

Hazen

Preparing for the Unexpected

Scenario Planning
and Financial Tools
for Maintaining
Resiliency

November 12, 2020



Today's Theme: Three Main Pillars of Financial Resiliency

Utility Financial Health & Resiliency



**Scenario Planning for
Alternative Futures**



**Financial Tools for
Risk Management**



**Financial Management
Policies Aligned with Best
Practices**

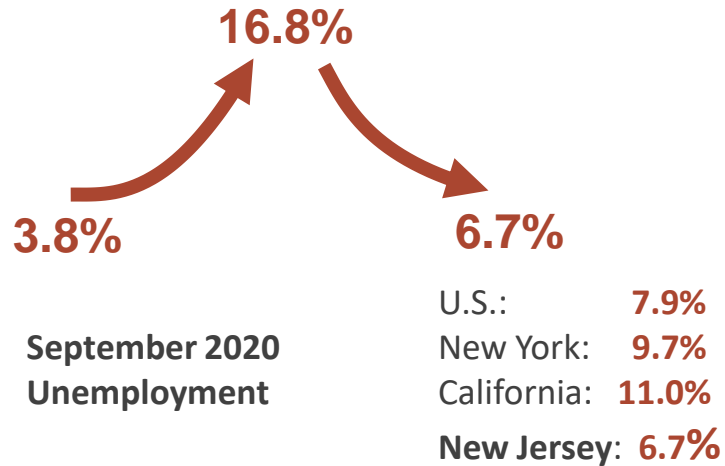
Drivers of Financial Uncertainty



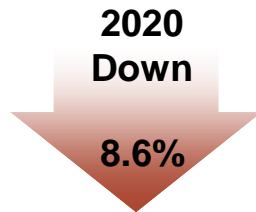
When will stability return?

Current Conditions of New Jersey Economy (COVID-19)

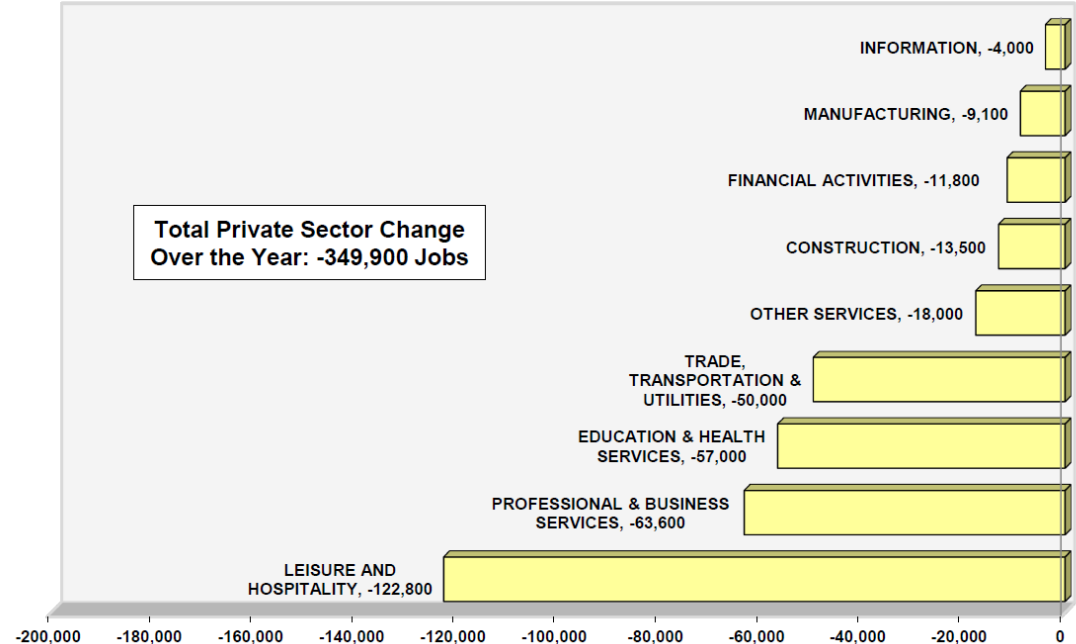
The New Jersey economy has been severely impacted



• Projected State Employment



New Jersey Private Sector Employment Change by Industry
August 2019 - August 2020



S&P Global Ratings lowered its rating for the state from 'A-' to "BBB+," with a stable rating outlook. A credit downgrade can increase the state's borrowing costs.

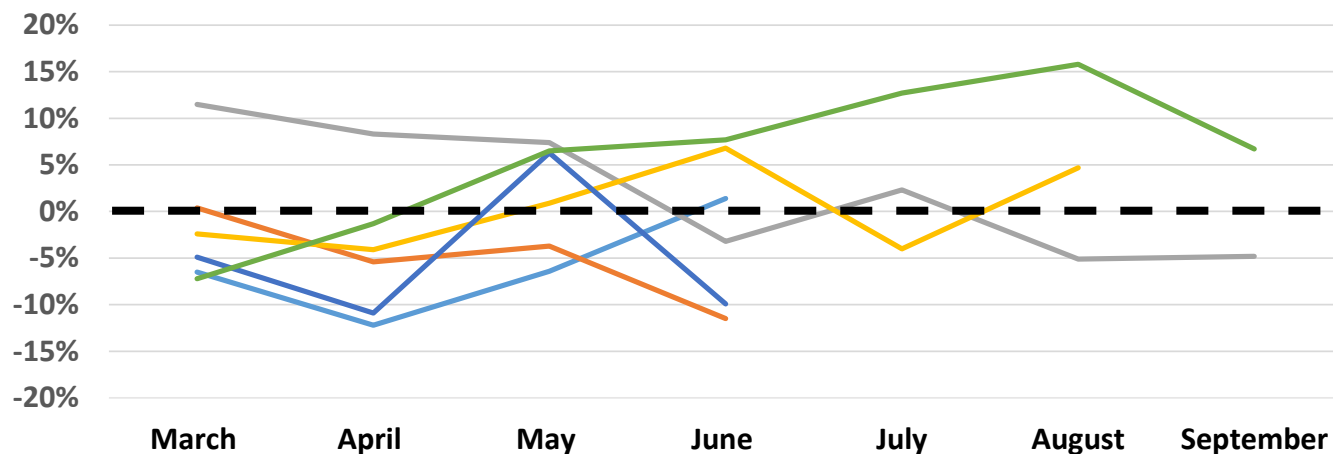
Impacts to U.S. Water and Wastewater Utilities

