

Partnering to Protect Public Health and Safety – Metro Council Intergovernmental Affairs Committee

March 14, 2017

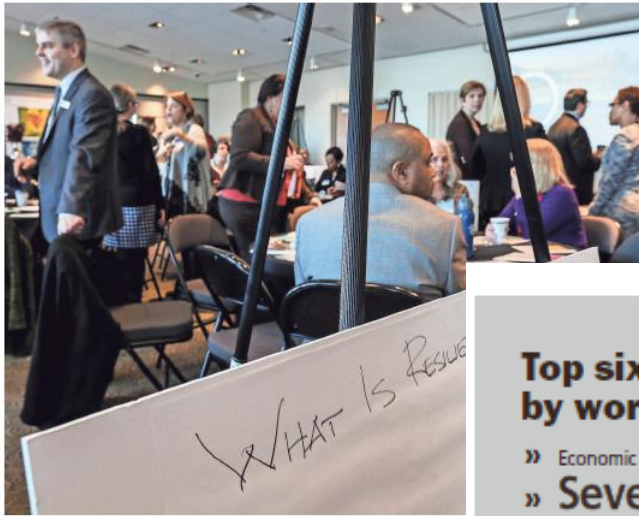


Intro Video

Louisville is Committed to Becoming a Resilient City



100 RESILIENT CITIES



Attendees for a conference on resilience mingle ahead of the start of the conference Tuesday morning

February 1, 2017,
Courier-Journal
article on
100Resilient Cities
Workshop

CITY GETTING HELP TO FACE THREATS

Effort aims to protect Louisville from shocks, stresses

JAMES BRUGGERS
@JBRUGGERS

Louisville may be able to tap into millions of dollars of free services from some of the world's leading companies or organizations as part of its participation in a network of 100 global cities trying to become more adaptable in the face of serious threats.

But first the city will have to narrow its focus on the problems it will seek to solve.

Among the priorities that made the first cut in a "Threats workshop" on

Top six shocks identified by workgroups

- » Economic crisis
- » Severe or catastrophic weather.
- » Infrastructure vulnerability or failure.
- » Riot or civil unrest.
- » Hazardous materials accident.
- » Cyber attack.

Top seven stresses identified by workgroups

- » Poverty and inequality.
- » Lack of wellbeing and poor health.
- » Low-performing education systems.
- » Aging infrastructure.
- » Racial and lack of social cohesion.
- » Degradation of built and natural environment.
- » Climate change.

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- » Climate change.

MSD is foundational to Louisville's transformation



\$1.2 billion
investment
downtown
with 2018
projected
completion

Louisville Metro development estimated
to exceed **\$6 billion**

Louisville's prosperity depends on this vital system



We cannot transform while this is our reality



Yuck! Louisville still has \$934M sewer problem

James Bruggers, @jbruggers

6:17 a.m. EDT October 25, 2016

As MSD enters the home stretch on a 19-year sewer system cleanup, there's progress but spills continue and costs rise

With no hesitation, Rhonda Curry and her triathlon

Torrential rain triggers flash flooding across metro Louisville

Posted: Jul 12, 2015 8:41 AM EDT Updated: Jul 19, 2015 8:52 AM EDT

By Julian Glover

LOUISVILLE, KY (WAVE) - Cars were stranded, homes flooded, and streets impassable thanks to flash flooding triggered by a round of torrential rain Sunday morning.

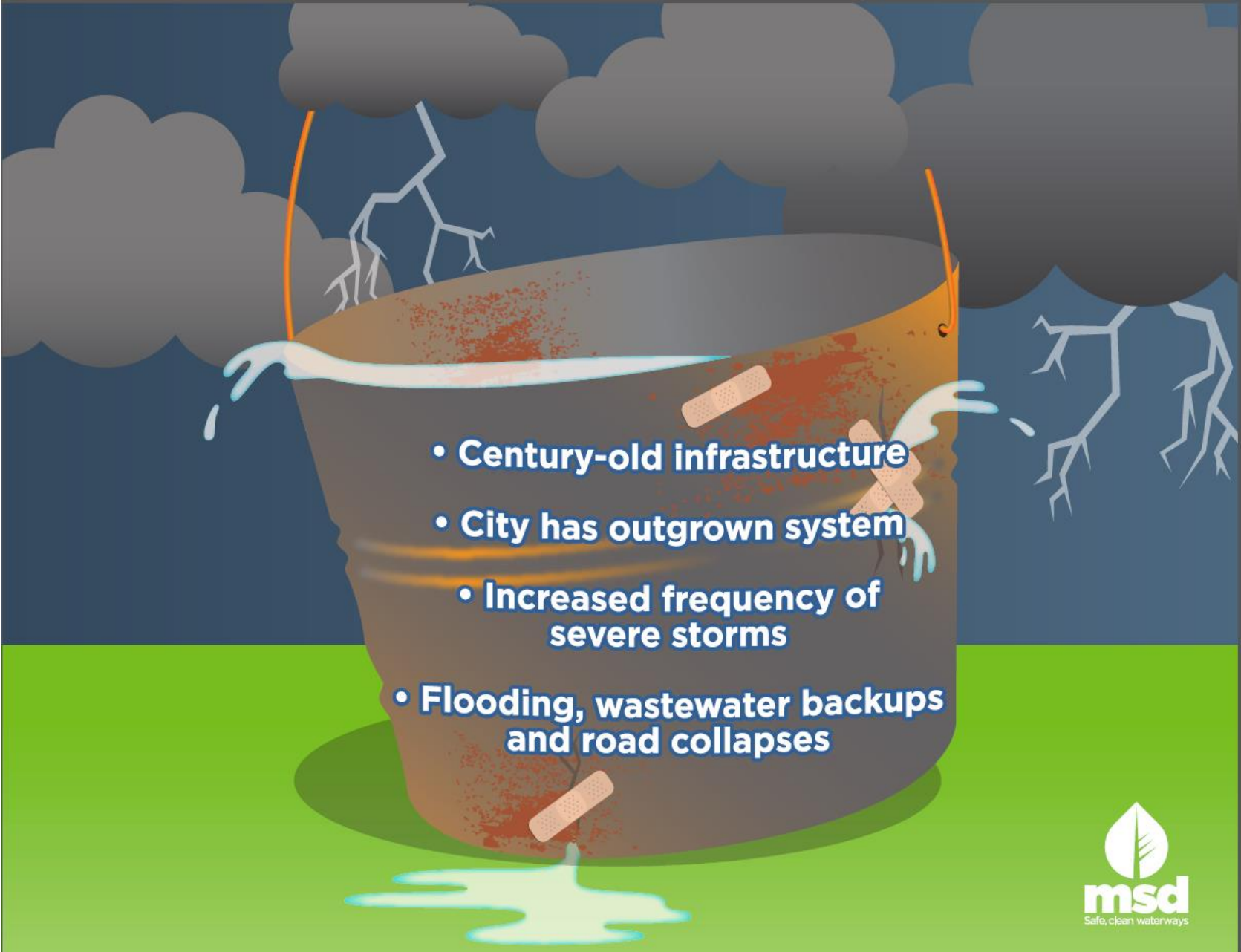


Sewer leak dumps up to 50,000 gallons of sewage into Beargrass Creek

UPDATED 8:09 PM EST Jan 01, 2016

LOUISVILLE, Ky. —A sewer leak dumped up to 50,000 gallons of sewage into Beargrass Creek. The Metropolitan Sewer District said it had to shut down the Nightingale pump station to work on a sewer main collapse off Phillips Lane.



