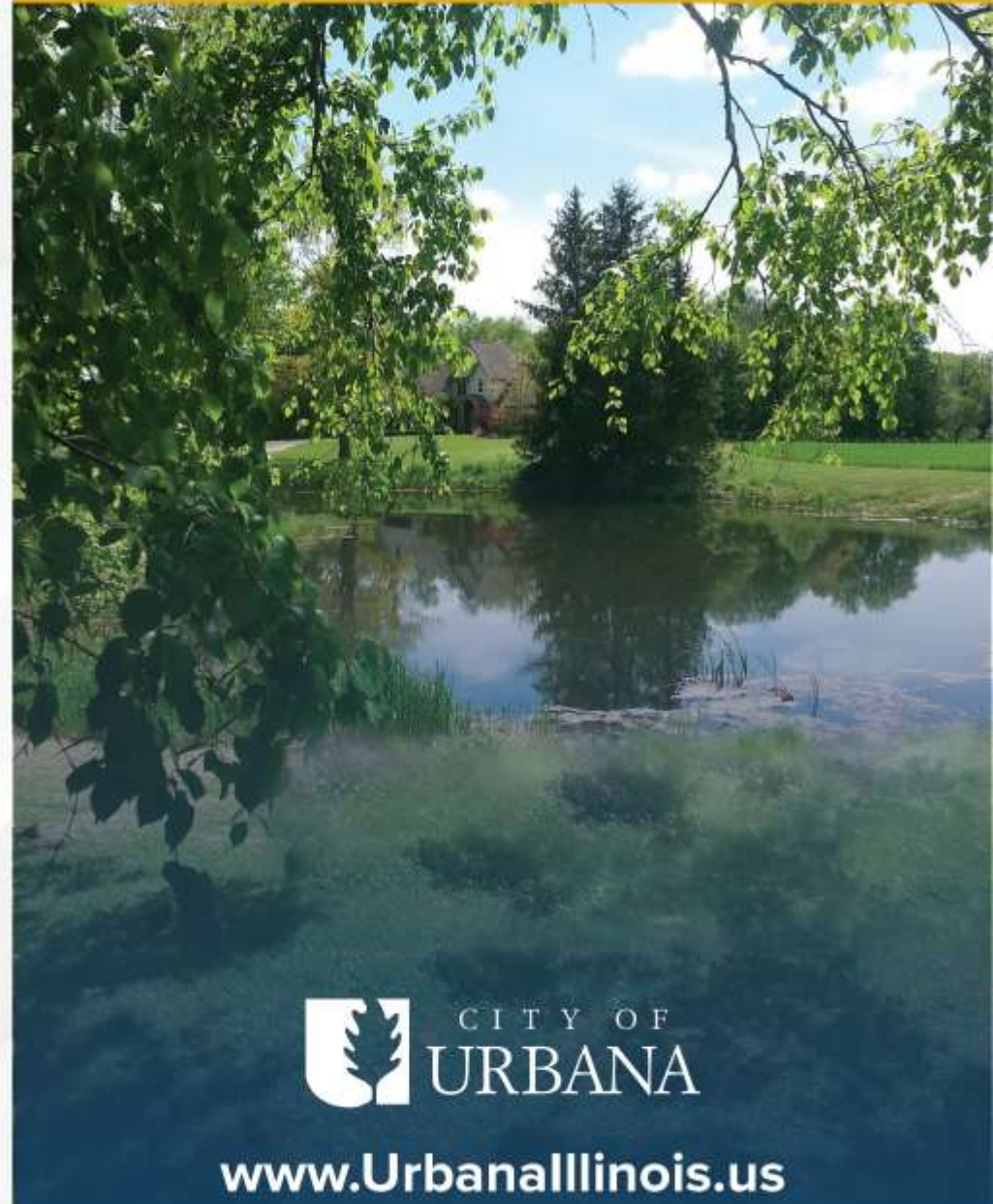


Public Meeting

May 11, 2023



Speakers & Panelists



Carmen Franks
Assistant City Engineer
City of Urbana



Tim Cowan
Public Works Director
City of Urbana



Tim Sumner
Lead Consultant
CMT



Eric Hansen
Lead Consultant
CMT



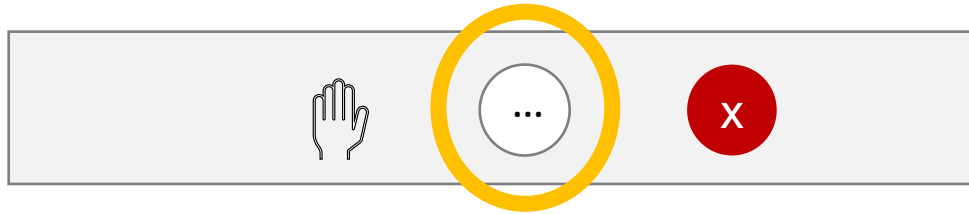
Kristina Kuehling
Public Involvement Consultant
Images, Inc.

