



Engineering, Operations, & Technology Committee

Asset Management Program Update

Item 6b

February 9, 2026

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Item 6b

Asset Management Program Update

Subject

Asset Management Program Update

Purpose

Provide annual update of progress on the Asset Management (AM) accomplishments and an initial overview of the AM tools being developed to refine long-term planning

Next Steps

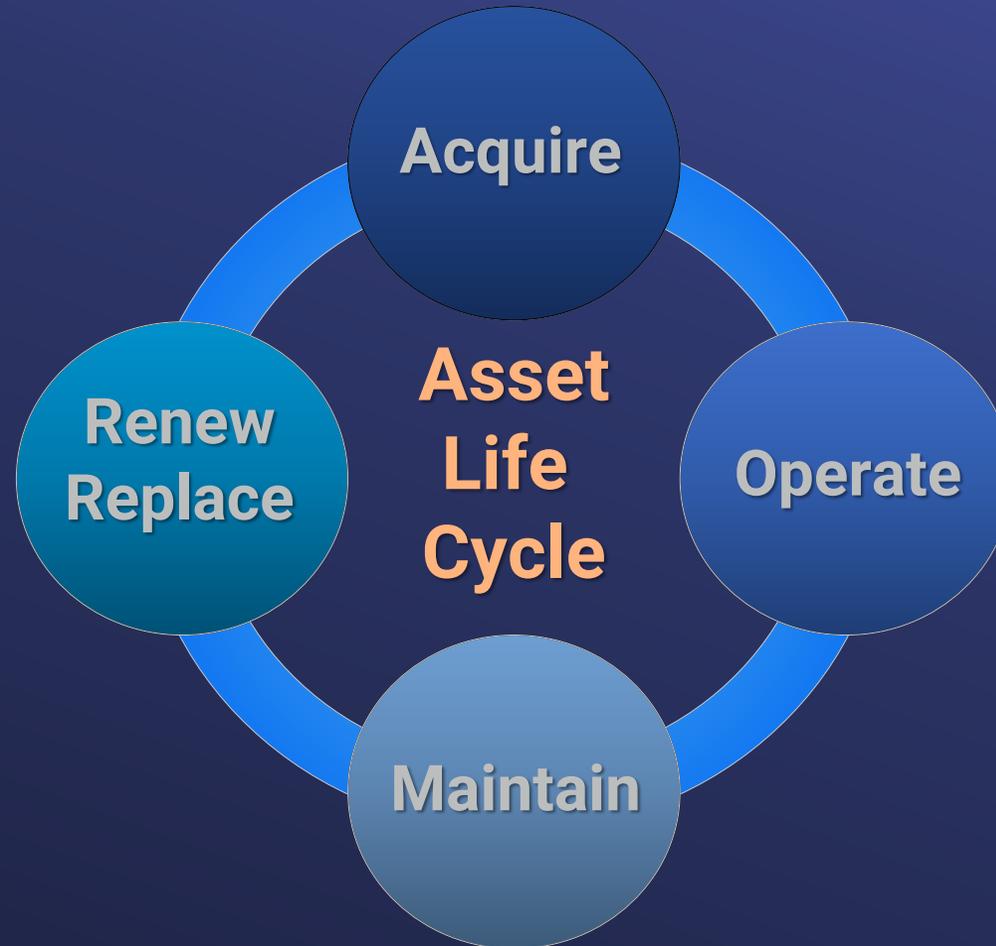
Complete international AM benchmark survey

Update the Strategic AM Plan

Continue to advance AM initiatives to close maturity gaps

Asset Management (AM)

*“The coordinated activity of an organization to
create value from its assets” –ISO 55000*

