



Ann Arbor's Water Future

City of Ann Arbor

City Council work session and discussion of the City's water treatment alternatives evaluation and recommendations.

September 13, 2021

www.a2gov.org



Purpose

Of Today's Work Session

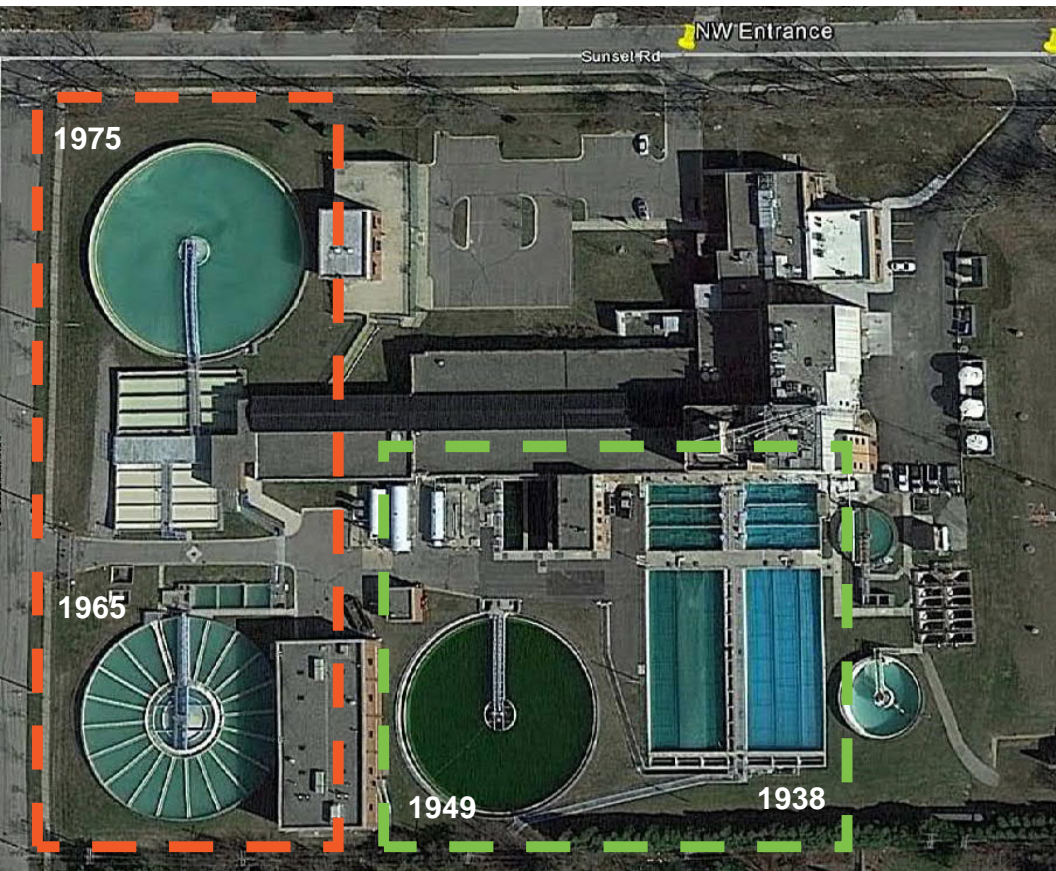
Background:

- To provide reliable, high-quality water into the future, significant improvements are needed.
- Re-evaluation of alternatives completed in 2015.

**Re-present
2016
recommend-
ations**

**Seek
Council
members'
feedback**

**Answer
questions
from
Council
members**



The recommendation at the conclusion of the 2015 Study was to rehabilitate the existing water treatment plant.

2015 Study

Conclusions and recommendations

Four alternatives were considered:

- Construct new or expand existing well fields
- Construct a new water treatment plant
- Join a regional water provider
- Rehabilitate the existing water treatment plant

Each alternative was assessed against the City's water quality goals, sustainability framework, customer service requirements, and regulatory compliance.

What source
water to use

Improve
redundancy
(backup)

Manage aging
infrastructure

Changes since 2015



Ann Arbor

Ann Arbor OKs new plan to reduce PFAS in city's drinking water

Updated: Jan. 29, 2019, 11:24 p.m. | Published: Sep. 25, 2018, 5:13 p.m.

