CITY OF COLUMBUS, DEPARTMENT OF PUBLIC UTILITIES

- Population of 892,533 within city limits; ~1.3M in greater metro area
- Provide water, sewer, and stormwater service and support to Columbus residents and contracted suburban communities

**2018 Accounts Billed**

<table>
<thead>
<tr>
<th>Service</th>
<th>Water</th>
<th>Sewer</th>
<th>Stormwater</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>278,139</td>
<td>274,872</td>
<td>197,831</td>
</tr>
</tbody>
</table>

**4,519 miles of city-owned sewers:**

- 2,657 - Sanitary
- 1,759 - Storm
- 157 - Combined

44 miles of county-owned sewers maintained under contract
COLUMBUS’ WET WEATHER TIMELINE

- Request to Explore Integrated Planning: July 2012
- OEPA Approval of Request: January 2013
- Blueprint Columbus Report Submitted: September 2015
- Integrated Plan Approved: December 2015
- Columbus Report Submitted: December 2016
- Blueprint Columbus Construction Begins: May 2017
- CEPT Construction Begins: July 2017
- OARS Online: July 2017
THE VALUE OF INTEGRATED PLANNING FOR COLUMBUS

• Encouraged holistic thinking;
• Integrated stormwater regulatory compliance and sanitary sewer overflow elimination;
• Resulted in a greener, innovative plan that brings infrastructure investments above ground and invests in neighborhoods; and
• Allows for continuous plan improvements to be more engaging, more integrated, and more effective.
Blueprint Columbus: Why?
SANITARY SEWER OVERFLOWS (SSOS): IS THERE A BETTER WAY?

<table>
<thead>
<tr>
<th>Gray (Tunnels)</th>
<th>Green (Blueprint)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addresses the symptom</td>
<td>Addresses the problem</td>
</tr>
<tr>
<td>Temporary local jobs</td>
<td>Permanent local jobs</td>
</tr>
<tr>
<td>Machines from overseas</td>
<td>Local materials</td>
</tr>
<tr>
<td>Does not address stormwater</td>
<td>Improves stormwater</td>
</tr>
<tr>
<td>Addresses consent order requirements</td>
<td>Addresses consent order requirements</td>
</tr>
<tr>
<td>Out of sight, out of mind</td>
<td>Improves neighborhood infrastructure</td>
</tr>
</tbody>
</table>
THE BLUEPRINT APPROACH

GOAL: Keep rain water out of sanitary sewers

Lateral Lining

Roofwater Redirection

Sump Pumps
Image of Downer’s Grove, IL neighborhood flooding after I/I work
THE BLUEPRINT APPROACH

GOAL: Improve stormwater discharges

Green Infrastructure
TYPES OF GREEN INFRASTRUCTURE
18,404 acres
21 Project Areas
Blueprint Columbus: How
LEGAL AUTHORITY

• Two categories of work:
  – Work in right-of-way
  – Work on private property

• Green Infrastructure
  – Smaller rain gardens are being installed in right-of-way
  – Regional basins are being installed as well
    • On park property maintained by Columbus Rec and Parks
    • On land bank property being transferred to Columbus DPU

• Lateral lining, roof redirection, sump pumps
  – Require work on private property
COLUMBUS CITY COUNCIL FOUND A PUBLIC NUISANCE

• On December 16, 2015 – Ordinance 2015-2905
  – City Council found excessive inflow and infiltration entering the sanitary sewer system was a public health nuisance and created the I/I reduction program.
• Council created the I/I reduction program.
  – Columbus City Code Sections 1145.87-89
Public Nuisance → Designation Order
DESIGNATION FINDINGS AND ORDER

Code Section 1145.87 states in part:

• The director may designate areas within the sanitary sewer system where excessive I/I is causing SSOs and/or WIB events. The areas so designated shall be subject to the I/I reduction program on a schedule to be determined by the director. The director may designate more than one area at a time, and if so, the designation may include a prioritization of the areas for implementation of the I/I reduction program. The prioritization may be made on the basis of the number, frequency and duration of the SSOs and WIB events, the likelihood of human exposure and the priority, if any, assigned by Ohio EPA or other relevant factors.