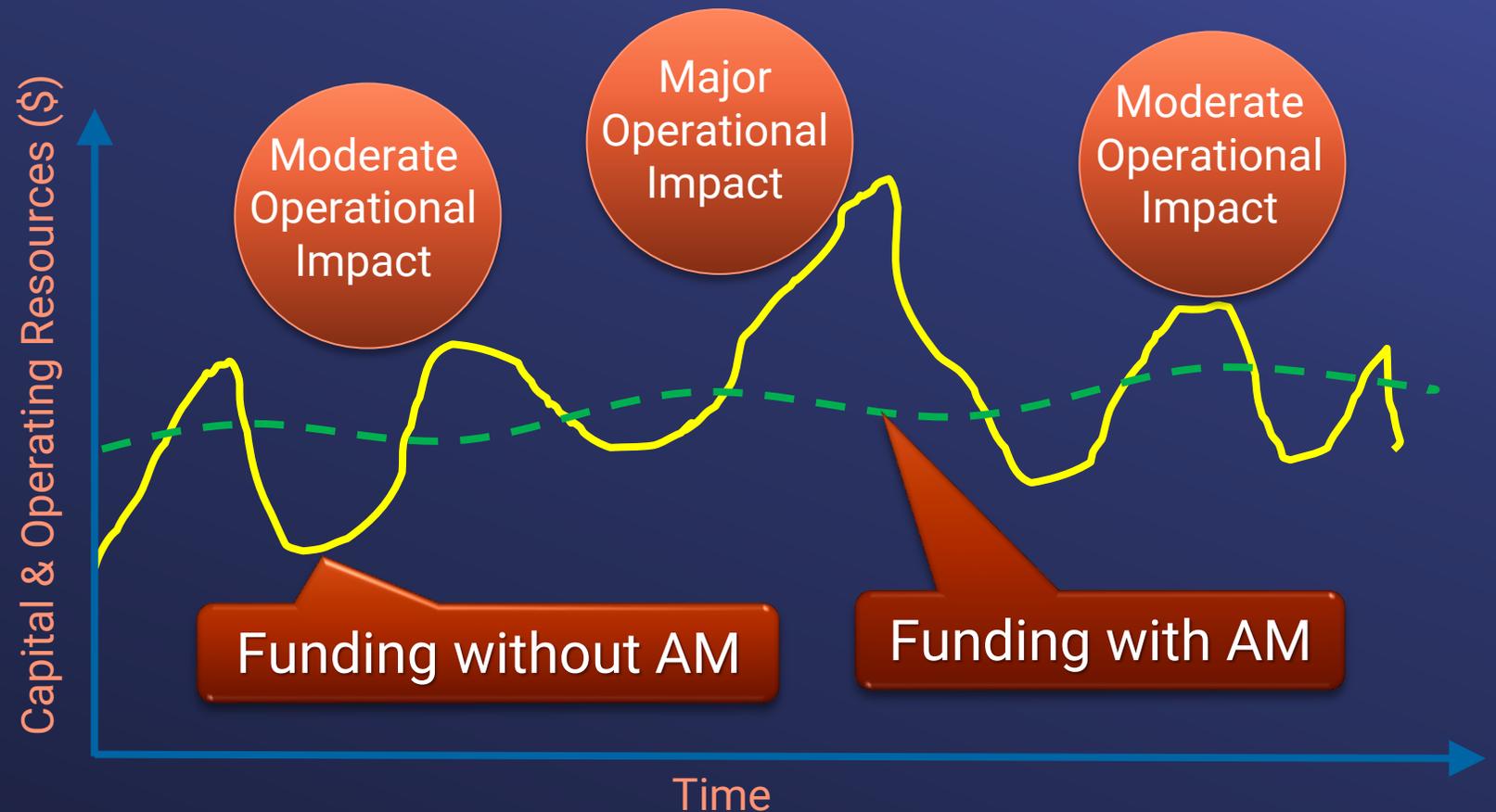


Reduces total cost of ownership

- Proactive planning minimizes operational disruptions
- Enhances generational equity for asset investments

AM Value Proposition

Transparent & defensible investments at the right time



Metropolitan's Infrastructure

\$31B

Repl. Cost New

Adjusted for
inflation only

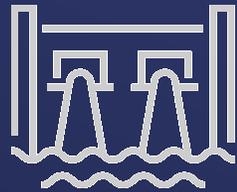
\$46B

Est. Repl. Cost

Adjusted for code
& environ. costs



5 Water Treatment
Plants



15 Hydroelectric
Facilities



8 Pumping Plants



24 Dams &
Reservoirs



G.F. Napolitano Pure Water Demo Plant



830 mi. of
Distribution Pipelines



79 mi. of Canals



218 mi. of Tunnels,
Siphons, Conduits



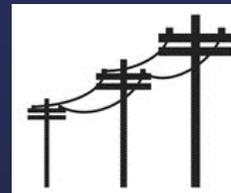
450 Chemical/Auxiliary
Storage Tanks



11,500 Water Regulating
Valves (2 in. to 21 ft dia)



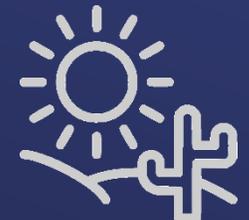
5,000 Motors
& Pumps



308 mi. of Power
Transmission Lines +
1,200 High Voltage Towers



500 Buildings, Shops,
& Other Structures



1,000 mi. of
Unpaved Road

The Challenge



- What are the core issues?
 - Balancing reliability, costs, & risks
 - Enhance R&R forecast tools

Optimal balance affordability, reliability, & risk

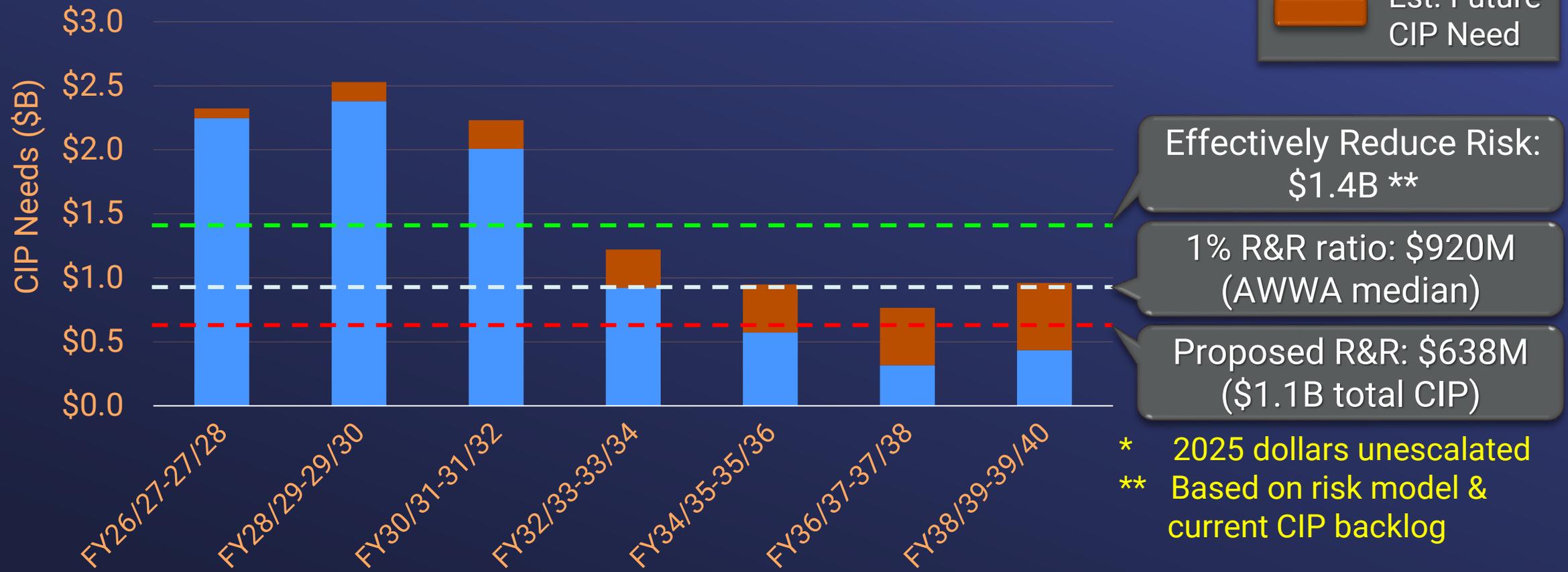


Core issue for
strategic AM
decisions

- Do the right work, at the right time, for the right reason.