Purpose of Today's Meeting

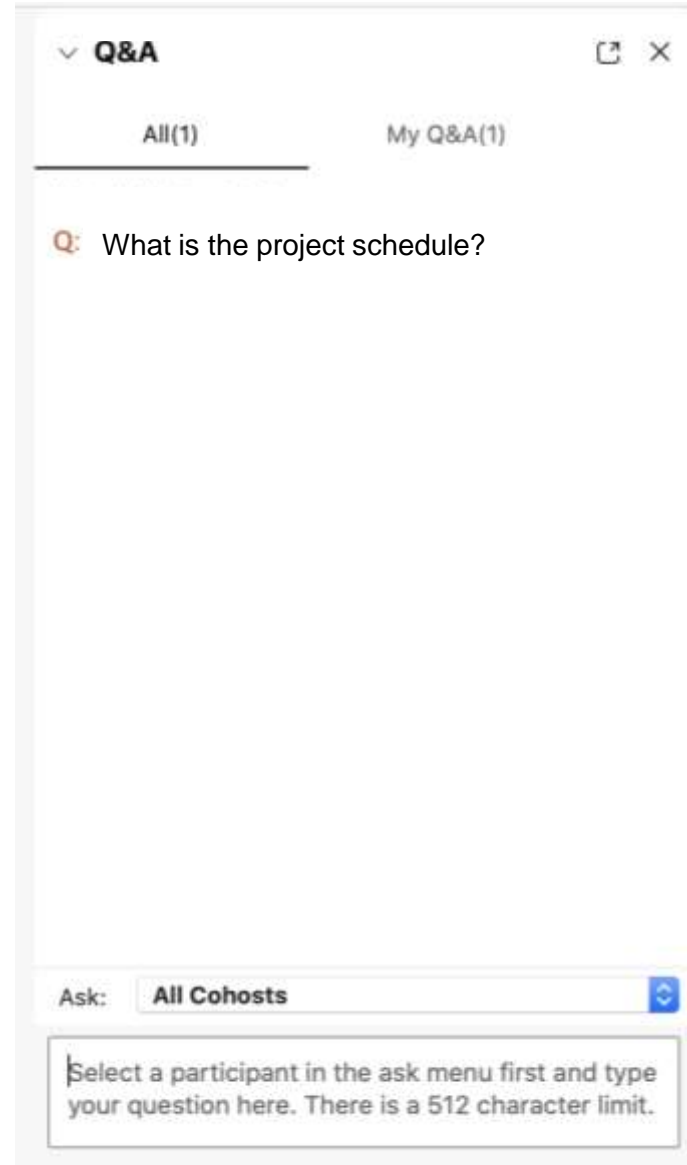
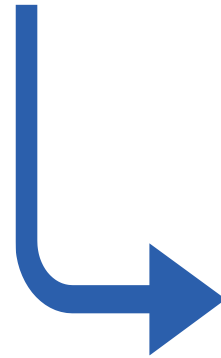
- ✓ Program Overview
- ✓ Data Analysis & Findings
- ✓ Program Solutions
- ✓ Preliminary Program Costs
- ✓ Next Steps
- ✓ Questions and Comments

Comments received by May 25, 2023 will become part of the meeting record.

Q&A *How to submit a question or comment*



Click on the button with three dots to expand options. Select “Q&A” and type a question or comment.



Q&A session
will be held at the end
of the presentation.



Project Team





Stormwater Asset Management Program Overview

Project History



Stormwater Program Overview

Municipal Separate Storm Sewer System (MS4) Program

- IEPA permit for water quality
- Revolves around 6 Minimum Control Measures (MCMs)
 1. Public Education and Involvement
 2. Public Participation
 3. Illicit Discharge Detection and Elimination
 4. Construction Site Runoff
 5. Post Construction Runoff Control
 6. Pollution Prevention and Good Housekeeping



Local MS4 Communities/Entities



**City of
Urbana**



**City of
Champaign**



**Champaign
County**



**Village of
Savoy**



**University
of Illinois**

Why are we undertaking this study?



Document the storm drainage system needs of the Urbana community



Provide City staff with a strategy to manage the system of pipes, structures, basins and streams



Identify opportunities to implement green stormwater infrastructure



Quantify the future costs to manage the system

What can we expect from an
Asset Management Plan?

Establish
infrastructure
investment
priorities

Identify
maintenance
staff and
equipment
needs

Identify
practices that
reduce runoff
volumes &
pollutants

Create
long-term
rehabilitation
& replacement
plan of system

Quantify
the system
annual cost
of ownership

Schedule and Process

- Provide a Planning Framework
- Annual Capital and Maintenance Plans
- Level of Service (LOS)
- Total Cost of Ownership (TCO)



Stakeholder Engagement Activities



Technical Advisory
Committee



Social Media



City of Urbana
Website



City Newsletters



Council Meetings





Data Gathering

- What do we have?
- What's it worth?
- What condition is it in?

What do we have?

