October 28, 2025

KCWATER

South Resiliency Water Treatment Plant Project

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Agenda

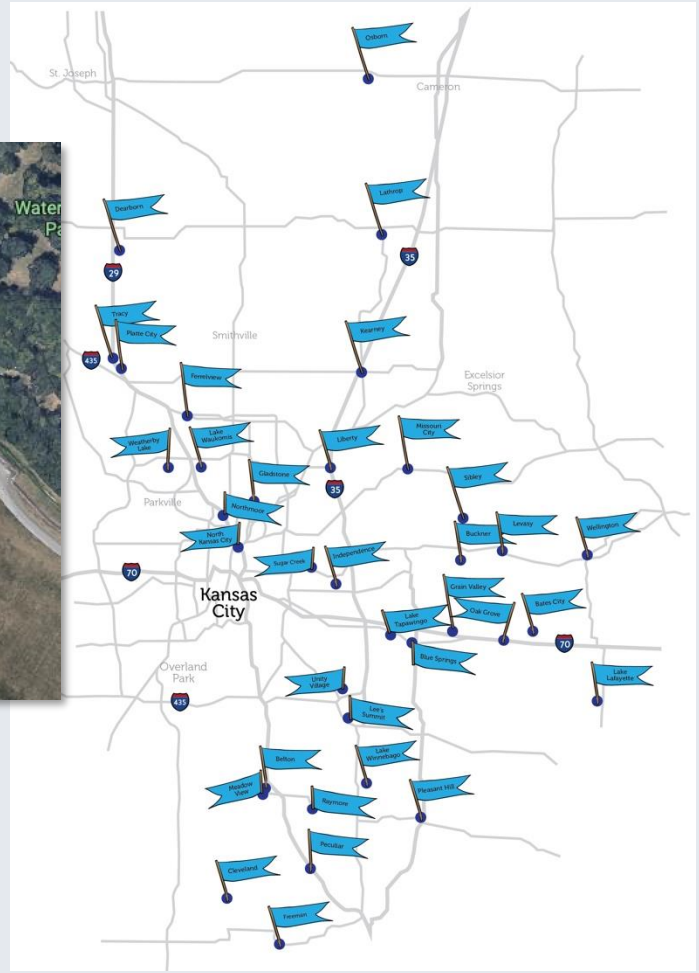
- Project overview and background
- Project drivers, goals, and benefits
- Review of potential sites
- Screening criteria review
- Recommend site
- Funding discussion
- Next steps

