2024 SEWER ACTIVITY REPORT





Prepared by

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M E M O R A N D U M

DATE: February 26th, 2025

TO: Sanitary Sewer Technical Committee

SUBJECT: Sewer Activity in the City of Urbana from January 1, 2024 to December 31, 2024

I. INTRODUCTION

The City of Urbana owns, operates, and maintains 540,411 linear feet (102.4 miles) of sanitary sewer and 754,512 linear feet (142.9 miles) of storm sewer. The sanitary sewer system includes 2,343 manholes while the storm sewer system includes 8,328 storm manholes or inlets. Based on the U.S. Environmental Protection Agency's estimated infrastructure replacement cost of one million dollars per mile of sewer pipe Urbana's sanitary and storm sewer infrastructure would be valued at almost one quarter of a billion dollars.

The sanitary and storm sewer budgets for the -2025 fiscal year (July 1, 2024 to June 30, 2025) included:

- $210,00 for sanitary sewer miscellaneous repairs
- $205,000 for sanitary sewer lining
- $220,000 for sanitary sewer cleaning & televising
- $500,000 for Carle Sanitary Sewer planning study
- $1,101,000 for sanitary and storm sewer structure inspections
- $369,000 for sanitary sewer lateral lining pilot program
- $175,000 for public sanitary sewer gaps study
- $65,000 for various sanitary sewer reimbursement programs
- $1,042,558 for sanitary sewer operation and maintenance activities
- $375,000 for storm sewer miscellaneous repairs
- $330,000 for storm sewer lining
- $1,070,000 for storm sewer cleaning and televising
- $75,000 for Vine Street pump station repairs
- $94,000 for Main Street brick arch storm sewer replacement
- $51,000 for storm sewer abandonment study
- $50,000 for Coler Avenue brick arch storm sewer study
- $17,500 for various stormwater education, incentive, and reimbursements
- $799,000 for storm sewer operation and maintenance activities

II. SEWER REHABILITATION ACTIVITIES

A. Point Repairs

Point repairs to the sanitary sewers were made at 13 separate locations. Approximately 24 linear feet of repairs were performed on the sanitary sewer system, as well as repairing or replacement of 9 sanitary sewer manholes. Similarly, point repairs to the storm sewers were made at 25 separate locations. Approximately 62 linear feet of repairs were performed on the storm sewer system, as well as 22 storm sewer structure repairs and 4 new or replacement storm sewer structures.

Locations of sanitary and storm sewer repairs completed in 2024 are presented in Figures 1 and 2. Histories of sewer repairs from 2019 to 2024 are presented in Figures 3 and 4.

B. New Sewer Construction

143 linear feet of new storm sewer and 2 new storm structures were constructed as part of Carle Ave. storm bypass sewer. At West Main St., 290 linear feet of storm sewer were replaced.

C. Cured-in-Place Sewer Lining

In 2024, the City lined 7,111 linear feet of the sanitary, and 4,422 linear feet of the storm sewer systems.

The City has completed full length cured-in-place lining on 140,442 linear feet (26.6 miles) of sanitary sewer to date, which represents 25.9% of the sanitary sewer system. The City has completed full length cured-in-place lining on 37,854 linear feet (6.5 miles) of storm sewer to date, which represents 4.5 % of the storm sewer system. Sanitary and storm sewer lining locations for 2024 are presented in Figures 5 and 6.

III. MAINTENANCE ACTIVITIES

The City's Operations Division performed routine sewer cleaning, grease treatment, and televising activities in 2024. The City completed 292 sanitary sewer segment inspections. Additionally, the City systematically cleaned 59,400 feet of the sanitary sewer in maintenance zone 3. See Figure 7 for the City's Grease Treatment map showing the locations of the sanitary sewers that were cleaned, a total of 27,842 feet were treated in 2024. See Figure 8 for a map showing the Sewer Maintenance Zones for the City.

Moving forward the City is hoping to target cleaning and inspecting approximately 10% of its sanitary sewers and 10% of its storm sewers annually to help develop subsequent year's capital improvement projects as well as begin planning more proactive maintenance and hopefully reduce the number of reactive maintenance calls.

The City hired a contractor to clean and televise 56,782 feet of storm sewers and 40,604 feet of sanitary sewers in maintenance zone 4.

IV. SANITARY SEWER BACK-UP CALLS AND RESPONSES

The City of Urbana Operations Division responded to a total of 82 sanitary sewer back-ups in 2024. Of the 82 back-up locations, 44 were in private lines while the remaining 38 were in city-owned sewers. The City also responded to 9 calls about storm drainage problems in 2024.

A history of sewer back-up complaints in the City from 2019 to 2024 is presented in Figure 9. The locations of sanitary sewer back-ups reported in 2024 are currently unavailable at this time due to reporting issues with the newly implemented asset management software.

V. SANITARY SEWER SURCHARGES AND RESPONSES

In 2024, the City had 2 confirmed cases of sanitary sewer surcharge events caused by public sewers. When cases of sanitary sewer surcharge events are identified, the City typically sends each property owner an Overhead Sewer Program information packet and a letter urging them to contact the Public Works Department to discuss their complaint.

VI. SEWER SYSTEM INVESTIGATIVE STUDIES

Dye water testing was done as needed to determine which buildings or drainage structures were tributary to a given sewer system. No dye testing was performed in 2024.

Smoke testing, storm sewer televising, and resident surveys were performed for approx. 8,400 ft of backyard storm sewers in the West Urbana neighborhood (generally south of Carle Park) to determine the storm connections to those sewers. This was performed as part of the Storm Sewer Abandonment Study.

Flow monitoring within 8 manholes was performed between August 18, 2023 and October 31, 2023 for the Carle Hospital Sanitary Sewer Study. Additional flow monitoring for this project was performed between March 28 through July 5, 2024.

VII. OVERHEAD SEWER PROGRAM

There was one overhead sewer installation completed in 2024. Information on the Overhead Sewer Program was distributed to many eligible property owners and is also available on the City's website. A history of overhead sewer program participation from 2019 to 2024 is presented in Figure 10.

VIII. ILLEGAL CONNECTIONS AND DISCHARGES

The City adopted an illegal connection reimbursement program in December 2007. Under this program property owners are reimbursed for 50% of the cost to eliminate an illegal sanitary connection to the storm sewer, up to $4,000. Zero property owner participated in the illegal connection reimbursement program in 2024.

IX. PAVEMENT REPLACEMENT REIMBURSEMENT PROGRAM

The City adopted a pavement replacement reimbursement program for sewer service laterals in December 2007. This program was revised in January 2018, with implementation of a unit price program taking immediate effect. In July 2024, the program was expanded to include rehabilitation of the sewer lateral via lining. Under the revised program, residents are reimbursed an amount proportional to the amount of pavement work completed or lateral lined. Using the assistance provided in this program in 2024, property owners at 15 separate locations participated in pavement replacement, and 1 location opted for sewer lateral lining. Figure 11 tabulates the sewer lateral lining and pavement replacement reimbursement program participation in 2024. A history of program participation from 2019 to 2024 is presented in Figure 12.