01 Changes in governance

02 Changes in City policy

03 Changes in water quality



Since 2015, the City has completed over \$15M in improvements.

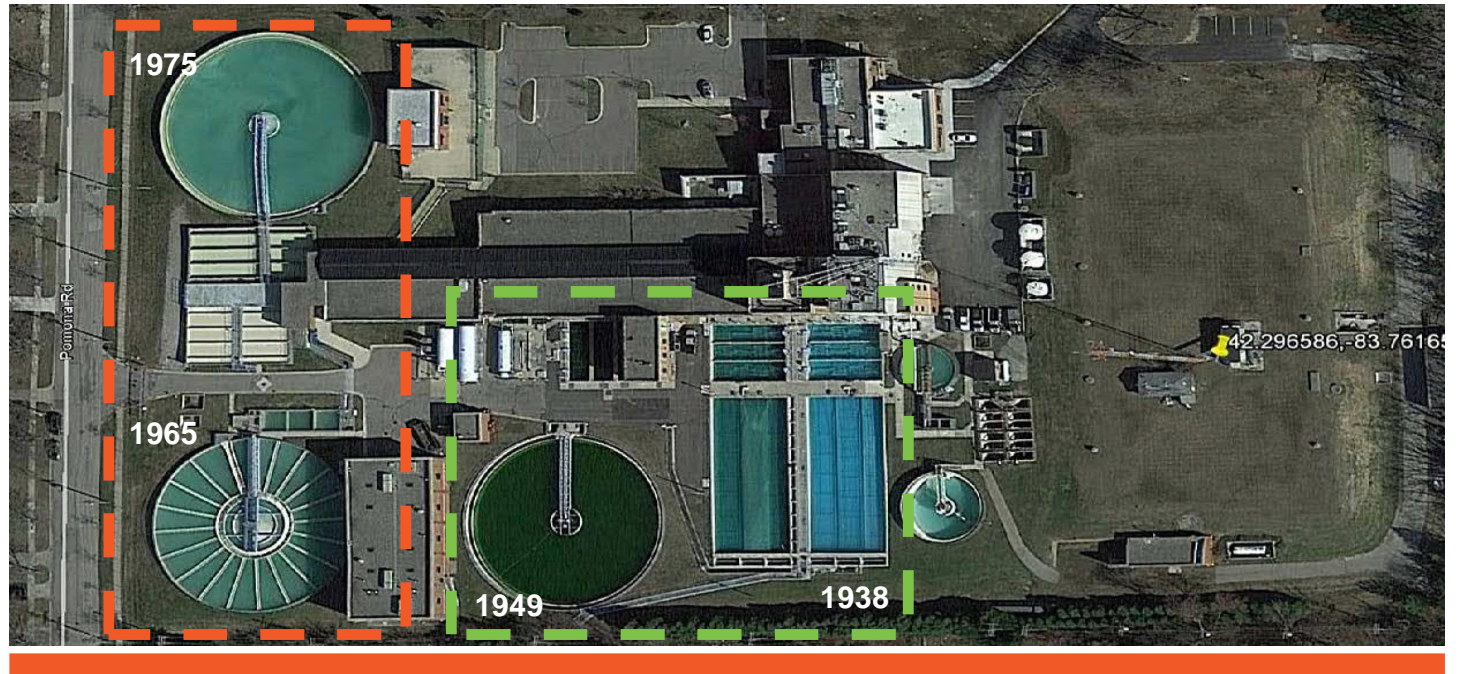
Changes since 2015

04 Activities to advance the 2015 recommendations

- Added UV to improve *Cryptosporidium* treatment
- Improved effectiveness of PFAS control
- Monitored 1,4-dioxane migration to the river
- Improved automation system for treatment
- Improved building envelope (structural, architectural)
- Improved Steere Farm wellfield
- Improved electrical systems at Barton Pump Station

