

# Watershed Information and Conservation Council of Napa County

## Napa Valley Drought Contingency Plan Update #2

July 30, 2020

# Review: What is a Drought Contingency Plan (DCP)?



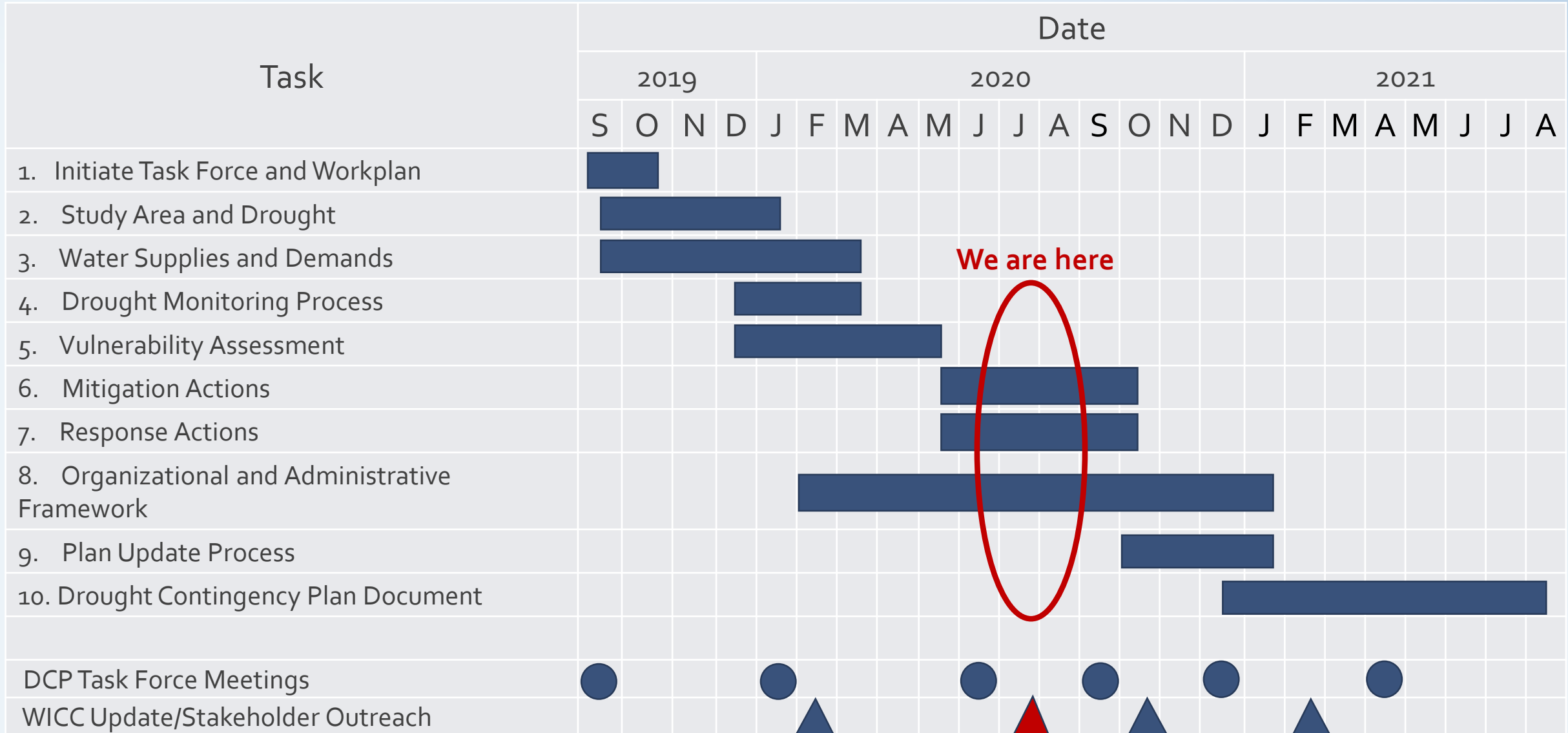
# Drought Contingency Plan

- Drought Contingency Plans (DCPs) address
  - How will we recognize the next drought in early stages?
  - How will drought affect us?
  - How can we protect ourselves from the next drought?
- Drought Resiliency Projects
  - These projects are referred to as "mitigation actions" in the DCP
  - Are implemented to mitigate effects of drought