X. HAZARDOUS SUMP PUMP DISCHARGE ELIMINATION PROGRAM

In the case a hazardous sump pump is reported to the City, the property owner is notified and is asked to take action to abate the hazard. This can be done by moving the sump pump discharge to a different location or by connecting to the City's storm sewer system. The property owner could choose to participate in the Hazardous Sump Pump Discharge Elimination Program, through which the City provides a public storm sewer within the right-of-way adjacent to the property and the sump pump discharge is connected directly to the new storm sewer. This program involves a cost share by the homeowner of 50% of construction costs, up to a maximum share of $500.00. $10,000 is budgeted for this program each year. Zero hazardous sump pump discharge was identified in 2024.

XI. PRIVATE TO PUBLIC SEWER CONVERSION PROGRAM

The City adopted a private to public sanitary sewer conversion program in March 2010 and funded the program with $25,000 from the Sewer Benefit Tax revenues. Under this program, the City assumes ownership of private sanitary sewers which have undergone necessary infrastructure upgrades, serve two or more properties, and have been designated as priorities per the Department of Public Works criteria. The City pays for the cost of required infrastructure repairs. The City continues to identify properties that are served by shared private sanitary sewer laterals, with conversions taking place as deemed necessary by the condition of those sewers.

XII. NEW EQUIPMENT AND TECHNOLOGIES

The City recently moved from CUES Granite Net to Wincan inspection software with GIS integration. The City took delivery of a new Aries sewer camera and van in 2024.

XIII. SEWER WORK PLANNED FOR-2026 FISCAL YEAR

A. Sanitary Sewer Work

The following sanitary sewer projects are tentatively scheduled for the 2026 fiscal year:

- Sanitary Sewer Miscellaneous Repairs $214,000
- Sanitary Sewer Lining $209,000
- Carle Hospital Sanitary Sewer Improvements $500,000
- ARPA Lateral Lining $69,000

B. Storm Sewer Work

The following storm sewer projects are tentatively scheduled for the 2026 fiscal year:

- Storm Sewer Miscellaneous Repairs $390,000
- Storm Sewer Cleaning & Televising $900,000

- Storm Sewer Lining $343,000
- Boneyard Creek Maintenance $83,000
- Boneyard Creek Lighting & Maint. Reim. $80,000

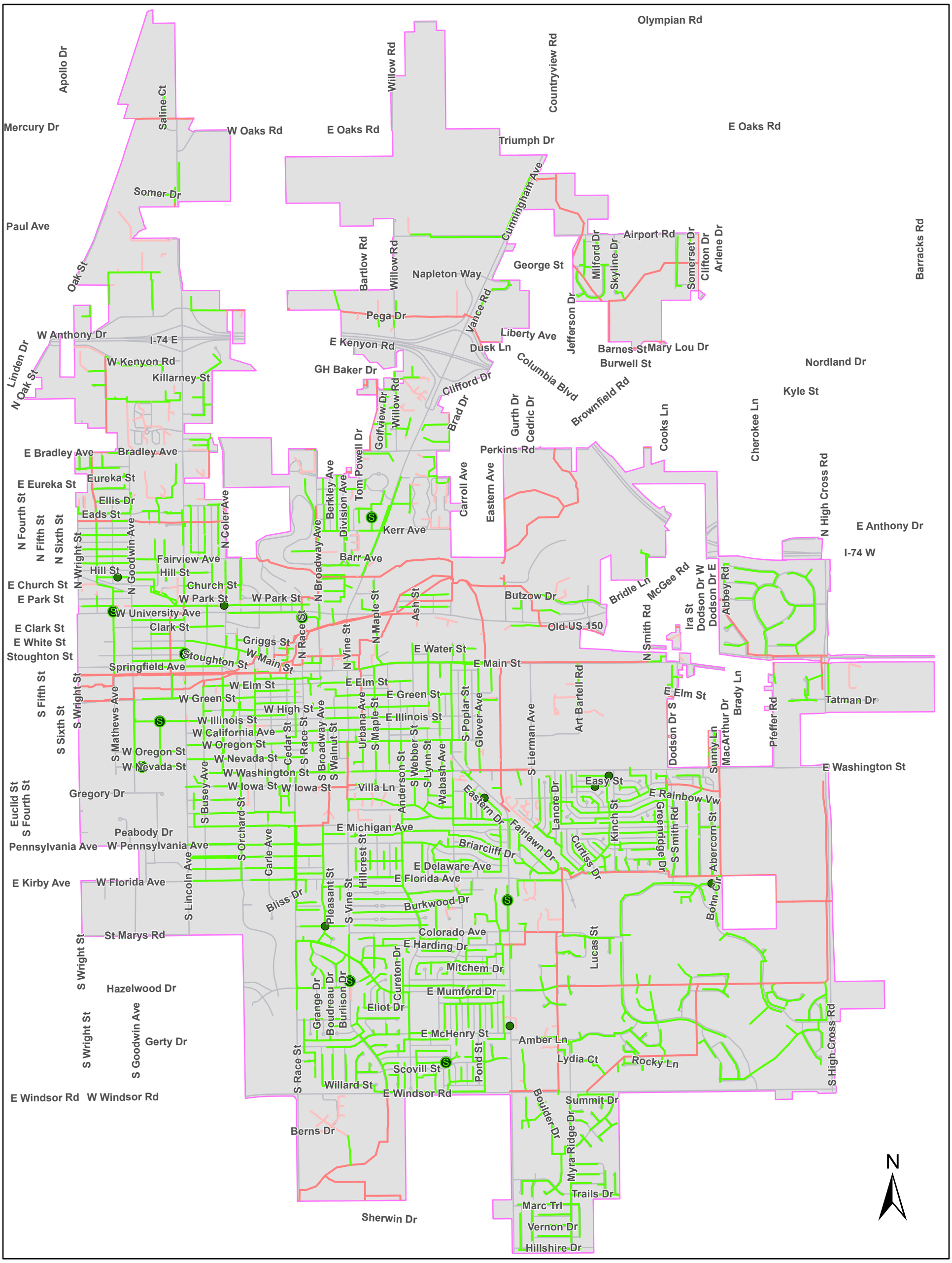
For map showing the proposed sewer projects in the Capital Improvement Plan (fiscal years 2025 through 2029), refer link: CIP