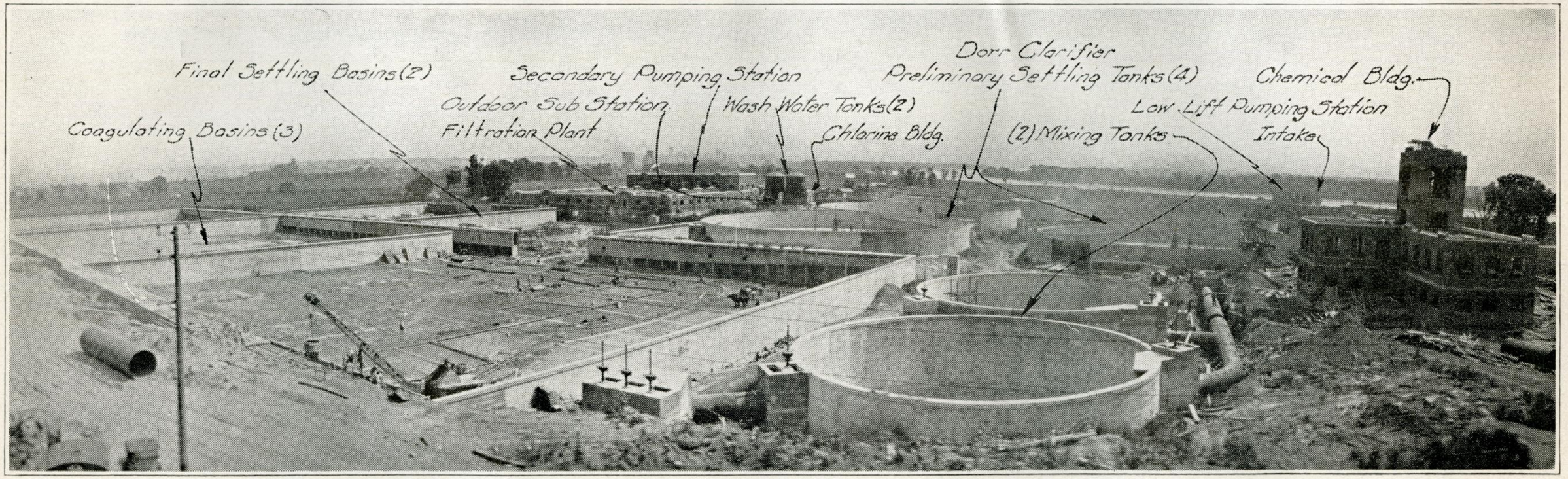
Project Overview

KC Water is currently evaluating potential sites for a future water treatment facility in and around the East Bottoms area in Kansas City, Missouri.

Briarcliff Water Treatment Plant

- Located north of the Missouri River, west of N. Oak Trafficway and east of Highway 9
- Built in 1920
- Treats approximately 100 million gallons per day
- Pulls 80% of the water from the Missouri River and 20% from ground water sources (wells)
- Delivered to nearly 1 million people across 89 municipalities and wholesale customers





JULY 28, 1926. NEW WATER SUPPLY AND PURIFICATION WORKS, NORTH KANSAS CITY

Why explore building a new treatment plant?

The current plant is approximately **100 years old**

Maintaining the old facilities requires **expensive specialized contracts**

The City needs a more resilient water supply system with improved water quality

KCMO is one of the **only cities** its size with **one** water treatment plant

There are no reliable, large interconnections with other metro utilities

Existing plant site has space and height constraints for new technology, processes and future expansion.

Loss of water service could cost region over $100M/day according to FEMA economic valuation

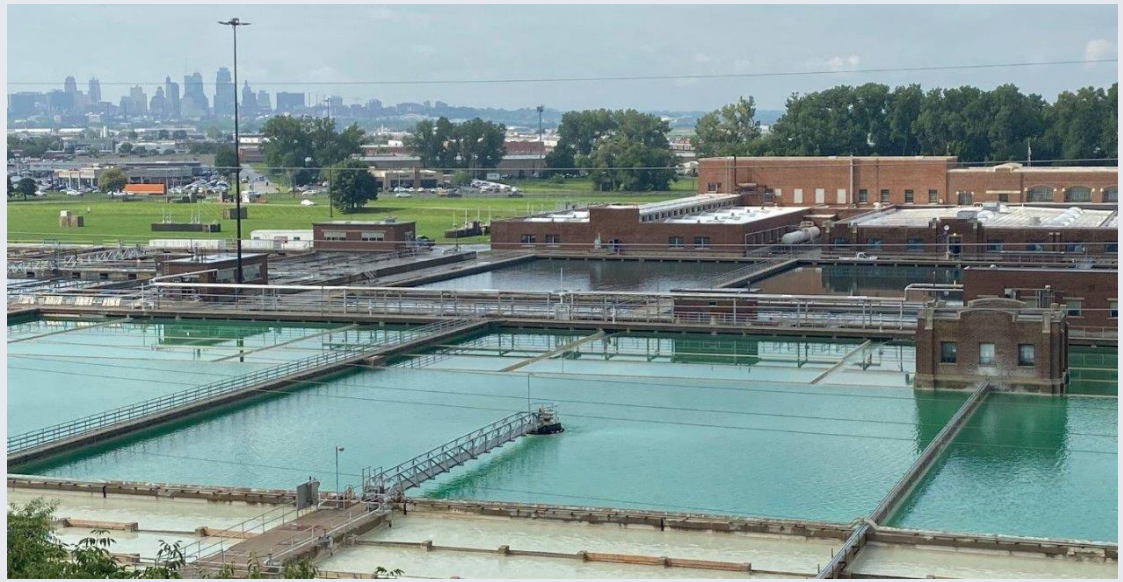
New treatment technologies are more robust for emerging contaminants