CIP Trend for R&R exceed planned funding levels

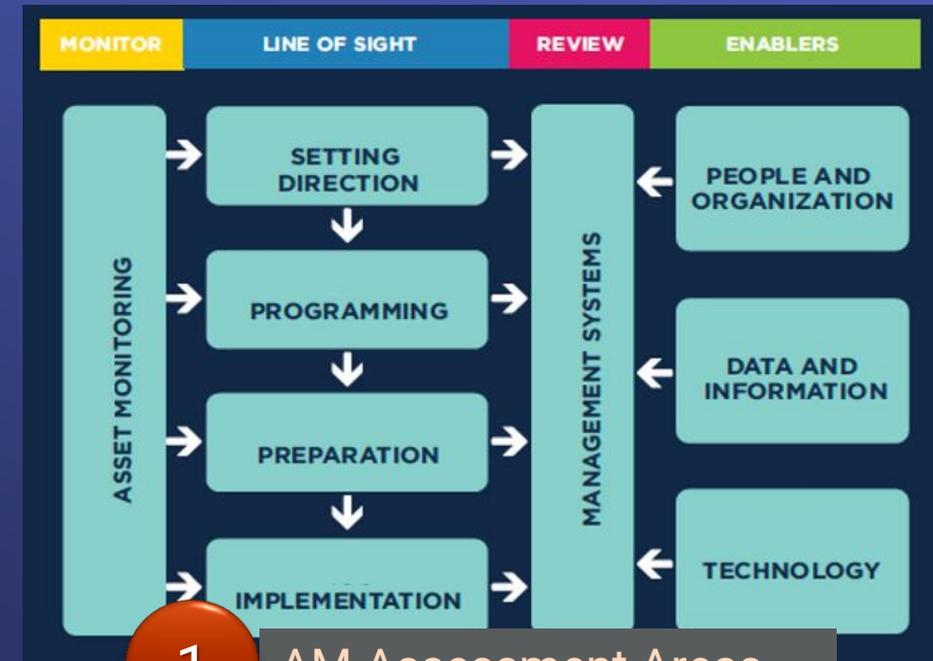
- CIP R&R* needs identified by staff
- Other CIP projects (drought, upgrades, etc.) excluded



Opportunities for enhanced AM practices

AM Maturity Assessment

- Held 9 workshops with Metropolitan staff
- Assessment Findings
 - Strong foundational AM efforts
 - Enhance proactive CIP/OE planning
 - Connect data systems
 - Close asset data gaps
 - Invest in a decision support tool
- Sharing AM knowledge with member agencies & other utilities