- 
- **Century-old infrastructure**
 - **City has outgrown system**
 - **Increased frequency of severe storms**
 - **Flooding, wastewater backups and road collapses**

RISK: Ohio River flood protection





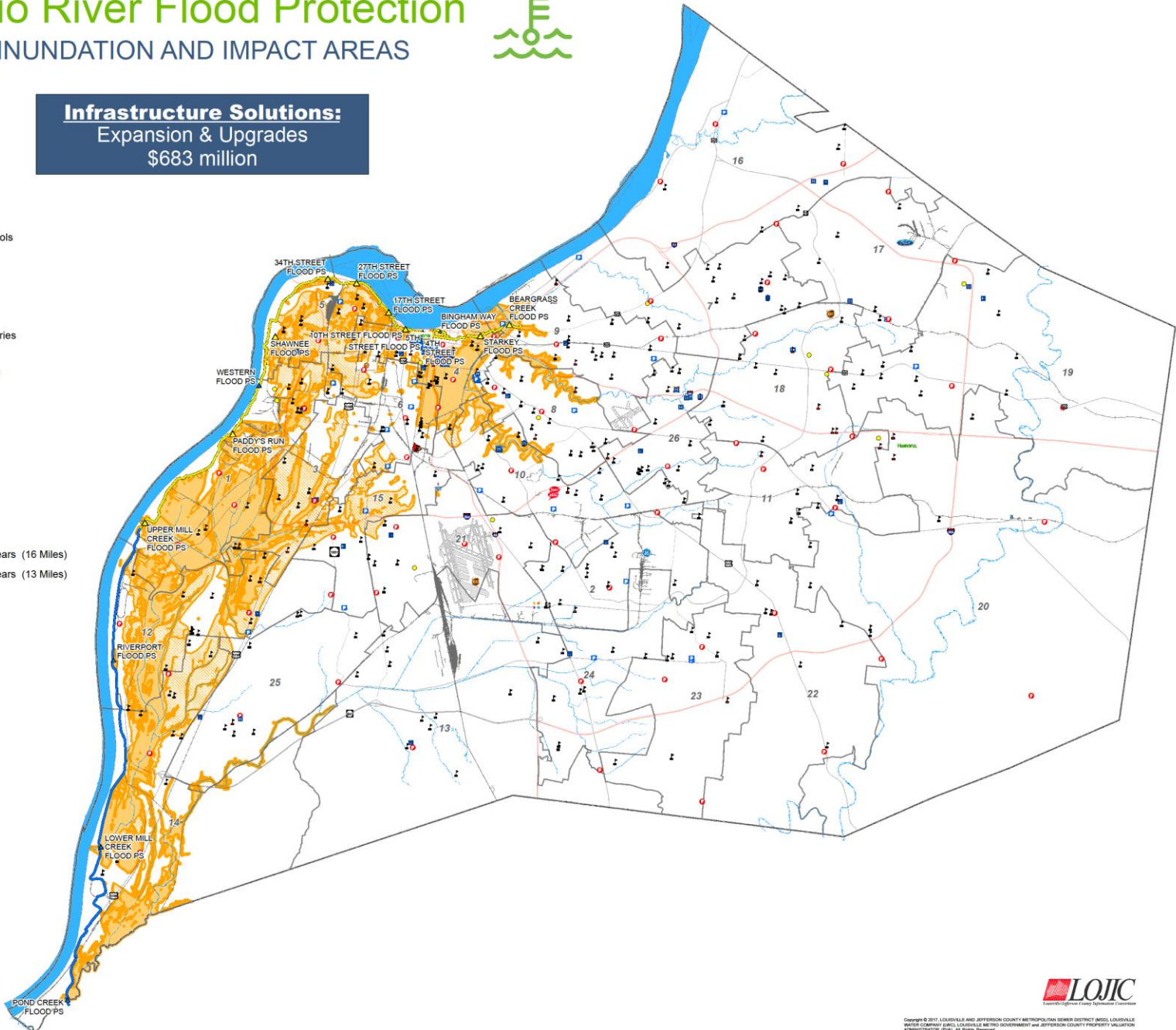
Infrastructure Solutions:
Expansion & Upgrades
\$683 million

Legend

- Hospitals
- ▲ Primary & Secondary Schools
- ▲ Colleges & Universities
- Fire Stations
- Police Stations
- Metro Government Offices
- Louisville Free Public Libraries
- Major Employer (>1000)
- Jefferson County Boundary
- Metro Council Districts
- Interstate
- Major Arterial
- Minor Arterial
- Railroads
- Abandoned Railroads
- Railroad Bridges
- Major Streams
- Levee/Floodwall: 50 - 75 Years (16 Miles)
- Levee/Floodwall: 25 - 50 Years (13 Miles)
- ▲ Flood Pump Stations (16)
 - ▲ 0 - 25 Years (1)
 - ▲ 25 - 50 Years (5)
 - ▲ 50 - 75 Years (10)
- Inundation Areas
- Impacted Area



1:50,000



Paddy's Run Flood Pumping Station



- Constructed in 1953
- Protects 35,000 of our Friends and Neighbors

Part of the larger system that protects **\$23.8 billion** in property

RISK: Stormwater drainage and inland flooding



Outer Loop approaching National Turnpike



Neighborhood Flooding

IMPACT AREAS



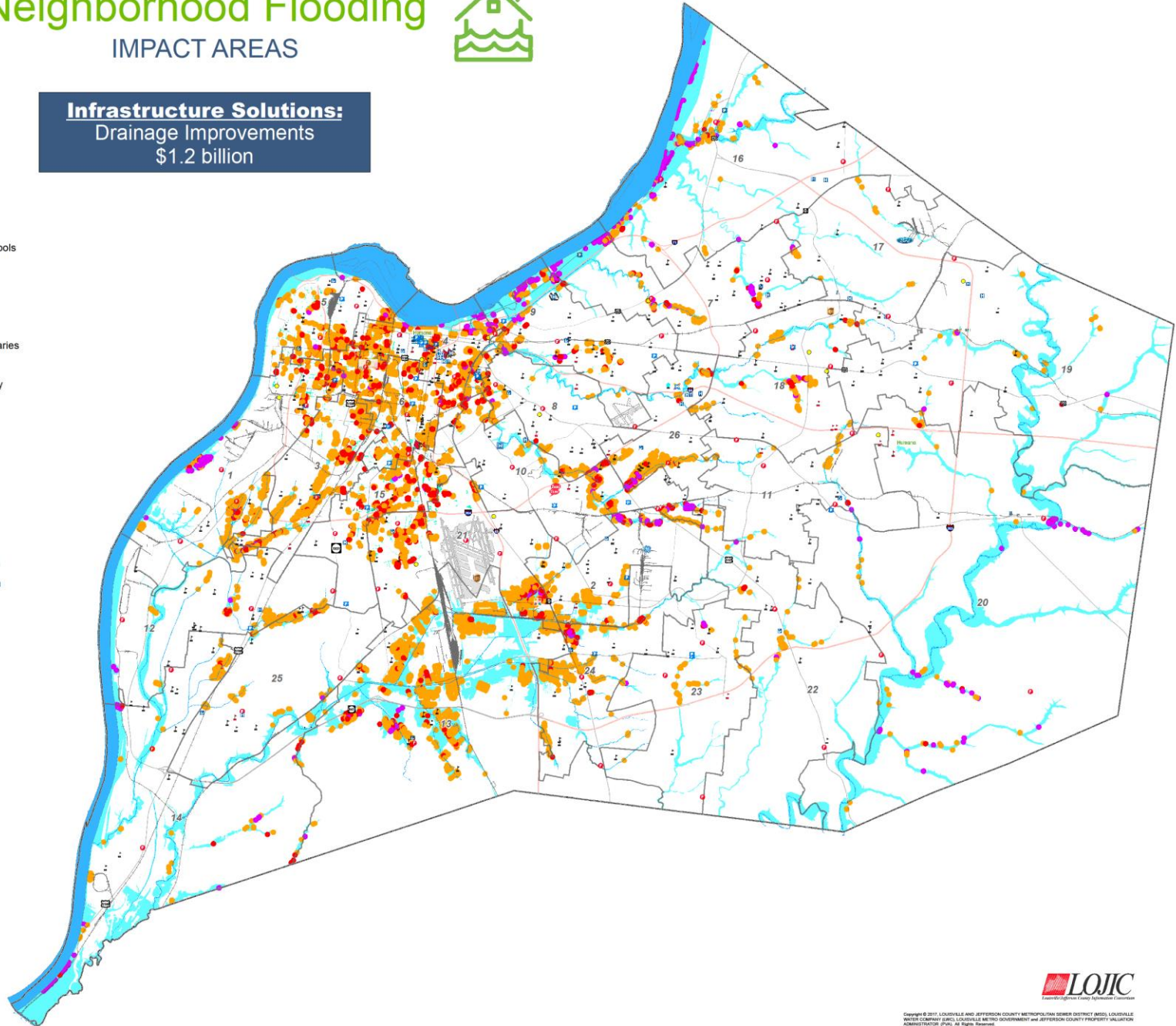
Infrastructure Solutions:
Drainage Improvements
\$1.2 billion