145 miles of pipe

8,300 structures

Storm sewers, inlets, manholes

Vine Street pumping station

Green infrastructure (2)

Stormwater management ponds (4)

Storm screen (1)

Streams & ditches (4)

GIS



Reports & Plans



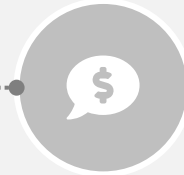
Institutional Knowledge



Stakeholder Input



Cost of Service Elements



Information Gap Analysis



Schedule Factor



Field Investigations





Determining Your Assets' Worth

- Estimate **value of replacing entire system** in today's dollars
- Use **unit price summaries** for replacing sewers
- Includes construction, engineering and contingencies
- 2022 Replacement Cost is:

\$344 million dollars



Existing Conditions

Scalable Application

Without detailed age records, our team uses population growth from U.S. Census Bureau per decade

- ✓ *Assumption: assets built to keep pace with population growth*
- ✓ *Total length of sewer allocated by decade based on % of population growth*



Data Records

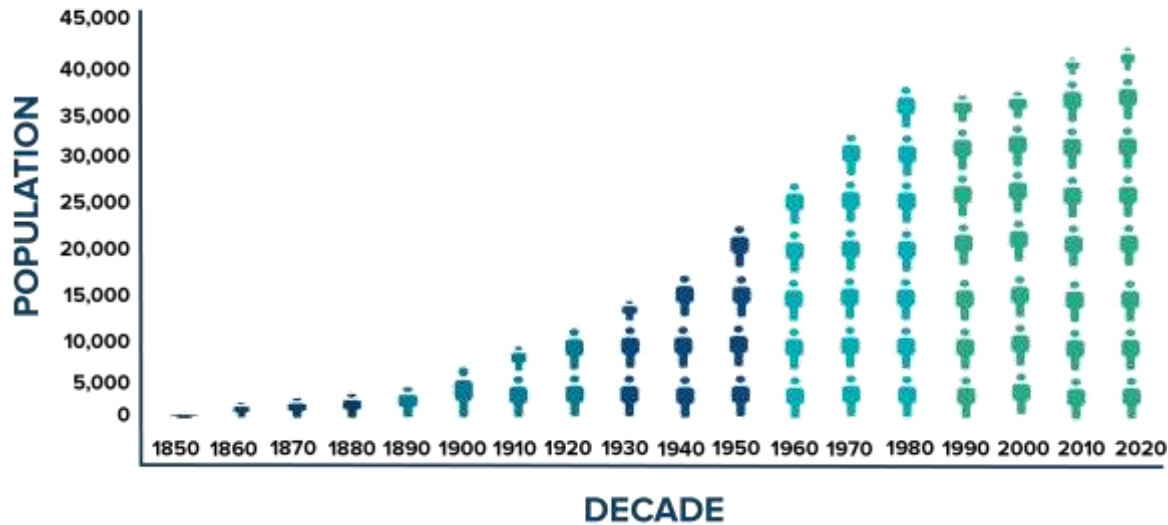
- ✓ 1980 report: **73 miles of pipe**
- ✓ 2019 GIS record: **145 miles of pipe**

Urbana Storm Sewer System Age

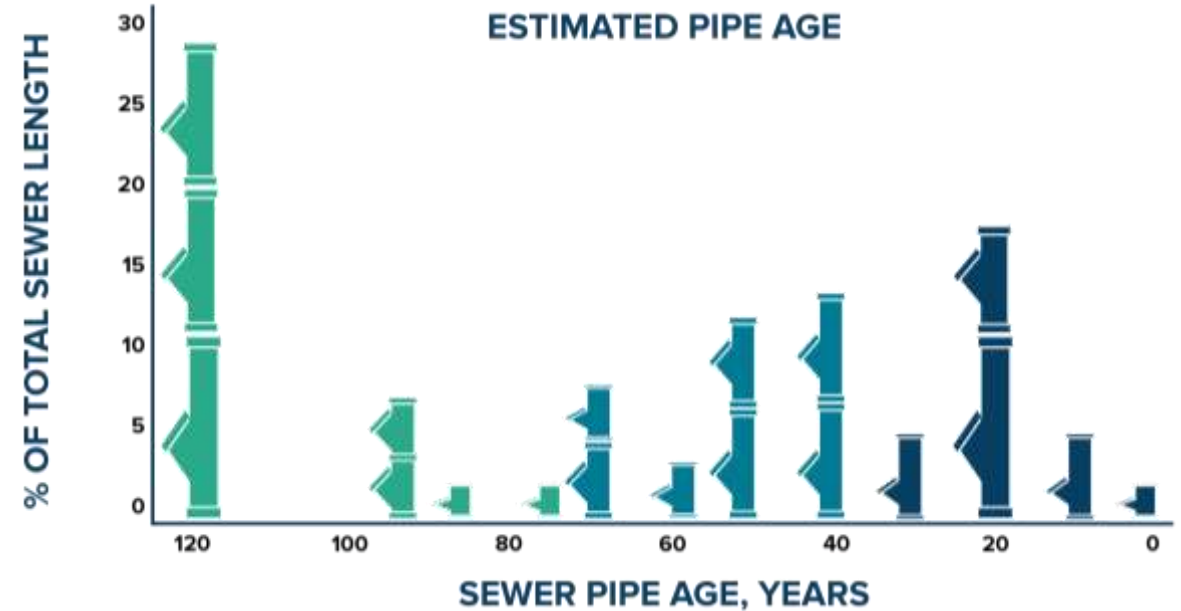
DATA
GATHERING



POPULATION GROWTH PER DECADE



ESTIMATED PIPE AGE



Urbana population growth from U.S. Census Bureau per decade



Urbana Storm Sewer System Age



Level of Service

- What is an acceptable level of service?
- How much should we be investing?