2024 SEWER ACTIVITY SUMMARY TABLE

	Quantity	Comments
Rehabilitation Activities:		
Sanitary Sewer Pipe Point Repairs	24 l.f.	
Sanitary Sewer Manhole Repairs	9 ea.	
New Sanitary Sewer Manhole Construction	X ea.	
Storm Sewer Point Repairs	62 l.f.	
Storm Sewer Manhole/Inlet Repairs	26 ea.	
New Storm Sewer Manhole/Inlet Construction	X ea.	
Maintenance Activities:		
Sanitary Sewer Cleaning and Inspections	59,400 l.f	292 segments
Sanitary Sewer Grease Treatment	27,842 l.f.	
Sanitary Sewer Cleaning and Inspections - Contractor	56,782 l.f.	
Storm Sewer Cleaning and Inspections - Contractor	40,604 l.f.	
Sanitary Sewer Blockages:		
In Private Service Lines	44 ea.	
In City Owned Mains	38 ea.	
Sanitary Sewer Surcharges:		
Reports of Sanitary Sewer Surcharges	2 ea.	
Storm and Sanitary Sewer Programs:		
Overhead Sewer Program	1 ea.	
Illicit Connections & Discharges	0 ea.	
Pavement Reimbursement Program	15 ea.	
Hazardous Sump Pump Discharge Elimination	0 ea.	
Private to Public Sewer Conversion	0 ea.	

Attachments:

Figure 1 - 2024 Sanitary Sewer Repair Locations
Figure 2 - 2024 Storm Sewer Repair Locations
Figure 3 - History of Sewer Pipe Repairs from 2019-2024
Figure 4 - History of Sewer Manhole/Inlet Repairs from 2019-2024
Figure 5 - Sanitary Sewer Full Length Lining Locations 2024
Figure 6 - Storm Sewer Full Length Lining Locations 2024
Figure 7 - Grease Treatment Map 2024
Figure 8 - Sewer Maintenance Zones Map
Figure 9 - History of Sanitary Sewer Back-Up Complaints from 2019-2024
Figure 10 - History of Overhead Sewer Program Participation from 2019-2024
Figure 11 - 2024 Pavement Replacement & Lateral Lining Reimbursement Program Participation
Figure 12 - History of Sewer Lateral Lining & Pavement Replacement Reimbursement Program 2019-2024



Legend

- Sanitary Manhole Repairs
- Sanitary Pipe Repairs
- Sanitary Sewers
  - City of Urbana
  - Urbana-Champaign Sanitary District
  - Private
- Streets
- Urbana City Limits

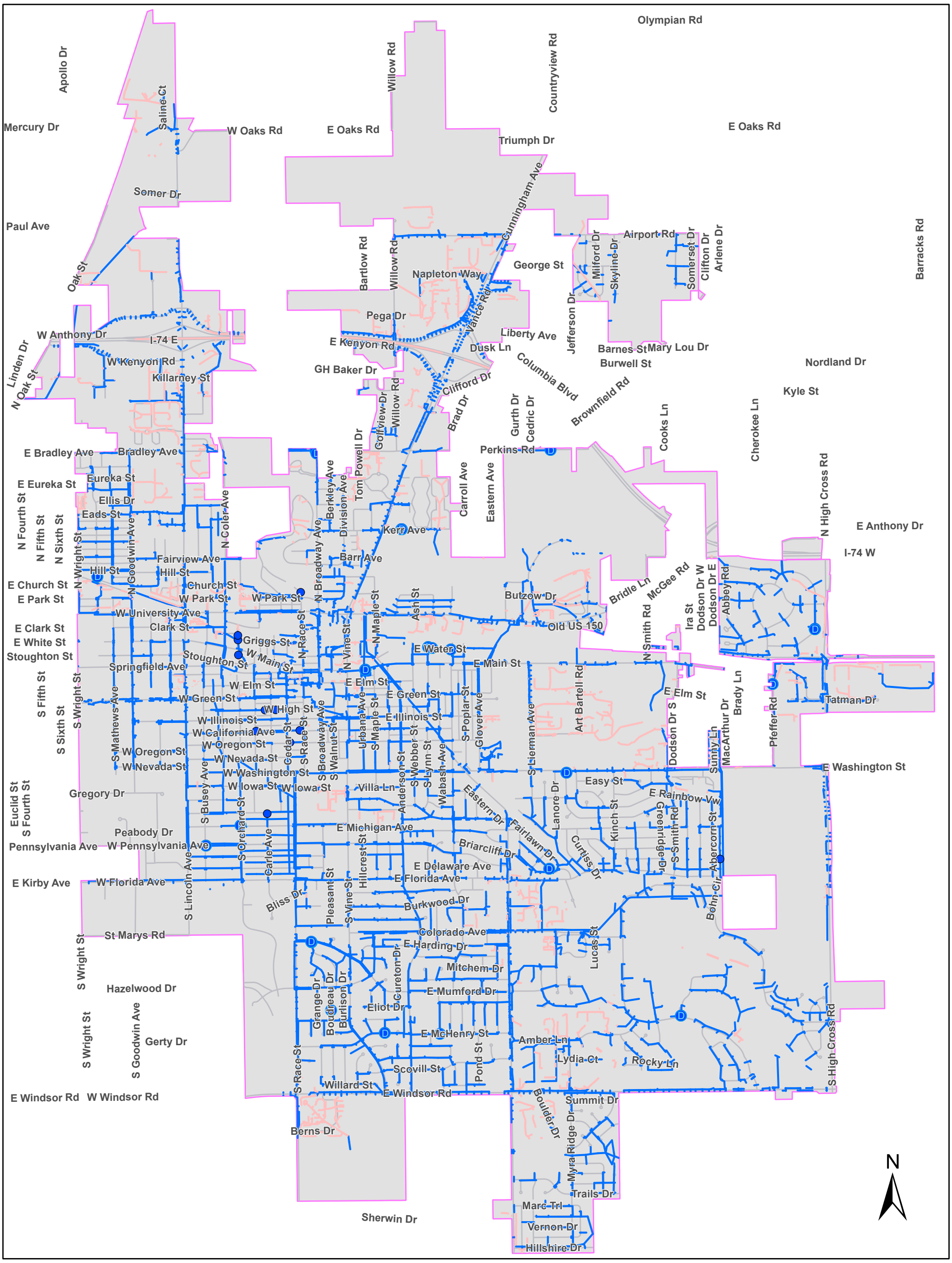
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Feet

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FIGURE 1
2024 SANITARY SEWER REPAIR LOCATIONS



Legend

- Storm Manhole & Inlet Repairs
- Storm Sewer Repair
- Storm Sewers
- Ownership
- City of Urbana
- Private
- Streets
- Urbana City limits