Legend

- Hospitals
- Primary & Secondary Schools
- Colleges & Universities
- Fire Stations
- Police Stations
- Metro Government Offices
- Louisville Free Public Libraries
- Major Employer (>1000)
- Jefferson County Boundary
- Metro Council Districts
- Interstate
- Major Arterial
- Minor Arterial
- Railroads
- Abandoned Railroads
- Railroad Bridges
- Major Streams
- CSSA 100-Year Floodplain
- FEMA 100-Year Floodplain
- Flood Risk Categories**
 - Substantial
 - Moderate
 - Minor



1:50,000



Water rescues were necessary in 2015



**Sutherland and
Dunbarton area**

RISK: Viaduct drainage challenges





Viaduct Flooding

LOCATIONS



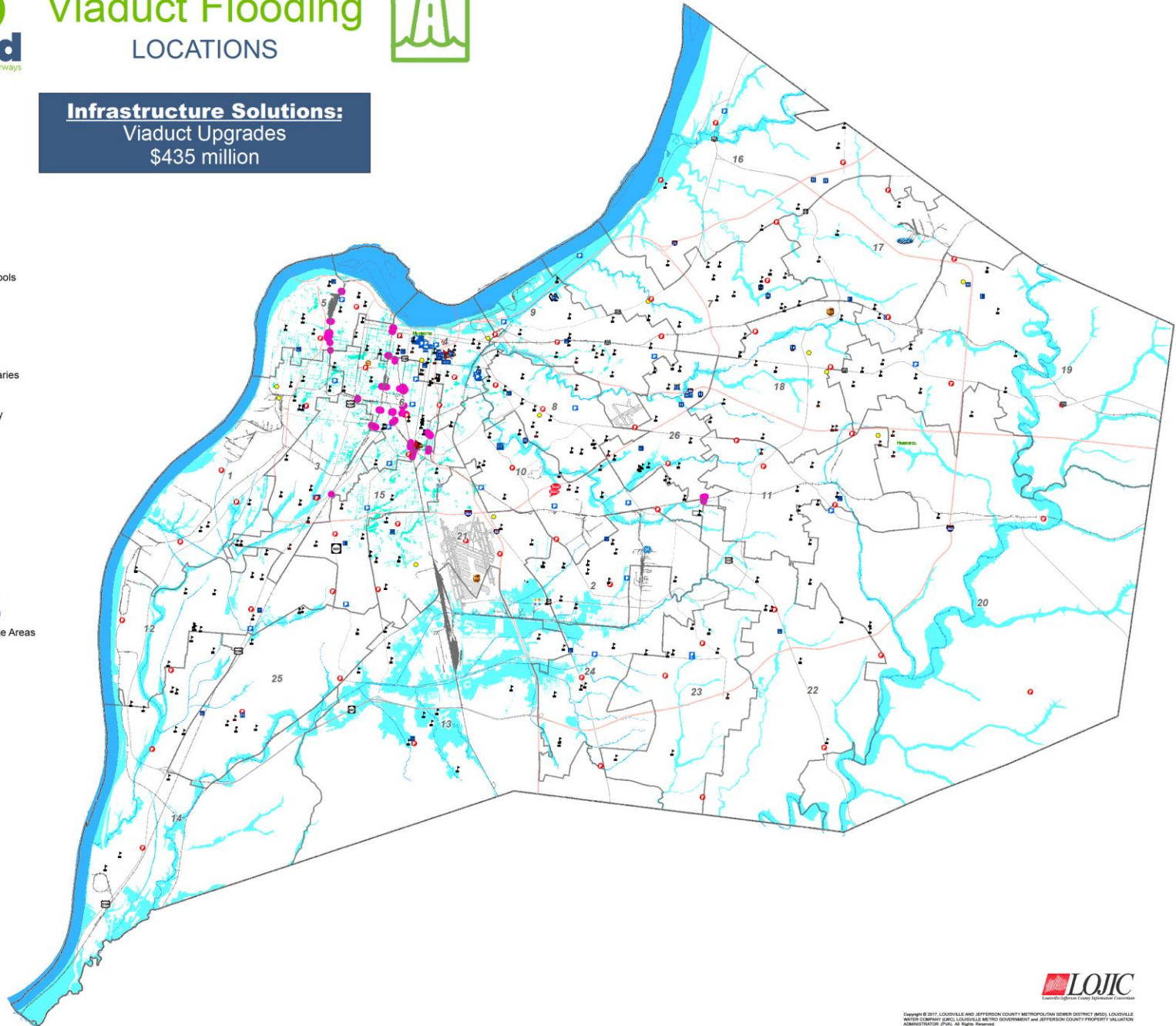
Infrastructure Solutions:
Viaduct Upgrades
\$435 million

Legend

- Hospitals
- Primary & Secondary Schools
- Colleges & Universities
- Fire Stations
- Police Stations
- Metro Government Offices
- Louisville Free Public Libraries
- Major Employer (>1000)
- Jefferson County Boundary
- Metro Council Districts
- Interstate
- Major Arterial
- Minor Arterial
- Railroads
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- Railroad Bridges
- Major Streams
- CSSA 100-Year Floodplain
- FEMA 100-Year Floodplain
- Viaduct-Related Floodprone Areas



1:50,000



Major access corridor



3rd Street and Eastern Parkway

RISK: Crumbling sewer infrastructure























Trolley gets stuck in sinkhole downtown
Friday, November 7th 2014, 9:58 pm EST
LOUISVILLE, KY (WAVE) – Several passengers were on board a trolley as it drove over a sewer grate that gave way, creating a small sink hole in downtown Louisville, according to MetroSafe.