ALTERNATIVE

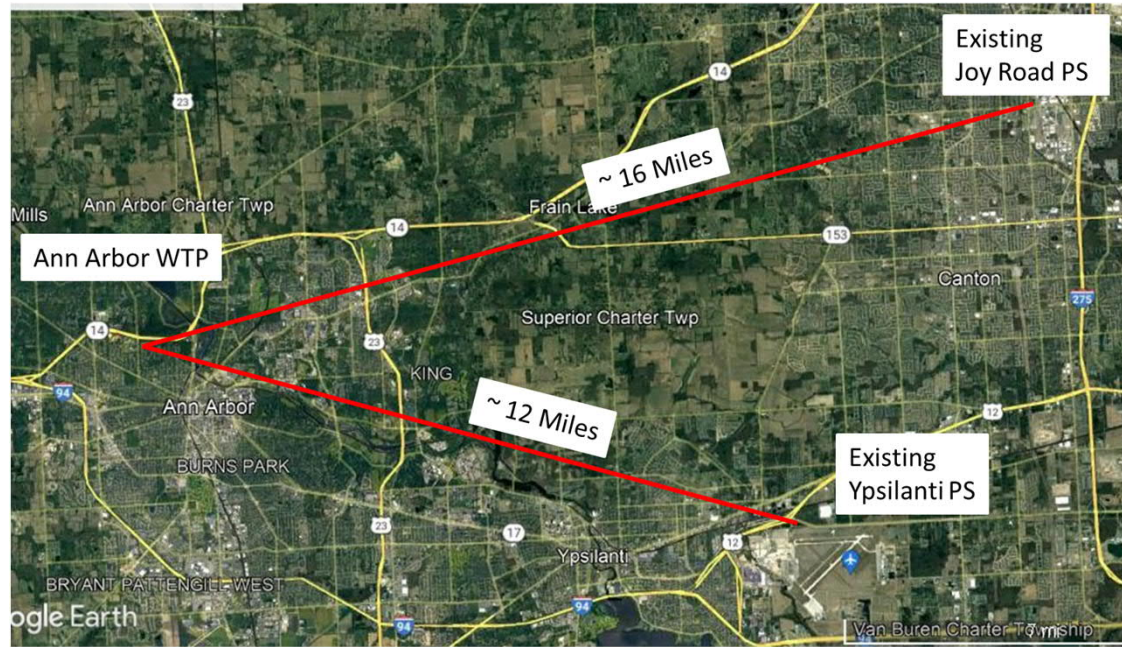
01

















Rehabilitate the water treatment plant on the existing site.

ALTERNATIVE

02



Connect and purchase drinking water as part of a regional water supply solution.

Evaluation Criteria	Rehabilitate the City's Water Treatment Plant (Alternative 1)	Connect and Purchase Water from a Regional Supply (Alternative 2)
Risk to source water quality		
Risk to treated water quality		
Ability to respond to community values		
City's carbon footprint		
Impact on schedule		
Impact on capital cost		
Impact on annual costs		

Comparison

Risk considerations for both alternatives

Green denotes lower risk/impact.

Yellow denotes medium risk/impact.

Red denotes higher risk/impact.