— BUREAU OF —  
RECLAMATION

# DCP Schedule





# Supply & Demand Analysis

# DCP Approach

- The water supply data we are working with is based on *three different year types*:
  - **Normal Year:** The amount of water that most closely represents the average water supply available to your agency.
  - **Multiple Dry Year:** This is meant to represent the lowest average water supply available to your agency for a consecutive multiple year period. In this analysis we've assumed "multiple dry years" to mean third dry year.
  - **Critical Dry Year:** This is meant to represent the lowest water supply available to your agency.
- **The Critical Dry Year Scenario is used for the Vulnerability Assessment**

# Understanding the Water Resource Systems



- Water supply and demand data are being finalized with Task Force member agencies.
- Data are being utilized in the Vulnerability Assessment to understand the risks and impacts of drought.

# Initial Water Supply and Demand Assessment

- Water supply and demand assessment identified a heavy reliance on limited number of supply sources.
- **As a region, there is enough water supply across all year types**
  - *However, some municipalities face supply deficits during drought conditions*



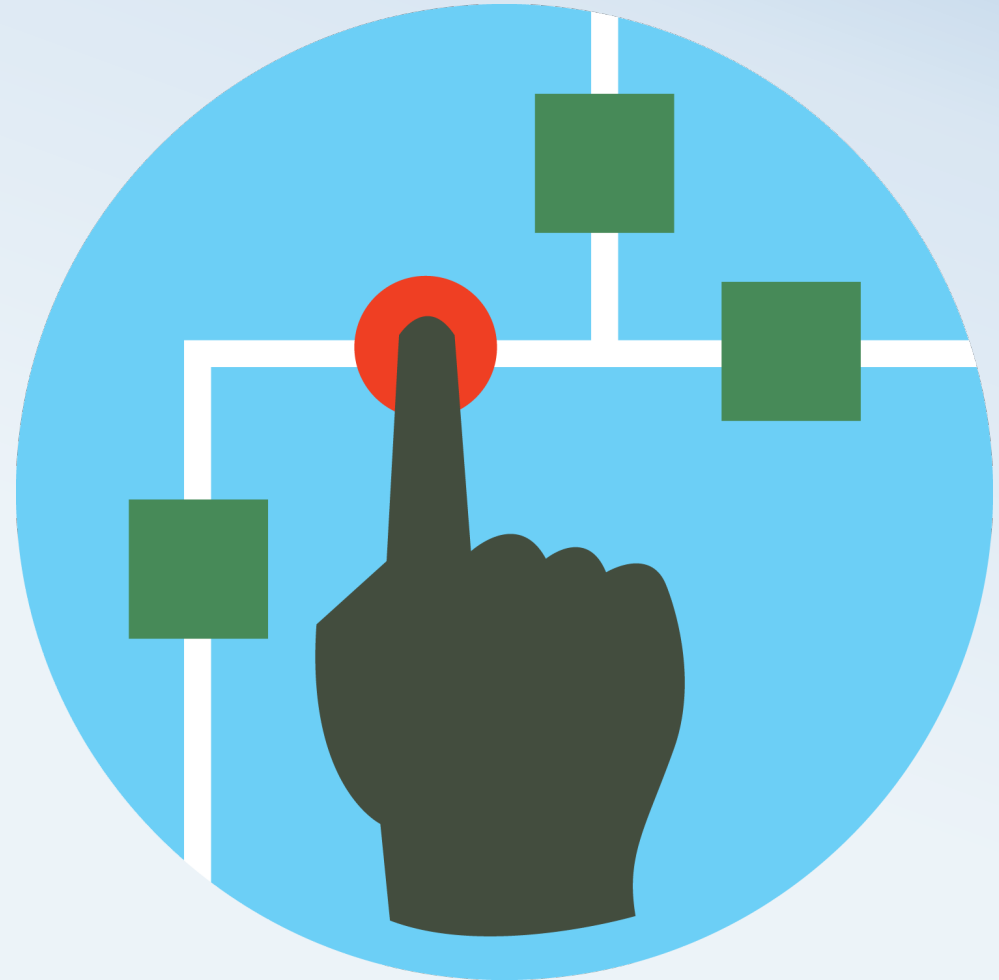




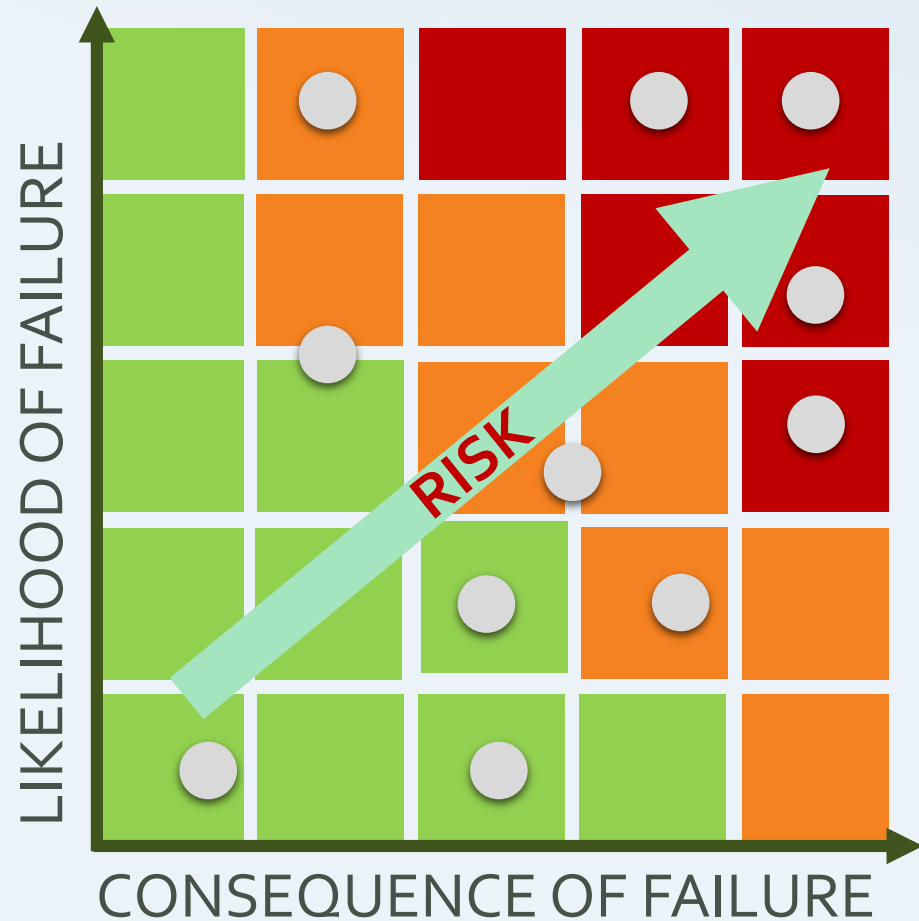
# Vulnerability Assessment

# Vulnerability Assessment

- Evaluates specific threats to critical water resources
  - Forms the basis for development of drought response and mitigation actions (i.e., projects)
- **In the context of this DCP:**
  - *Drought Vulnerability is the extent to which the Partner Agencies, and the region, are exposed or susceptible to risk.*



# How Can We Assess Vulnerability?



- Risk is a combination of:
  - Likelihood of occurrence
  - Consequences of occurrence
- **Risk = Consequence x Likelihood**
  - Consequence = significance of the supply source
  - Likelihood = uncertainty factors that contribute to loss of supply

# Consequence – Depends on your Perspective

We can look at the consequences from two perspectives

- **Regional Consequence**

- How much does an individual supply help meet the Napa watershed's water needs?
- Imported water and groundwater basin make up the largest percentage of the regional water supply.
- Local reservoirs contribute less to the region.

