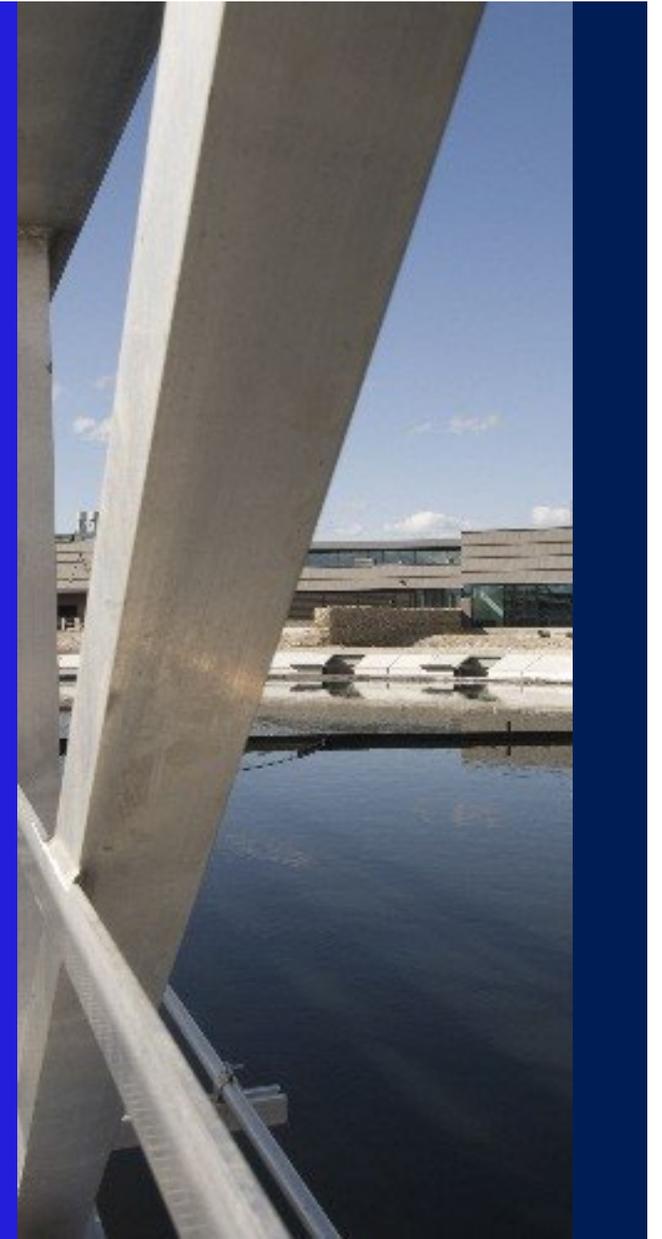


In the kNOW Webinar

One Water

An Integrated, Inclusive Approach to
a Sustainable Water Future

July 14, 2020



Welcome & Introductions

Why this issue is Important

- Adam Hosking, Jacobs, Vice President, Global Director for Water Resources

An integrated approach to water resilient cities

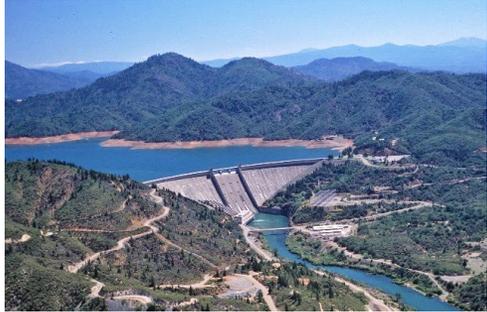
- Harpreet Sandhu, City of Calgary, Alberta, Canada
- Susan Butler, Jacobs, Global Technology Leader | Integrated Water Resources Management (IWRM)

How to use a One Water Approach to engage the Community

- Claude Tankersley, City of St. Petersburg, FL
- Leisha Pica, Jacobs, Global Technology Leader | Wastewater Planning

Questions & Answers

What is driving municipal resilience and One Water approaches?



From Now ..

- Water scarcity
- Population growth
- Urbanization
- Aging infrastructure
- Aging workforce
- Changing regulations
- Water/energy/food nexus
- Siloed water system

To Next ...

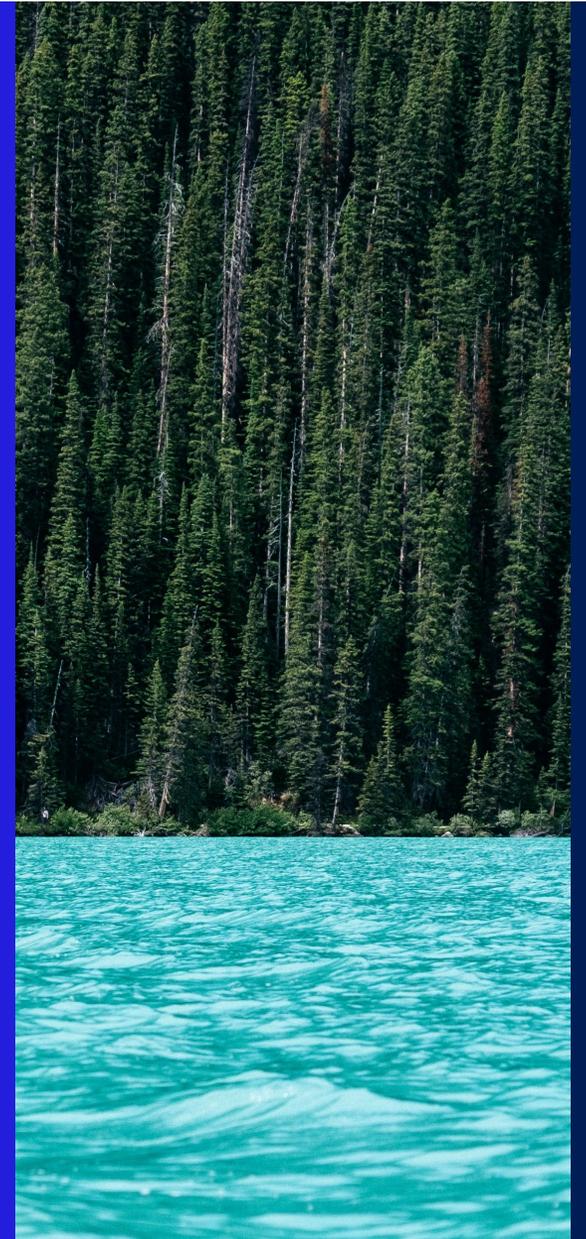
- Climate change-extreme weather events
- Uncertain and changing hydrology
- Shrinking budgets
- Quality of life/community enhancement
- Equity



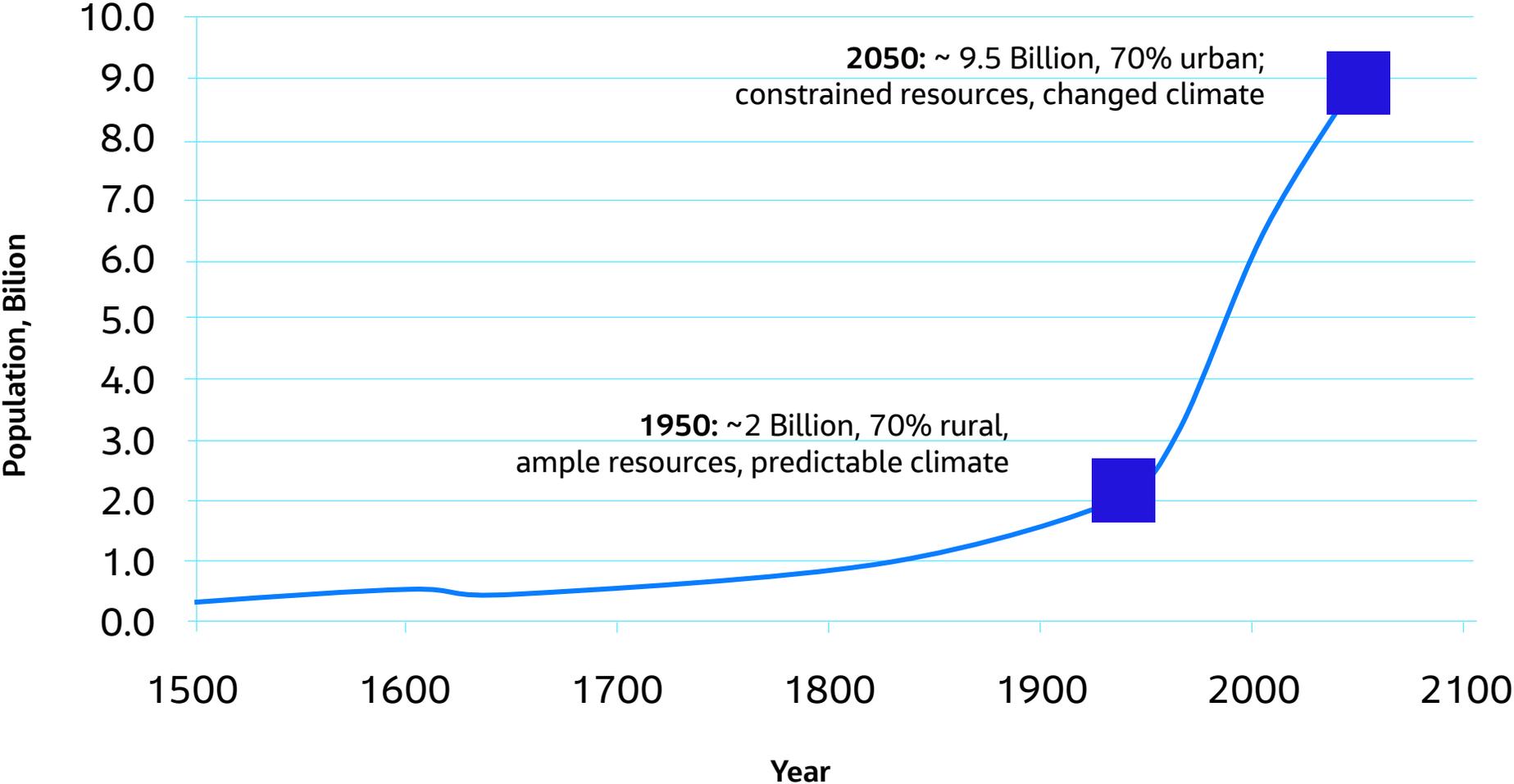
An integrated approach to water resilient cities – global perspective