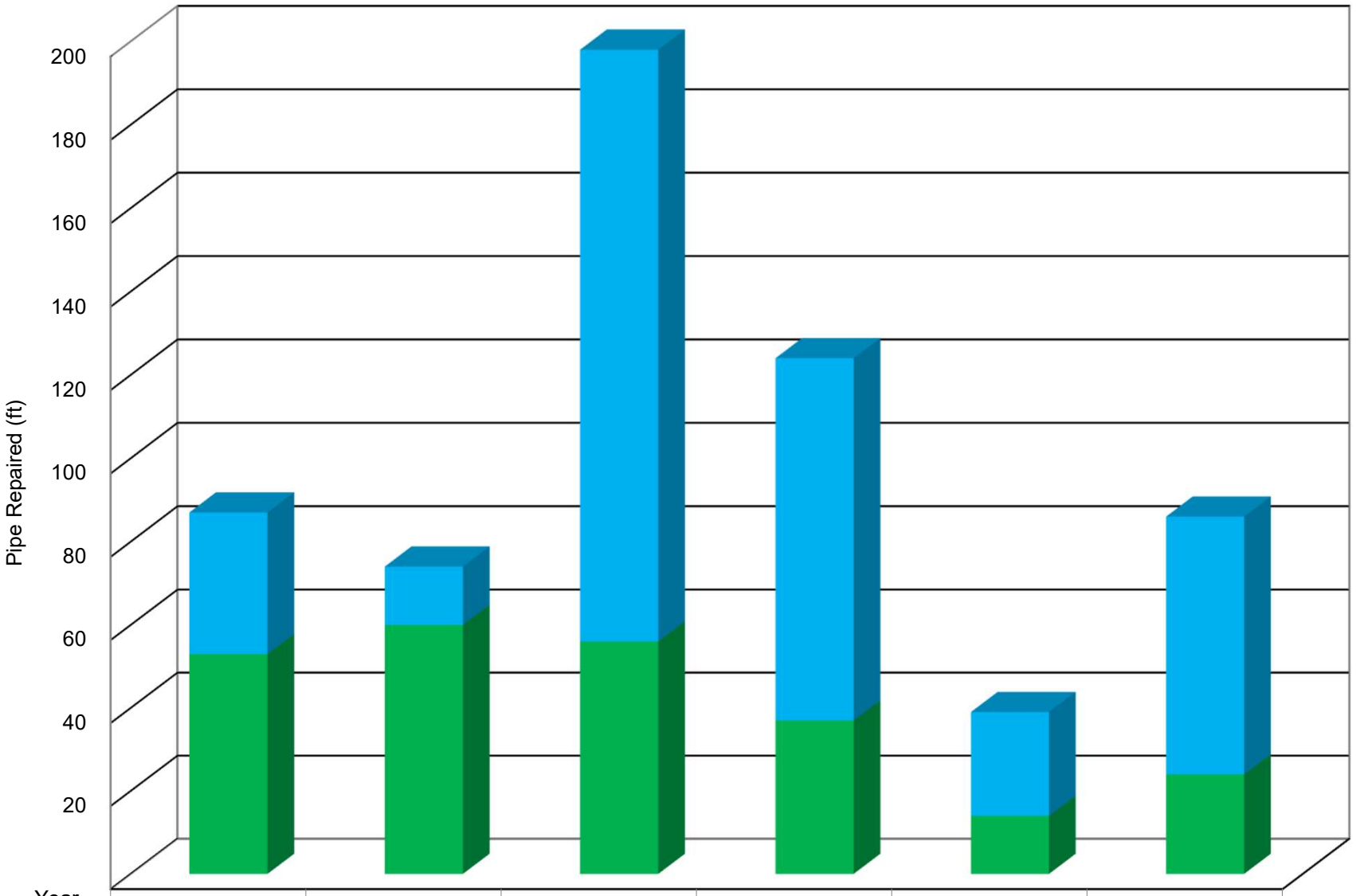
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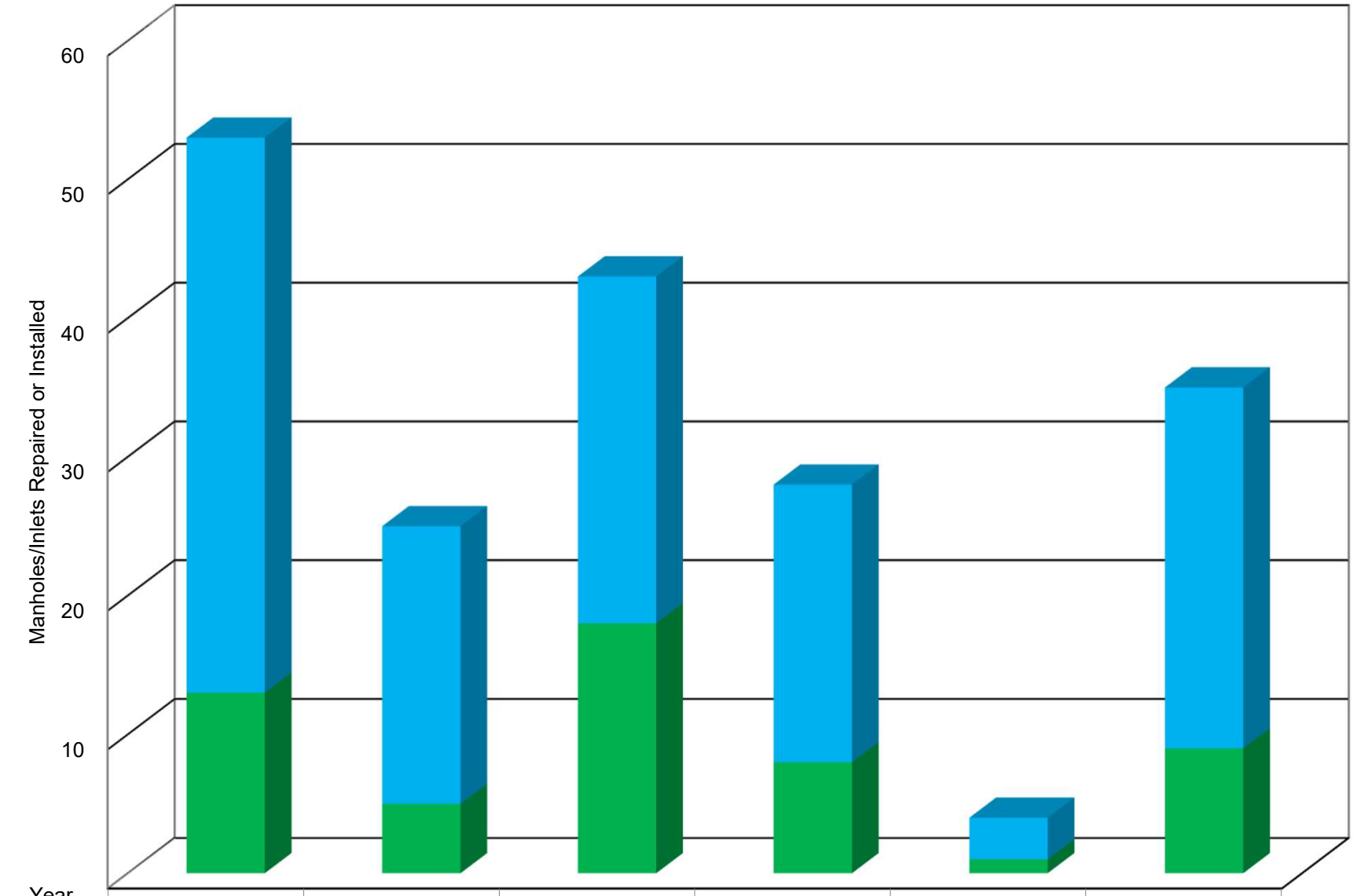
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FIGURE 2
2024 STORM SEWER REPAIR LOCATIONS