1 AM Assessment Areas

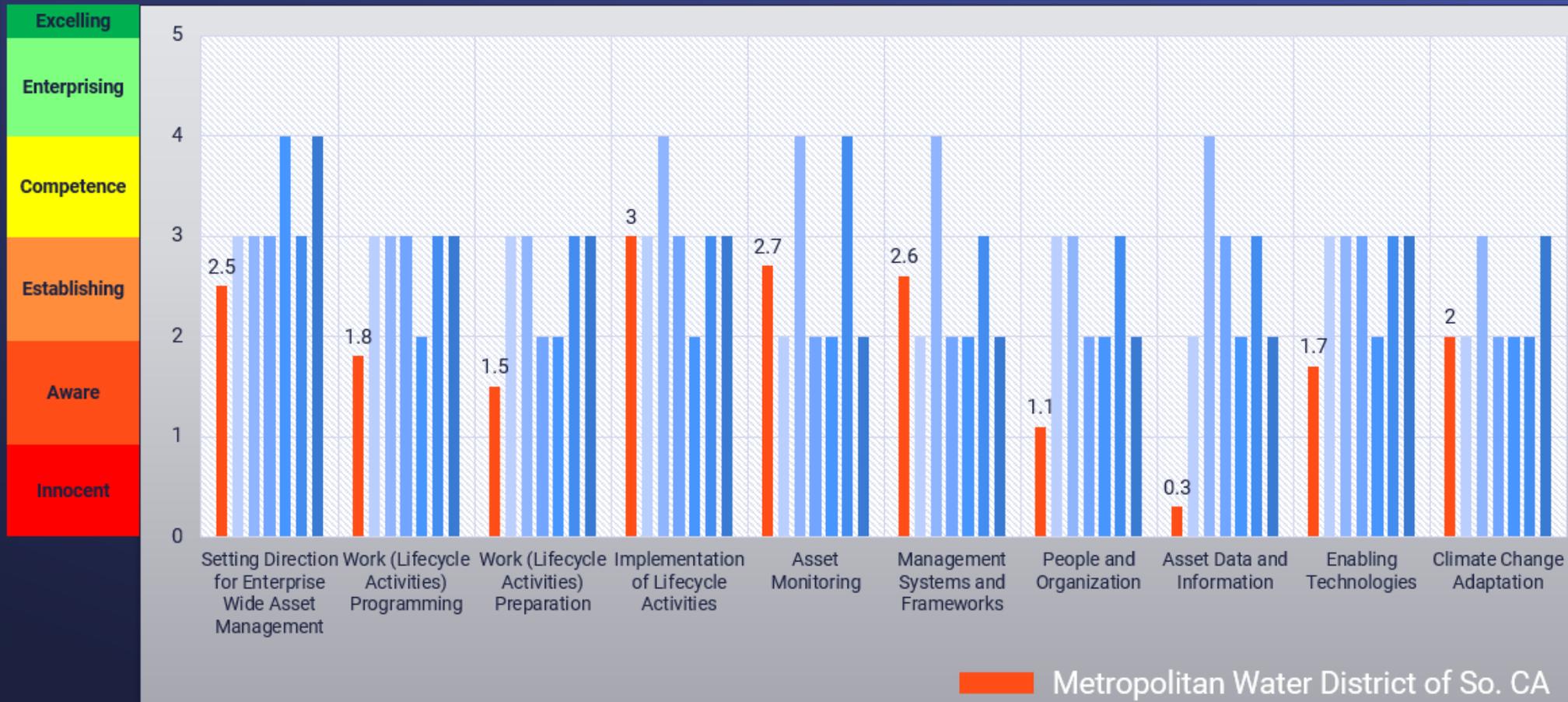


2 AM Maturity Scale

Opportunities for enhanced AM practices

Preliminary Results from AM Benchmark Survey

- International survey of water utilities to measure best-in-class AM practices
- Metropolitan consistently scored below most peer utilities in 6 of 10 categories



The Impact

- What does this mean for us?



Recent operational disruptions

- Garvey Reservoir cover
 - Reservoir taken out of service
 - Reduced operational flexibility
 - Impacts drought response actions
- Key CRA equipment
 - Reduced CRA capacity
 - Extensive repairs or refurbishments needed for 8-pump reliability
- Weymouth Plant gas line
 - Multiple outages over last 5 years
 - Interrupted coating shop production



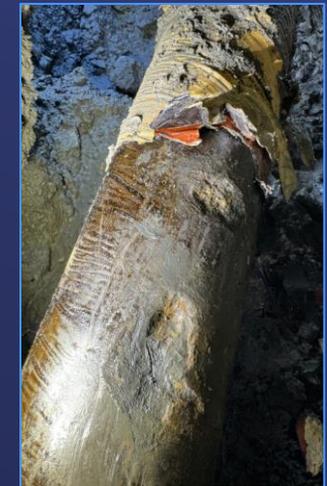
Hinds PP Transformer Bushing (2025)



Garvey Reservoir Cover (2025)



Eagle Mtn PP Unit 9 Pump (2024)



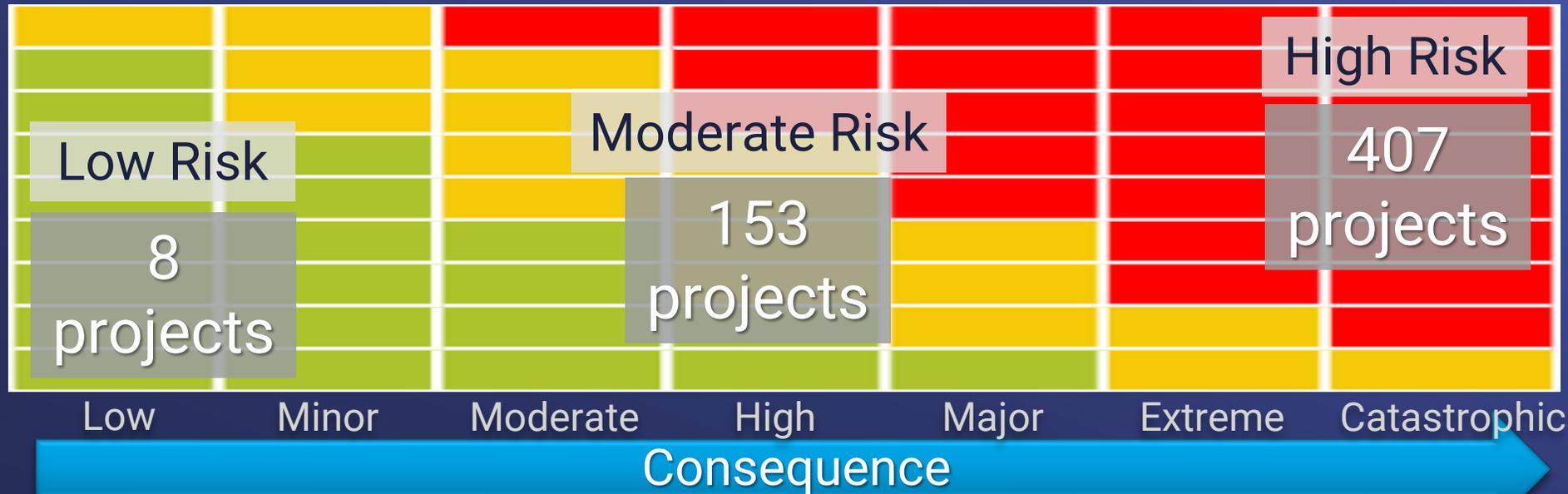
Weymouth TP Gas Line Repl. (2023)

