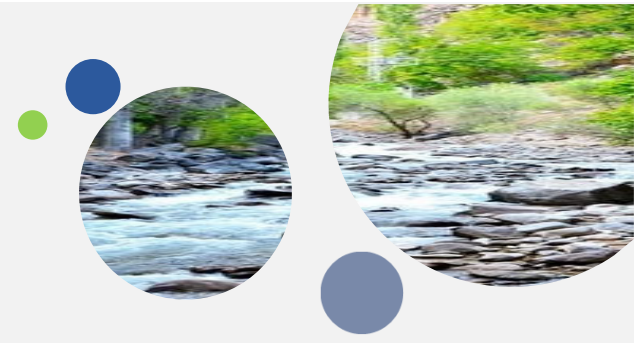


2029 CSO PLAN

- Willow Run Detention Basins
Estimated Overflow Reduction: 154MG | Cost/gallon: \$0.01
- River Water Intrusion Phase III Improvements
Estimated Overflow Reduction: 107MG | Cost/gallon: \$0.06
- Bromley Pump Station Improvements
Estimated Overflow Reduction: 60MG | Cost/gallon: \$0.03
- SR9 Sewer Separation
Estimated Overflow Reduction: 10MG | Cost/gallon: \$0.19

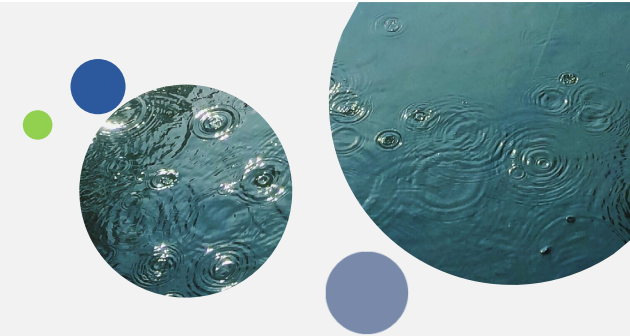
Total Phase II CSO Project Cost: \$892.2M





STORMWATER MANAGEMENT

STORMWATER SNAPSHOT



Service Area: 170 square miles

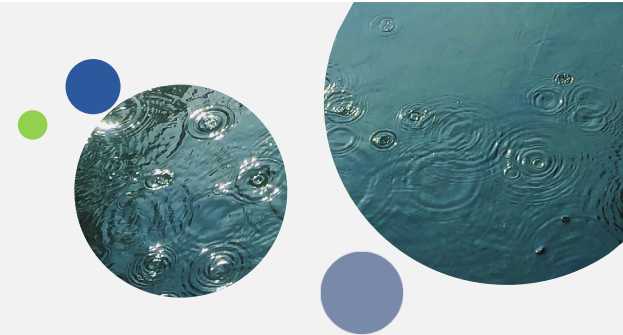
Storm Sewer Pipe: 441.52 miles

Storm Sewer Structures: 32,915

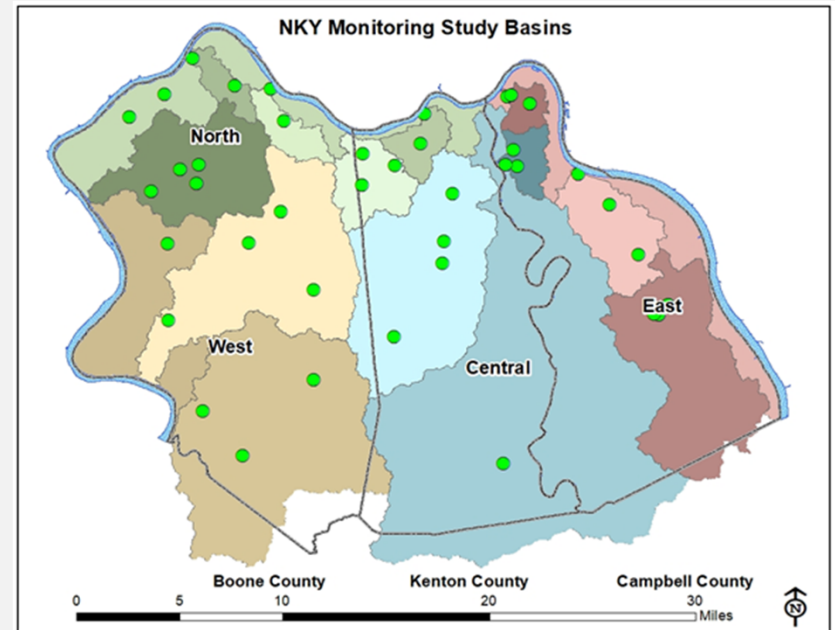
Customer Accounts: 78,998 residential; 6,392 nonresidential