Susan Butler, Jacobs

Harpreet Sandhu, City of Calgary



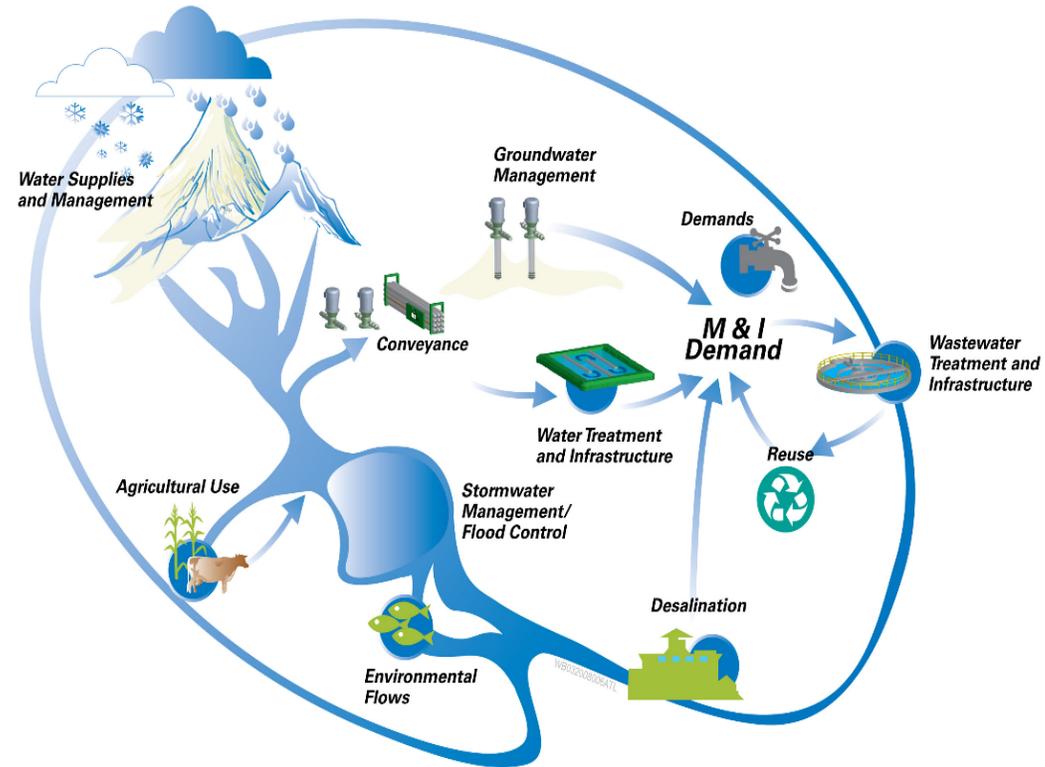
Will current approaches meet future needs?



How is One Water different from other water solutions?

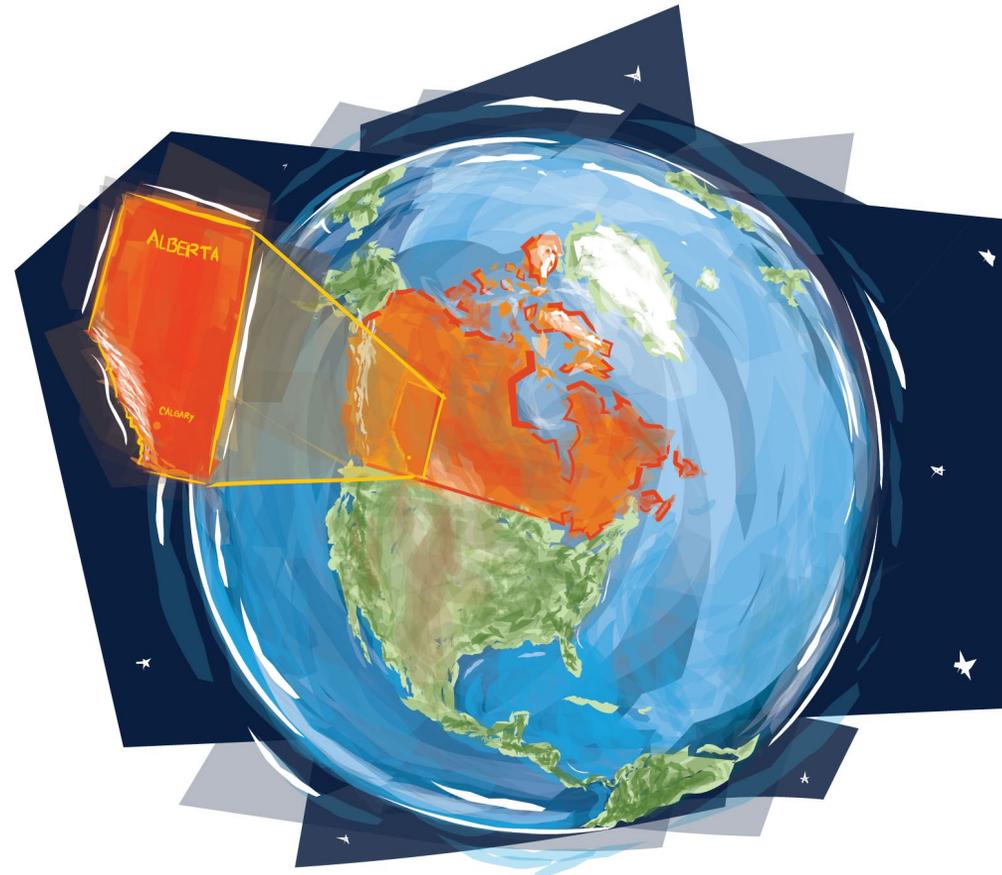
Builds on United Nation's Integrated Water Resource Management system's view and 7 basic principles

1. Consider all sources of water (surface, groundwater, reclaimed water stormwater, seawater, and others)
2. Seek sustainability and equity in water resources
3. Account for all end users/uses of water
4. Consider water quantity and quality
5. Provide opportunities for stakeholders to participate in the planning process
6. Align local water-related decisions with broader community and national objectives
7. Integrate social, economical, and environmental goals into strategies