Project Drivers

- Provide redundant water source reliability
- Build resilient infrastructure
- Reduce risk of water supply shutdowns due to point source operational risks
- Utilize modern treatment technologies to optimize chemical usage
- Utilize emerging technologies to potentially remove new contaminants
- Reduce current operations and Maintenance costs with maintaining existing systems in limited space and structures

Project Benefits:

- Furthers resiliency of overall water supply
- Enables Briarcliff WTP to run at lower capacity/shutdown for upgrades and repairs
- Gives operational flexibility to:
  - Provide service **south** of MO River from second WTP
  - Provide service **north** of MO River from Briarcliff WTP
- Operate one plant as a base load plant and one plant as peak load plant



Project Support

- **Integrated Management Planning**: Mayoral appointed committee of community leaders came together to help with KC Water's integrated planning process to guide future water infrastructure decisions.
  - Group came to the conclusion that constructing a new drinking water treatment plant to improve the reliability and redundancy of Kansas City's drinking water supply as a top priority.
  - **"Drinking water quality and supply redundancy are the most important Water utility priorities. "**
- Kansas City Industrial Council (KCIC) has made this project their top priority
- Missouri and Associated Rivers Coalition (MOARC) supports this as a high priority

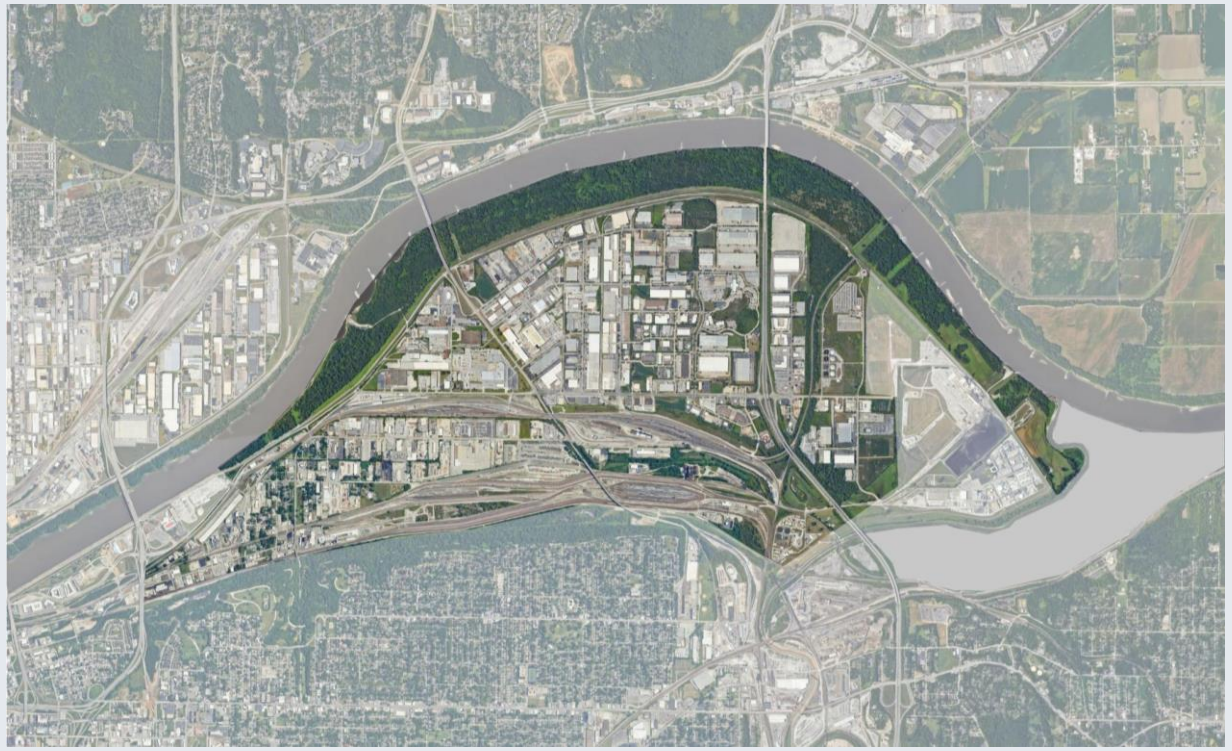
Area of Interest – East Bottoms

- Proximity to Missouri River – reduces pipeline costs
- Proximity to existing infrastructure (i.e. East Bottoms Pump Station, railroads, etc)