Financial impacts have varied greatly across the U.S. depending on:

- Customer base composition (residential versus non-residential)
- Service area demographics (payment delays and defaults)
- Extent and duration of government restrictions (business shutdowns)
- Climate of service area (dry and hot regions versus cooler and wet regions)

Limited data on US utilities indicate moderate to severe impacts

2020 change in water pumpage or consumption versus 3-year average



SOURCES:

– Duke University Nicholas
Institute, August 2020

– Data provided by utilities

Continued Financial Risks to Utility Finances



Depressed Commercial
Sector Revenues



Housing Starts



Bill Payment Defaults



Worsened Affordability



Capital Financing Challenges

Utility Financial Management Issues



- Capital and operational reserve sufficient?
- Mix of PAYGO and debt financing of capital projects appropriate?
- Restructure current debt?
- Current rate structure appropriate?
- Will rates remain affordable?

Initiatives to address risk issues to be discussed in the following presentations



Scenario Planning



Financial Modeling



Optimizing Financing Strategies

Scenario Planning for Alternative Futures

Scenario Planning Basics

*Scenario Planning is NOT about ENVISIONING
what we WANT to happen in the future*

*It is NOT about PREDICTING
what will LIKELY happen in the future*

*Scenario Planning IS about BEING PREPARED
for whatever happens in the future*

What is Keeping You Up at Night?



The Scenario Planning Process

**Develop
the Core
Question**



**Identify Key
Uncertainties**



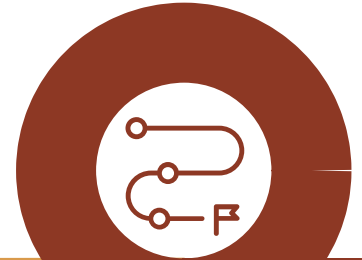
**Create the
Scenarios
Matrix**



**Explore
Future
Conditions**



**Prioritize
Adaptive
Strategies**



Develop the Core Question



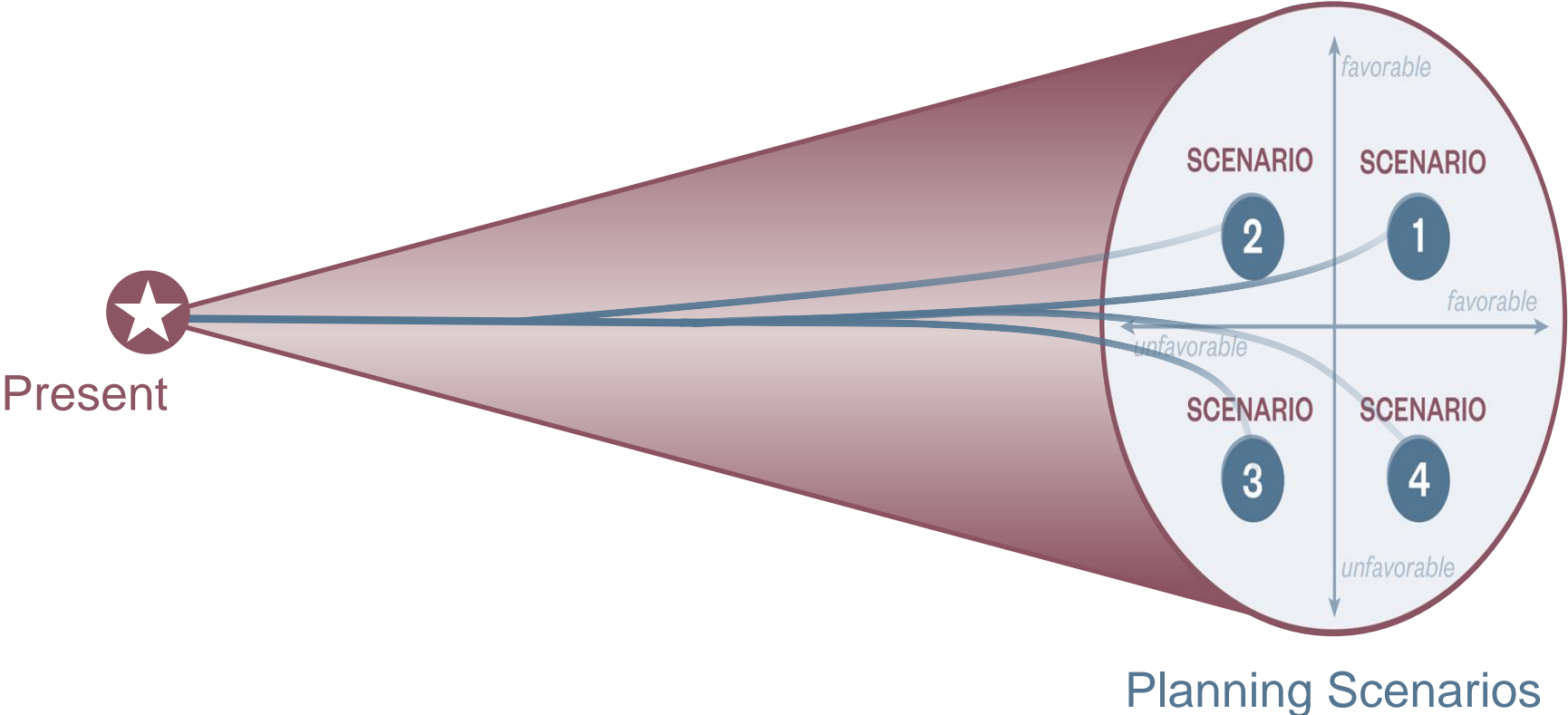
“Given financial uncertainty brought on by the global pandemic, how will I maintain my current level of service and fortify my financial position?”