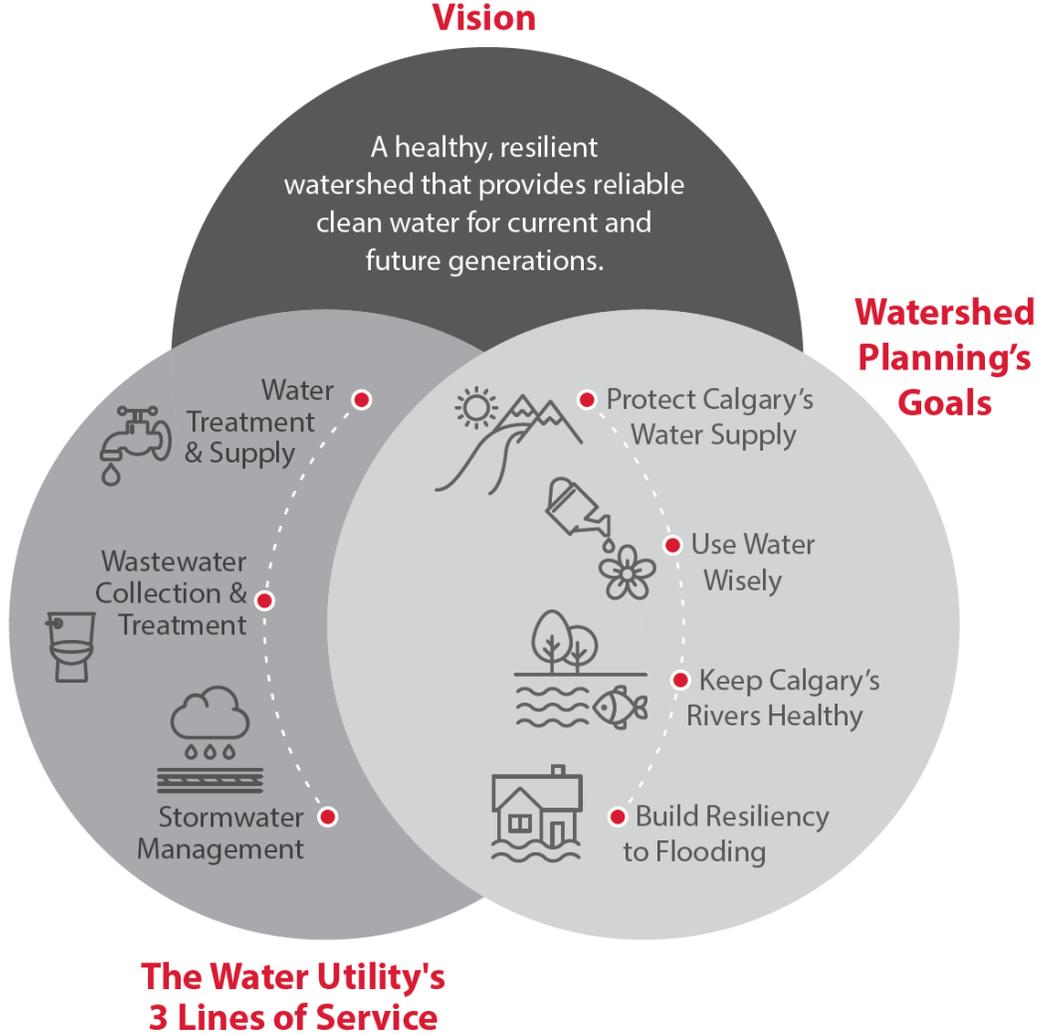


One Calgary One Water

A framework for Calgary's water secure future



The City of Calgary Water Utility



Water Security: Framework

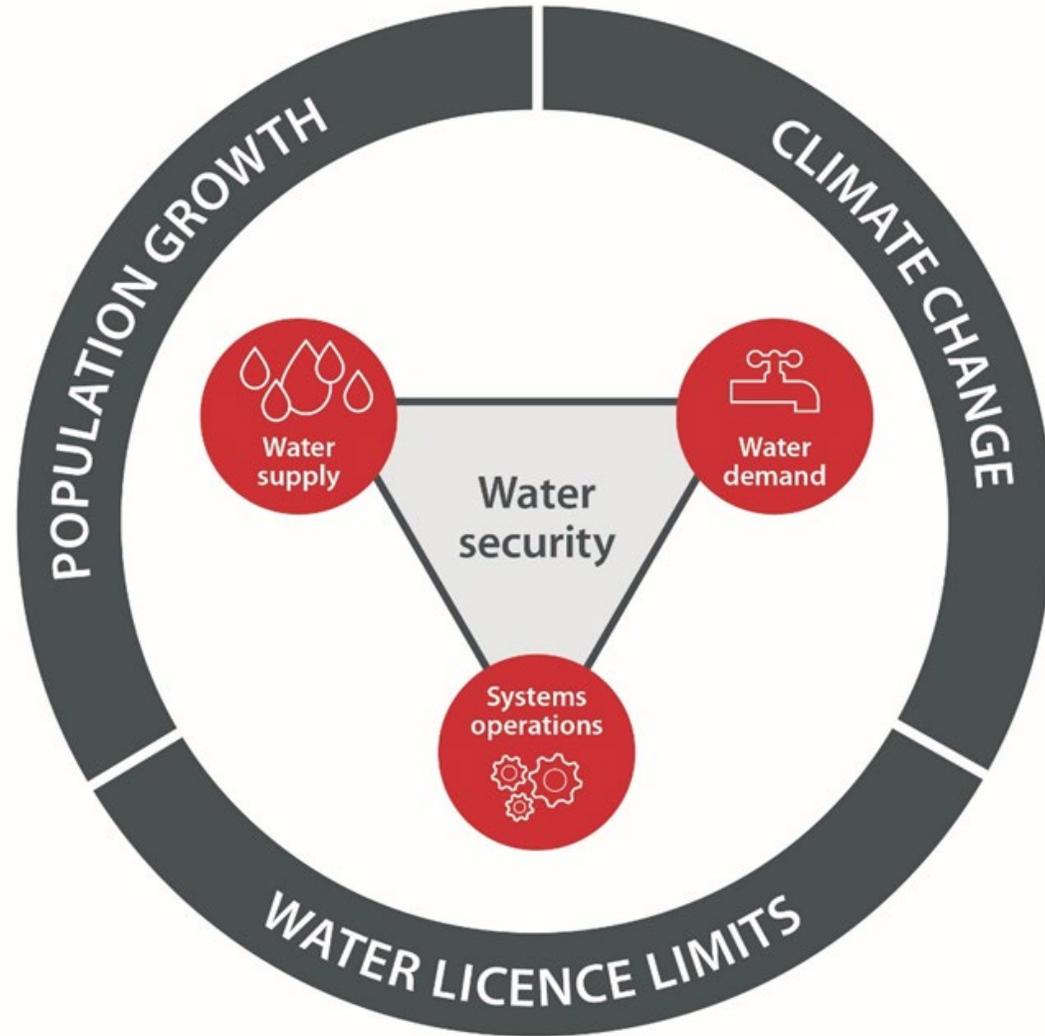
One Calgary One Water

A Framework for Calgary's water secure future



- Critical risks
- Key initiatives
- Priority actions

“Having enough safe water for human well-being, ecosystem resilience and economic activities now and for future generations”



Water Security: Critical Risks

Climate Change

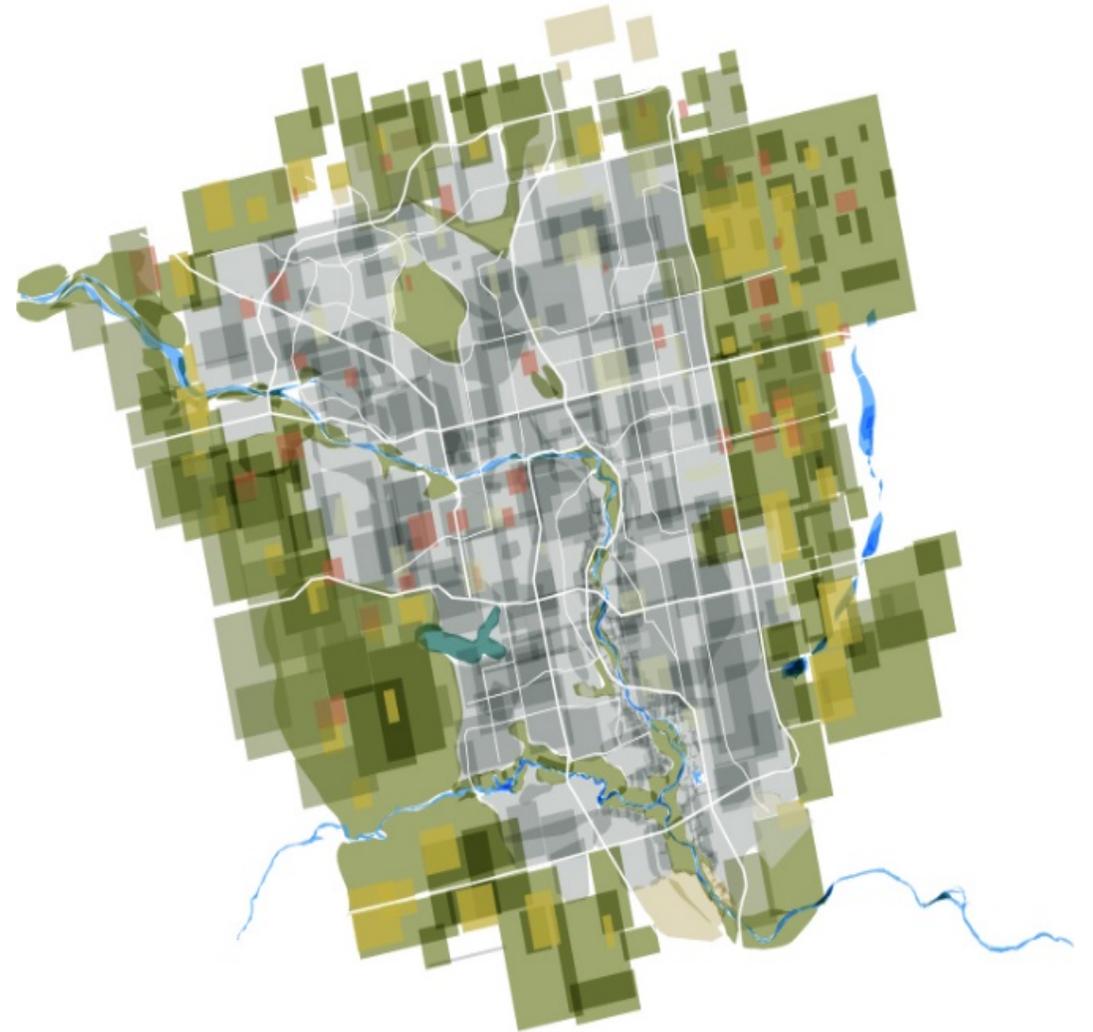
- How and when we receive precipitation will change – shifting water management investments and decisions
- Summers will be drier with higher risk of drought and wildfire



Water Security: Critical Risks

Population and Economic Growth Pressures

- Water security is an advantage in citizen well-being, attracting and retaining businesses, recreation and tourism
- Competition for a limited resource
- Impacts of land development on water quality



Water Security: Six Priority Actions



Develop future water supply scenarios



Address water licence/rights limits

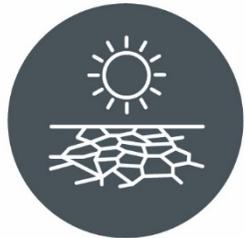


Ensure collaboration on a regional solution for water security

Water Security: Six Priority Actions



Advocate for new upstream reservoir on the Bow River



Finalize the Drought Management Plan



Finalize the Source Water Protection Plan and Policy

Every land use decision is a water management decision

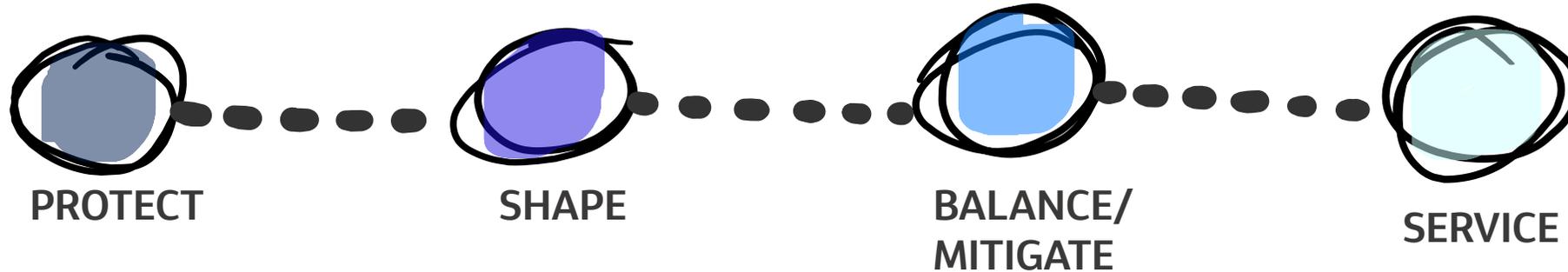
Proactive stewardship

Restoration and protection

Water Security



Connecting land use + water = The Water Policy Framework



Clarify our **role within the land use planning system**.
Define the **space for compromise and negotiation**.
Identify the **strength of our position** on multiple water-related subjects.
Specify **our approach to development**.
Educate ourselves, other departments and external stakeholders about what we do and how we do it.