Level of Service (LOS)

WHAT IS THE APPROPRIATE LOS FOR URBANA?



Current
Program



Future
NPDES Permit
Requirements



System
Maintenance
& Repair

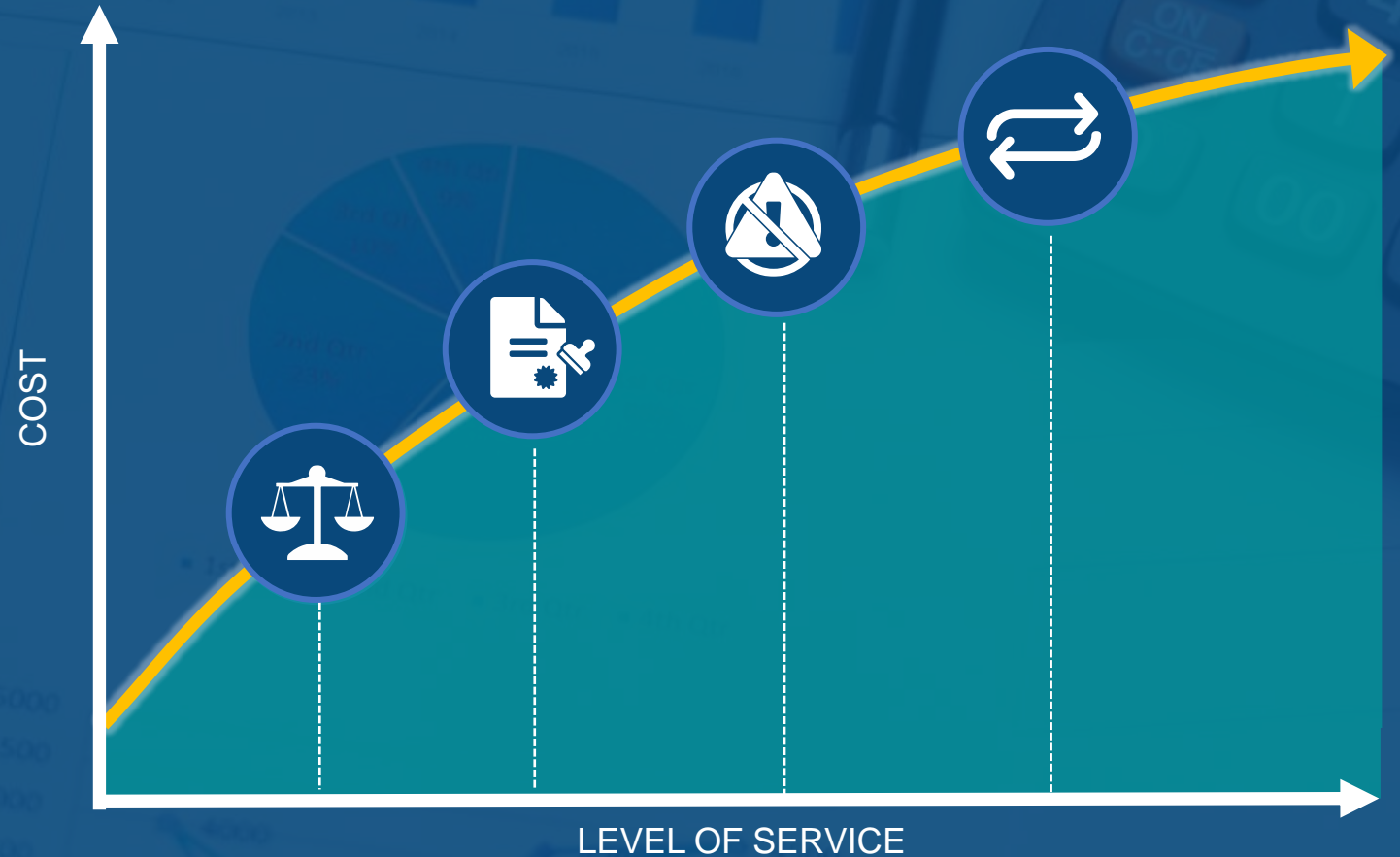


Rehabilitation
& Replacement

Level of Service (LOS)