Aging Sewer Infrastructure



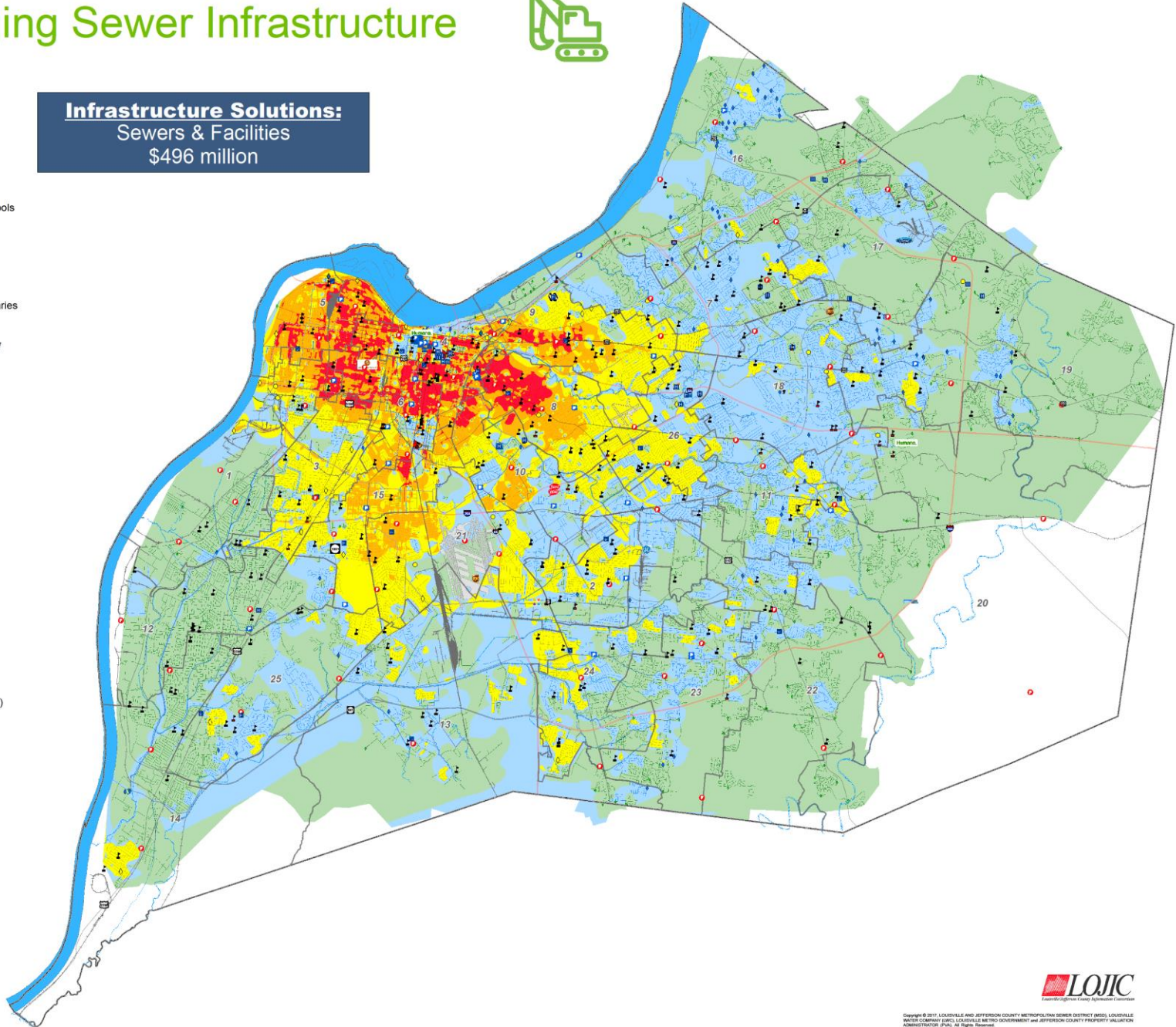
Infrastructure Solutions:
Sewers & Facilities
\$496 million

Legend

-  Hospitals
-  Primary & Secondary Schools
-  Colleges & Universities
-  Fire Stations
-  Police Stations
-  Metro Government Offices
-  Louisville Free Public Libraries
-  Major Employer (>1000)
-  Jefferson County Boundary
-  Metro Council Districts
-  Interstate
-  Major Arterial
-  Minor Arterial
-  Railroads
-  Abandoned Railroads
-  Railroad Bridges
-  Major Streams
- Sanitary Pump Stations**
-  0 - 25 Years (154)
-  25 - 50 Years (85)
-  50 - 75 Years (31)
- Sewer Age**
-  0 - 25 Years (1261 Miles)
-  26 - 50 Years (876 Miles)
-  51 - 75 Years (664 Miles)
-  76 - 100 Years (307 Miles)
-  110 - 150 Years (186 Miles)



1:50,000





Broadway & Floyd 90-inch brick sewer collapse - July, 2015

Broadway sewer - originally built in 1867



Southwestern sluice gate constructed in 1975

First failure = 1983

More than 2,000 homes and businesses flooded

Second failure = Spring 2016



RISK: Wastewater treatment facilities



Morris Forman Water Quality
Treatment Center



Wastewater Treatment

SERVICE AREAS



Infrastructure Solutions:

Upgrade & Expansion

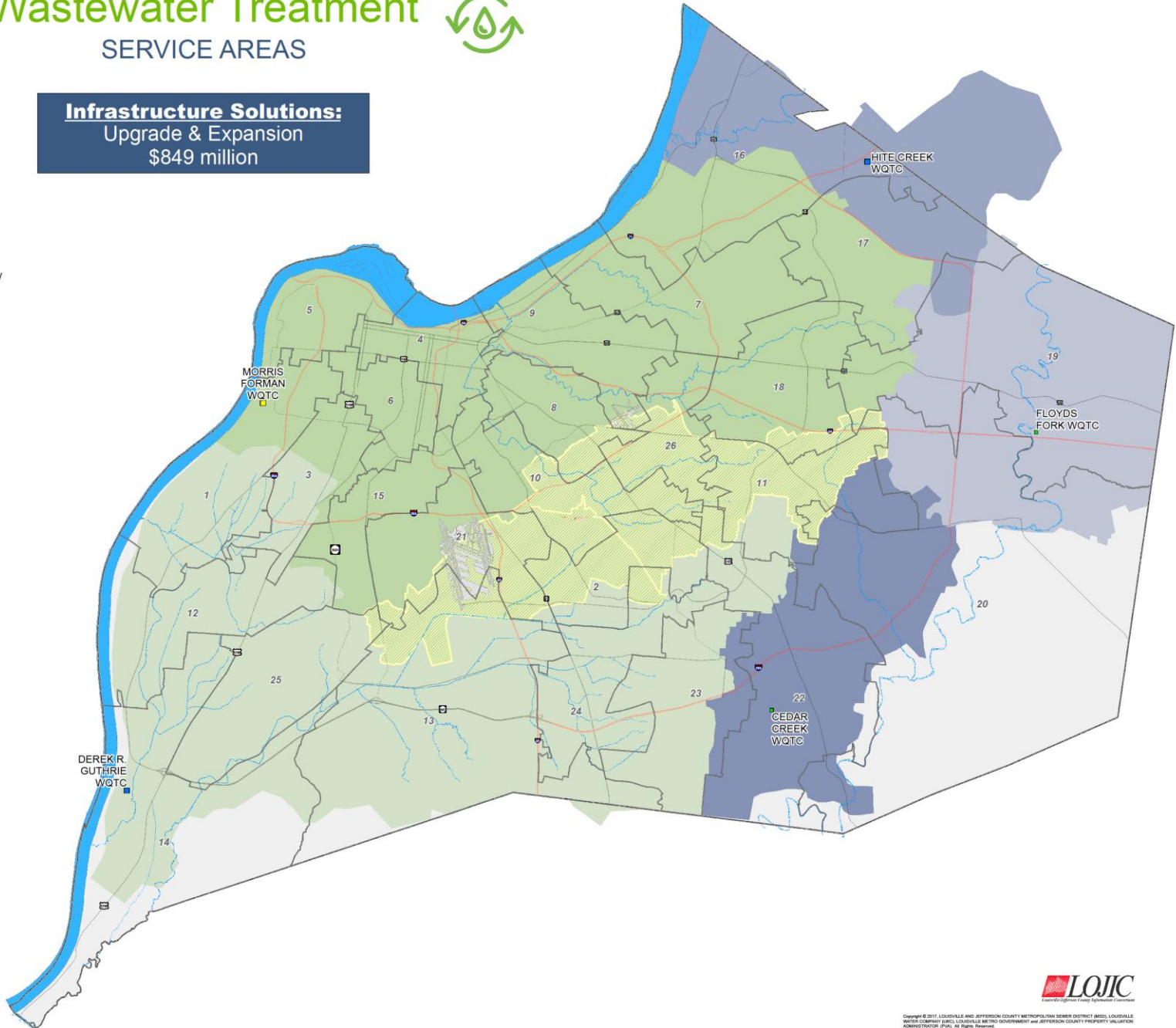
\$849 million

Legend

- Jefferson County Boundary
- Metro Council Districts
- Interstate
- Major Arterial
- Minor Arterial
- Major Streams
- Water Quality Treatment Center (WQTC)**
 - 0 - 25 Years (2)
 - 25 - 50 Years (2)
 - 50 - 75 Years (1)
- Water Quality Treatment Center Service Areas**
 - Morris Forman
 - Derek R. Guthrie
 - Cedar Creek
 - Floyds Fork
 - Hite Creek
 - Wet Weather Diversion



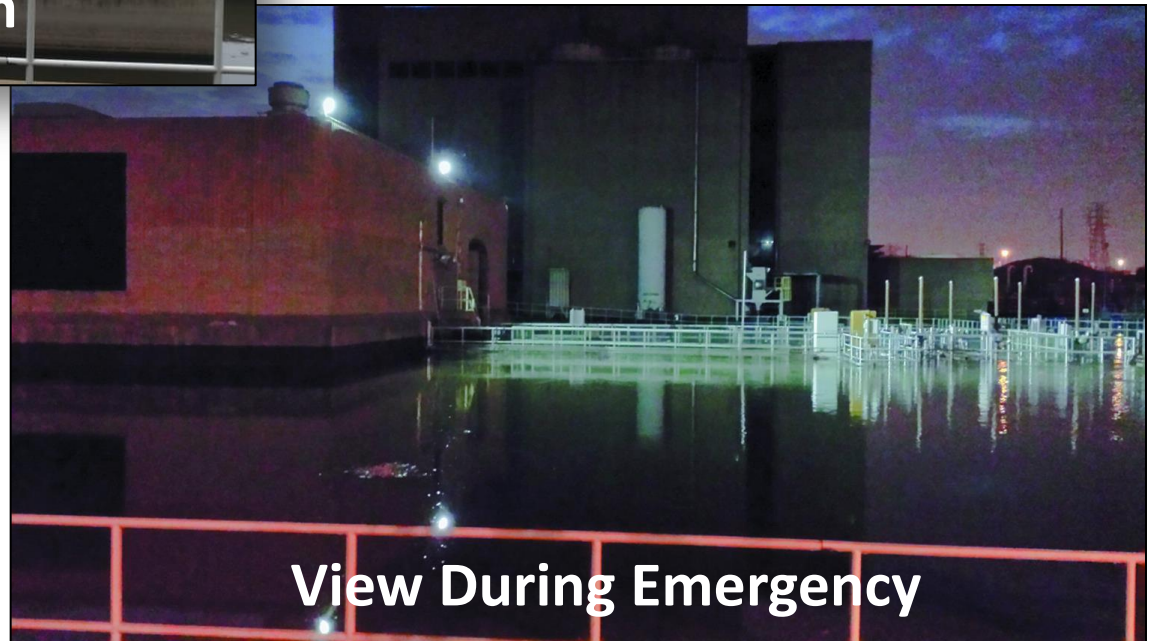
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Morris Forman plant power outage could have had devastating community impacts