Building connections through One Water

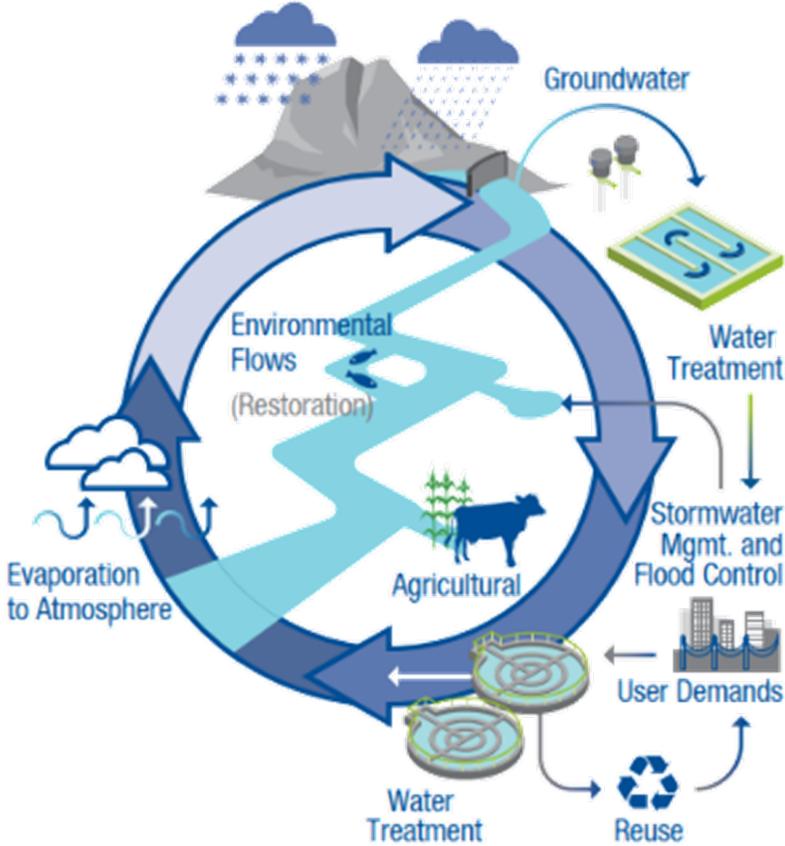
Telling the Utility's value story to the community

"In our community, literacy is about understanding that everything is connected and acknowledging that sacred kinship" – Treaty 7 First Nations traditional knowledge keepers