Explore Future Conditions



- *If I had a crystal ball, what would I want to know about each of the planning futures?*
- *How do the futures differ from each other?*
- *What actions would I take in each future?*

The Cone of Uncertainty



The Scenario Planning Process

Develop
the Core
Question



Identify Key
Uncertainties



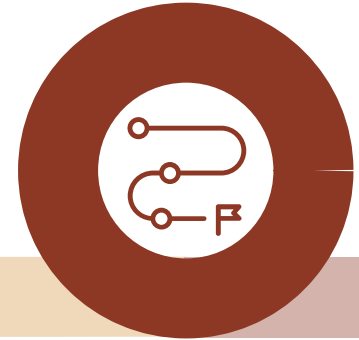
Create the
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Prioritize
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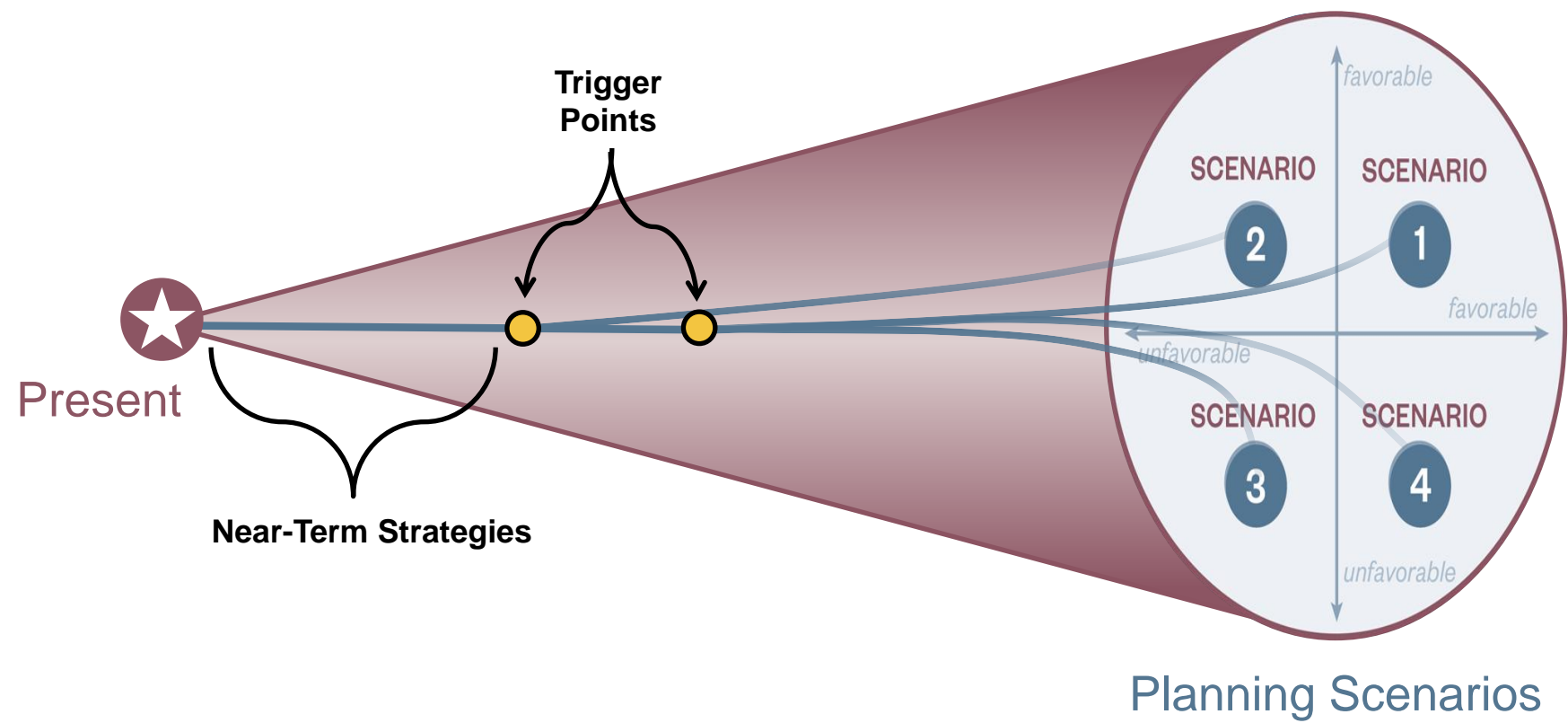


Prioritize Adaptive Strategies



	Reprioritize CIP	Issue Bonds in 2021	Restructure Workforce	Increase Cash Reserves	Defer Maintenance
1 Rapid Recovery	✓	✓	✗	✗	✗
2 Uneven Uneasiness	✓	✗	✗	✓	✓
3 Dismal Days	✓	✓	✓	✓	✓
4 Slow and Steady	✓	✓	✓	✓	✗

The Cone of Uncertainty



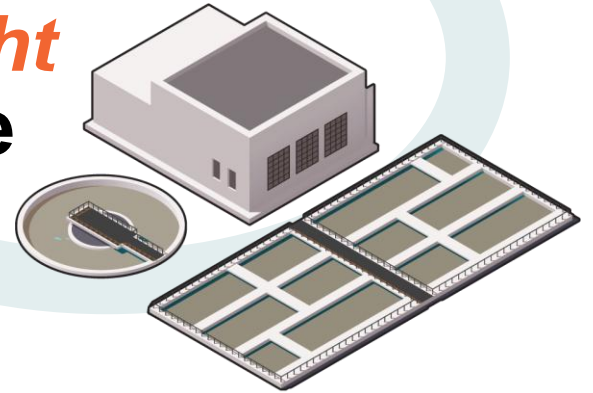
Tools for Financial Risk Management

How Can Tools Help Minimize Financial Risks?