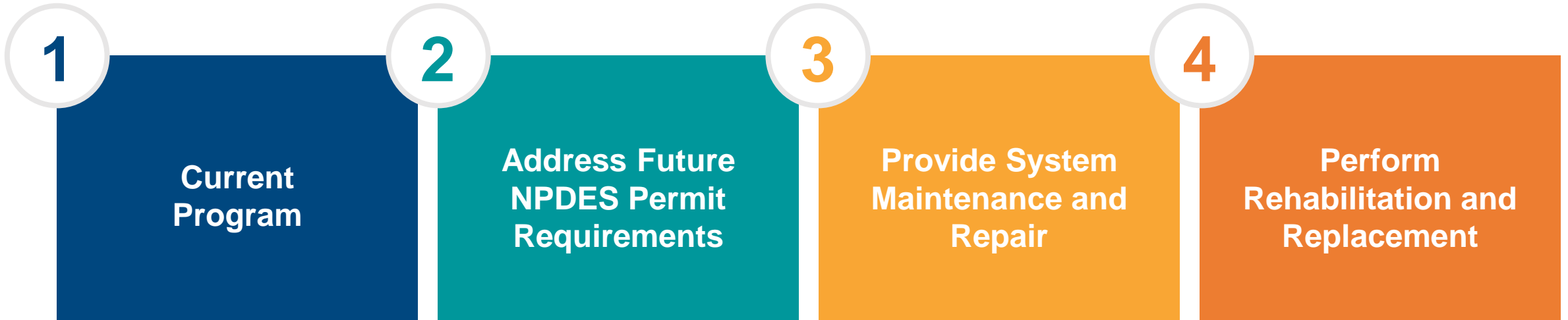
Cost of Operation,
Maintenance,
Repair,
Rehabilitation
& Replacement





Program Solutions

What are the solutions for
improving the stormwater utility?



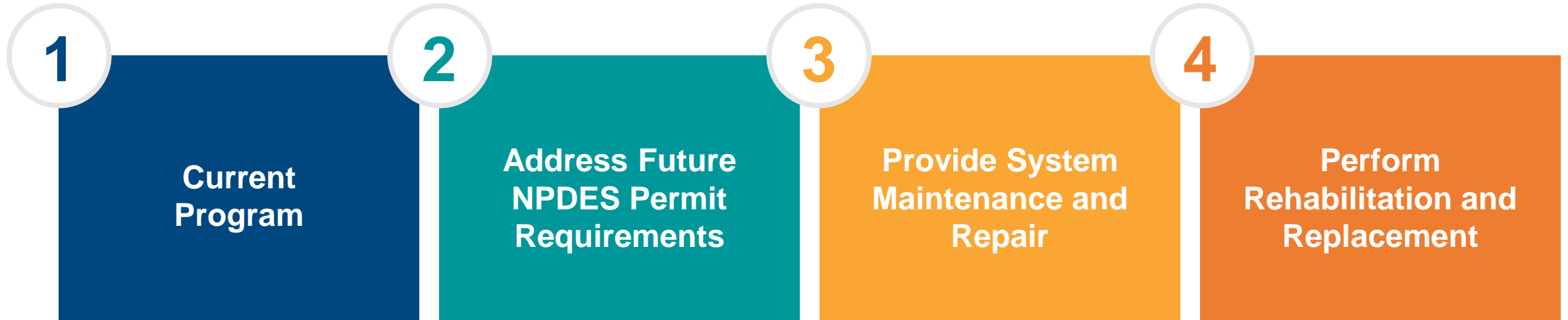
Maintain current stormwater management program activities as identified

PROS:

- Nominal funding of SWU program

CONS:

- City can't adequately invest in SW infrastructure
- City falls further behind in maintenance
- City will still be in reactionary mode



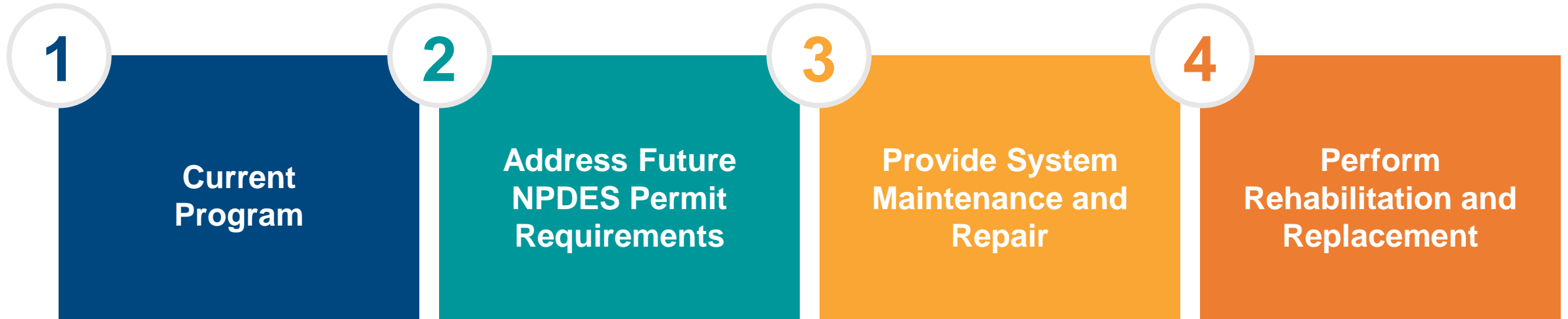
Current Program + additional activities by Urbana PW to comply with forthcoming new MS4 rules (mostly administrative / reporting)

PROS:

- City can address forthcoming increased regulation of stormwater management activities
- City keeps pace with the increased regulatory requirements

CONS:

- Does not provide for additional investment in stormwater infrastructure
- City still in reactionary mode

**Current Program +**

Clean and televise remainder of system ($\approx 400,000$ LF over 5 years) 

Make repairs to critical parts of the system (≈ 36 contracted point repairs/year) to prevent catastrophic failures