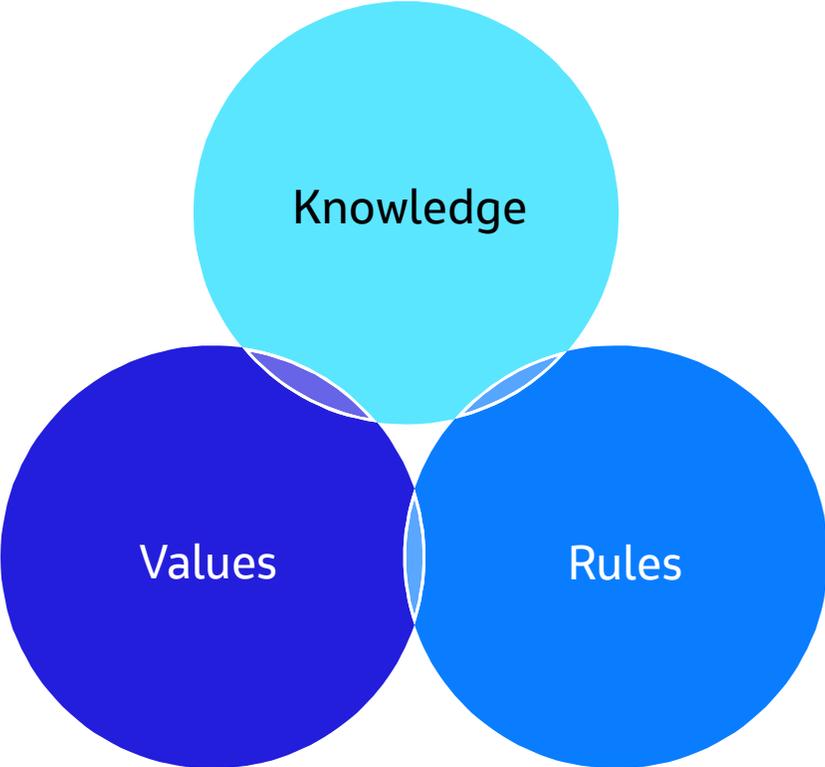
Water Utility Resilience

- Resilience
- Uncertainty
- Land Use
- Neighborhoods
- Equity

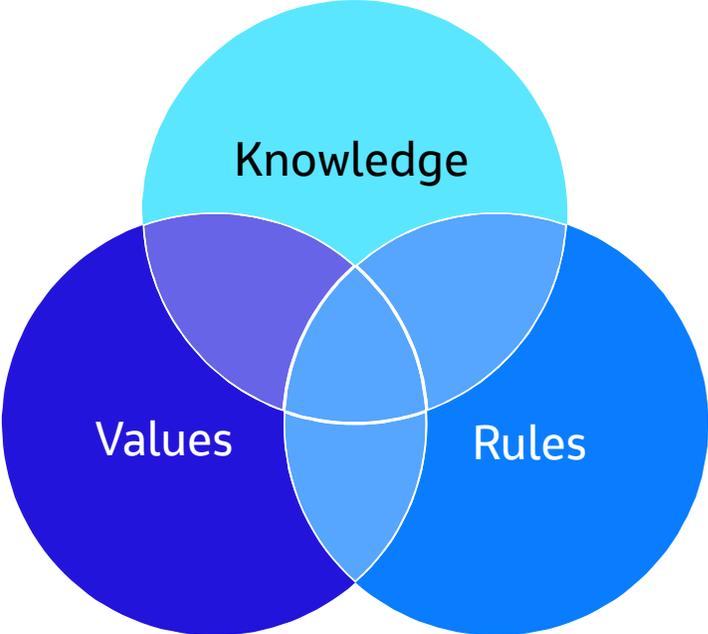


- Stakeholders
- Investors
- Insurers
- Ecosystems

Shared progress leads to more resilient solutions

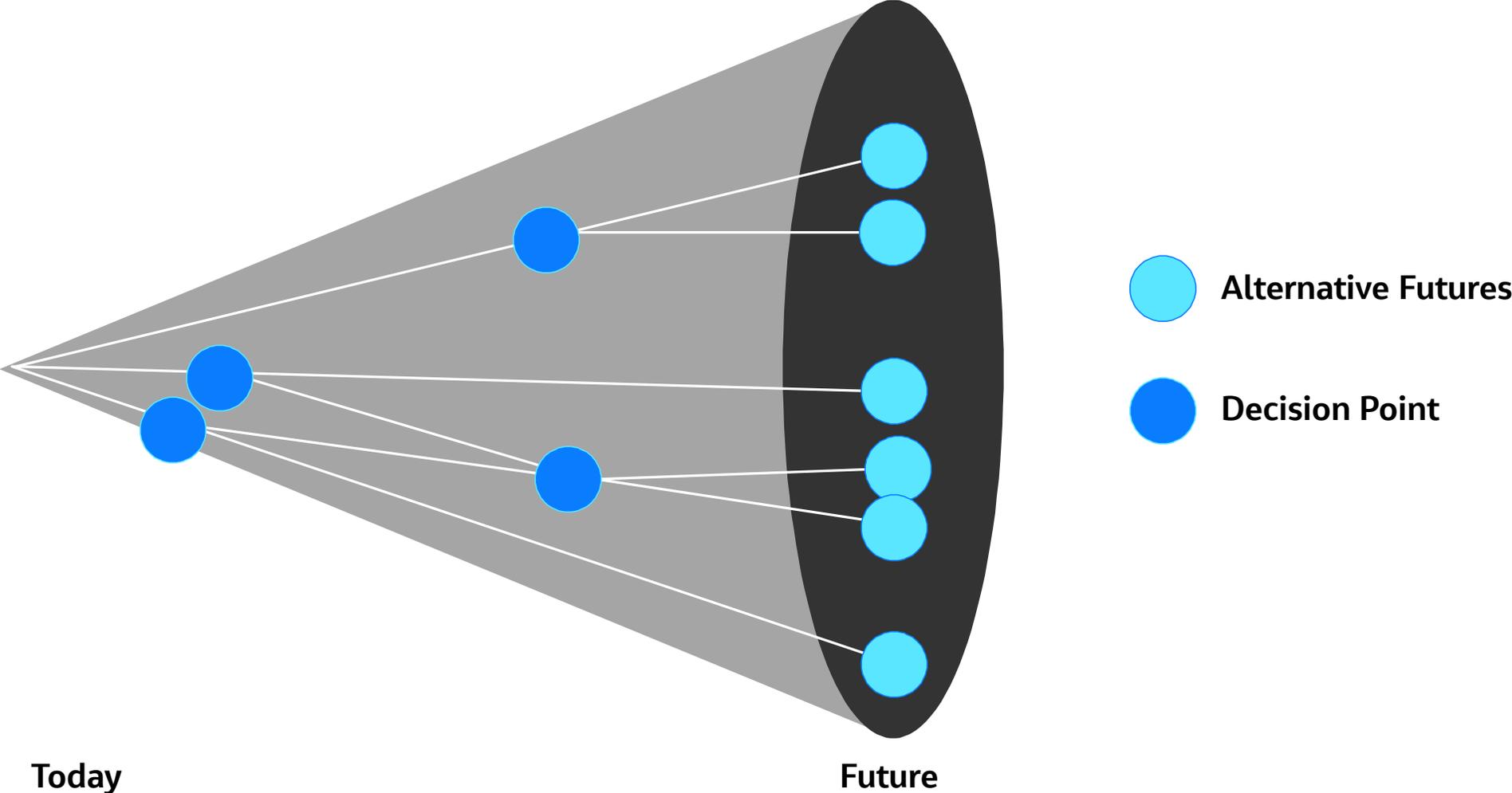


Low resilience, non-adaptive
Little overlap between knowledge, values and rules

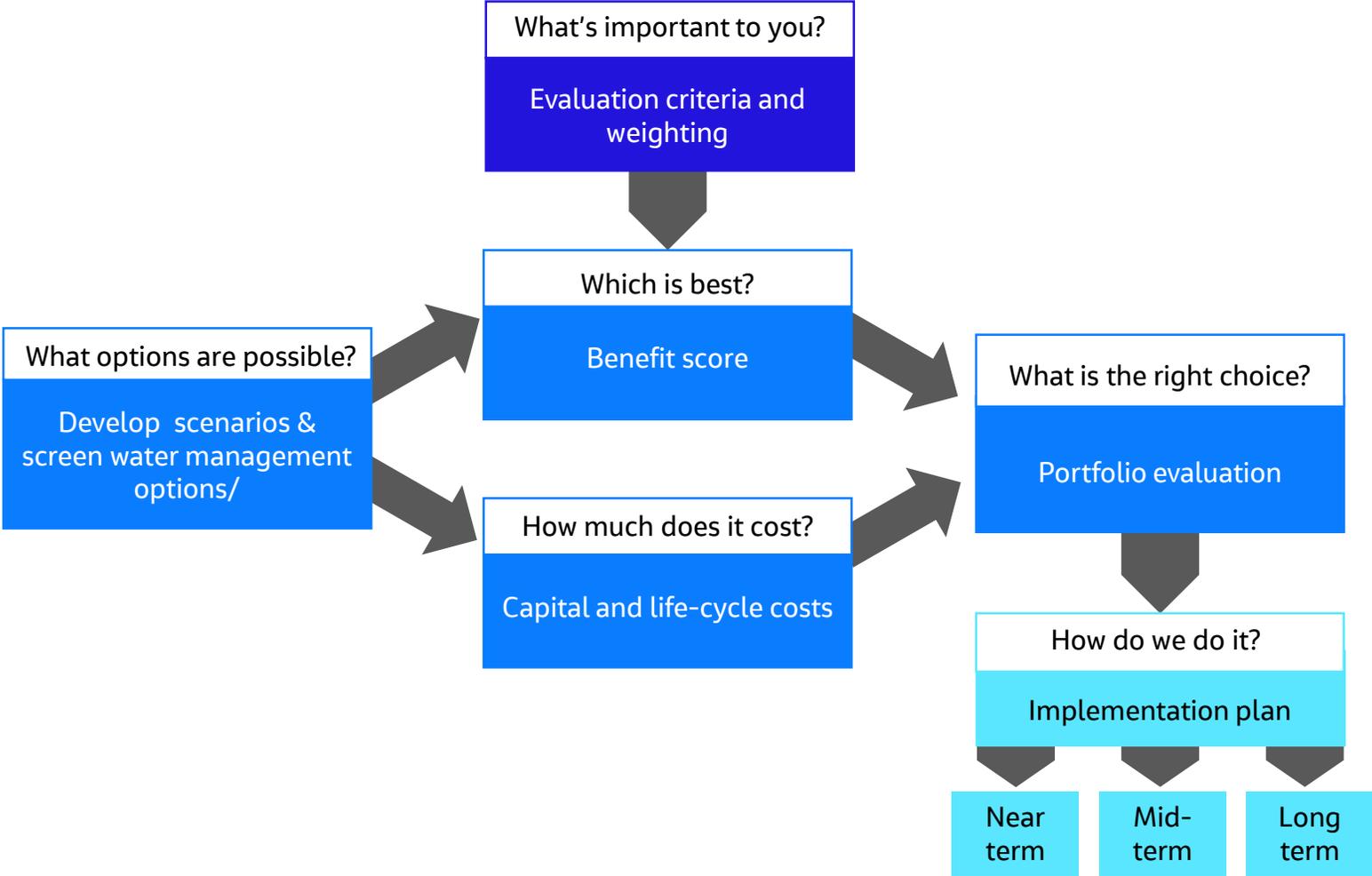


Resilient and highly adaptive
Knowledge, values and rules intersect

Shared progress leads to more resilient solutions

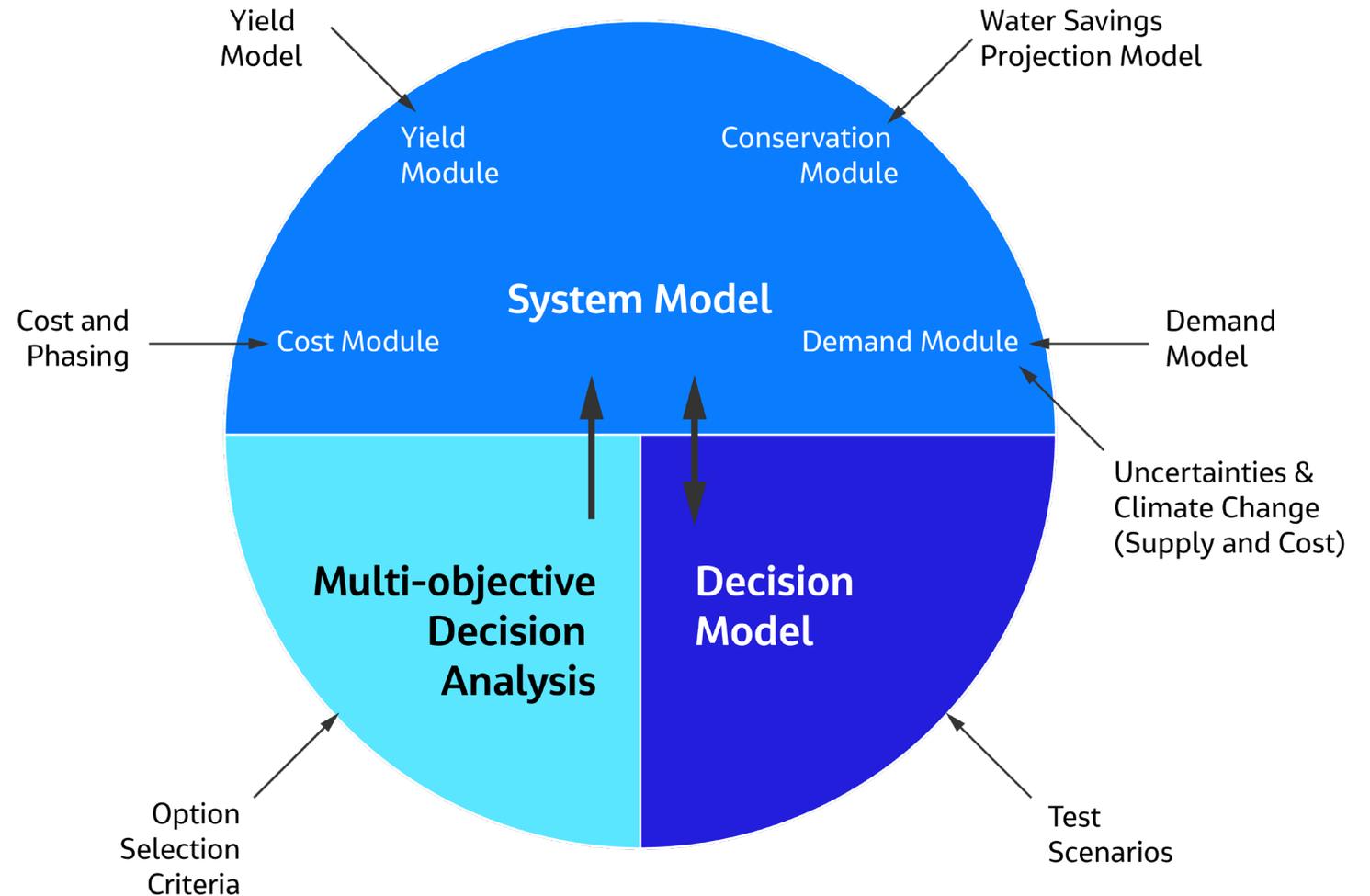


Phased approach engages stakeholders, evaluates options and combined portfolios to find “best” solutions