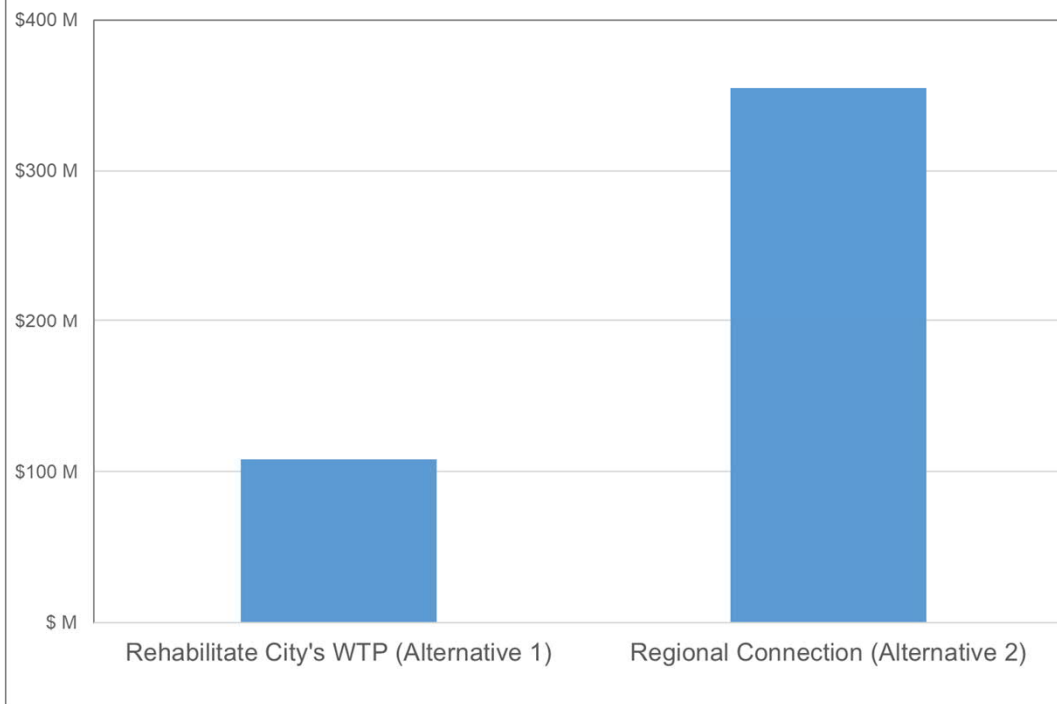
Discussions with both the state regulator (EGLE) and the regional water supplier (GLWA) are necessary to refine risks, impacts and costs.

**Water
Quality**

**Autonomy &
Community**

**Carbon
Footprint**

Estimated Capital Cost (today's dollars)