- **Local Consequence**

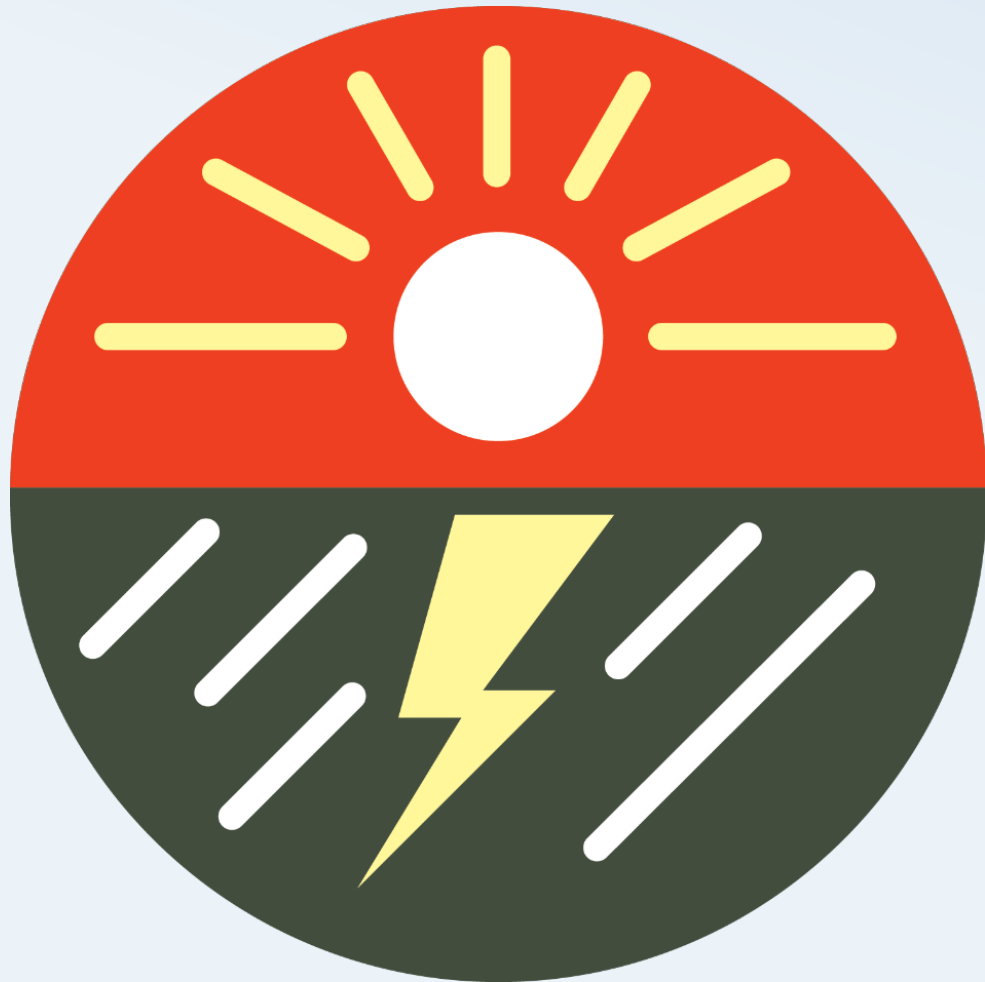
- How much does an individual supply contribute to an individual agency or group of users?
- Relying solely on "Regional Consequence" can be misleading.
- While some local reservoirs account for a small portion of the regional supply, they are critical to each agency's respective portfolio.

# Likelihood – Related to Uncertainty Factors

- Critical water supplies in the Valley face a number of threats and uncertainties, including:
  - **Climate Change**
  - **Infrastructure Susceptibility and Supply Limitations**
  - **Regulatory, Environmental, and Water Rights Constraints**
  - **Cost Constraints and Affordability**
  - **Source Water Quality Degradation**