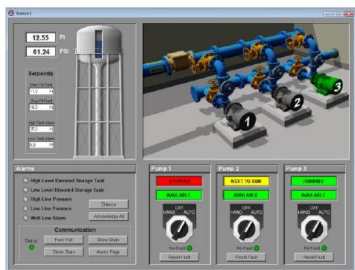


**Build the
Right
thing**

**Build at the
Right
time**



Unlocking Power of Existing Data



1 Existing business data

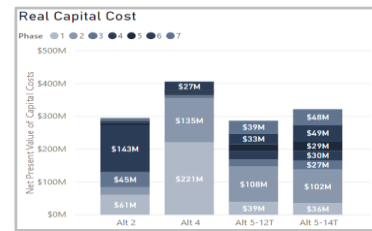
2 Imported and organized into data model



Power BI

3 User interface to evaluate and understand impacts of planning variables

4



Visualize complex data clearly

\$20M

NPV Savings with Expanded Schedule

Link between process and financial planning

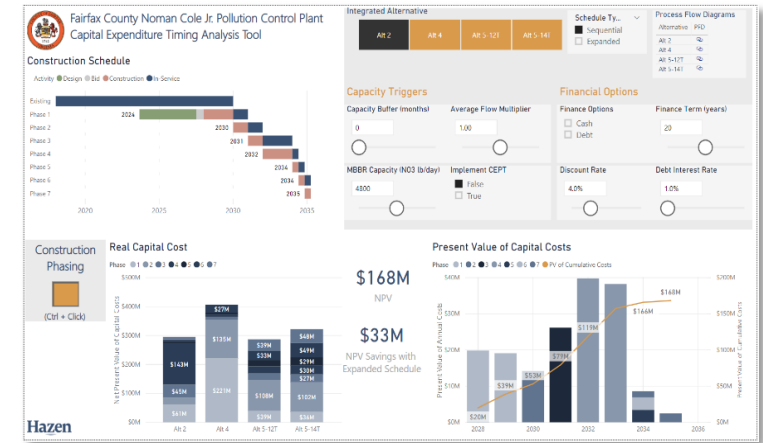
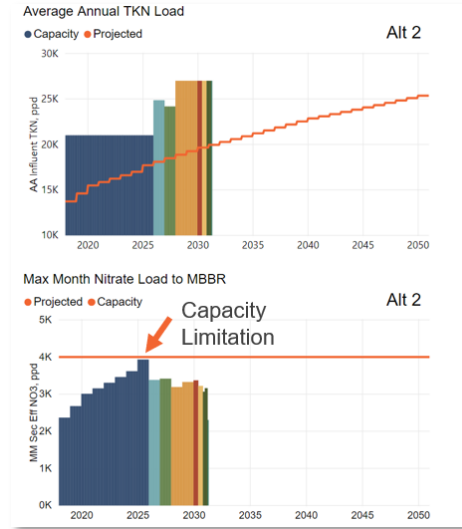
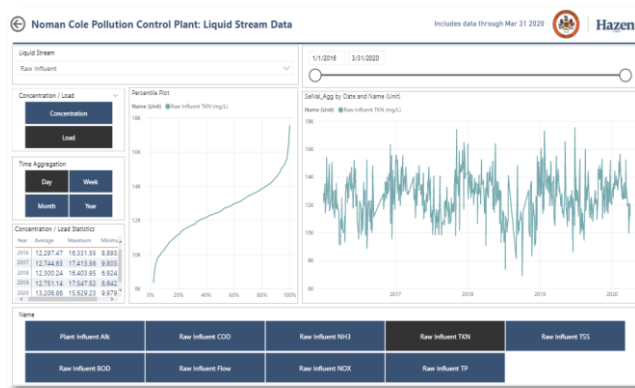
Debt Interest Rate