Right to comment on the designation order and right to appeal (if the person lives in or owns property within a designated area) – Code 1145.94 governs appeal process
Public Nuisance → Designation Order → Implementation
IMPLEMENTATION OF I/I REDUCTION PROGRAM

• After an area is designated DPU has the authority under Code 1145.88 to enter property private and complete the following tasks:
  – Investigate (survey work – dye testing, smoke testing, videography)
  – Take Corrective Measures (lateral lining and roof redirection)
  – Post-Implementation Inspection

• DPU has the authority to enter the property for these purposes and entry is not a trespass under Code 1145.89.
  – DPU is required to provide the owner five days written notice of the requested entry.
FIRST PROJECT: CLINTONVILLE 1

• Approximately 997 acres; 2875 homes
• GI Engineering started with surveying in 2014; Construction began 2017
• To Date:
  – 423 Rain Gardens
  – 31,193 sq ft of permeable pavement
  – 350 sump pumps installed
• Private Property Work (downspouts, lateral lining) began in 2018
  – The first (of 6) project areas completed achieved 62% roofwater redirection
### GATHER THE RELEVANT PLAYERS

<table>
<thead>
<tr>
<th>Design Engineers</th>
<th>Department of Public Service</th>
<th>Public/Private Utilities</th>
<th>Department of Public Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rec &amp; Parks</td>
<td>Communication Team</td>
<td>City Arborists</td>
<td>Workforce Development</td>
</tr>
<tr>
<td>Community Stakeholders</td>
<td>Local Academia</td>
<td>Land Redevelopment Office</td>
<td>City Council</td>
</tr>
</tbody>
</table>
1. Start having conversations w/OEPA as early as possible (Planning and Concept Development stage)
   – The Project Coordination Unit of the Office of Financial Assistance is the best initial point of contact.
   – Note: The nomination process occurs annually in August for the following year’s funding cycle. (In other words we nominated projects this past August for loan awards in 2020).

2. Think broadly during your Affordability Analysis – plan for seasonal O&M needs, all regulatory requirements, and infrastructure needs for future growth
THE COMMUNITY CARES ABOUT GREEN INFRASTRUCTURE...

**GI Ranked by Popularity**

1. Regional Rain Gardens
2. Pervious Paving
3. ROW Rain Gardens
4. “Bump-Outs”

**Top Concerns**

- Maintenance
- Mosquitos
- Property Values
SO INVOLVE THEM EARLY AND OFTEN

Original Communications
1. 60% Design
2. 90% Design
3. Pre-Construction

Blueprint Communications 2.0
1. Surveying
2. 30% Design
3. 60% Design
4. 75-90% Design
5. Pre-Construction

Tactics
- 2 Mailings
- Canvassing
- Public Meetings
- Site Visits

- 5 Mailings
- Canvassing
- Public Meetings
- Site Visits
- Neighborhood Presence
- Field Markings
- Blueprint 101
- Social Media
IF POSSIBLE, BE FLEXIBLE IN YOUR DESIGN

Be prepared to make ongoing process improvements and design changes to cultivate community acceptance and buy-in.
PRIVATE PROPERTY WORK REQUIRES A LOT OF NOTICES

2 week Notice – Project Commencement → 5-day notice – entering private property → 1-on-1 Resident Site Review

1 wk private property work Summary → 48-hr Notice of Private Property Work → Notification of Work Completion
A GOOD PUBLIC OUTREACH TEAM IS INVALUABLE

1. Reduce burden on PM’s/design engineers and construction crews

2. Improve efficiency by providing one communication avenue for residents

3. Counter misconceptions & garner community support

4. Cultivate a sense of ownership in the community
QUESTIONS?

Learn more at:
Columbus.gov/Blueprint

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