Clear framework and evaluation architecture is first step for streamlined analysis and results at key decision points

- Critical success factors for the plan
- System performance metrics
- Structured decision system
- Evaluation and data management tools and linkages



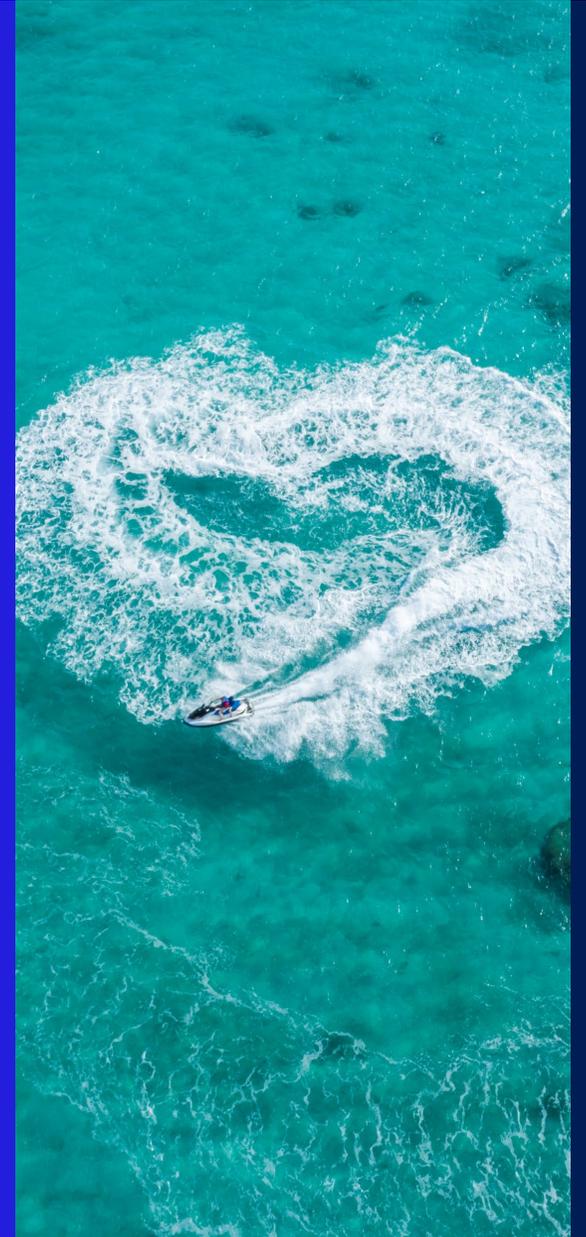
Your turn...

Poll Question #1

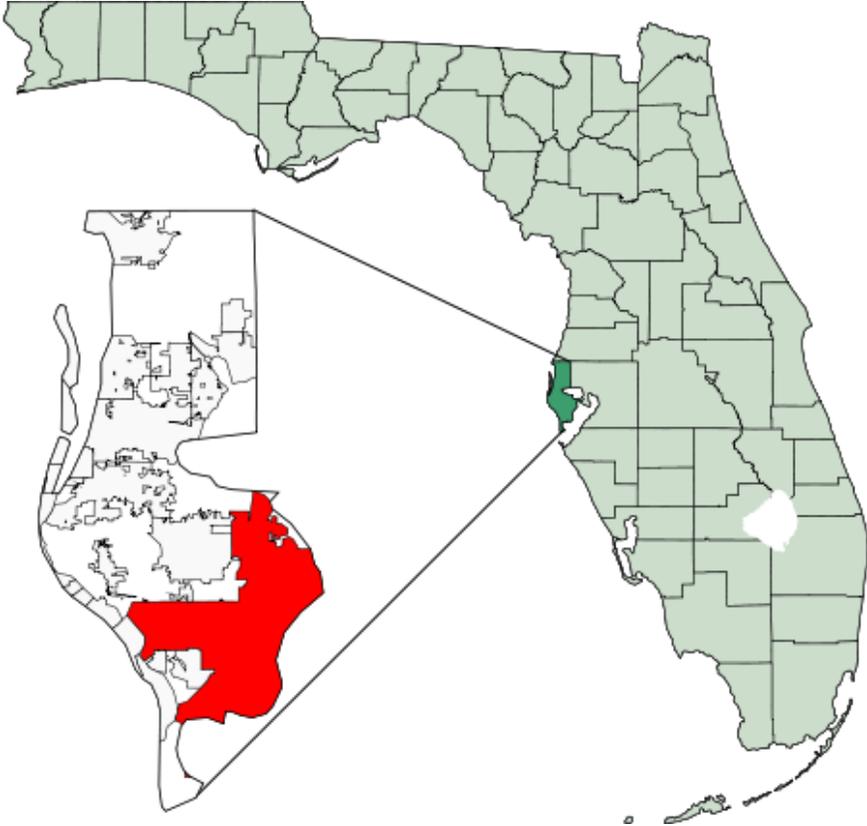


How to use a One Water Approach to engage the Community

Claude Tankersley, City of St. Petersburg
Leisha Pica, Jacobs



St. Petersburg, FL



St. Petersburg will be a city of opportunity where the sun shines on all who come to live, work and play. We will be an innovative, creative and competitive community that honors our past while pursuing our future.

- \approx 250,000 utility customers
- 110 neighborhood & business associations
- 100% clean energy transition

Challenges Facing the City

St. Petersburg Mayor Rick Kriseman addresses sewage problems

Millions of gallons of sewage dumped into bay



Top St. Pete headlines in 2015:
No. 2 – Raw sewage
— by Janelle Irwin

Climate Strike Draws Hundreds In St. Petersburg

By JESSICA MESZAROS & THOMAS IACOBUCCI • SEP 20, 2019



Protesters in St. Petersburg took part in climate strikes happening across the world Friday, ahead of a [United Nations Climate Change Summit](#) next week.

Flooding in St. Pete and Tampa



Credit: 10News Photojournalist Deborah Whiteside
Vehicles drive through flooded roadways near 62nd Avenue N and Dr. Martin Luther King Jr. Street in St. Petersburg, Florida.

10 TAMPA BAY'S News Weather Sports Connect Watch Live

← 10INVESTIGATES TURN TO 10 VERIFY BEYOND THE HEADLINE BOBBY LEWIS C

VERIFY

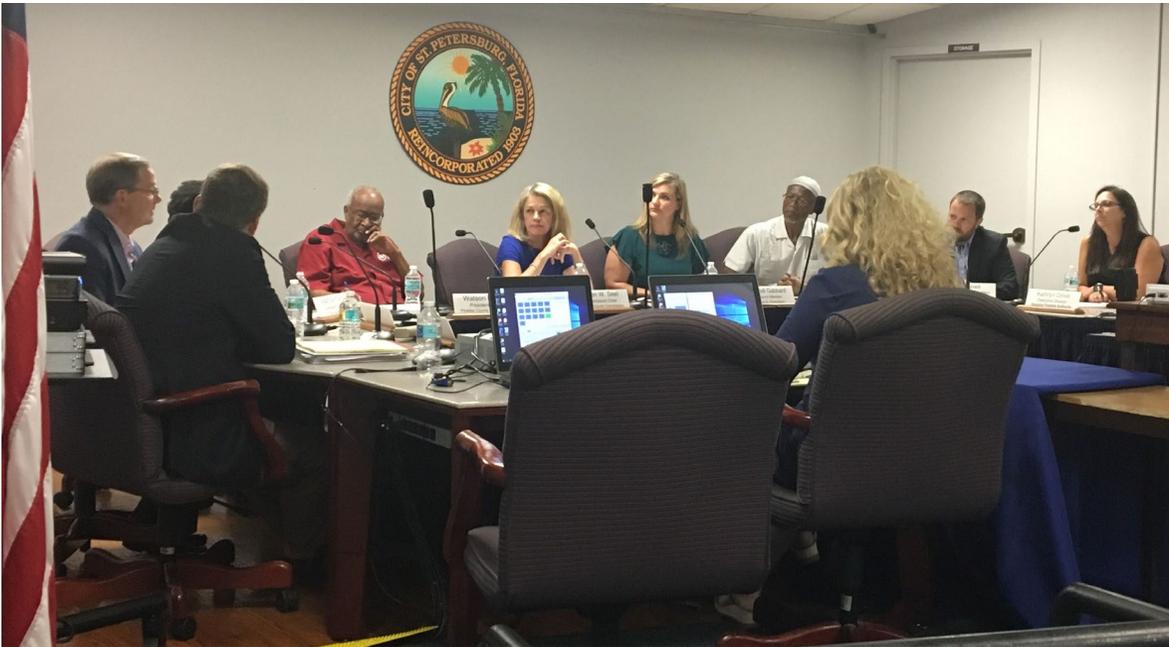
VERIFY: What's in your drinking water?

According to an NRDC report, Florida ranked second in the U.S. for people affected by Safe Drinking Water Act violations in 2015, but does this mean you need to be worried about what's in your water?