CIP Risk Heatmap

Data collected from +560 R&R capital project proposals



Once in 1 yr
Once in 1,000 yrs



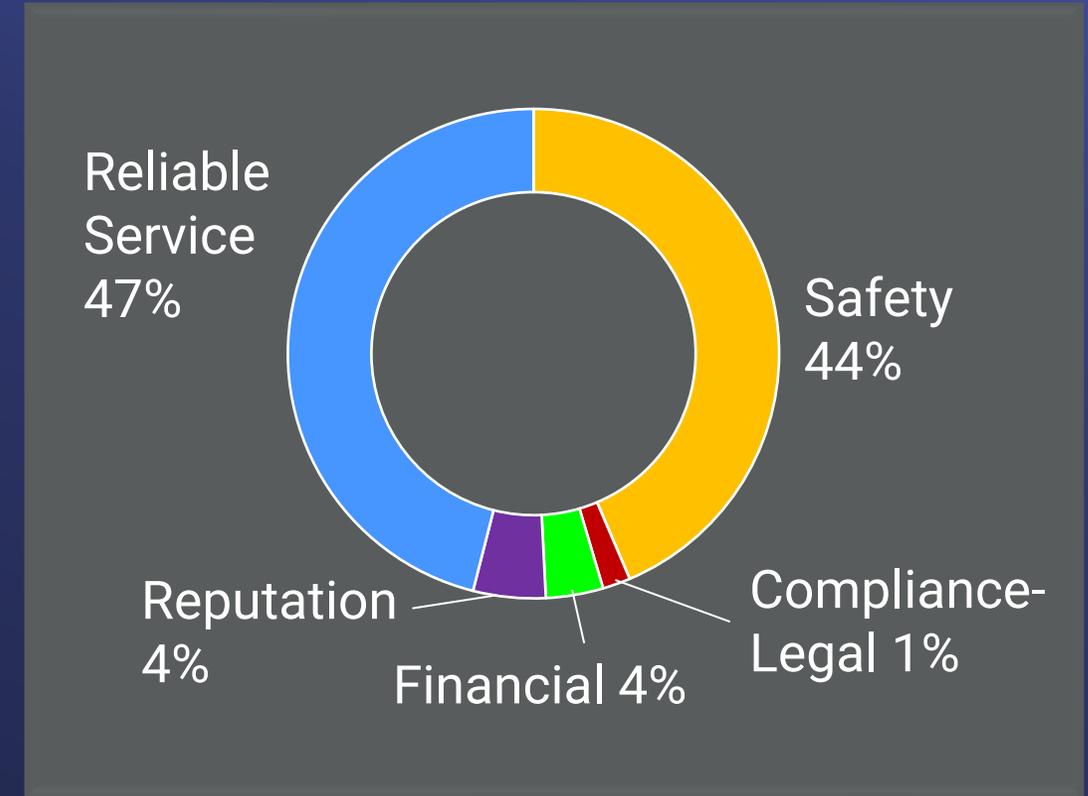
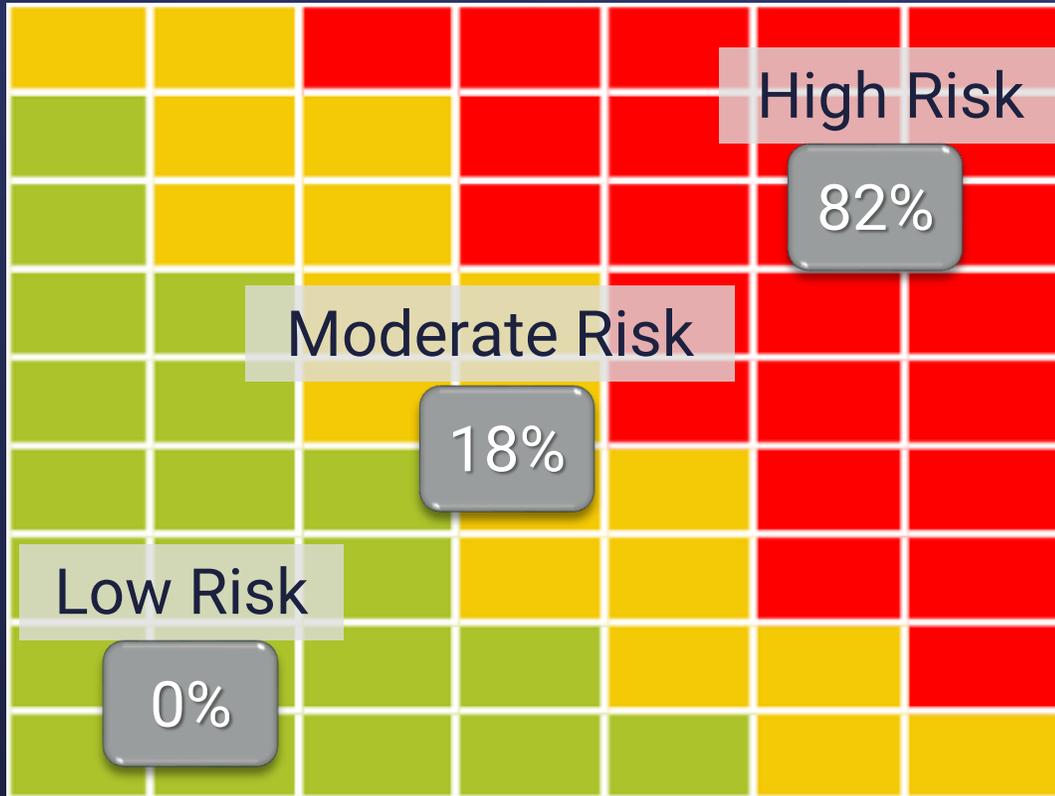
- Safety
- Compliance & Legal
- Reputation
- Financial Impact
- Reliable Service

	Low	Minor	Moderate	High	Major	Extreme	Catastrophic
Safety	████████	████████	████████	████████	████████	████████	████████
Compliance & Legal	████████	████████	████████	████████	████████	████████	████████
Reputation	████████	████████	████████	████████	████████	████████	████████
Financial Impact	████████	████████	████████	████████	████████	████████	████████
Reliable Service	████████	████████	████████	████████	████████	████████	████████