Year	2019	2020	2021	2022	2023	2024
Storm	34	14	142	87	25	62
Sanitary	53	60	56	37	14	24

Figure 3
Sanitary and Storm Sewer Pipe Repair History



Year	2019	2020	2021	2022	2023	2024
Storm	40	20	25	20	3	26
Sanitary	13	5	18	8	1	9

Figure 4
Sanitary and Storm Sewer Manhole/Inlet Repair and Installation History

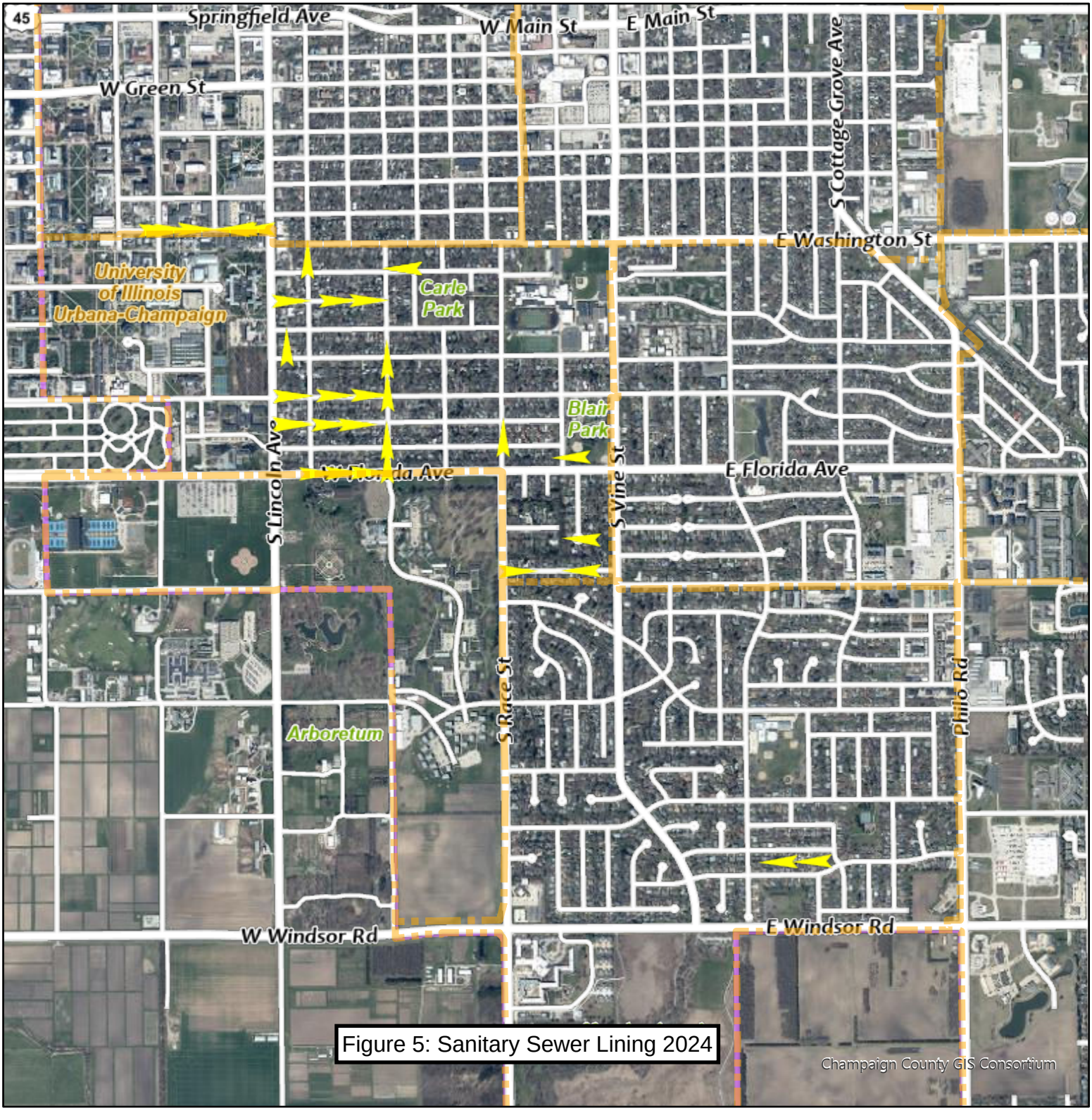


Figure 5: Sanitary Sewer Lining 2024

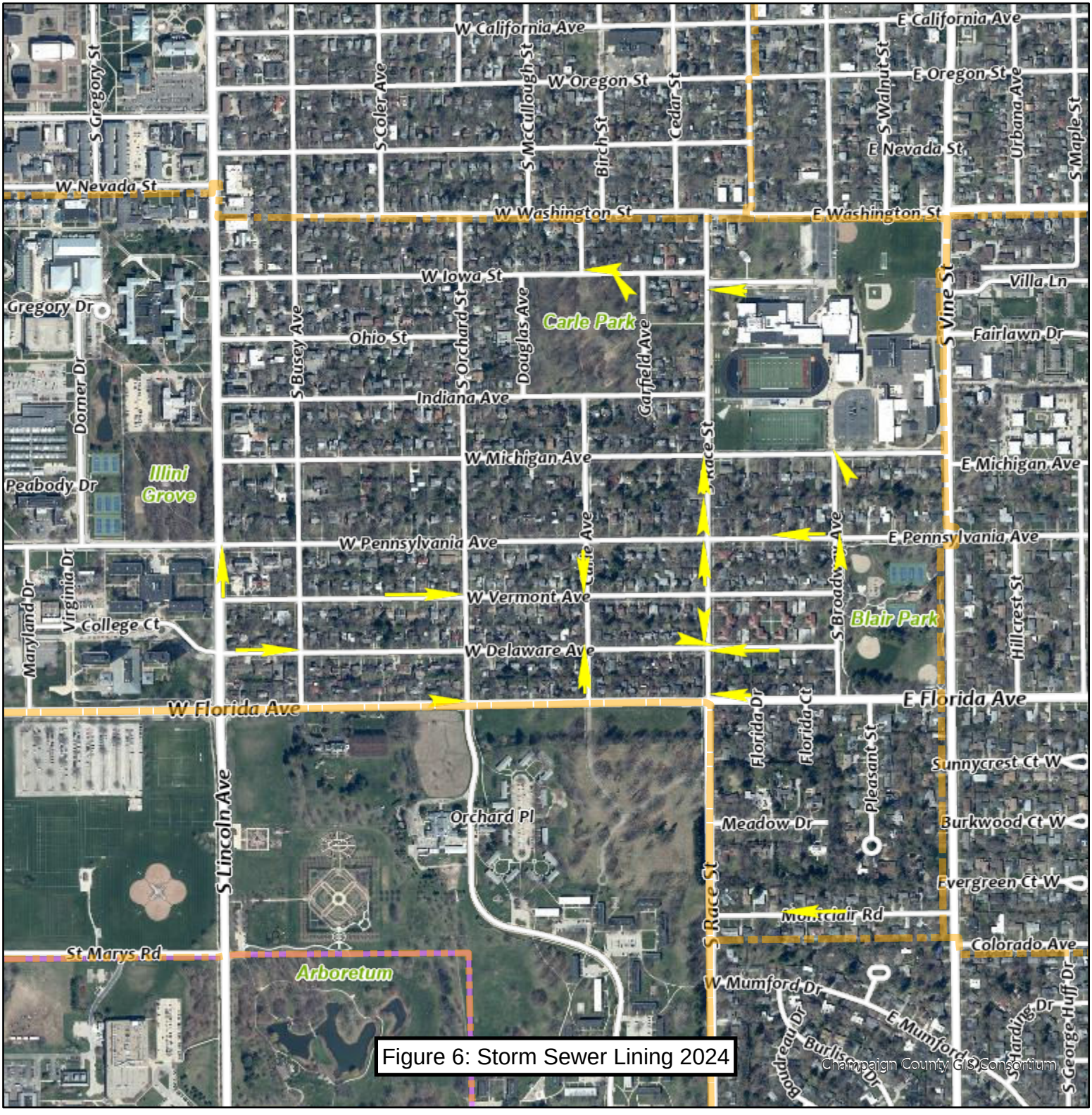


Figure 6: Storm Sewer Lining 2024

Legend