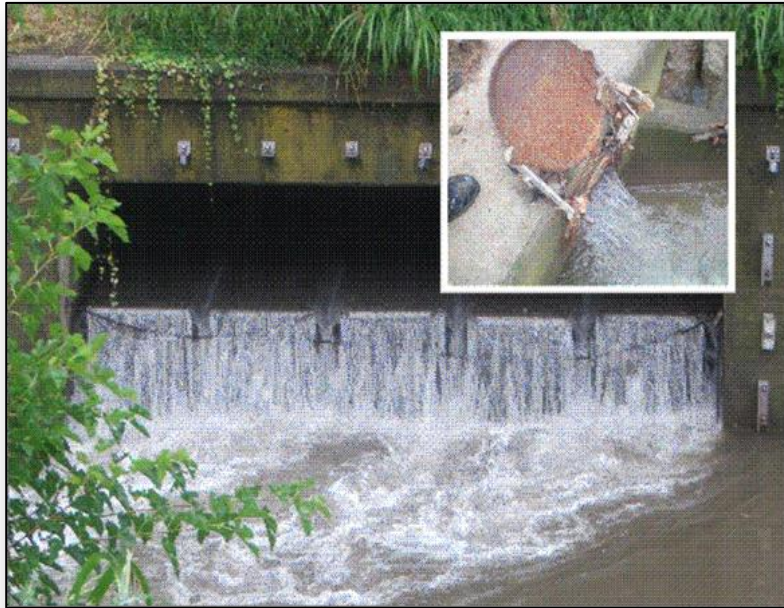
2015



RISK: Consent Decree Obligations



**More than \$400
million invested
over the past
decade**



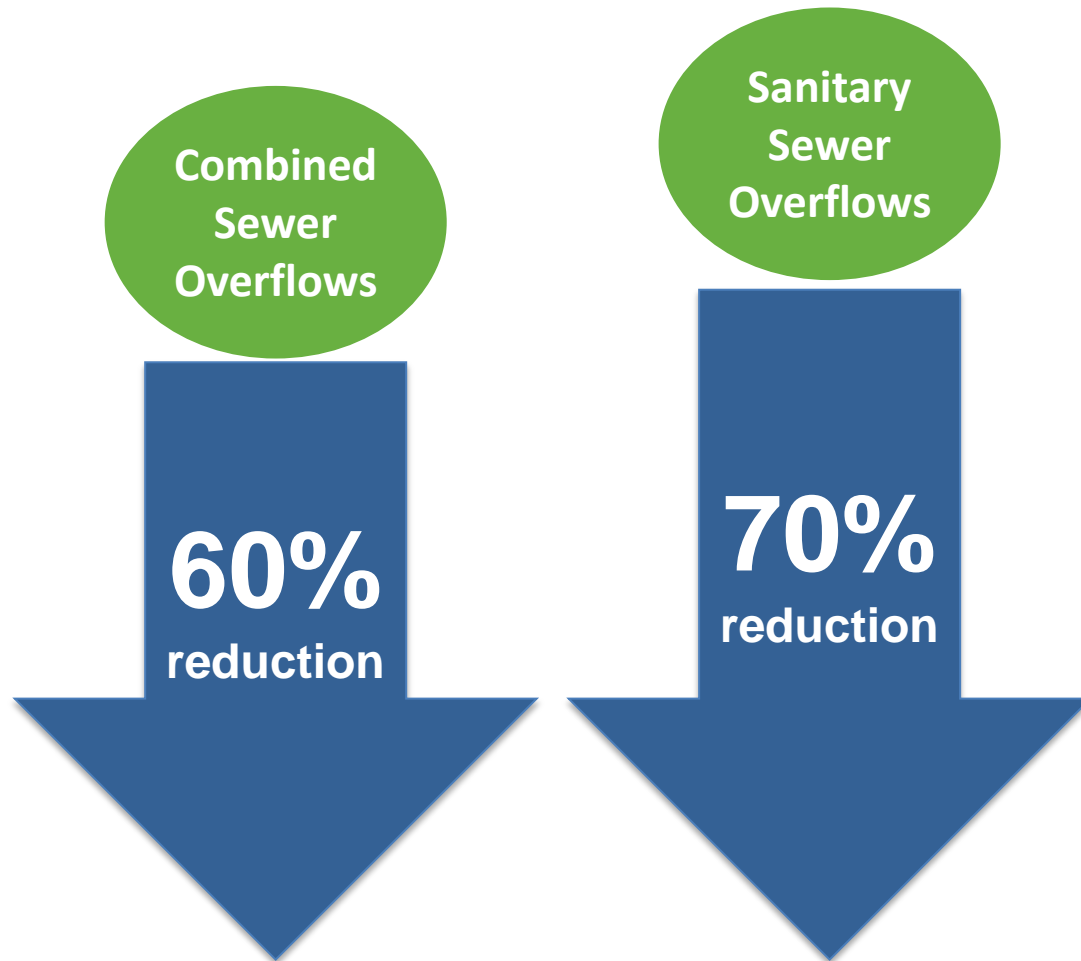
Typical CSOs along Beargrass Creek

Logan St Basin Construction



**~\$500 million more
necessary to reach
completion by 2024**

Consent Decree to-date



Consent Decree
program status:

- ✓ fully compliant
- ✓ on-time
- ✓ on budget

Catastrophic events are occurring around us

Flash flooding on Interstate 71 leaves motorists stuck



Cincinnati

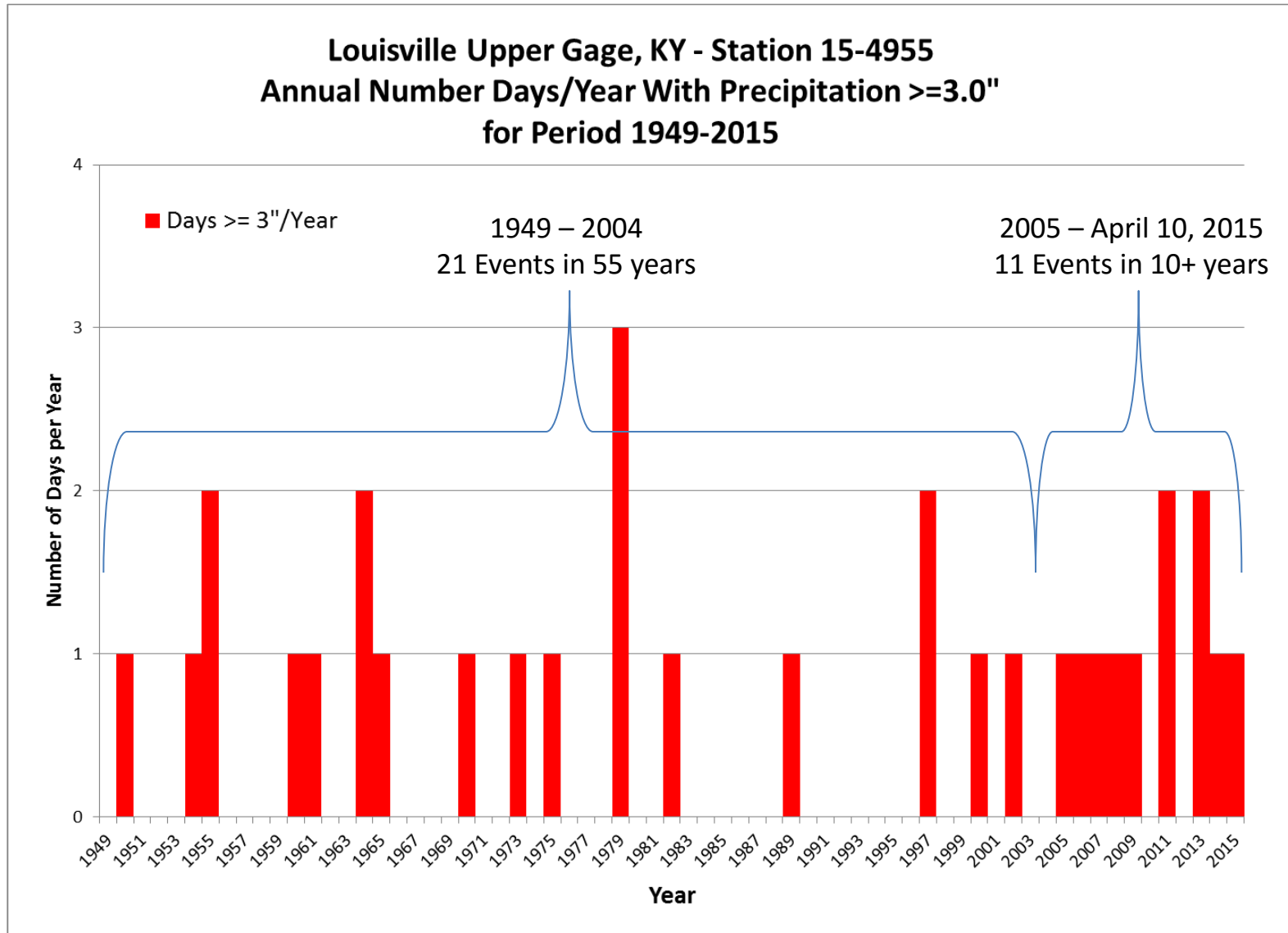


Paducah



West Virginia

Increased Frequency of Extreme Storms



We must renovate the outdated system to serve tomorrow's Louisville



Some infrastructure in our downtown business core pre-dates the Civil War

With challenges come opportunities



**MSD has the
infrastructure solutions**

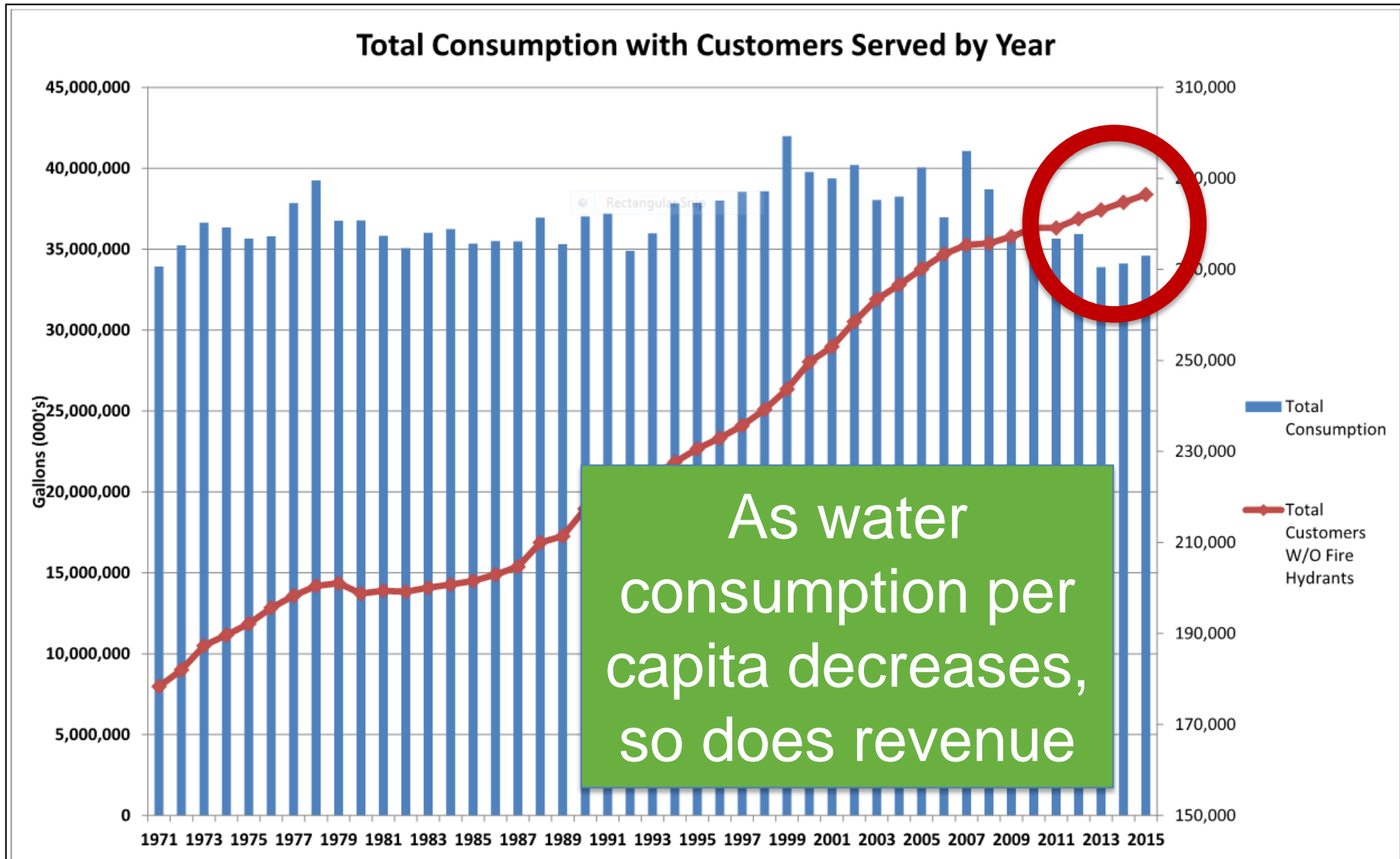
MSD infrastructure solutions

More than two years of
analysis and careful
planning

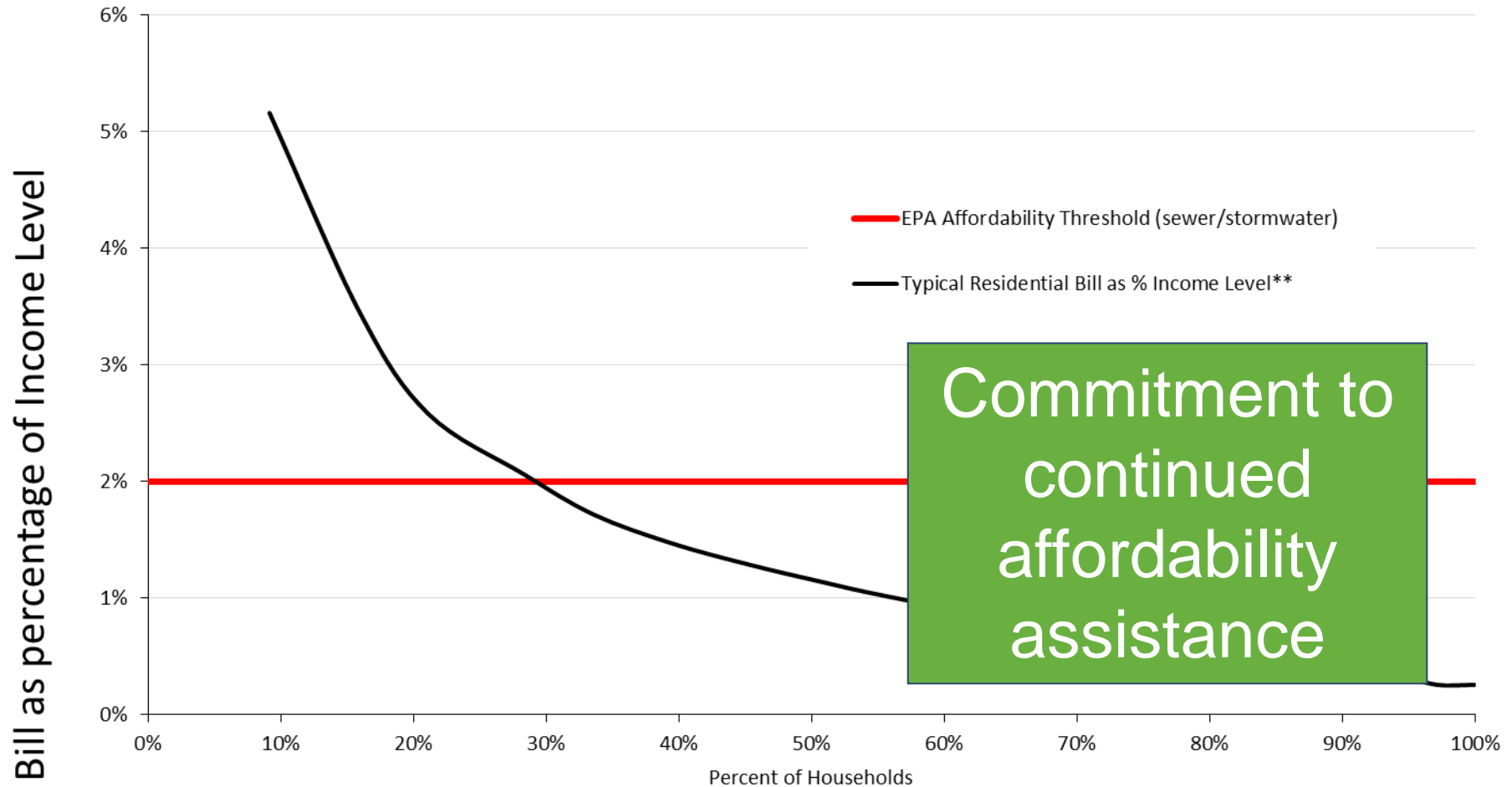


\$4.3 billion

Financial realities must be acknowledged

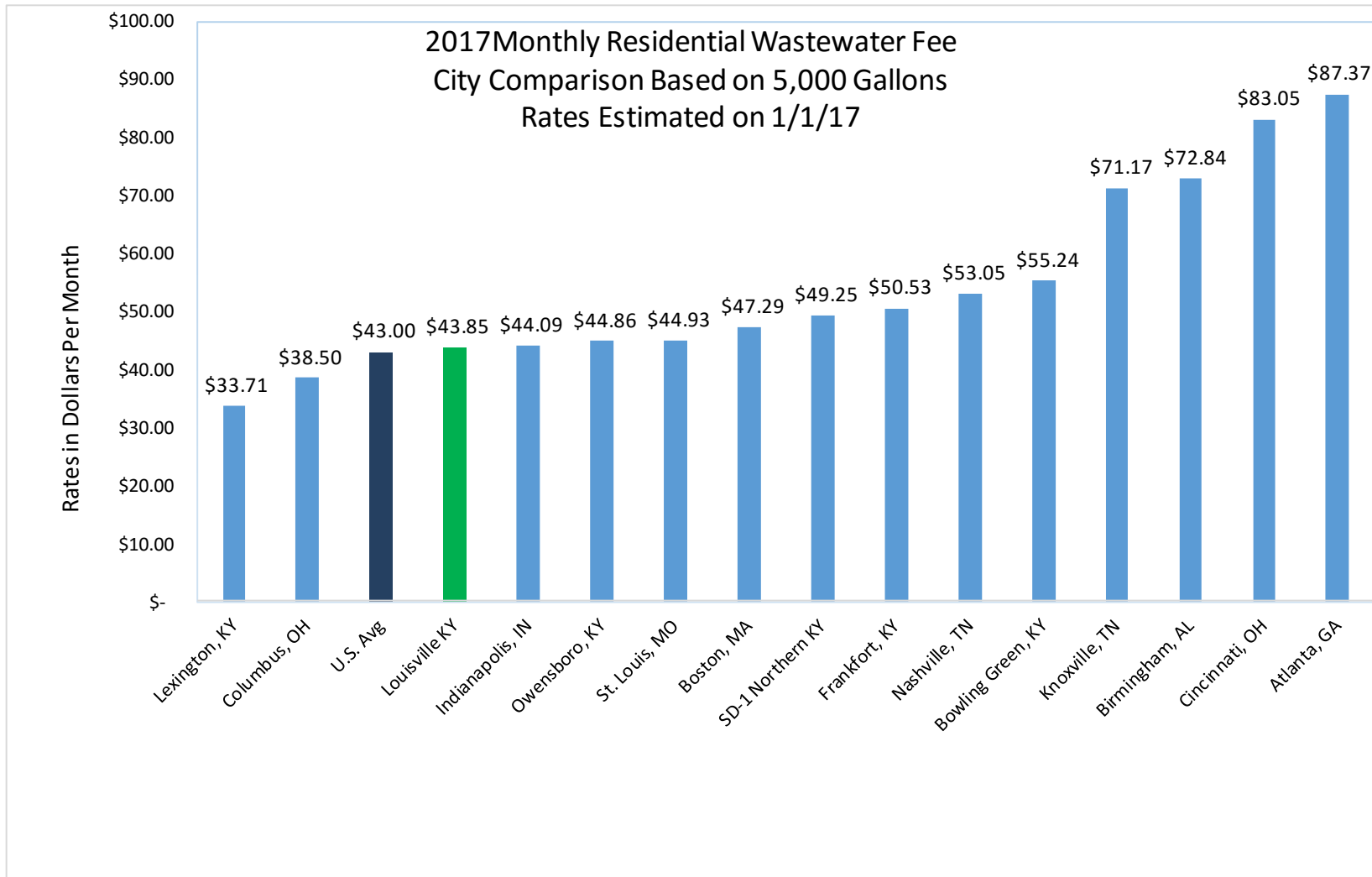


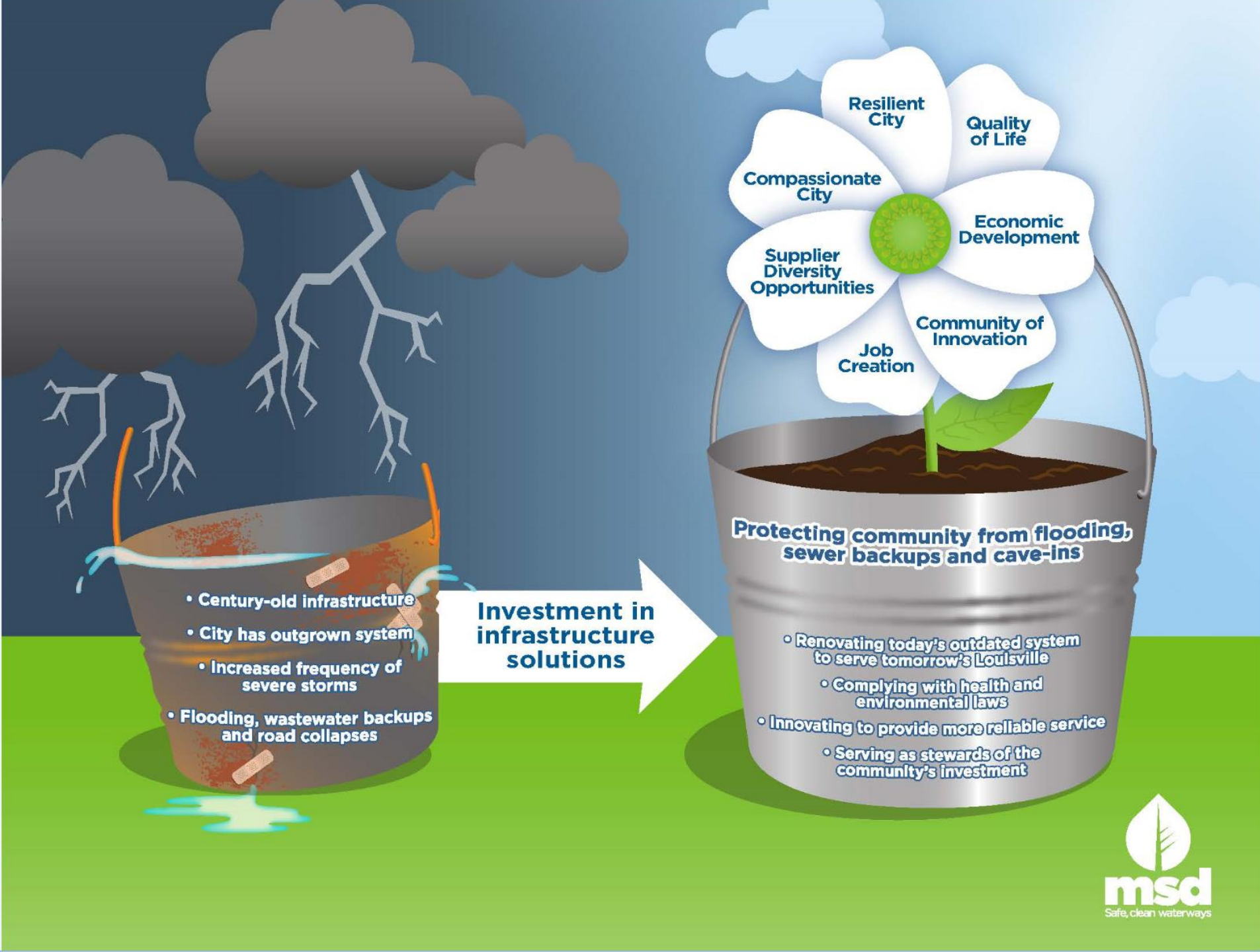
As stewards of the community's investment, must consider impact to all customers



** 2015 Cost of Service Study, assumes bimonthly billing, 10,000 gallons water, 8,500 gallons adjusted sewer flow, 5/8 inch connection

Louisville will remain competitive





**Renovating today's
outdated system to serve
tomorrow's Louisville**

**Complying with health
and environmental laws**

**Innovating to provide
more reliable service**

**Serving as stewards of
the community's
investment**



The economic impact in Louisville will be **\$3.4 billion** and **2,310 jobs** over 10 years



Every \$1 we
invest = \$2.62
for local
economy

Source: U.S. Department of Commerce



We invite you to join us in our Community Conversation

Community
Conversation
guiding
principles

- **TRUTHFUL** information
- **FAIR** cost to all involved
- **GOODWILL** to strengthen neighborhoods
- **BENEFICIAL** investment across all of Louisville

Risks to Today and Tomorrow's Louisville





What will be OUR legacy?



Make sure your voice is part of the discussion

- Comments and questions during meetings
- Paper input form distributed tonight
- www.louisvillemisd.org/community-input-form



Help bring many voices to the table for this crucial conversation

To schedule a presentation, please contact:

- Sandra Gibson at **sandra.gibson@louisvillemsd.org** or **502-540-6352**
- Wes Sydnor at **wesley.sydnor@louisvillemsd.org** or **502-540-6000**

QUESTIONS?