= East Bottoms Pump station

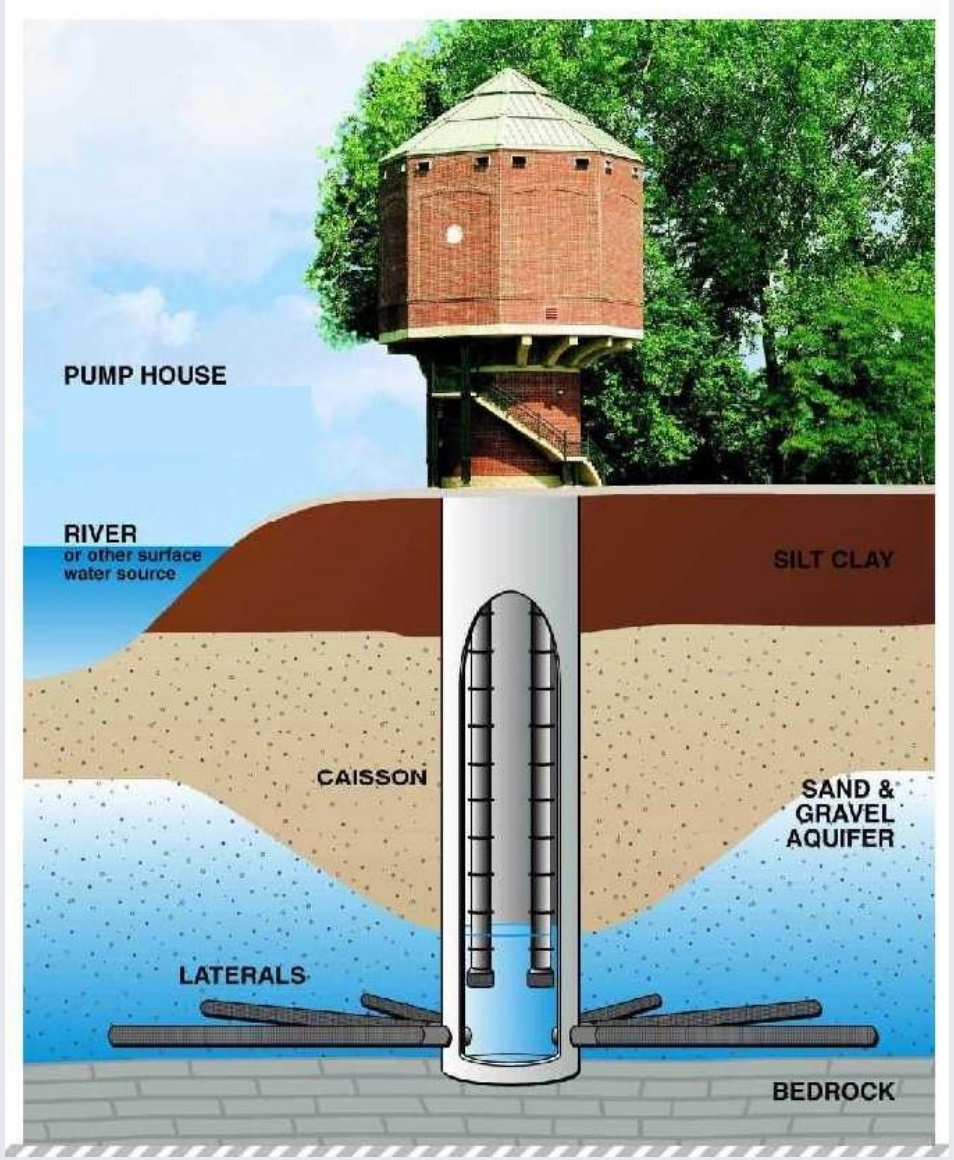
Site Evaluation

- **Three** sites selected for detailed evaluation
  - Equity considerations
  - Environmental assessment
  - Geotechnical evaluation
  - Groundwater evaluation
  - Site functionality
  - Community feedback



