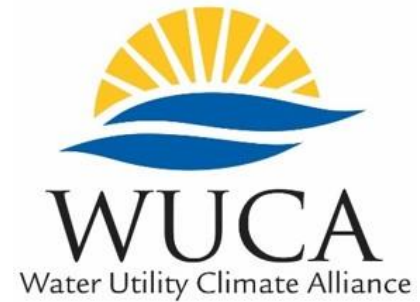
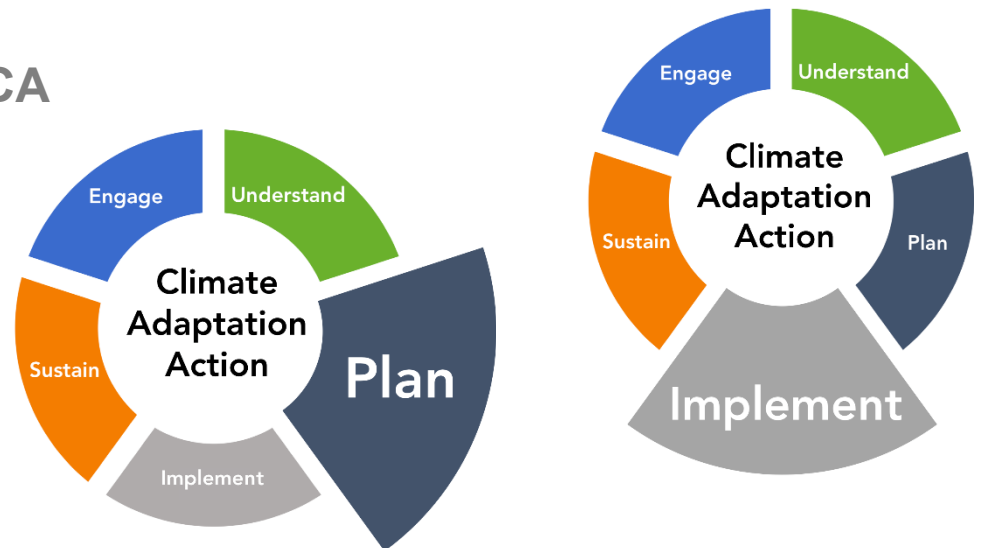