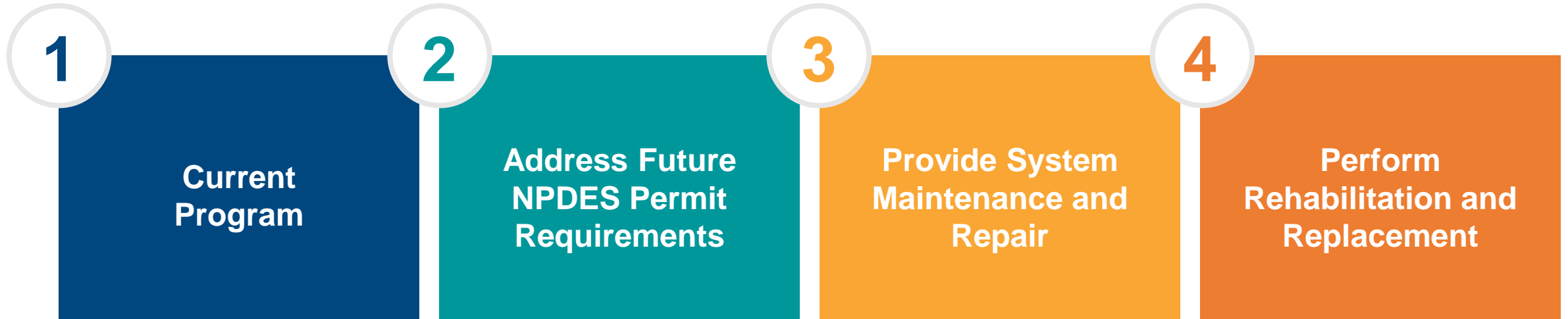
Anticipate higher maintenance costs in the 5-year program (including inflation)

PROS:

- Proactively address breaks/failures in the system
- Increased maintenance costs budget
- Planned maintenance rather than unplanned maintenance

CONS:

- Only addressing short-term needs
- Little consideration given to addressing life cycle infrastructure costs



Current Program + fund a mixture of rehabilitation and replacement of pipes and structures based on life cycle costs of the system targeting:



50 years for rehabilitation (≈ 15,000 feet of sewer & 84 structures)

125 years for replacement (≈ 6,000 feet of sewer & associated structures)

PROS:

- Proactively rehabilitating and replacing sewer system components in advance of failure
- Work based on condition assessment

CONS:

- May not reflect actual sewer system condition
- Costs may change due to sewer condition
- Most expensive program



Evaluate Program Costs

- What are you currently spending?
- What are the needs & priorities?
- When/where do we need to act?



Stormwater Program Cost & Funding

Stormwater Utility Fund

Result of Stormwater Utility Feasibility Report (2011)

Rate has not increased since 2020

Started in 2013 at \$4.94 /ERU/month
2022 SWU Rate: \$5.60 / ERU /month

- 1 ERU per single family home parcel
- ERU = Equivalent Residential
Unit = 3100 ft² impervious area

Fund broken down into 7 categories:

1. Administration and Finance
2. Planning and Engineering
3. Operation and Maintenance
4. NPDES MS4 Permit Compliance
5. Water Quality
6. Incentives and Credits
7. Capital Construction

Residential vs. Non-Residential ERUs



Single Family Residential (1 ERU) =
8,027 parcels

Non-Residential* (> 1 ERU) = 979
Non-residential ERU summary:

Low = 1.0 ERU
High = 589 ERU
Avg. = 66 ERU



Non-residential excludes special users, such as UIUC, Champaign County, USD 116, Park District and the City of Urbana

* Non-Residential includes commercial properties, apartment complexes, multi-family homes, etc.

Current Program

Administration & Finance

Billing & Customer Support
Billing Costs
Stormwater Utility Public Awareness
Stormwater Utility Implementation

Planning & Engineering

Civil Engineer
Engineering Technician
Engineering Technician
Training for GIS, EC, & Stormwater
GIS Professional Services

Operations & Maintenance

Operations staff, tools, insurance, & equip
Street Sweeping
Storm Sewer Cleaning & Televising
Stream & Rain Gauge Monitoring
Boneyard Creek Improved Area Maintenance
Ditch grading & mowing
Mosquito surveillance/abatement program
Regional Detention Pond Maintenance
Vine Street Pump Station O&M
Bridge Maintenance Projects (33% coverage)
St. Joseph Drainage District Payment

NPDES MS4 Compliance

NPDES Permit Fee
Public Education/Involvement Program
Eng. Tech Permit Compliance Activities