OPS: Cascading damage. Reduced capacity
WQ: Widespread changes needed to meet drinking water standards

Risk exposure for Desert projects collected this biennium

- High risk is undesirable, mitigation is high priority
- Reliable service & safety are primary drivers



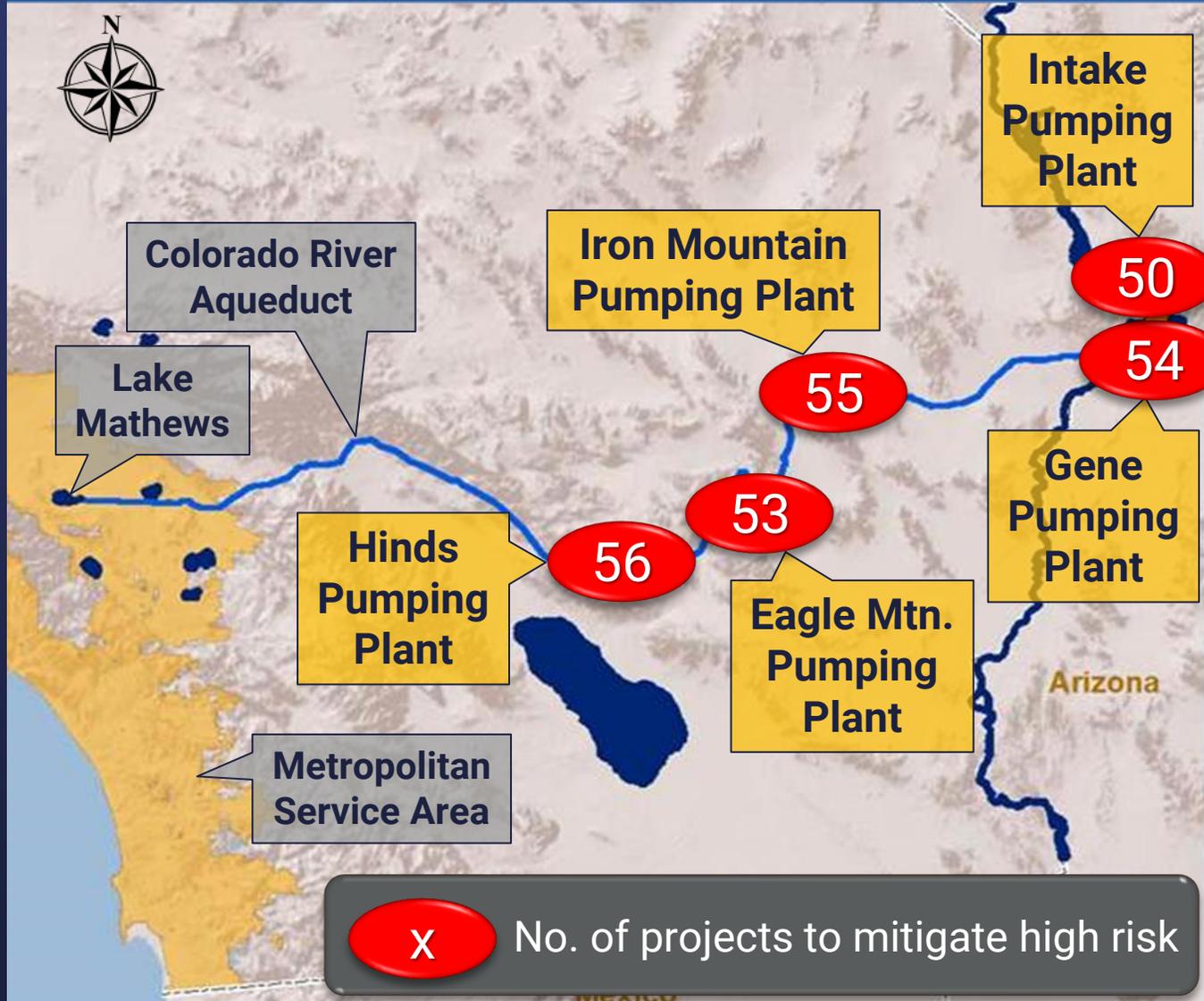
1

Risk exposure for known Desert projects

2

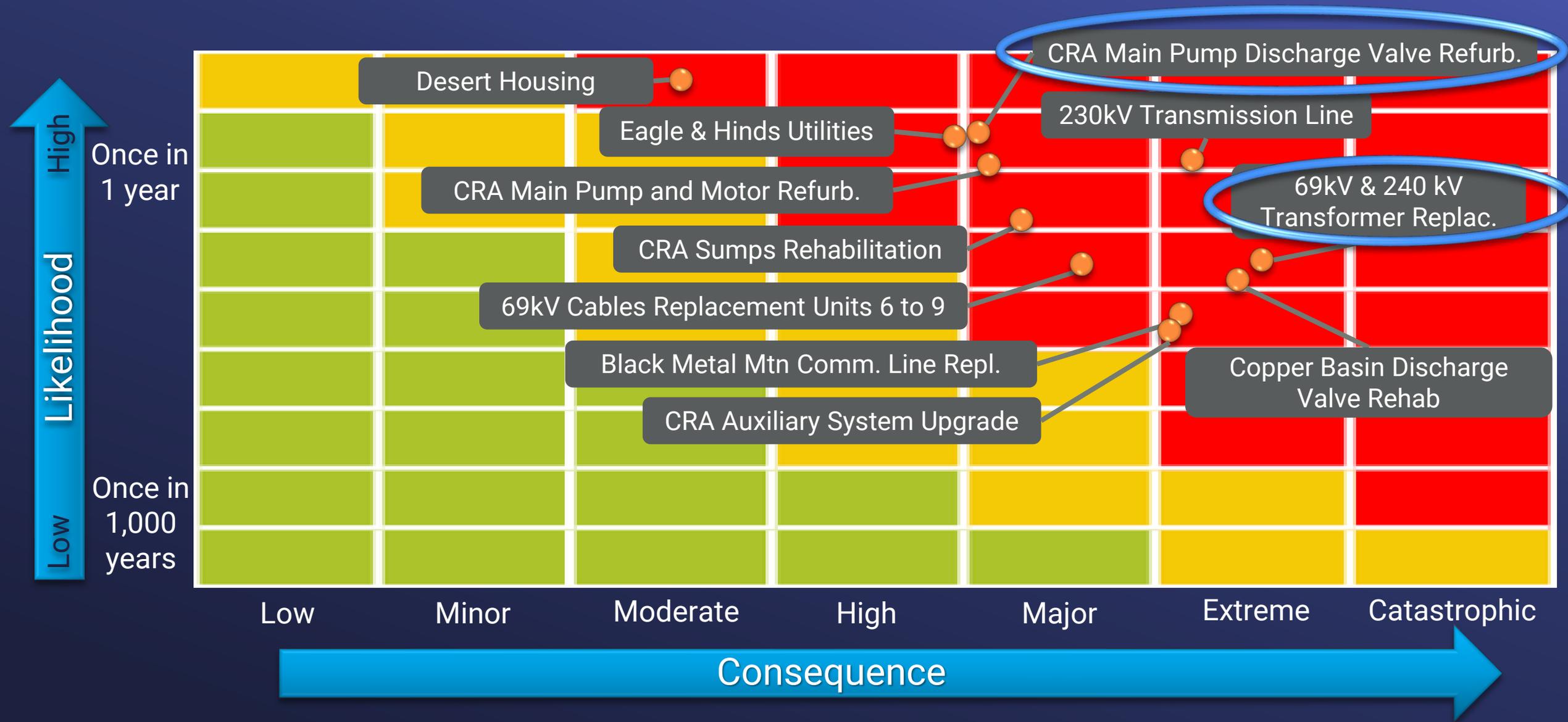
Risk drivers for known Desert projects

50+ projects addressing high risk at each Pumping Plant



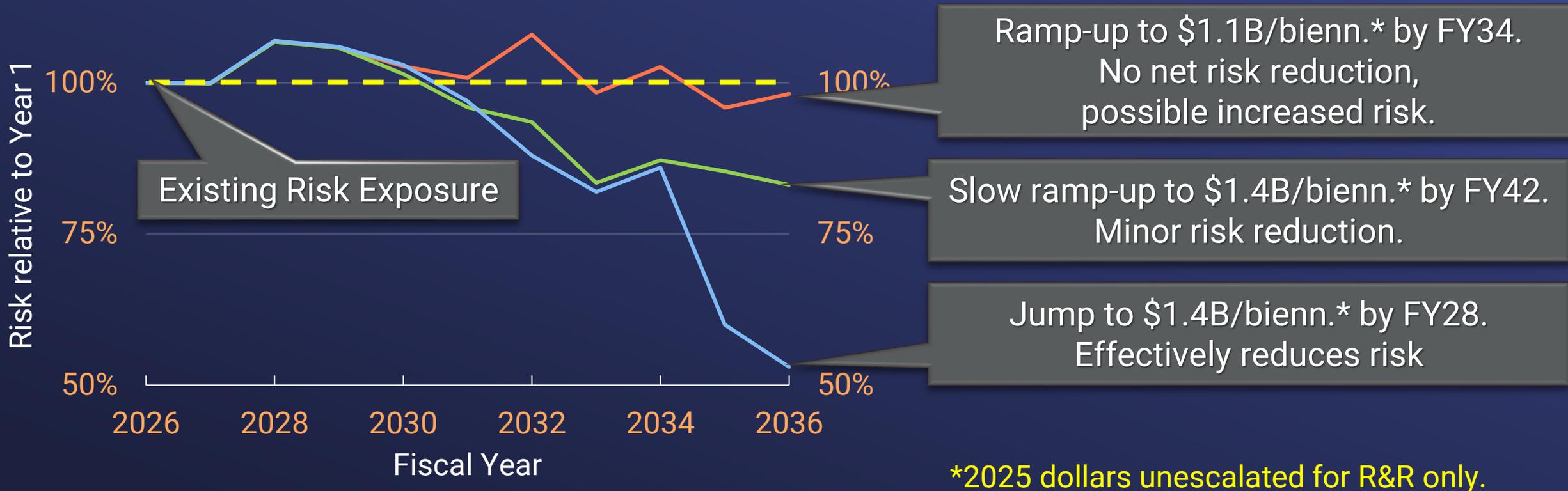
- The CRA is a high criticality “facility”
- Key high criticality systems
 - Main pump/motor units
 - Transformers
 - 230kV transmission system
 - Desert utilities
 - Desert housing
 - Physical security

Sample capital projects aimed at mitigating high risk in the Desert



Capital R&R investments should keep up with growing risk backlog

- Based on Metropolitan's Risk Optimization Model
- Considers both existing risk & potential future risks
- Low capital investments will not result in overall risk reduction





Key to the Solution

- What can we do about it?

Summary of Various Perspectives

- All signs point to an increase in capital investments to mitigate risk

Proactive Risk Mitigation

Effectively
reduce risk

\$1.4B
per
bienn.

Align with
AWWA
1% R&R ratio
(median)

\$0.92B
per
bienn.

Align with
Metropolitan's
1.1% R&R ratio

\$1.04B
per
bienn.