Residential Storm Water Rate: \$4.31/month

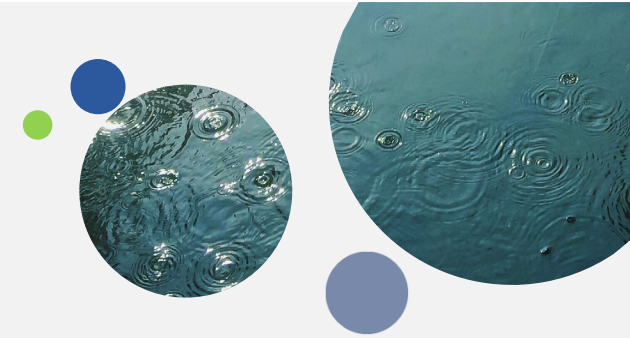
STORMWATER SNAPSHOT



- Stormwater Priority Matrix
- Stream Assessment Program
 - Monitoring to assess local stream “health”
 - Developing long-term Trend Analysis Reports
 - Assessing CWA compliance



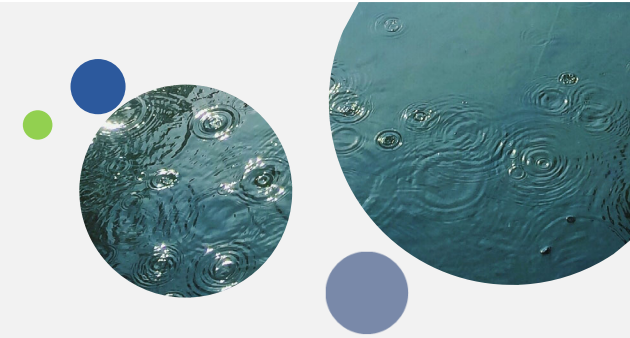
STORMWATER SNAPSHOT



- Stormwater Assistance Programs
 - Private Cost-Share
 - Public Cost-Share
 - Public Culvert Cost-Share
 - Technical Assistance
- Backup Prevention Program



STORMWATER SNAPSHOT



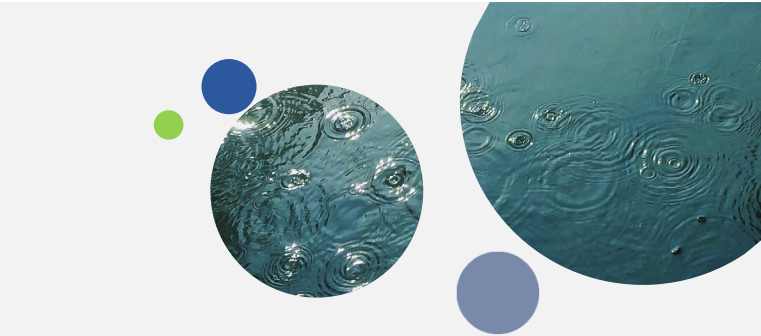
Two stormwater fee reductions in three years totaling 15% reduction in stormwater fee.

FY22 | 10% reduction

FY24 | 5% reduction

Stream & Wetland Mitigation Bank

- US Army Corps invitation to proceed
 - One of first Urban Stream in KY
- Founded in hydrologic restoration
 - Stormwater management
 - Calibrated restoration approach
 - Demonstrated Ecological Lift
 - Restore stream integrity
- Potential collaboration with CORA to establish a system of bike trails





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