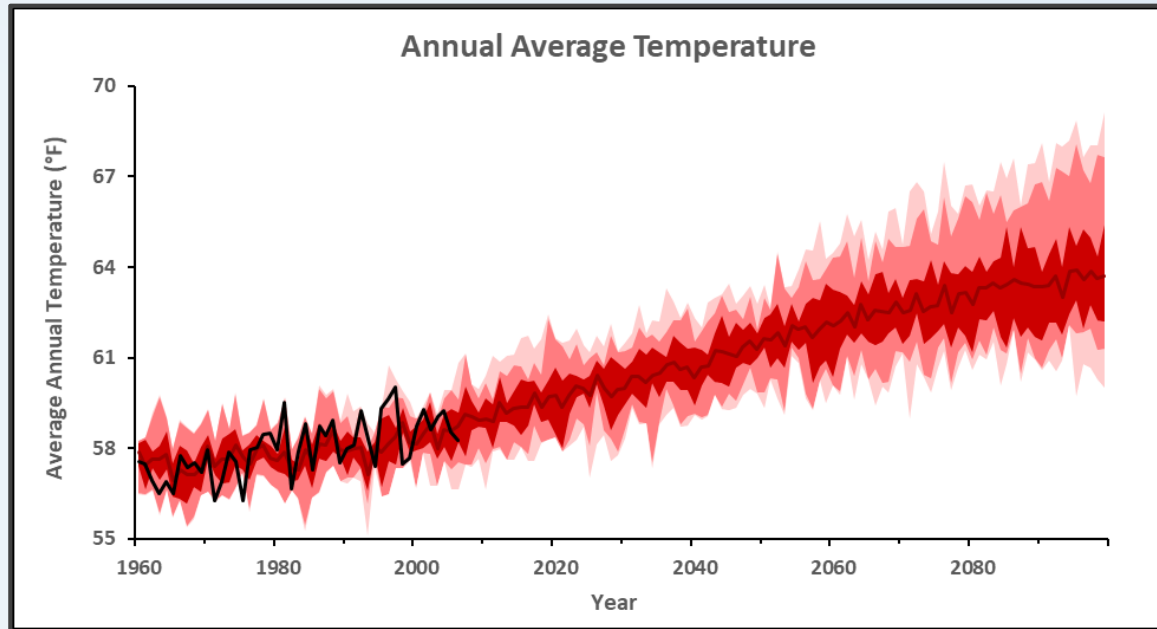
# Climate Change is Considered



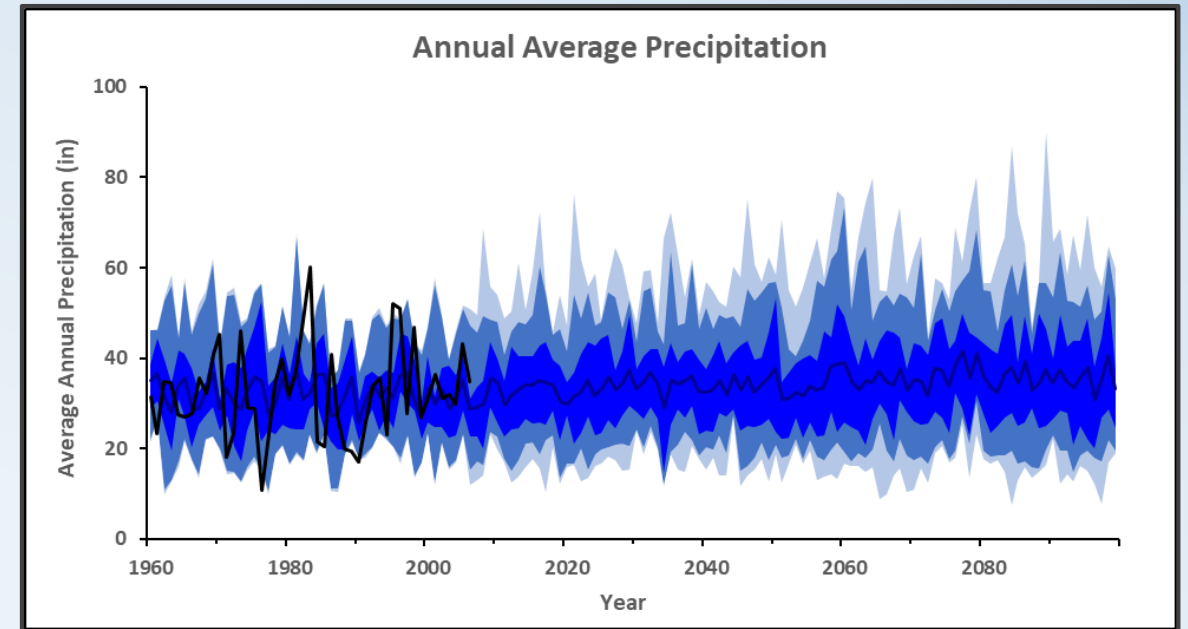
High level assessment of climate change in the Napa Valley:

- **Climate Change is projected to make planning for water supply and demand imbalances even more challenging.**
- While existing water supply data do account for climate variability, climate change has the potential to impact the availability and reliability of supplies.
- Future climate impacts, including changes to temperature and precipitation, must be considered when assessing supply.

# Climate Change Assessment – Summary



- **Temperature increases in all projections – strong consensus**
  - Many projections show an increase in variability and extremes
  - Potential impacts on water supply and demand – increased water demand



- **Precipitation increases in some projections, decreases in others – modest increase overall but no clear consensus**
  - Many projections also show an increase in variability and extremes
  - Potential impacts on water supply and demand – floods and droughts



# What's Next: Objectives and Measures for Screening Mitigation and Response Actions



# Initial Priorities from Task Force

- Projects and actions that deliver real results
- Recommendations that are implementation driven
- Review and make recommendations on how to better utilize/manage existing facilities and supply
- Look at expanding applications for Napa San winter water and explore potential of advanced purification efforts
- Develop a common platform for understanding surface supply water and groundwater interface, how this relates to State Water Project, and use this information for both DCP and regional educational purposes

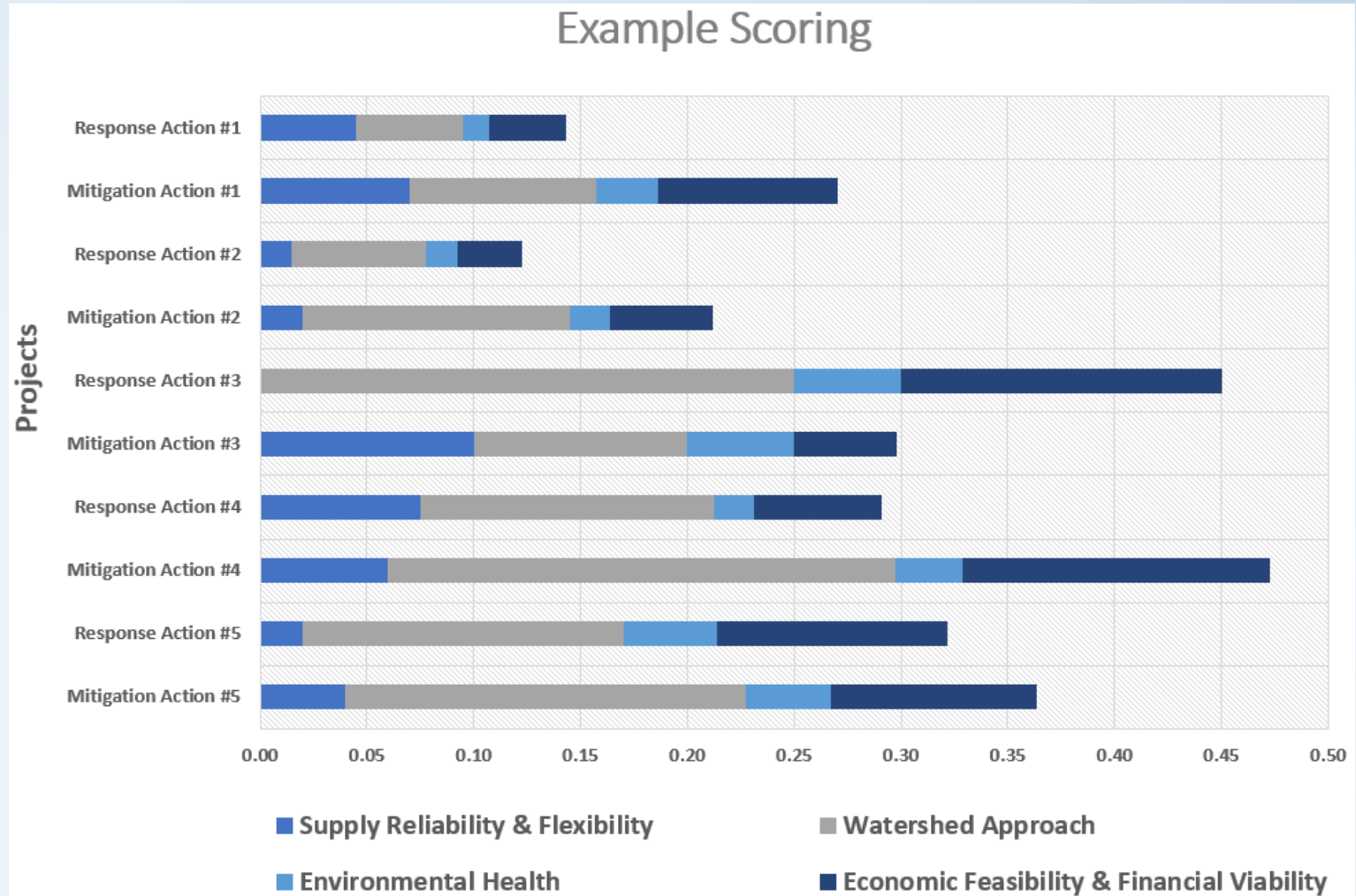
# Preliminary DCP Goals and Objectives

Project Goals and Objectives to satisfy local priorities and federal guidelines

Napa Valley DCP Task Force Goals	Napa Valley DCP Objectives
Supply Reliability & Flexibility	<ul style="list-style-type: none"><li>• Improve local, regional, and State Water supply reliability</li><li>• Improve reliance for non-drought disasters (i.e., fires, earthquakes, etc.)</li><li>• Reduce dependence on the State Water Project</li></ul>