Sanitary Lines Grease Treated

Grease Treated

- YES
- NO
- Urbana City Limits
- CCGISV.CCGIS.StreetCL

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FIGURE 7
GREASE TREATMENT MAP

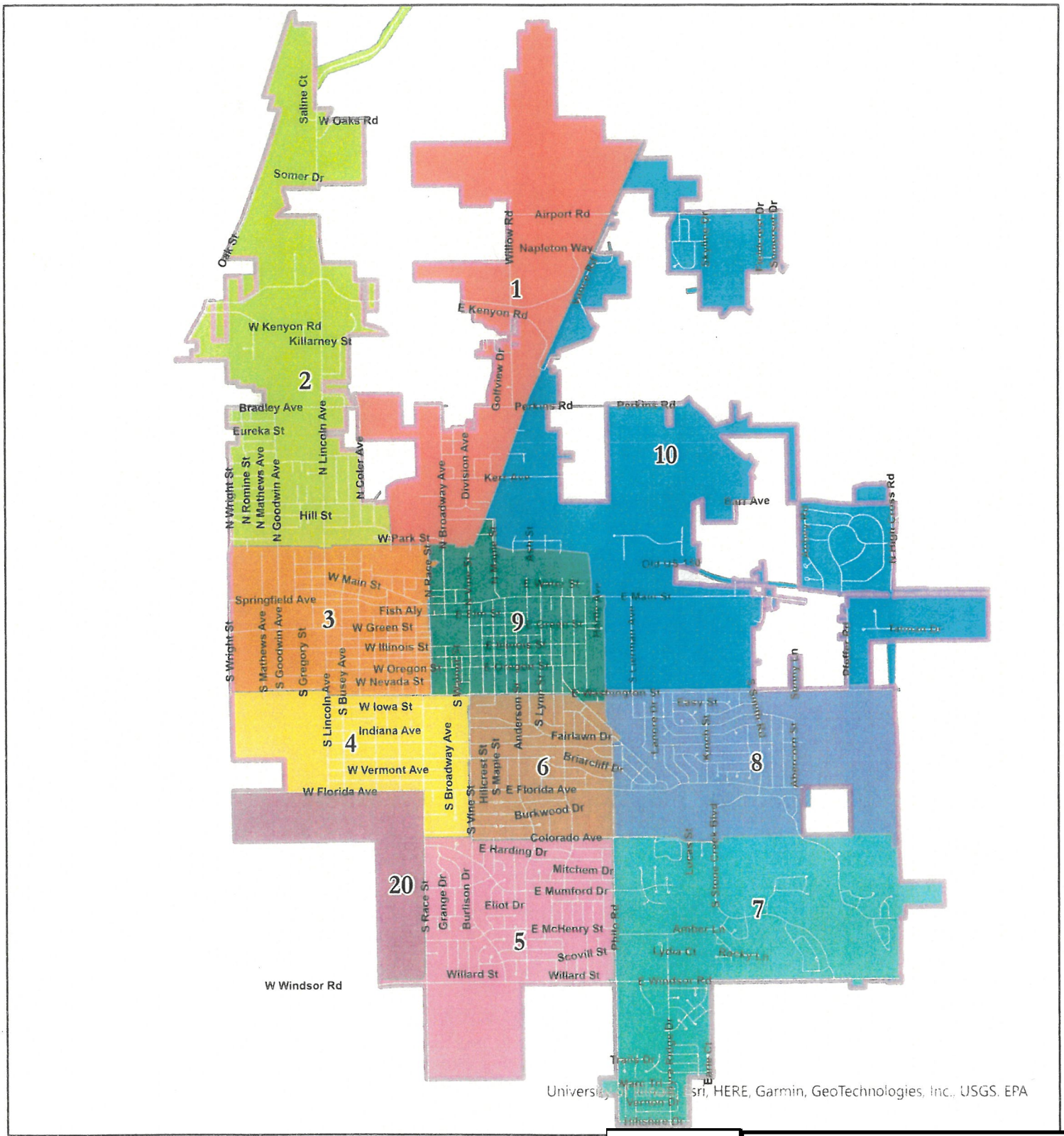
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Sewer Maintenance Zones for Lucity

a.k.a. 'Alternate Zones'

Date created: 4/12/23
Created by: Urbana Public Works, (217) 384 - 2342
Data sources: CCGIS Consortium, Urbana Public Works