Site Investigations

- Utility Surveys
- Geotechnical Investigation
- Phase I Environmental Investigation
- Electrical Load Study
- Source Water Study
- Rail Access



Screening Criteria

- Construction costs
- Land acquisition costs
- Constructability
- Phasing functionality

- Property acquisition considerations
- Area property owner impacts
- Construction impacts - i.e. traffic impacts, road construction, etc.

- Environmental impacts
- Remediation, demolition, etc.

Area of Interest – East Bottoms

★ = East Bottoms Pump station

Area of Interest – Site 1

ECONOMIC

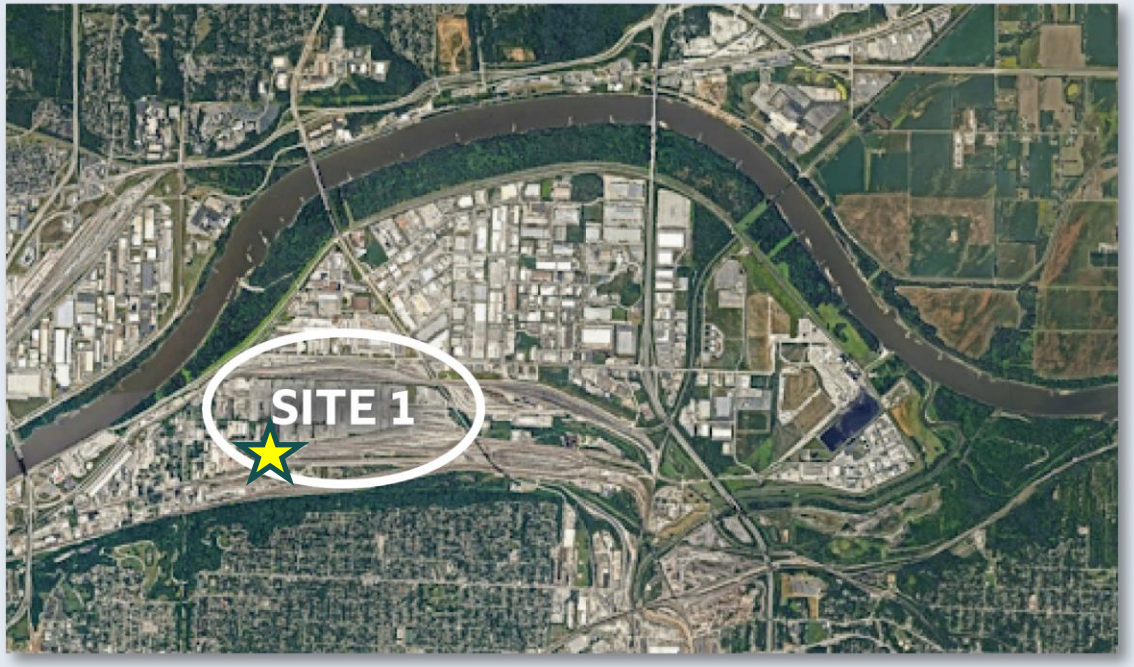
- Slightly lower capital cost
- Good plant layout and phasing functionality

SOCIAL

- Most construction and business impacts
- Residential properties would be affected

ENVIRONMENTAL

- Most properties with environmental issues



= East Bottoms Pump station

Area of Interest – Site 2

ECONOMIC

- Challenges with constructability and phasing
- Closer to the Missouri River intake structure

SOCIAL

- Significant construction would be required in the levee critical zone
- High rail disruption
- Moderate level of property owner impacts
- No residential properties

ENVIRONMENTAL

- Moderate environmental issues

= East Bottoms Pump station

Area of Interest – Site 3

ECONOMIC

- Limited utility conflicts
- Scored high for constructability and phasing

SOCIAL

- Construction outside of levee critical zone
- Away from residential area
- Scored the highest for the social criteria
- Least amount of business impact
- No residential properties

ENVIRONMENTAL

- Least amount of remediation compared to other sites.