**Building Resilience to a Changing Climate:
A Technical Training in Water Sector
Utility Decision Support**



Scenario Design: An Accelerated Introduction to Scenario Planning

Laurna Kaatz, Denver Water / WUCA

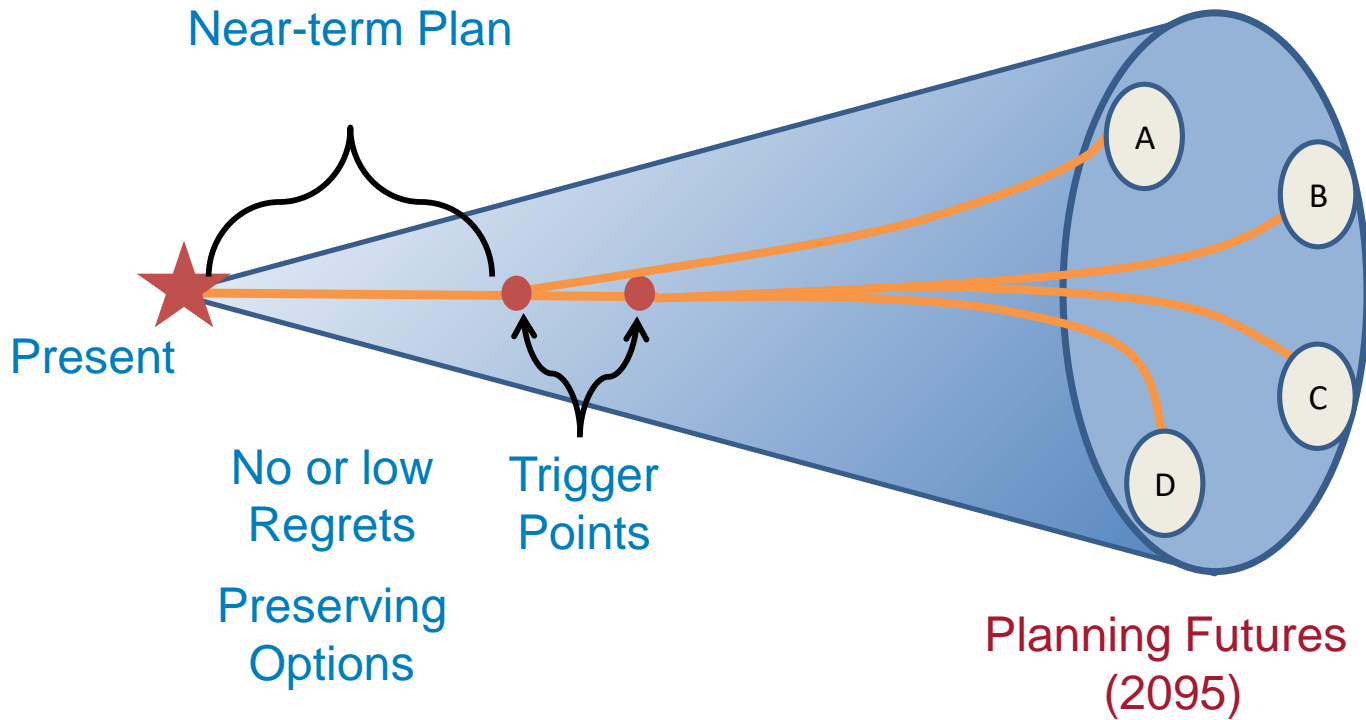


Scenario Planning

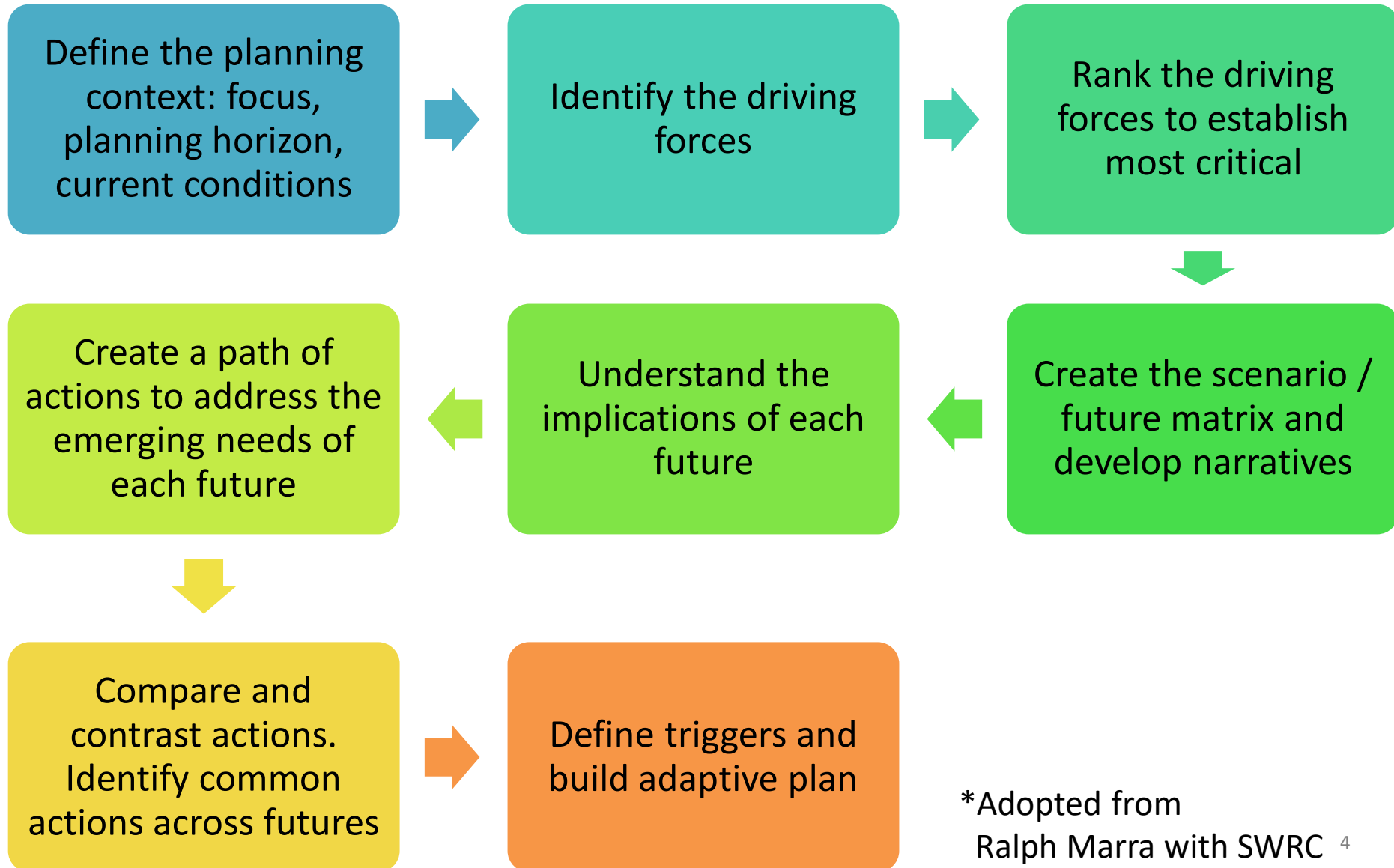
- Scenario Planning IS about being prepared for whatever happens in the future
- Scenario Planning is NOT about envisioning what we want to happen in the future or predicting what will happen in the future

Scenario Planning

Cone of Uncertainty



Scenario Planning Process*



*Adopted from
Ralph Marra with SWRC ⁴

South Central Water

South Central Water is a

- Mid to large water utility
- Provides drinking water, wastewater, and stormwater services
- Located in the southcentral U.S., near the coast
- Surface and ground water supplies
- One of the fastest growing communities in the U.S.