Purpose: General reference for staff



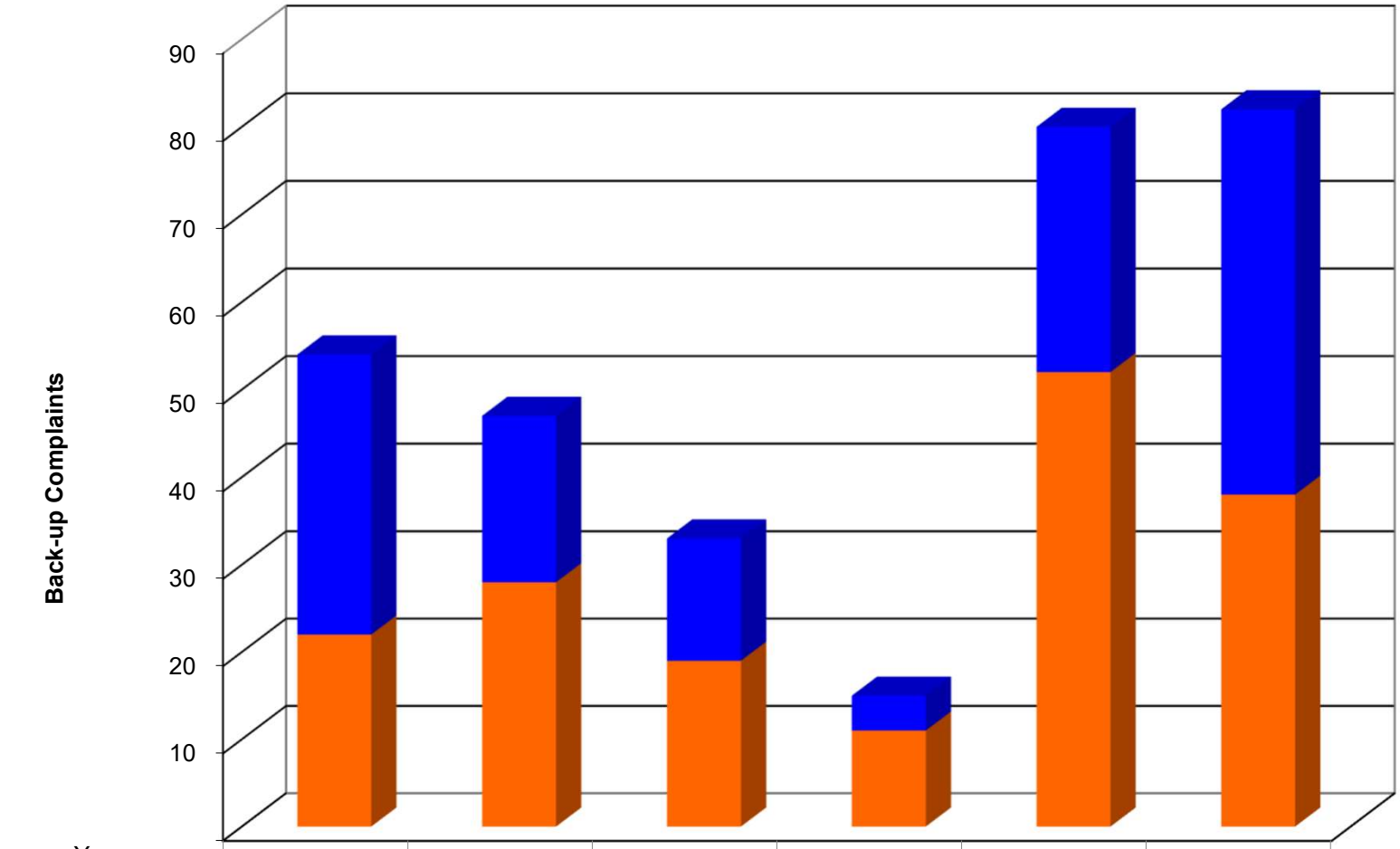
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FIGURE 8
SEWER MAINTENANCE ZONES MAP



Year	2019	2020	2021	2022	2023	2024
Private Back-Ups	32	19	14	4	28	44
Public Back-ups	22	28	19	11	52	38