Watershed Approach	<ul style="list-style-type: none"><li>• Interface with Groundwater Sustainability Agencies to help support ongoing groundwater basin management</li><li>• Alignment with the State's Water Resilience Portfolio principles</li><li>• Enhance water use efficiency and conservation in the Napa Valley</li><li>• Enhance climate change adaptation and mitigation</li></ul>
Environmental Enhancement	<ul style="list-style-type: none"><li>• Maintain and protect public health and safety</li><li>• Enhance local and regional ecosystems</li></ul>
Economic Feasibility & Financial Viability	<ul style="list-style-type: none"><li>• Cost effectiveness (\$/acre-foot)</li><li>• Ease of implementation/readiness to proceed</li></ul>

# Example: Scoring of Mitigation and Response Actions

- Goals and Objectives will be used to score/evaluate potential Mitigation and Response actions
- Process shows how a project performs against Goals and Objectives





# What's Next: Administrative and Organizational Framework

# DCP Task Force Partner Considerations

Who owns the DCP Responsibilities?

- Tasked with implementing Mitigation Measures, Response Actions, updating the DCP and communicating with the public
- Who are partners on drought mitigation projects, response actions and management of water beyond established service areas?
- Who secures and manages financial assistance for project grants and or/financing?





# Information Update: Interface between the DCP and the Napa Valley Groundwater Sustainability Plan

# Introduction

- When the Napa Valley DCP scope was developed in Spring 2019, the City of Napa emphasized:
  - Strong, project-oriented outcomes
  - Where possible, identify opportunities to collaborate in order to maximize support for, and secure, project implementation funding

# Opportunity for Collaboration

- Subsequent formation of the Napa County GSA, and future development of the GSP, present an opportunity for additional regional collaboration.
- In reviewing the DRAFT outline of the proposed GSP, several commonalities with DCP tasks were identified.





# Ongoing Coordination Discussions



- The DCP and GSP consulting teams are discussing common tasks and ways to share information.
- Options for possible collaboration are under development and will be sent to Task Force members for consideration later this summer.