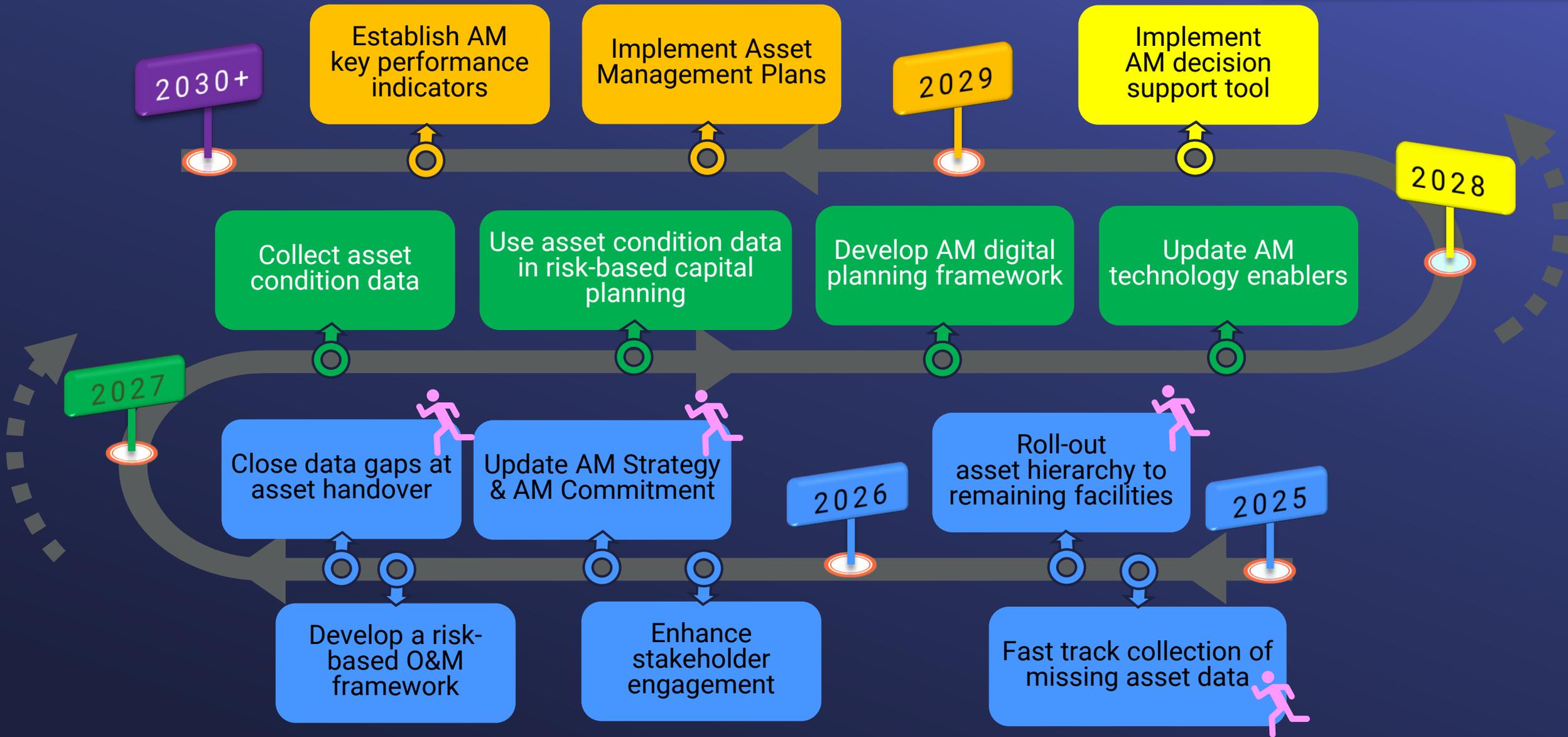
Effectively
manage CIP
backlog &
trends

~ \$1.4B
per
bienn.

Roadmap to enhanced AM maturity by 2030



Initiative in-progress



The Results



- What happens after that?

Comprehensive AM excellence by 2030

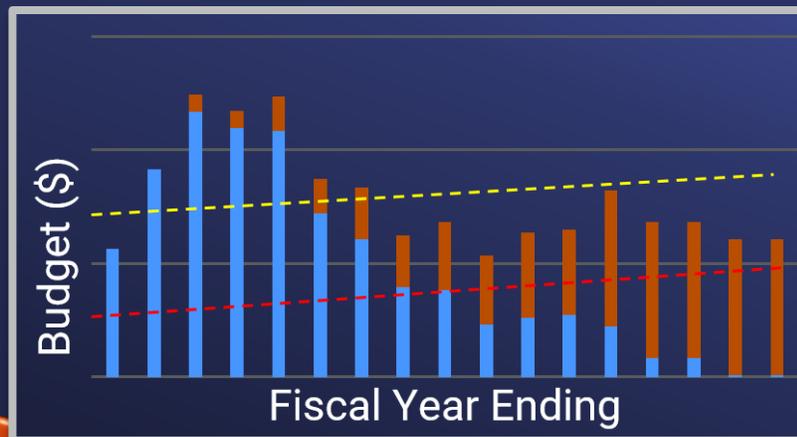
- Provide data-backed condition, risk, and long-term funding forecasts
- Optimize efforts to proactively maintain critical assets



	Low Criticality	Moderate Criticality	High Criticality
Very Poor	\$	\$\$\$	\$
Poor	\$\$	\$\$\$	\$\$\$
Good	-	\$	\$\$

1 What is the condition?

2 What is the risk?



3 How much do we need to spend?

Key Takeaways & Next Steps



Elevated risk due to deferring R&R needs

- Key takeaways
 - Benchmarks & analytical model suggest that Metropolitan is underinvesting in R&R
 - Consider re-aligning 10-yr financial plan for R&R to keep up with reliability needs
- Next steps
 - Develop strategy to ramp-up capital investments
 - Update our Strategic AM Plan
 - Enhance risk-informed asset investment planning