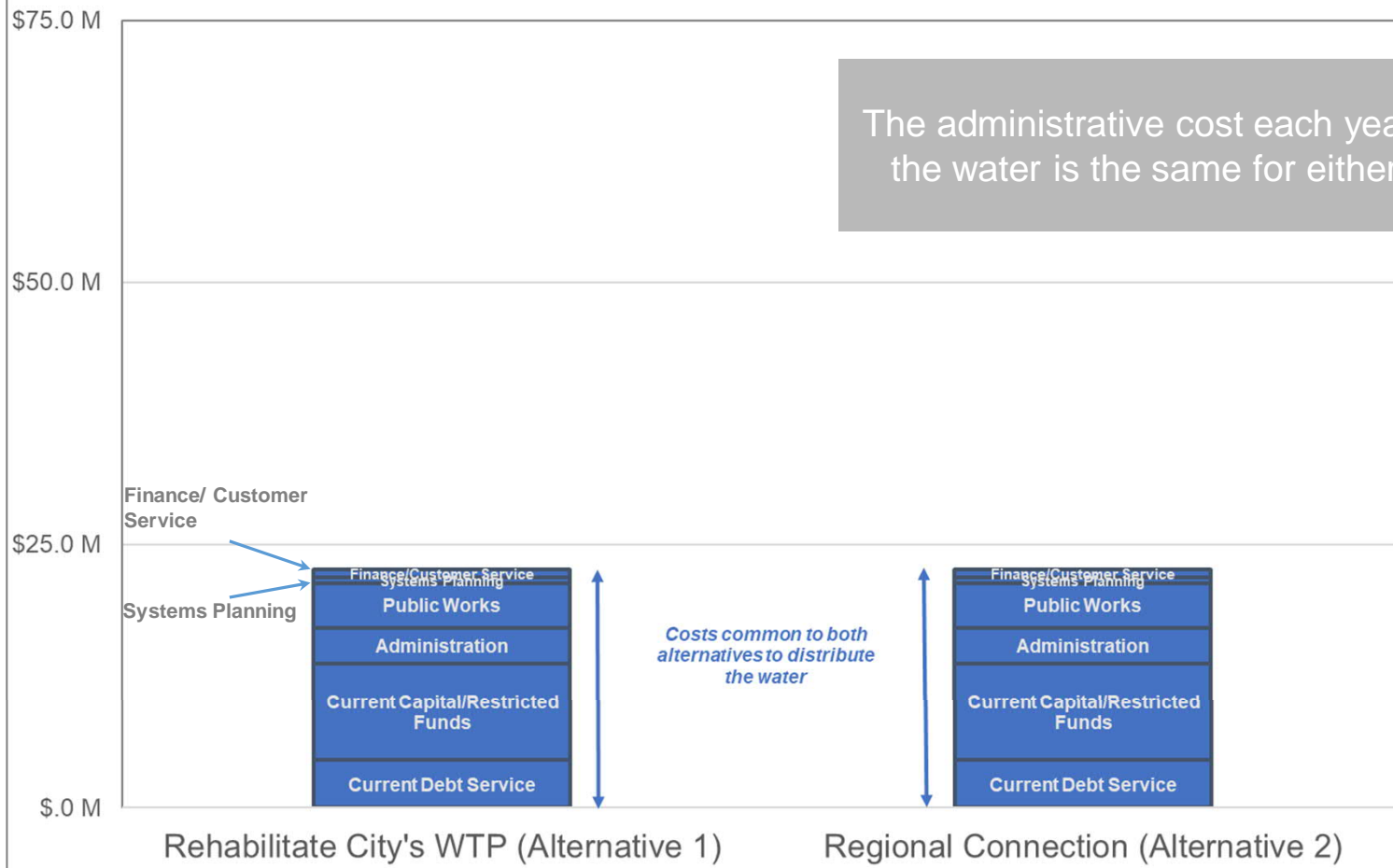
Financial Impact

Conclusions from 2015 Study

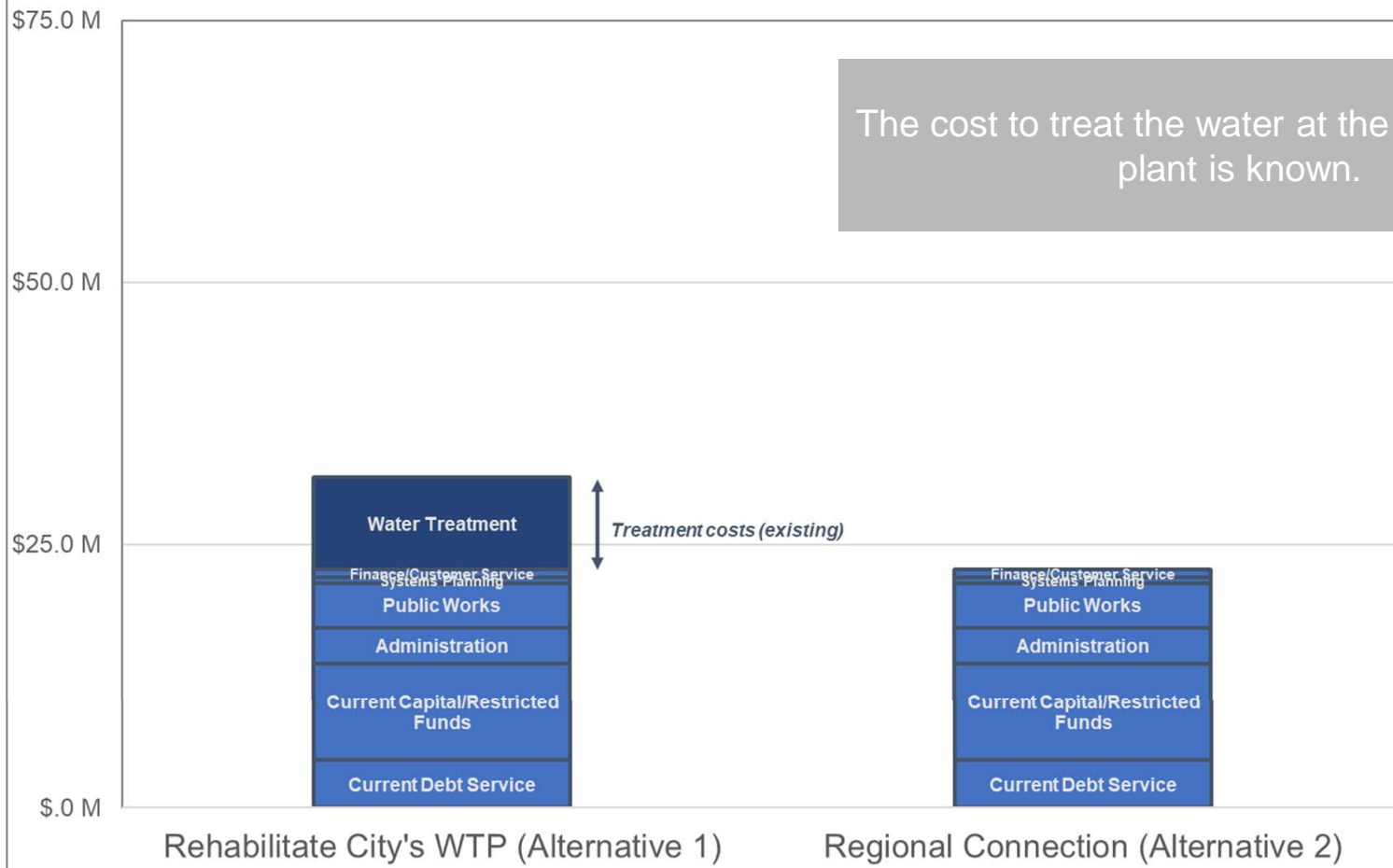
01 Rehabilitate City's Water Treatment Plant
Estimated capital cost = \$108M in today's dollars