3.5%

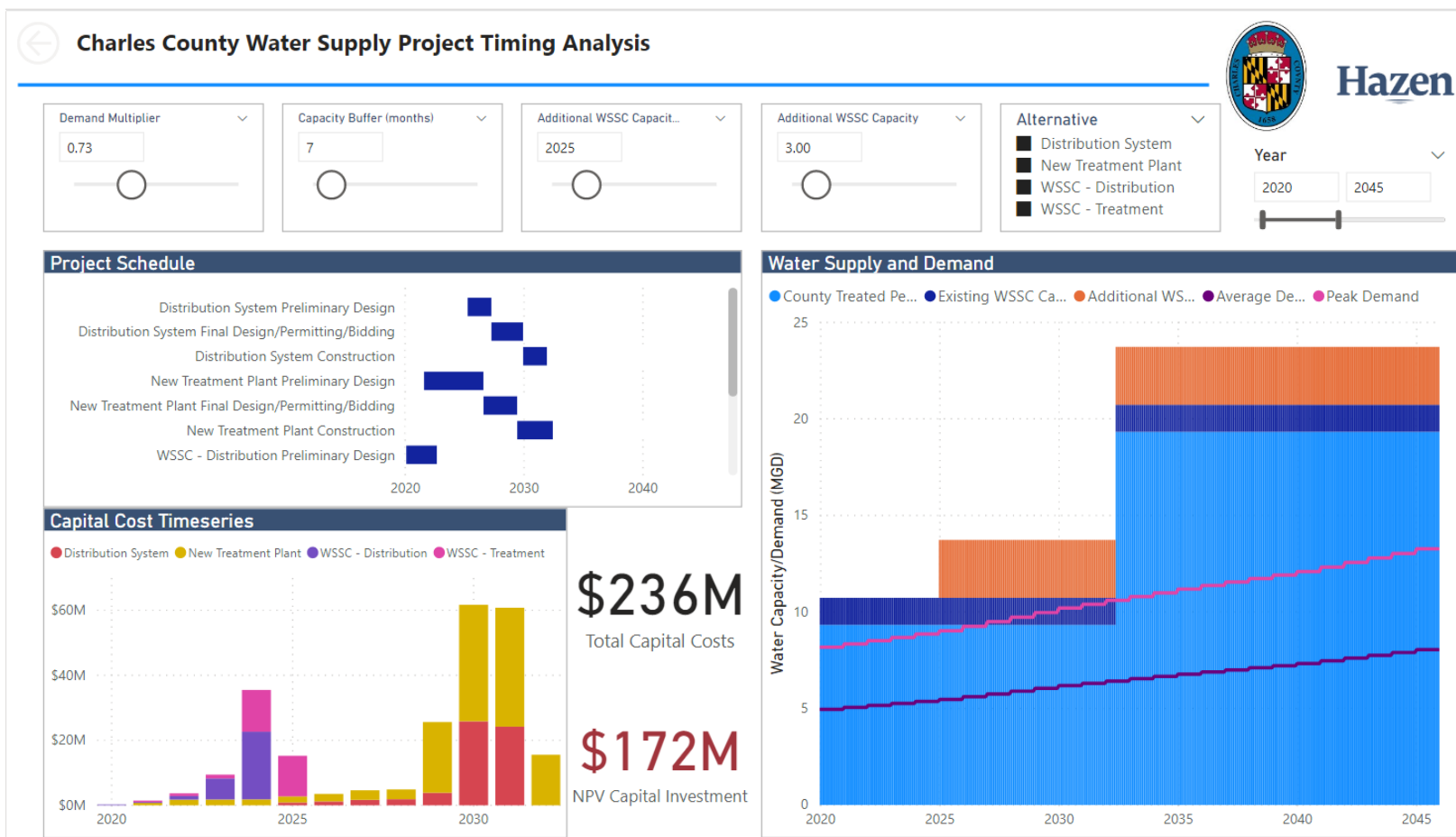
Easily updated to changing conditions

Tools Can Link Water/Wastewater Characteristics to Capacity Analysis and Inform Capital Investment Timing

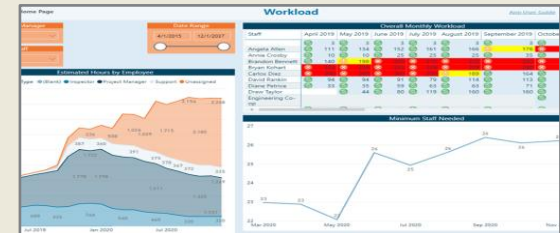
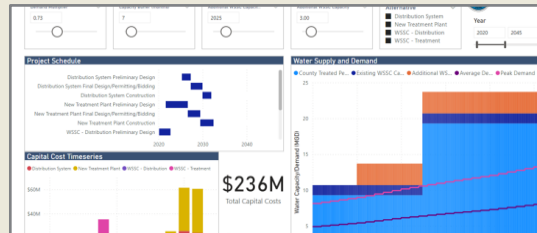
1 Raw flows and loads → 2 Process evaluation → 3 Impacts to capital investment



Illustrative Dashboard



Visualization Tools Provide a Flexible Platform to Answer Questions with Data



Does my current CIP accurately reflect the actual project implementation schedule and budget?

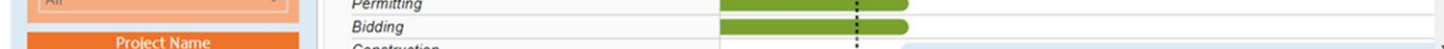
How will my capital needs change if I experience lower than anticipated growth?

Do I have the requisite staff to execute my plan?