= East Bottoms Pump station

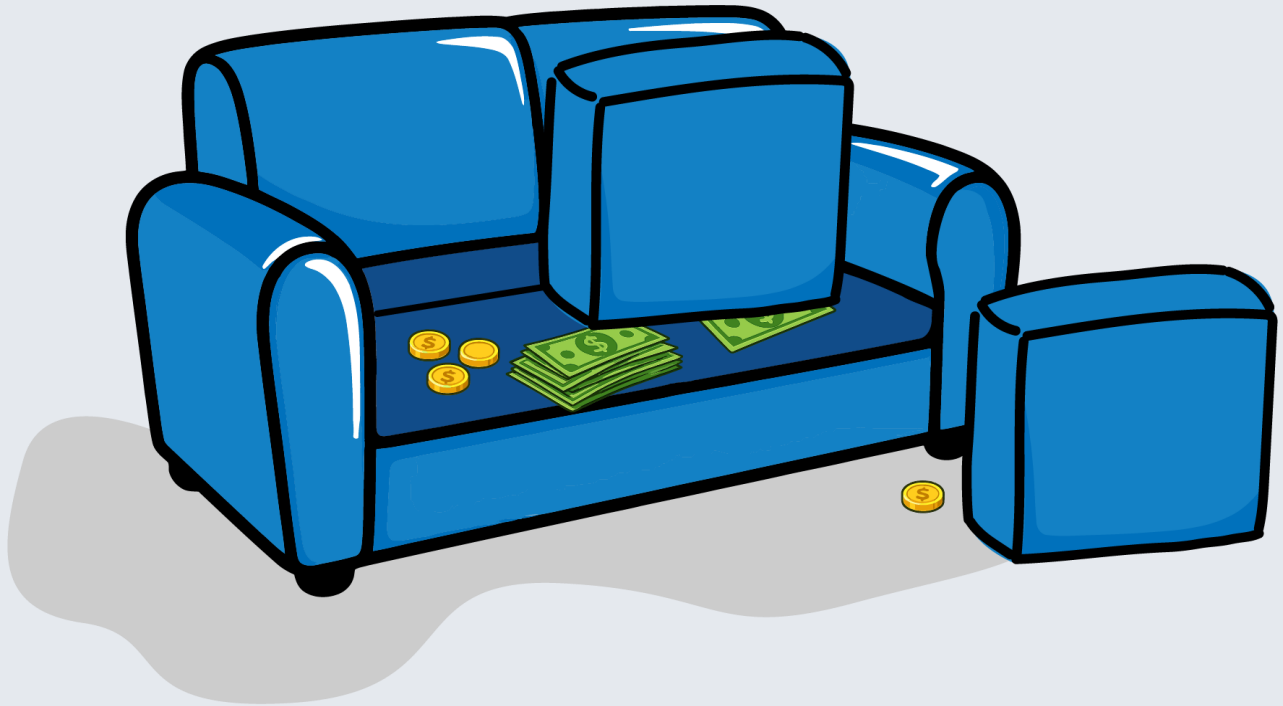
Preferred Site

= East Bottoms Pump station

Project Funding

- Estimated project timeline: 5 – 10 years
- Estimated project cost - $600M - $2B+

11+
State & Federal Grant Opportunities



What questions and input do you have about building a new water treatment plant in the East Bottoms?

Next Steps

- KCIC and MOARC advocacy
- Identify grant and funding opportunities
- Finalize the site after public input and continue conceptual design

Stay Informed!

http://www.kcwater.us/projects/south-resiliency-water-treatment-plant-project/

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