02 Connect to regional water supply solution
Estimated capital cost = \$355M in today's dollars

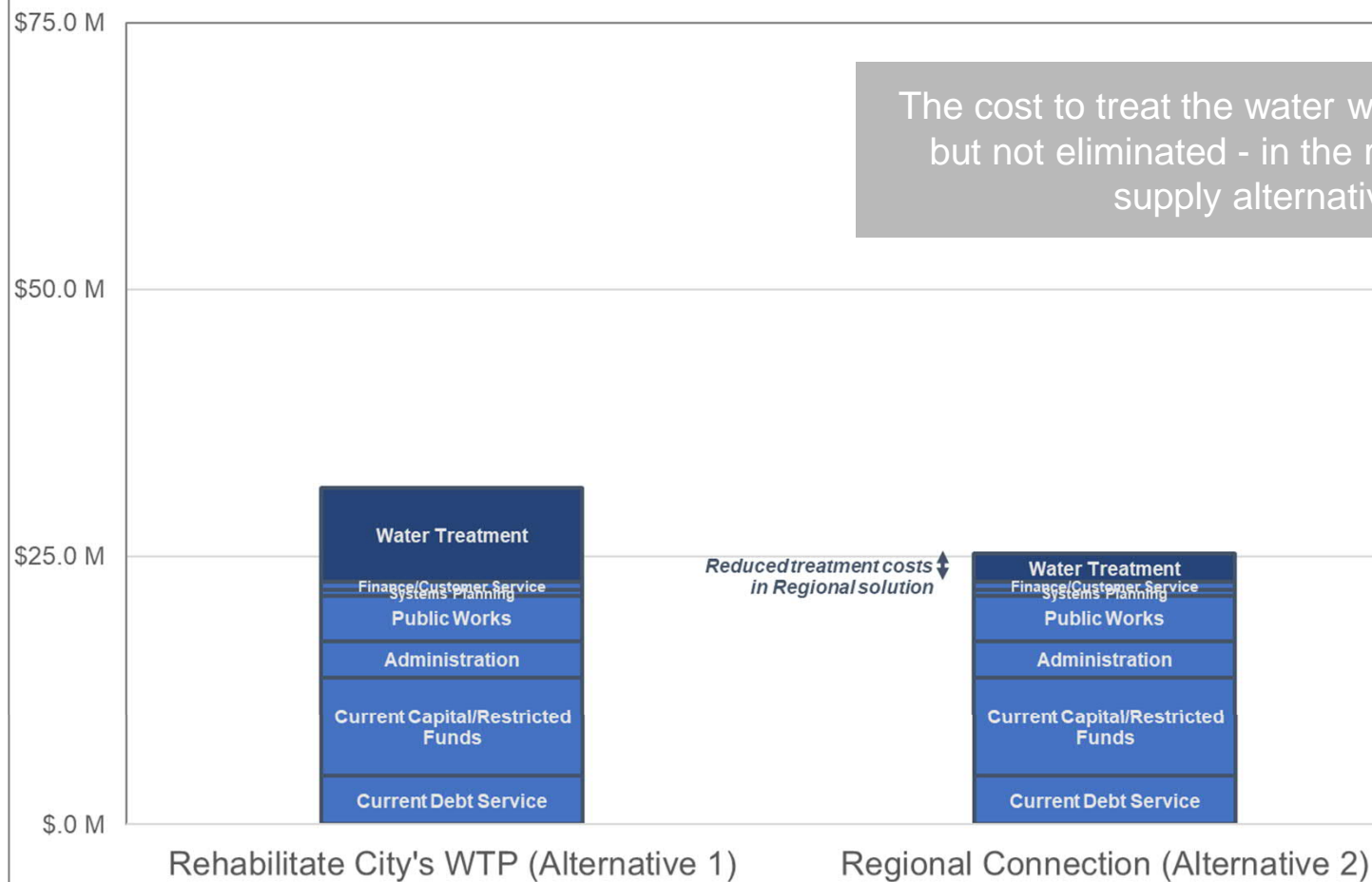
Estimated Annual Revenue Requirements (FY2022)