City Rate Payers Are Very Involved

Council of Neighborhood Associations
Alliance for Bayway Communities
Business Districts
Neighborhood Districts

City Council Committees
Council Meetings Public Comment
Next Door Community App



Members of Citizens Against Lane Loss wear red shirts during a meeting at St. Petersburg City Hall on April 4. Residents were on hand to protest the city removing regular traffic lanes and parking to add options for bicyclists, transit and pedestrians. [CAITLIN JOHNSTON | Times]

Why did the City select the One Water approach

Recognizing the many benefits, St. Petersburg chose a **One Water** approach



Protect Human Health



Improve Water Quality



Support Quality of Life Attributes



Support Economic Benefits



Enhance Vitality of Community

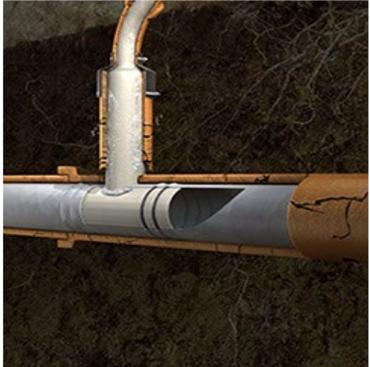


Integrate Water Resources

One Water Addresses Community Priorities



Address Climate Change & Sea Level Rise



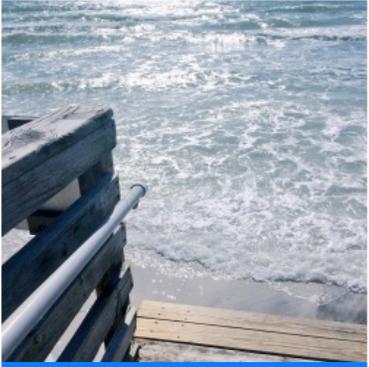
Fix Sewers and Stop Sewer Overflows



Fix Flooding and Reduce Flood Insurance Premiums



Expand Reclaimed Water System to My Street



Improve Recreational Water Quality

One Water Addresses City's Priorities

Integrated Sustainability Action Plan & Green Ordinance

Clean energy, reduce greenhouse gas emissions, climate actions, improved resiliency for more frequent storms



Redevelopment & Growth

Bring in new businesses and development, promote waterfront development, expand art

Stormwater Management

Local and regional stormwater solutions, and reduced flood insurance premiums



Tampa Bay Regional Resiliency Coalition

Regional Resiliency Action Plan
Climate based adaptation strategies particularly for sea level rise projections

STAR Community Rating

Community benefits, innovation, natural systems, health & safety

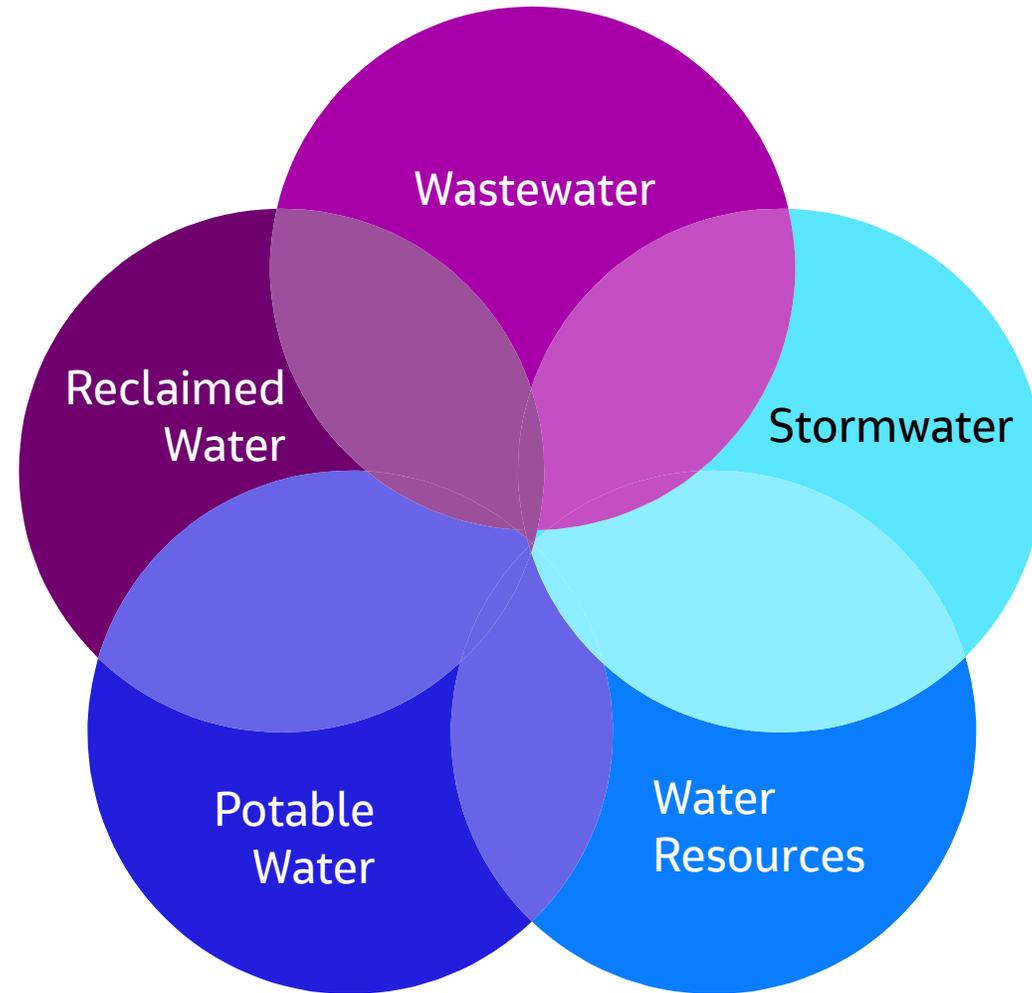


Address Aging Infrastructure

Proactive long-term operation of infrastructure, identify priorities for capital investment for potable water, wastewater, reclaimed water, and stormwater

The Value of the One Water Approach

- Operational needs
- Industry innovations
- Sustainability practices
- Value based planning
- Upstream solutions
- Triple bottom line
- City's existing plans
- Capital budget



One Water Offers Flexibility

Where does it make sense to simply replace assets over time?

Traditional
Approach

Where are different approaches needed to mitigate known and future potential risks?

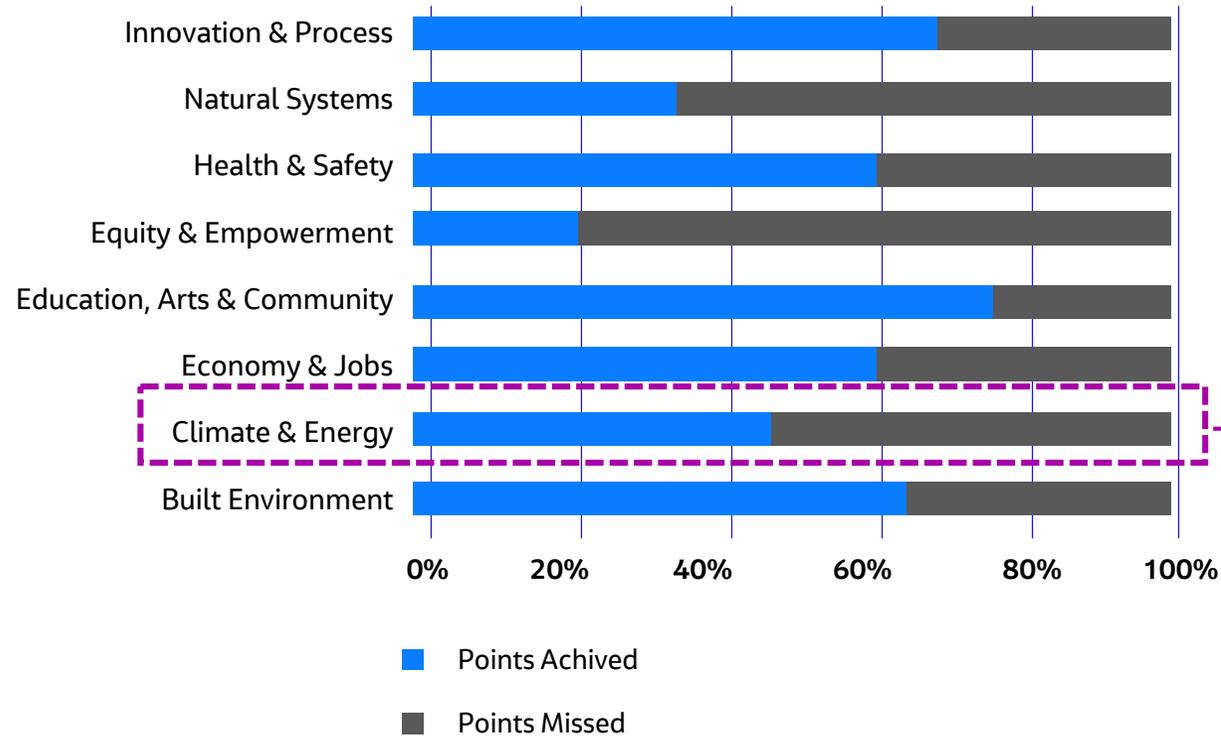
Risk
Mitigation
Strategies

Where can we apply innovation and updated technology and use resources?