Figure 9
Dry Weather Sanitary Sewer Back-Up Complaint History

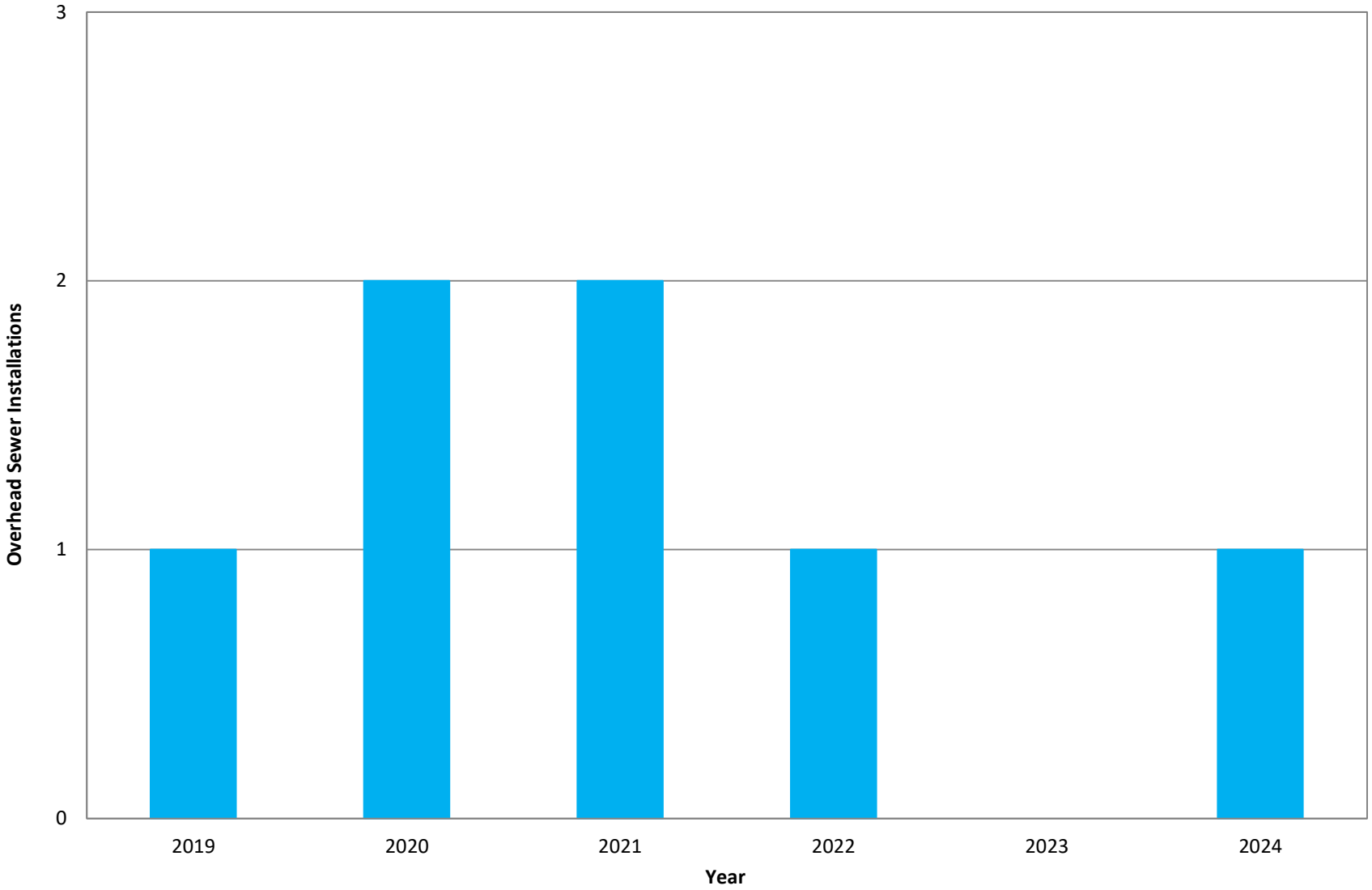


Figure 10
Overhead Sanitary Sewer Installation History

#	Address	Date	Reimbursement	Description
1	501 East California Avenue	1/3/2024	$3,805.56	Collapsed Sewer Lateral Pipe
2	803 South Cedar Street	1/16/2024	$3,750.00	Install sewer lateral to new sanitary sewer
3	806 West Delaware Avenue	1/30/2024	$6,083.33	Collapsed Sewer Lateral Pipe
4	301 West Washington Street	2/21/2024	$6,516.67	Severe Root Intrusion
5	1605 South Maple Street	4/15/2024	$3,250.00	Collapsed Sewer Lateral Pipe
6	204 East George Huff Drive	4/22/2024	$4,722.22	Severe Root Intrusion & Collapsed Sewer Lateral Pipe
7	307 West Delaware Avenue	4/29/2024	$3,177.75	Severe Root Intrusion
8	507 South Anderson Street	5/21/2024	$6,855.56	Collapsed Sewer Lateral Pipe
9	109 South Cottage Grove	6/14/2024	$5,802.78	Collapsed Sewer Lateral Pipe
10	206 South Cottage Grove	6/14/2024	$8,111.11	Collapsed Sewer Lateral Pipe
11	703 South Coler Avenue	6/26/2024	$5,750.00	Collapsed Sewer Lateral Pipe
12	711 West Delaware Avenue	8/30/2024	$4,750.00	Severe Root Intrusion & Collapsed Sewer Lateral Pipe
13	801 East Washington Street	10/28/2024	$5,247.22	Collapsed Sewer Lateral Pipe
14	2008 Cureton Drive	12/3/2024	$5,108.33	Collapsed Sewer Lateral Pipe
15	805 South Coler Drive	12/3/2024	$1,750.00	Severe Root Intrusion
16	103 West Michigan Avenue	10/1/2024	$3,430.00	Collapsed Sewer Lateral Pipe (Lining)
Total			$78,110.53	

FIGURE 11
2024 SEWER LATERAL LINING & PAVEMENT REIMBURSEMENT PROGRAM PARTICIPATION

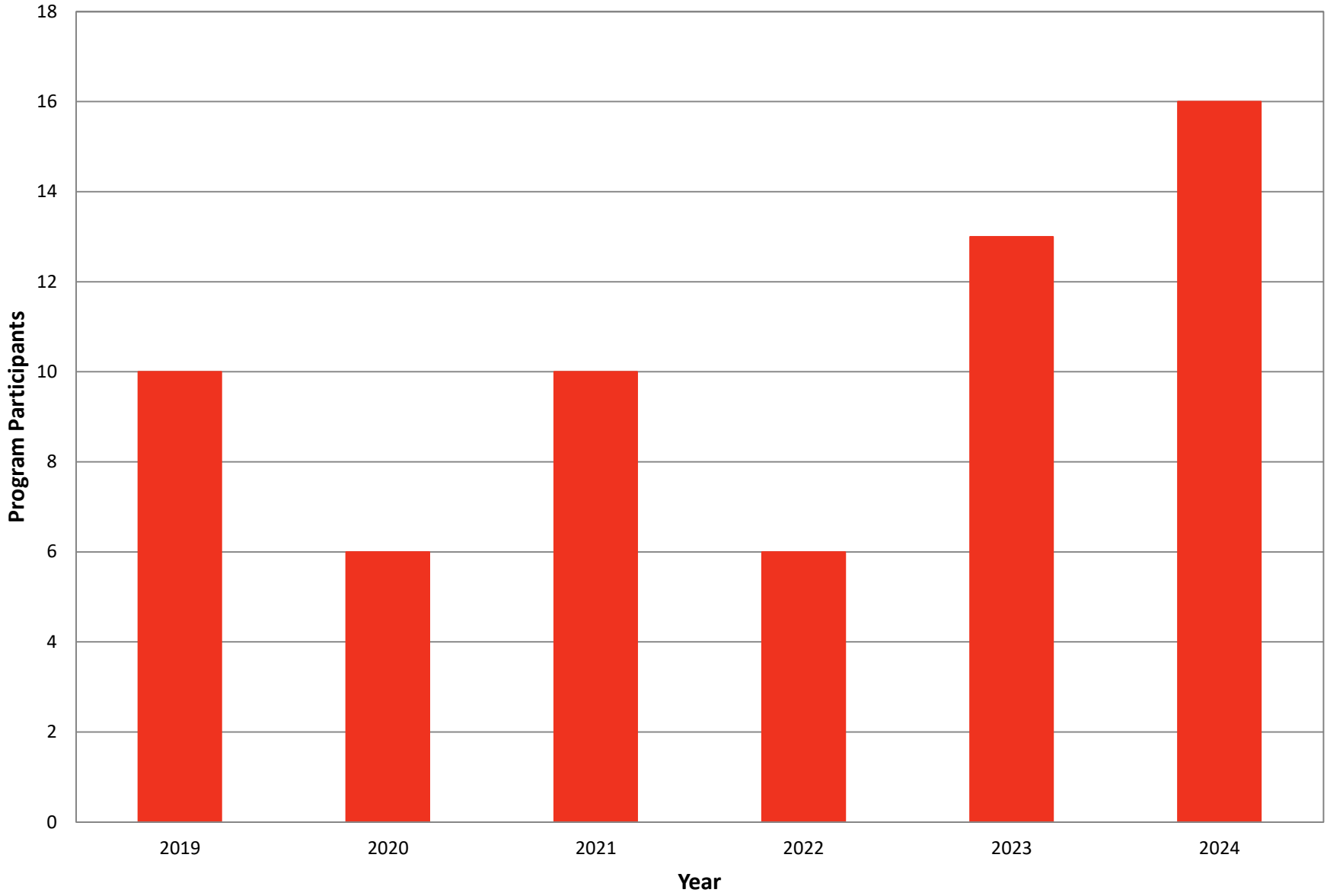


Figure 12
Sewer Lateral Lining and Pavement Reimbursement Program