Estimated Annual Revenue Requirements (FY2022)

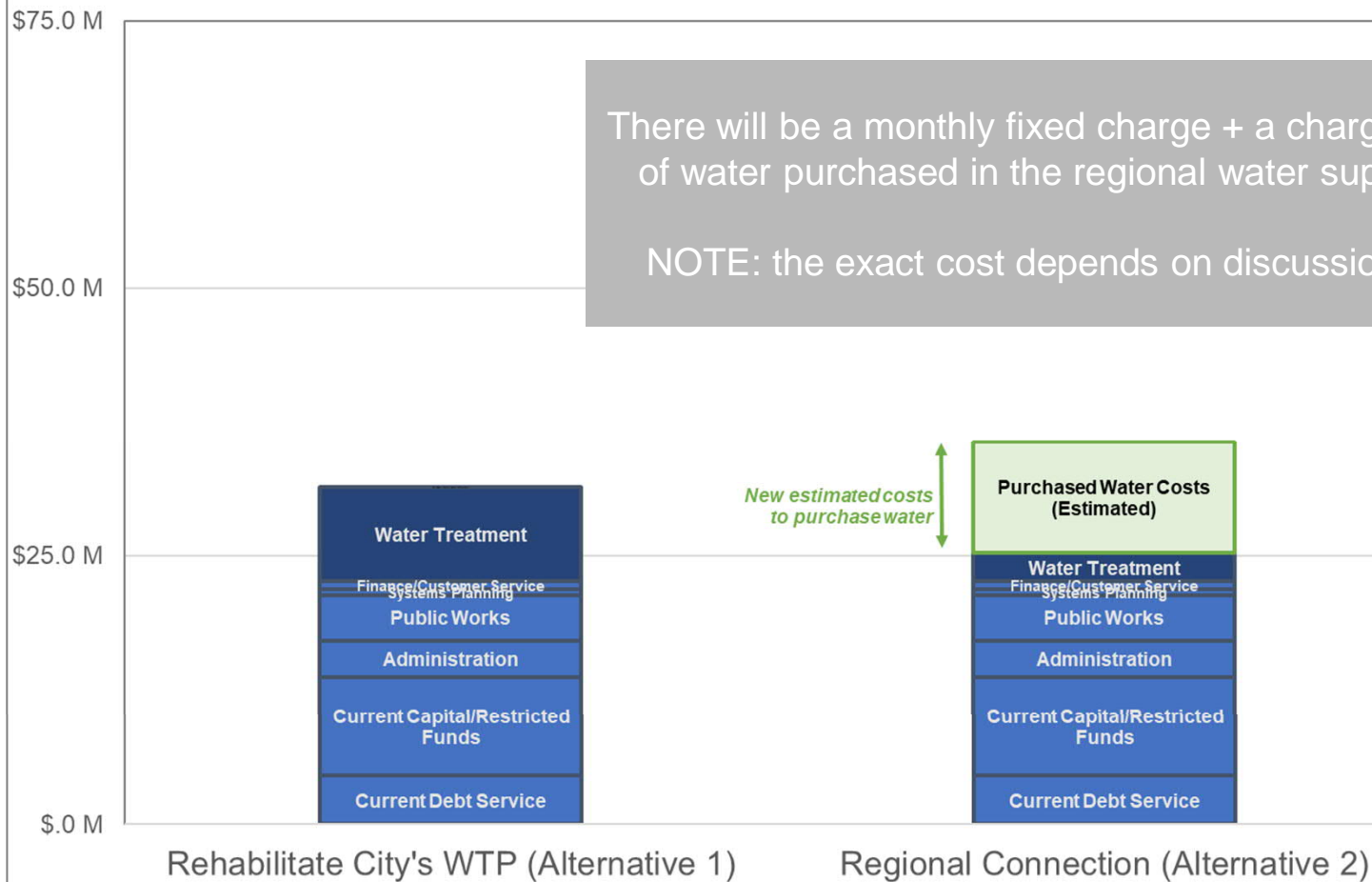


Estimated Annual Revenue Requirements (FY2022)



The cost to treat the water will be reduced – but not eliminated - in the regional water supply alternative.

Estimated Annual Revenue Requirements (FY2022)



Estimated Annual Revenue Requirements (FY2022)

\$75.0 M

The annual debt servicing cost for future improvements is estimated for both alternatives from the 2015 Study.

\$50.0 M

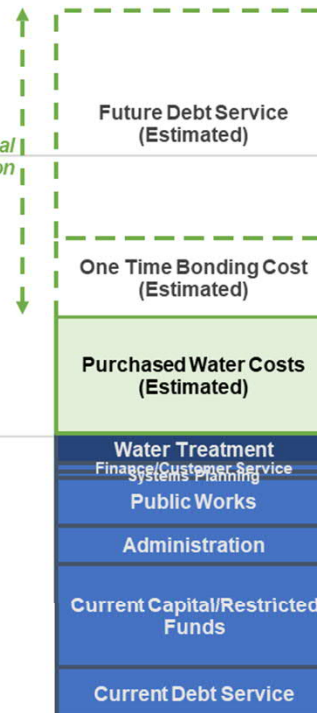
Future estimated capital costs for Regional solution

\$25.0 M

\$0.0 M



Future estimated capital costs at WTP



Rehabilitate City's WTP (Alternative 1)

Regional Connection (Alternative 2)

Estimated Annual Revenue Requirements (FY2022)

\$75.0 M

Annualized costs for future improvements are expected for both alternatives, but have not been quantified.

\$50.0 M

\$25.0 M

\$0.0 M

Finance/ Customer Service

Systems Planning

Future Capital (Unknown)
Future Debt Service (Estimated)
One Time Bonding Cost (Estimated)

Water Treatment

Finance/ Customer Service
Systems Planning

Public Works

Administration

Current Capital/Restricted Funds

Current Debt Service

Future unknown capital costs at WTP

Future unknown capital costs for Regional solution

Future Capital (Unknown)

Future Debt Service (Estimated)

One Time Bonding Cost (Estimated)

Purchased Water Costs (Estimated)

Water Treatment

Finance/ Customer Service
Systems Planning

Public Works

Administration

Current Capital/Restricted Funds

Current Debt Service

Rehabilitate City's WTP (Alternative 1)

Regional Connection (Alternative 2)

STAFF
RECOMMENDATION

Alternative
01



Staff recommend that the City proceed with conceptual design to upgrade the City's water treatment plant.

NEXT STEPS

Council decision at
future Council
meeting

Staff will present up to two
resolutions at a future Council
meeting.

Proceed with
conceptual design
of Alternative 1

The first resolution will be to
approve a contract for
conceptual design to rehabilitate
the City's Water Treatment Plant.

And simultaneous
evaluation of
Alternative 2?

The second resolution may be to
amend the contract to evaluate
simultaneously the regional
water supply solution, should the
Council decide to proceed with
that option.



DISCUSSION