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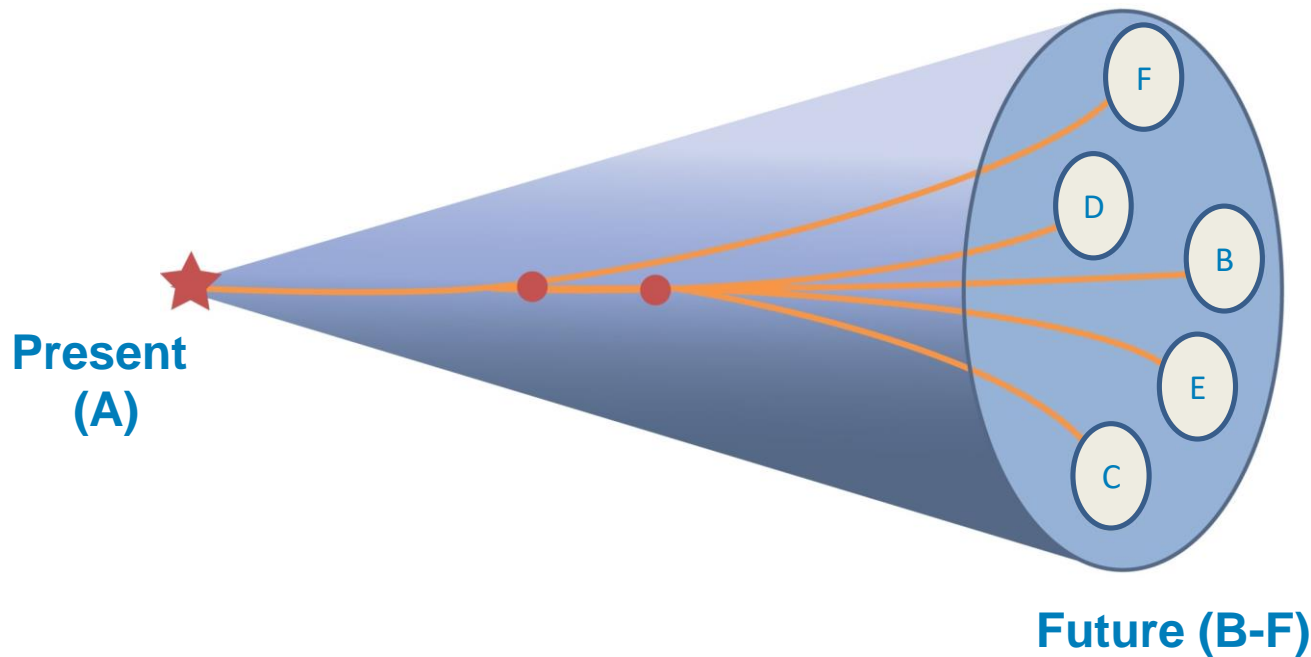
Focal Question: How can South Central Water best prepare its water system and enhance its resources to meet customer water needs as future challenges and opportunities arise over the next 75 years?

Drivers of Change

- External factors that will influence the context of South Central Water's (SCW) future
- Things outside of SCW's control
- Long-term challenges