Water Quality

Rain Barrel Reimbursement Program
Rain Garden Reimbursement Program

Incentives or Credits

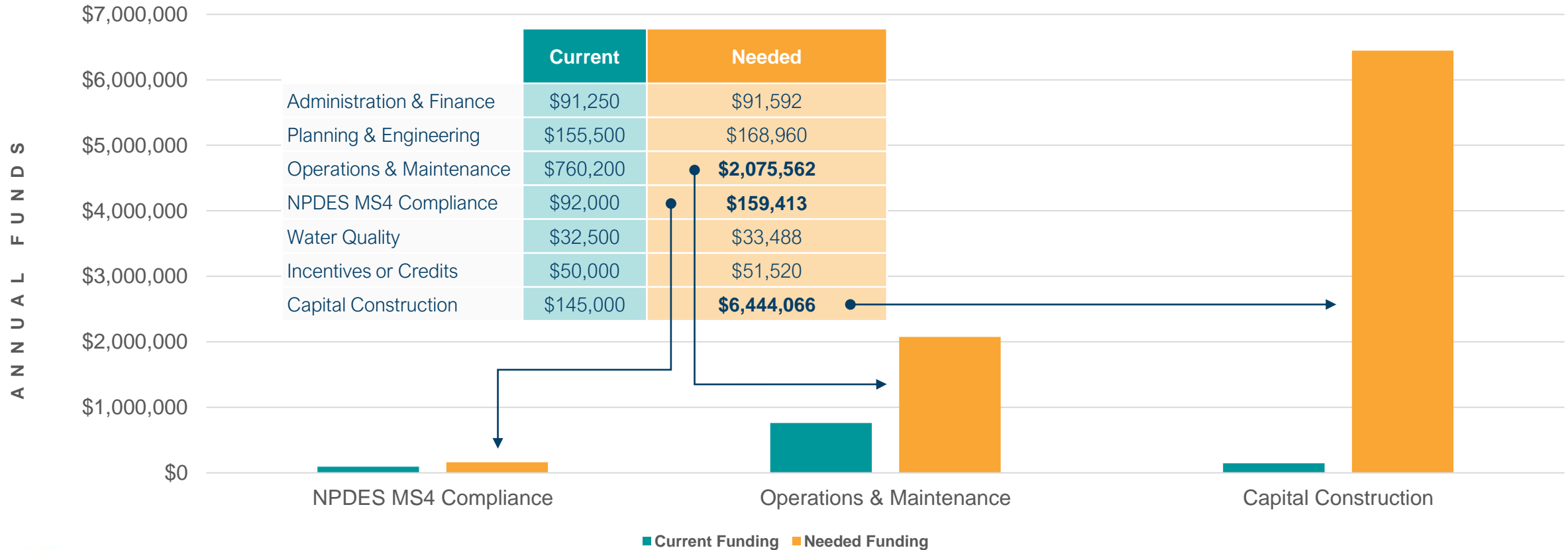
Non-residential Incentive or Credit Program

Capital Construction

Capital Improvement Projects (Pay as you go)
Sump Pump Discharge Abatement Program

FUNDING Current vs. Needed

FUNDING FOR STORMWATER ASSET MANAGEMENT



Preliminary Stormwater Utility Fee

EVALUATE
PROGRAM
COSTS



Options	Description	5-Year Annual Average Program Cost	Preliminary SWU Fee Increase: \$/Month **	Preliminary SWU Rate: \$/Month
1	Current Program	\$1,768,682	\$0.00	\$5.60**
2	Future NPDES Requirements *	\$1,825,138	\$0.17	\$5.77
3	System Maintenance and Repair *	\$2,534,390	\$2.35	\$7.95
4	Rehabilitation and Replacement *	\$8,047,743	\$19.27	\$24.87
5	Do Everything	\$8,869,372	\$21.62	\$27.22

* Includes Current Program

** Rate will increase to \$5.82 starting July 1, 2023

Select Illinois SWU Rate Comparison

City	Population ⁽¹⁾	Fee Type	Fee Criteria ⁽²⁾	Monthly Rate	Rate Reduction Program for Disadvantaged
Urbana	38,681	ERU	3,100 SF	\$5.60	No
Bloomington	78,283	Tier 1	≤ 7,000 SF (2 IAU) ⁽²⁾	\$4.38	No
Bloomington	78,283	Tier 2	7,000 – 12,000 SF (3 IAU)	\$6.57	No
Bloomington	78,283	Tier 3	> 12,000 SF (5 IAU)	\$10.95	No
Champaign	89,114	Tier 1	500 – 6,000 SF	\$5.24	No
Champaign	89,114	Tier 2	6,001 – 8,000 SF	\$11.18	No
Champaign	89,114	Tier 3	>8,000 SF	\$14.46	No
Decatur	69,646	ERU	4,500 SF	\$3.67	No

⁽¹⁾ Population as of 2021

⁽²⁾ IAU = Impervious Area Unit

Select Illinois SWU Rate Comparison

City	Population ⁽¹⁾	Fee Type	Fee Criteria ⁽²⁾	Monthly Rate	Rate Reduction Program for Disadvantaged
East Moline	21,136	Tier 1	< ¼ Acre (1 ERU)	\$2.61	No
East Moline	21,136	Tier 2	≥ ¼ to ½ Acre (1,75 ERU)	\$4.57	No
East Moline	21,136	Tier 3	≥ ½ to 2 Acre (2.5 ERU)	\$6.53	No
Peoria	111,666	Billing Unit System	Per 1,000 SF	\$5.00	No
Moline	42,418	Tier 1	< ¼ Acre	\$7.59	No
Moline	42,418	Tier 2	≥ ¼ to ½ Acre	\$14.61	No
Moline	42,418	Tier 3	≥ ½ to 2 Acre	\$29.99	No
Morton	17,133	ERU	3,300 SF	\$5.33	No
Normal	53,594	ERU	3,200 SF	\$4.60	No
Rantoul	12,119	Fixed Rate		\$3.43	Seniors & Disabled (320 ILCS 25/1 et seq)