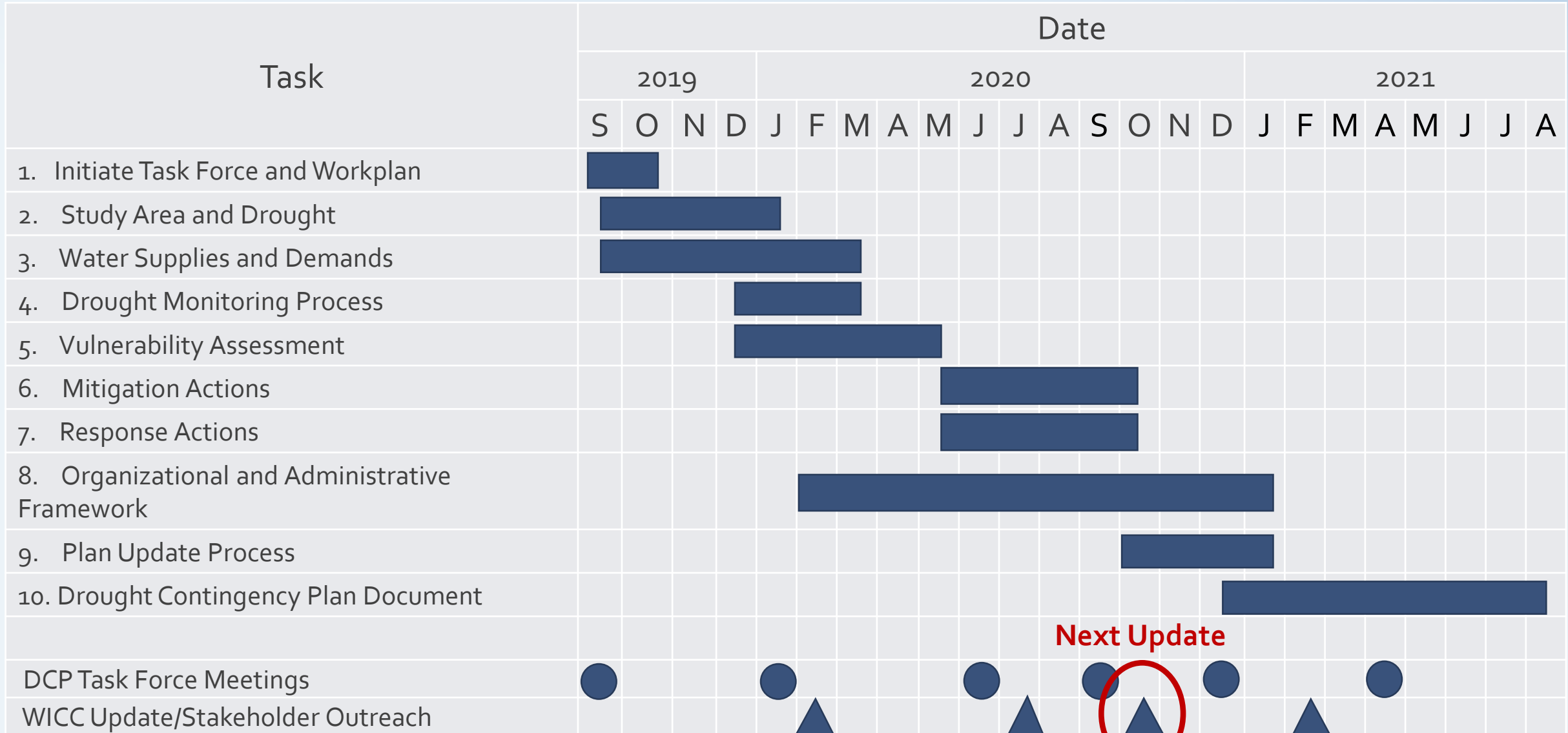
# Next Steps

# Stakeholder Updates

- Napa Valley DCP informational web site is:  
  
[www.napawatersheds.org/dcp](http://www.napawatersheds.org/dcp)
- DCP Task Force will provide a robust DCP update at the next meeting of the WICC, tentatively scheduled for:  
  
**October 22, 2020**



# DCP Schedule





Questions or Comments  
Email [dcp@cityofnapa.org](mailto:dcp@cityofnapa.org)