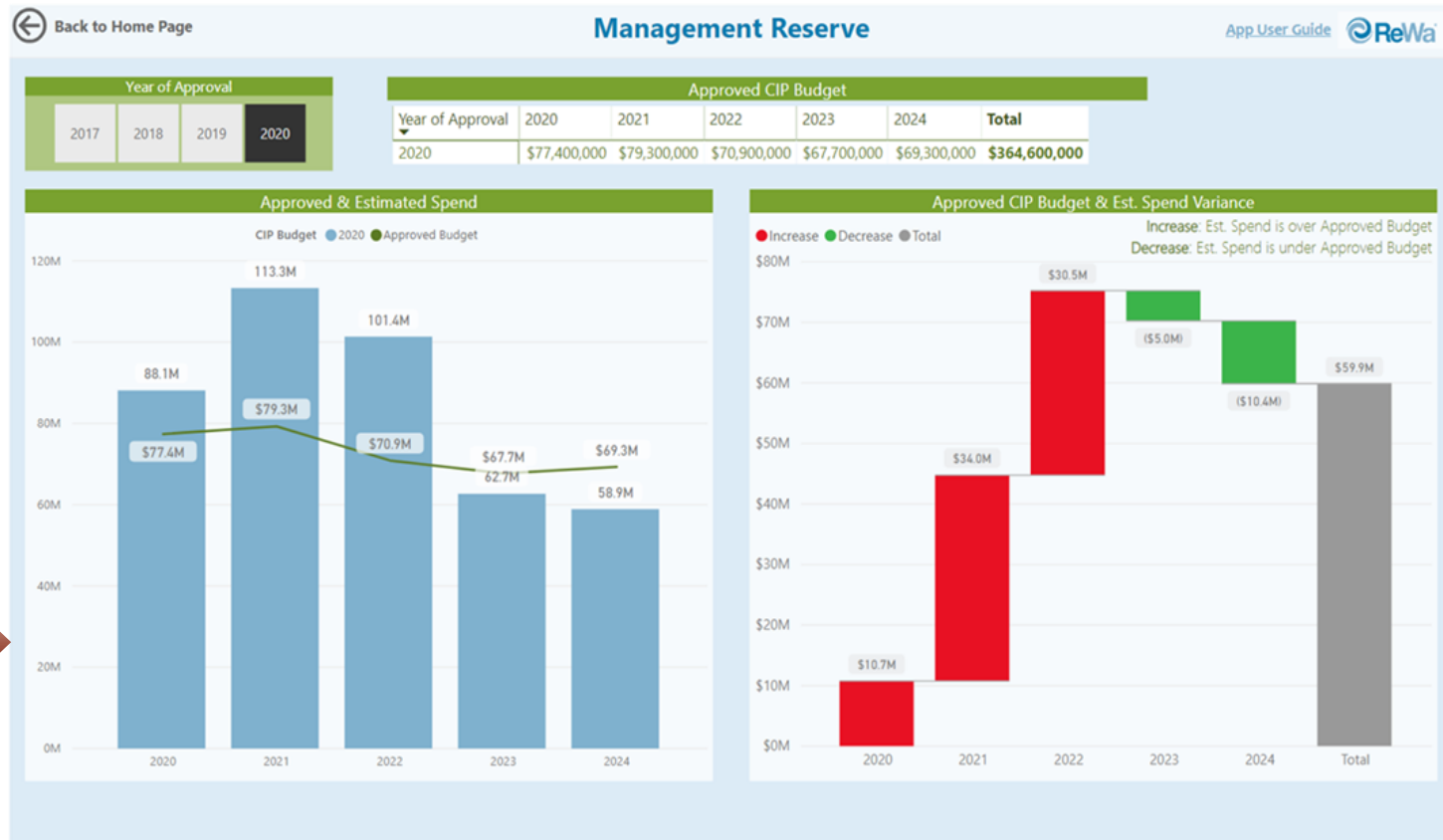
Enables Rapid Response to Changing Conditions

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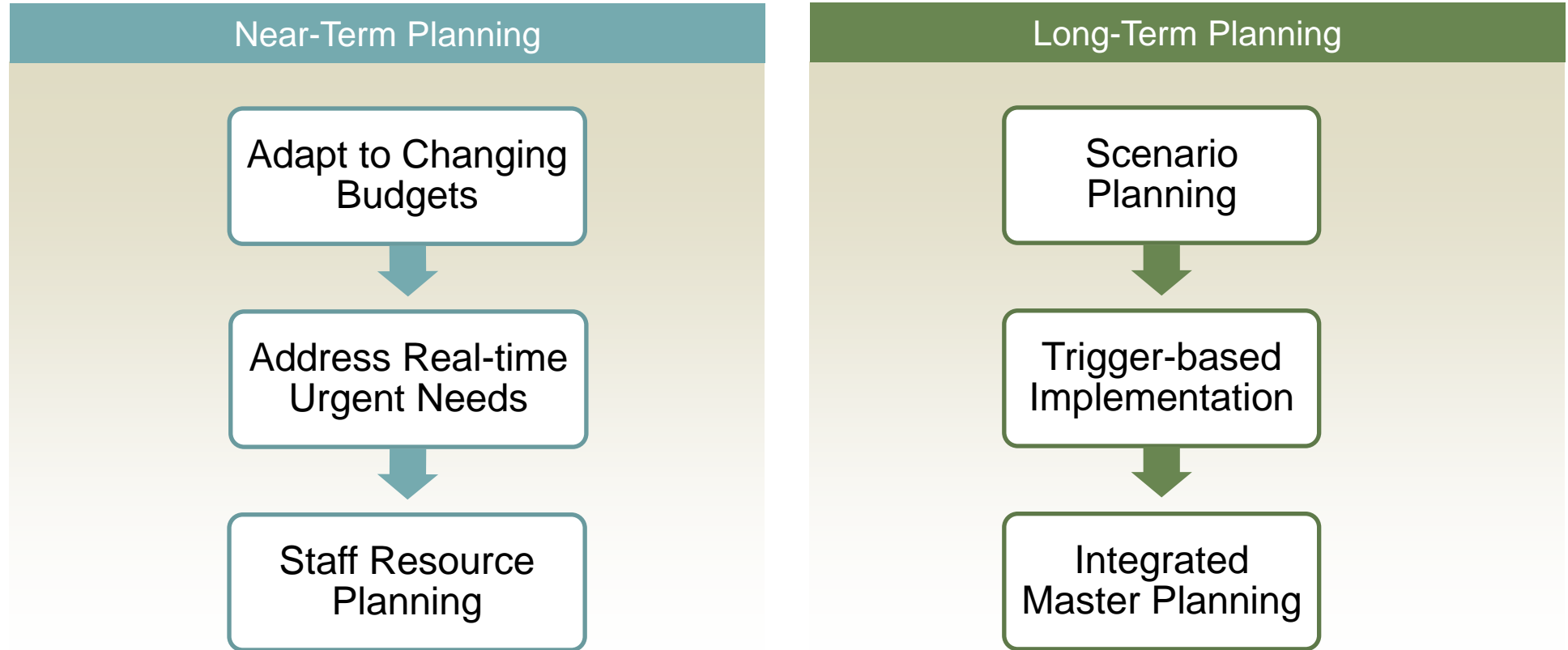
Monthly Project Updates