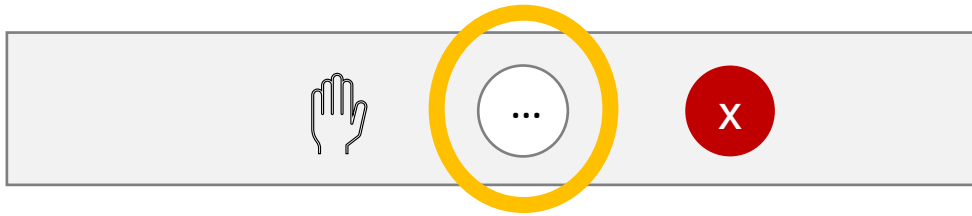
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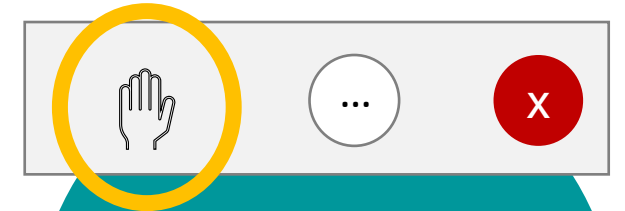
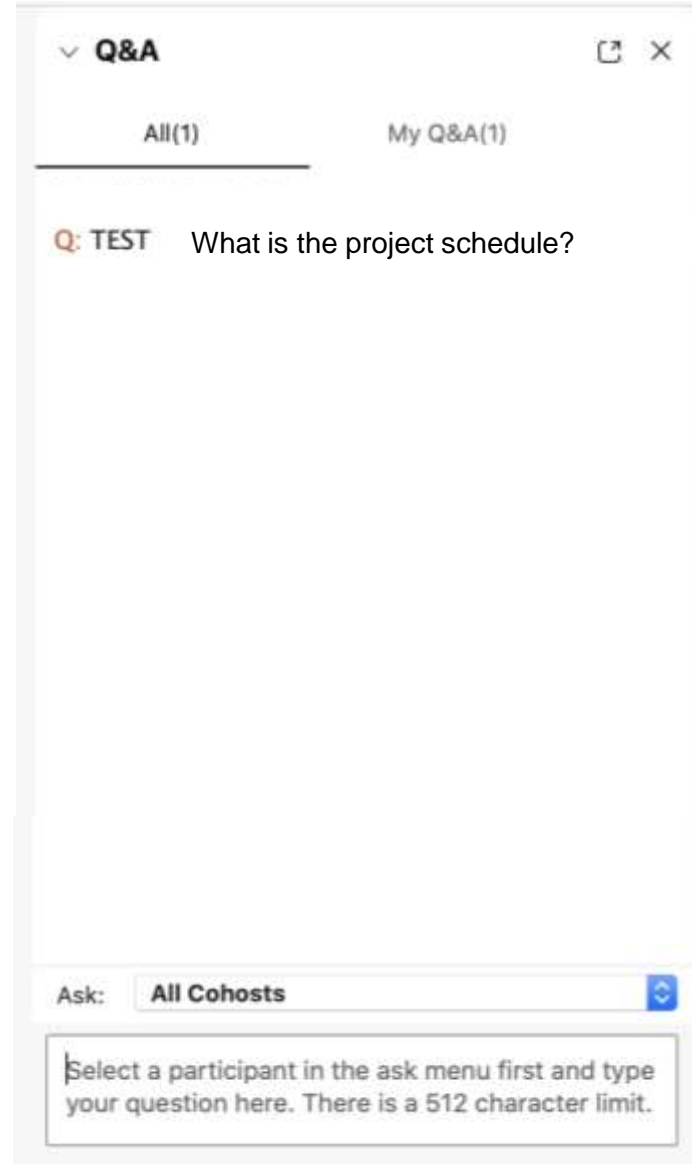
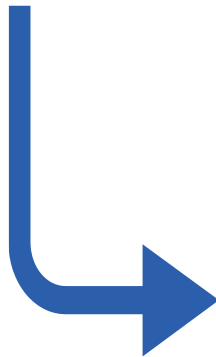


Question & Answer

Q&A *How to submit a question or comment*



Click on the button with three dots to expand options. Select “Q&A” and type a question or comment.



Click on the raise hand feature to notify the team you would like to speak.

Q&A Panelists



Carmen Franks
Assistant City Engineer
City of Urbana



Tim Cowan
Public Works Director
City of Urbana



Tim Sumner
Lead Consultant
CMT



Eric Hansen
Lead Consultant
CMT



Kristina Kuehling
Public Involvement Consultant
Images, Inc.



Thank you for your feedback!

COMMENT FORM

Urbanallinois.us/swamp



*Comments received by
May 25, 2023 will become
part of the meeting record.*

Next Steps



Refine
plan



City Council
meetings

Summer 2023



Continue
stakeholder
outreach



Finalize
plan

Thank you!