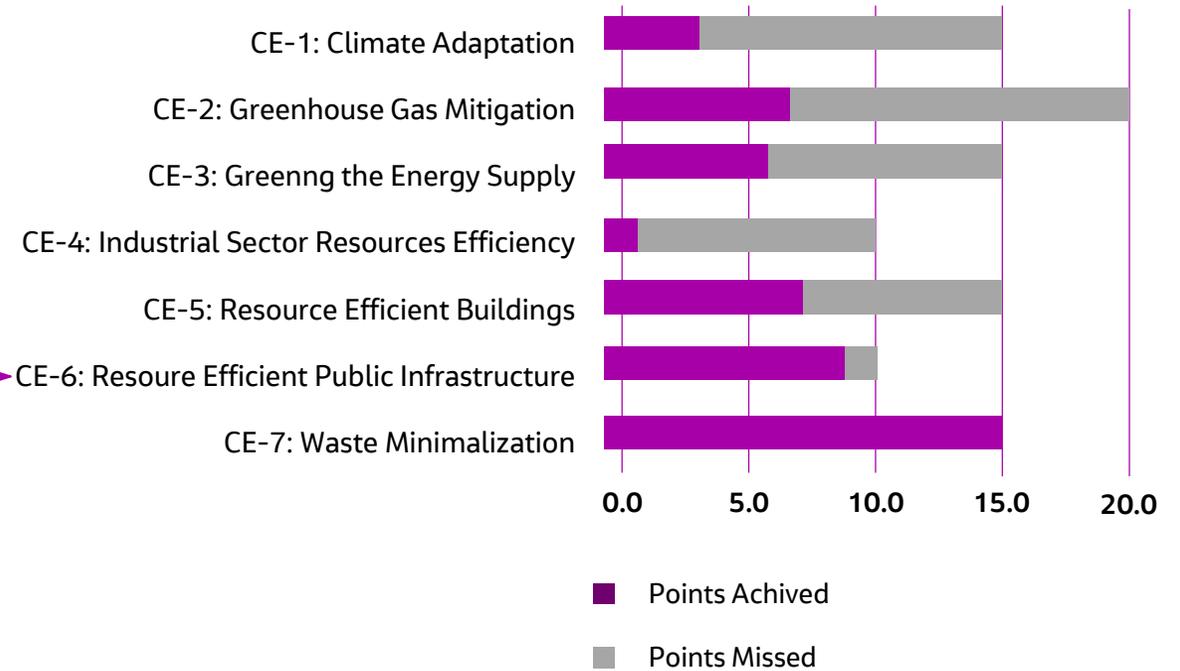
Innovation
and
Integration

One Water Achieves Community Goals

The City achieved 381 points of the total 720 points thereby receiving the Certified 3-STAR Community Rating in December 2016.

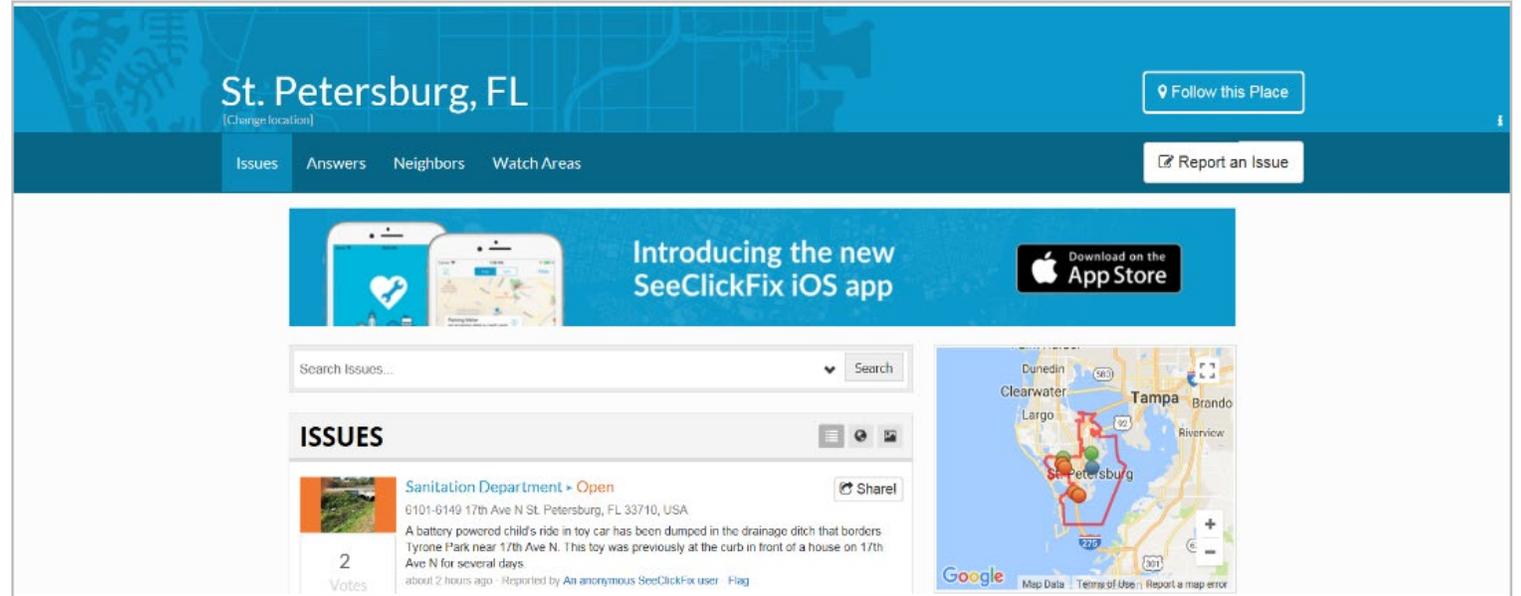


Incorporating greenhouse gas mitigation, alternative energy, and climate adaption into the Plan as a high priority also improves the Community's ability to receive state and federal funding.



Keeping the Public in Public Works

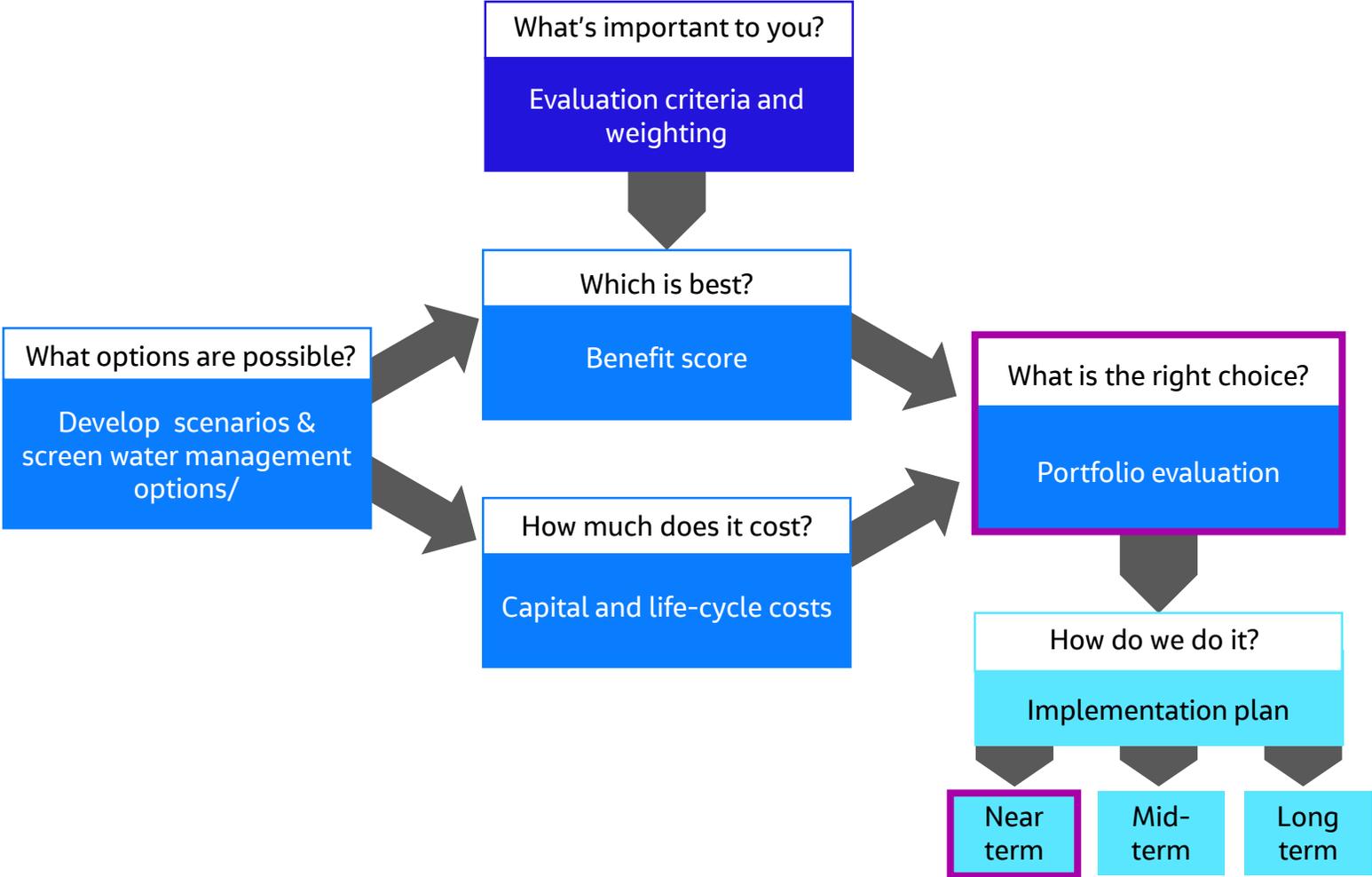
- Facility Tours
- Public Meetings
- Community Meetings
- Web-Based Resources
- City Initiatives & Committees



Mayor's Action Center
(information/service requests)
727-893-7111
Action@stpete.org



Where are we in the process?



In Conclusion

- 1. Turn Lemons into Lemonade**
Weather Put Spotlight on Future Conditions
- 2. Make Decisions Today for Tomorrow**
Forward Looking Investments for Resilience
- 3. Keep the Public in Public Works**
Engage vs. Inform the Public



Your turn...

Poll Question #2



Questions & Answers

Or send to: lori.irvine@Jacobs.com

A PDH certificate will be provided to those who participated in the live webinar.

Thank You!

Jacobs

Challenging today.
Reinventing tomorrow.