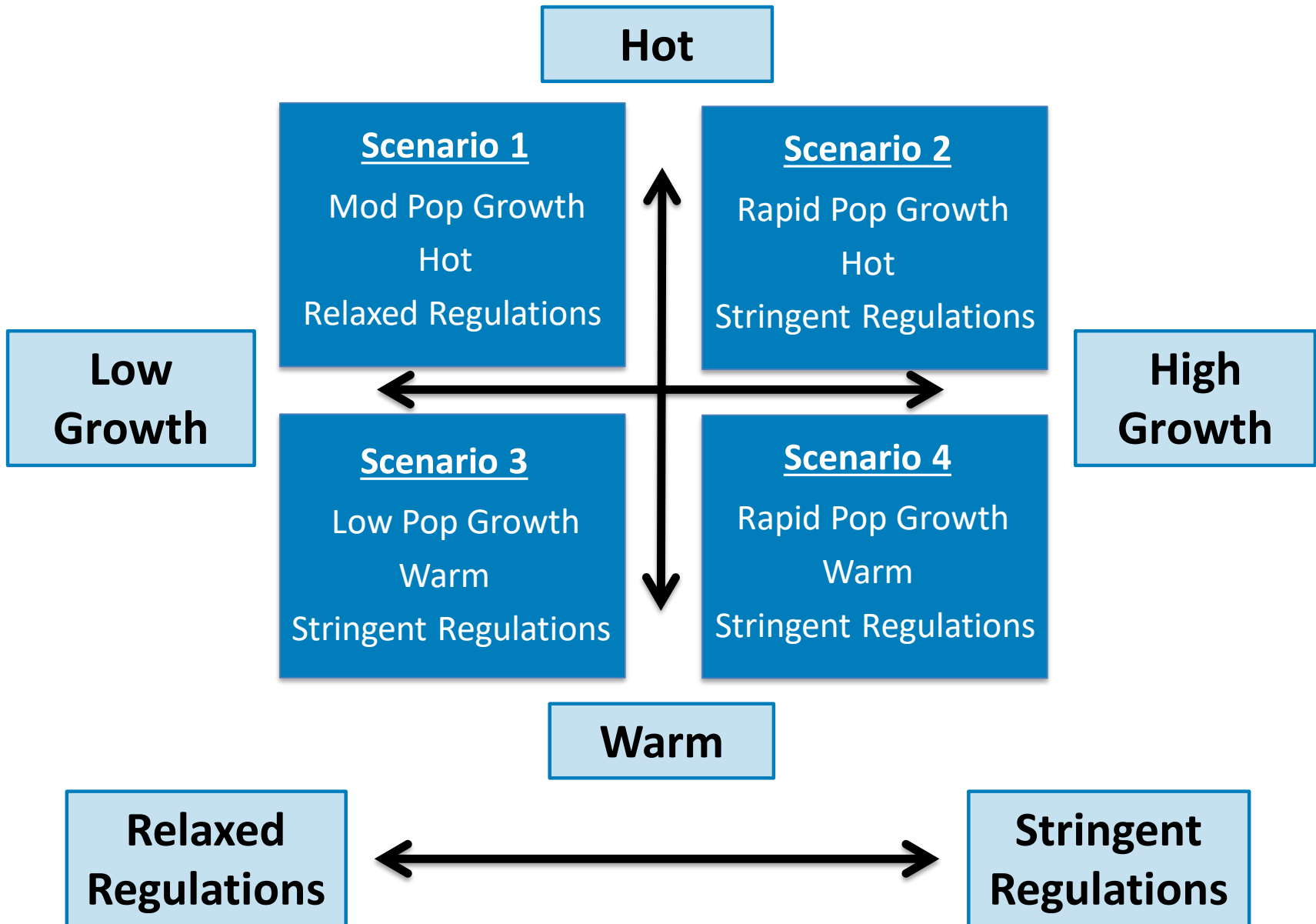
Individual Drivers of Change

The Cone of Uncertainty



- Traditional Future
- Water Quality Rules
- Hot Water
- Economic Woes
- Green Revolution

Example: Combining Three Divers to Create Four Scenarios



Personal Insights

1. No one-size-fits all approach
2. Pick the parts and pieces that work for you
3. Goal is adaptive planning

“In preparing for battle I have always found that plans are useless, but planning is indispensable.”

- Dwight D. Eisenhower

WUCA White Papers

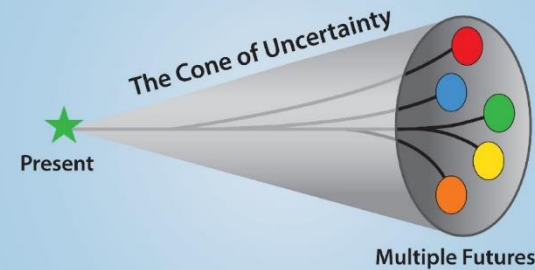
DECISION SUPPORT PLANNING METHODS: INCORPORATING CLIMATE CHANGE UNCERTAINTIES INTO WATER PLANNING



JANUARY 2010

EMBRACING UNCERTAINTY

A Case Study Examination of How Climate Change
is Shifting Water Utility Planning



Prepared for:

Water Utility Climate Alliance (WUCA)
American Water Works Association (AWWA)
Water Research Foundation (WRF)
Association of Metropolitan Water Agencies (AMWA)

Project Manager: Lurna Kaatz, Denver Water



Society for Decision Making under Deep Uncertainty

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The Society is a multi-disciplinary association of professionals working to improve methods and tools in this field, facilitate their use in practice, and ultimately encourage sound decision making in our rapidly changing world.