Adjustments to Changing Conditions Facilitate Improved Budgeting



Data-Driven Decision-Making Limits the Financial Risk Associated with Utility Operations, Nearly Immediately

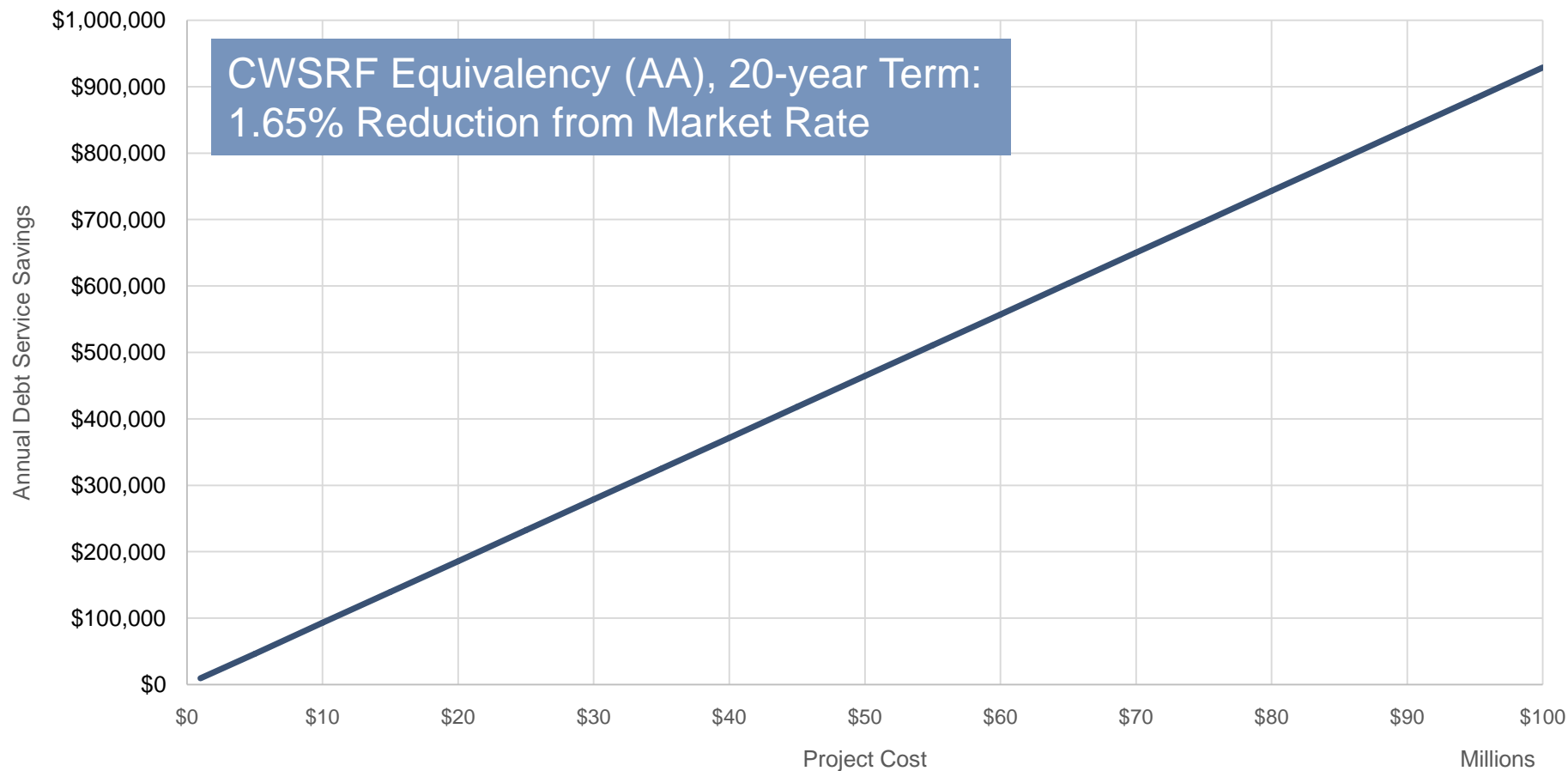


Optimizing Financial Management

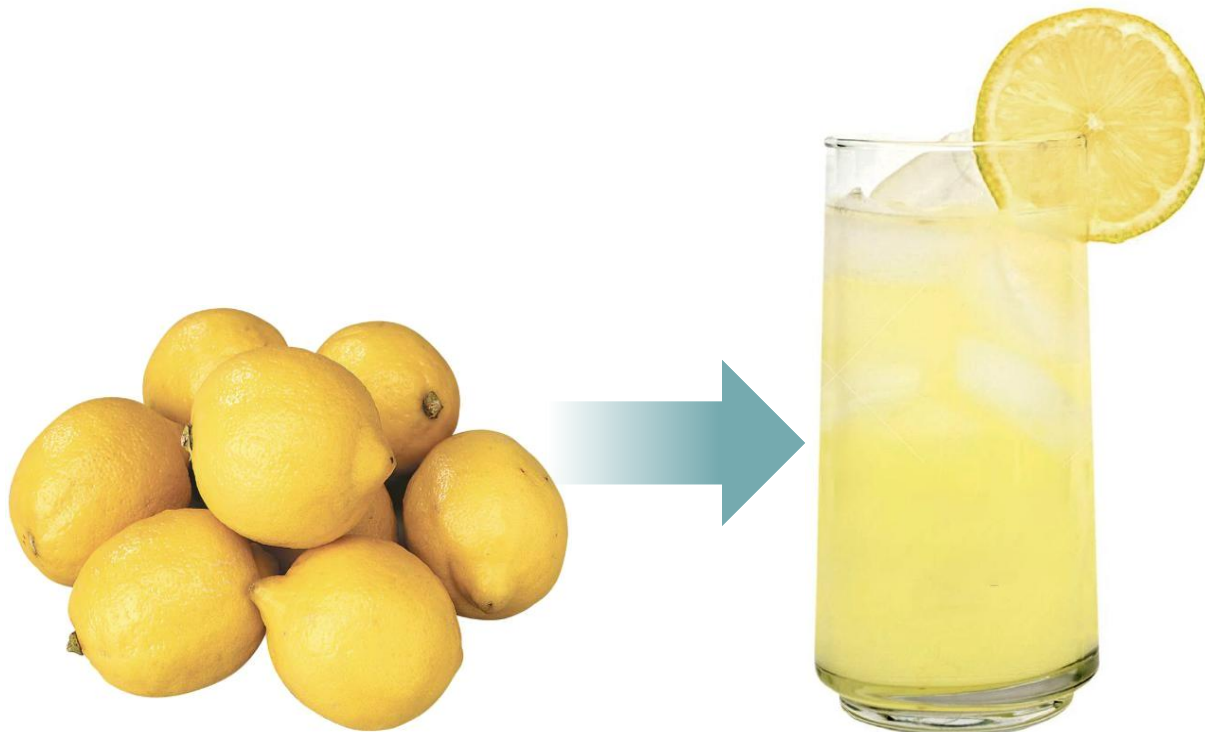
Selected Financial Management Strategies to Mitigate Risks and Lower Costs



Quantifying the Benefits of I-Bank Funding



Evaluate Financing Strategies under Current Economic Environment

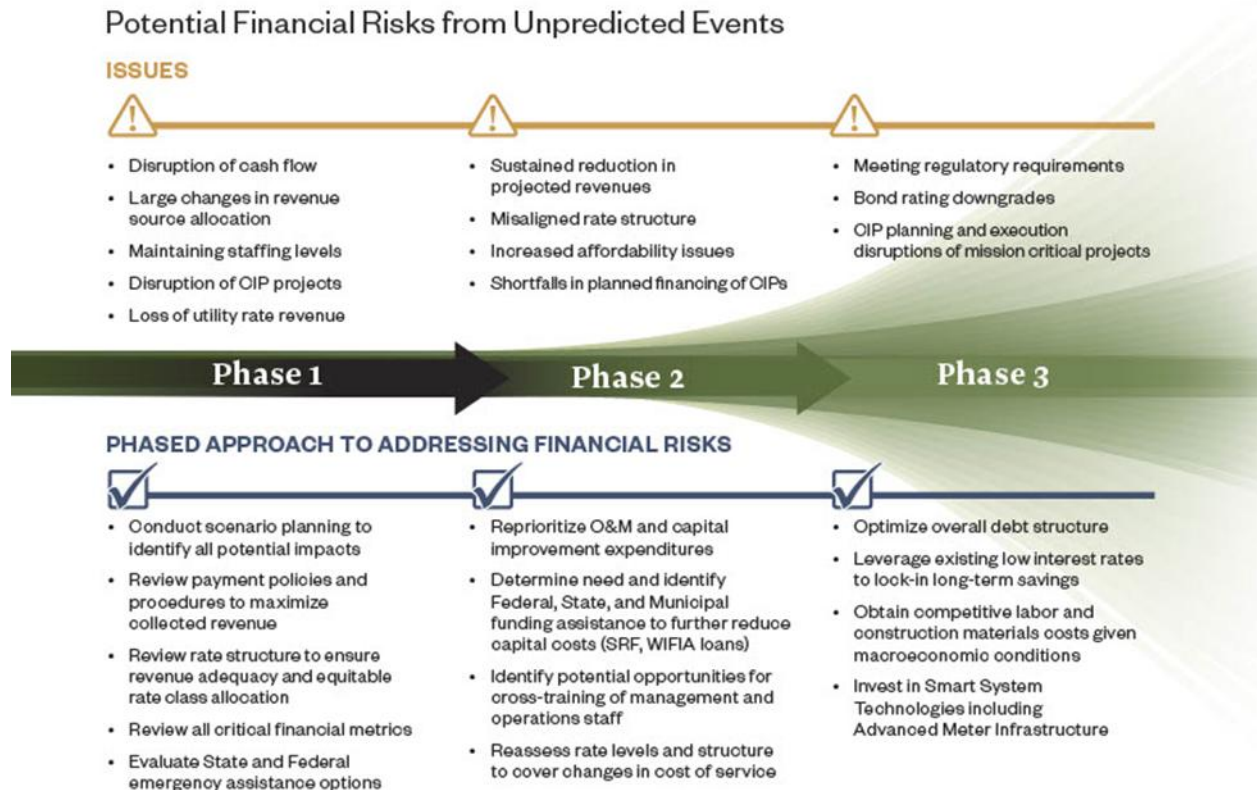


Recessions can create opportunities

- **Near zero real interest rates**
 - *Reduce cost of new borrowing*
 - *Restructure existing debt to lower debt service*
- **Slack construction demand and decreased commodity prices could lower project costs**
- **Likelihood of enhanced Federal Assistance Programs**
 - *Increased SRF Funding*
 - *New programs such as those being introduced by FEMA*

Numerous utilities report accelerating CIP using low interest and even longer-term bonds

A Phased Approach to Financial Resiliency



Questions and Contact Info



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