

CALIFORNIA DEPARTMENT OF WATER RESOURCES

# SWP Updates on Climate Change and Wildfire Response Planning



California Water  
Commission Briefing  
September 21<sup>st</sup>, 2022

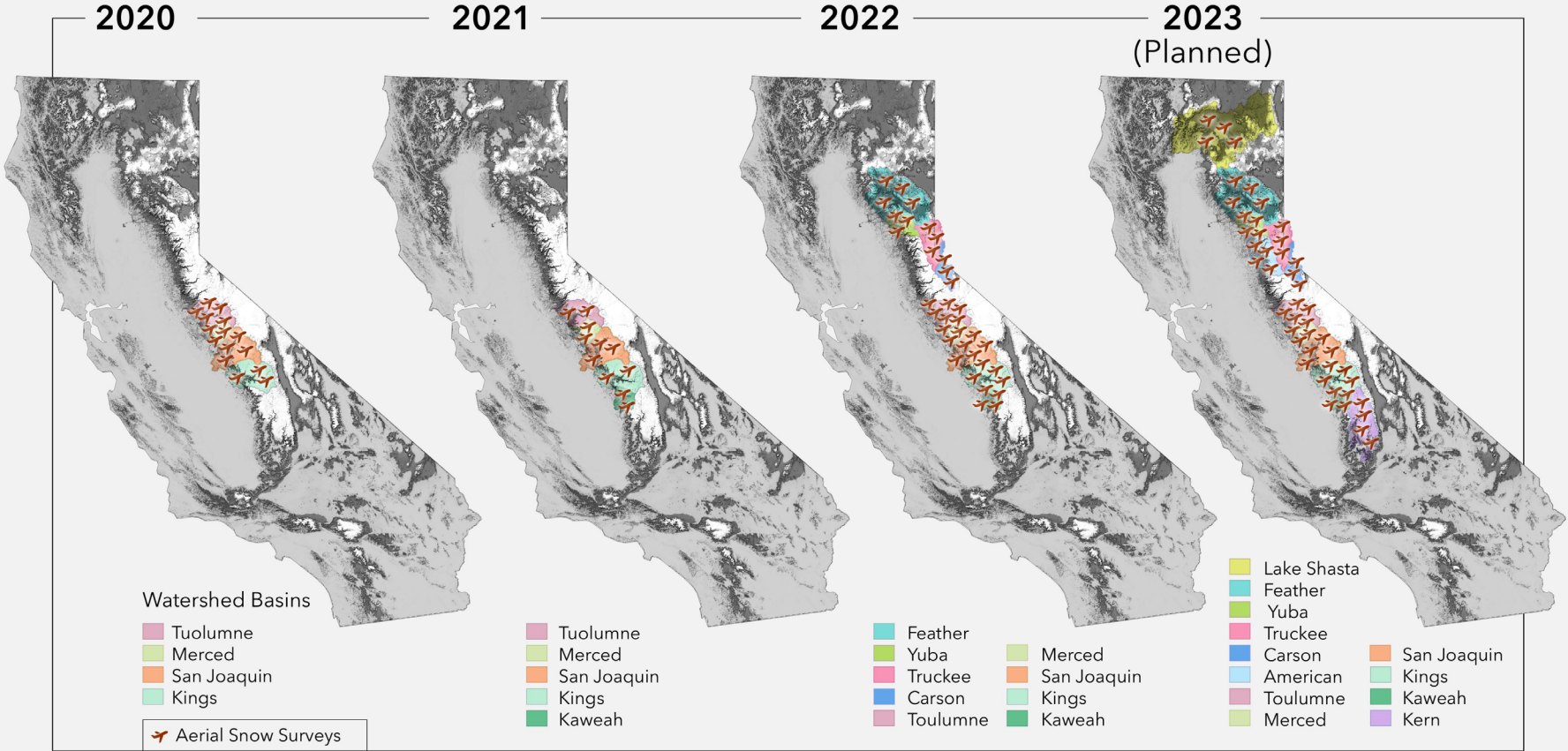
# Today's Briefing

- Improved forecasting
- Wildfire response
- Improved planning for future conditions



# Better Data = Improved Forecasting

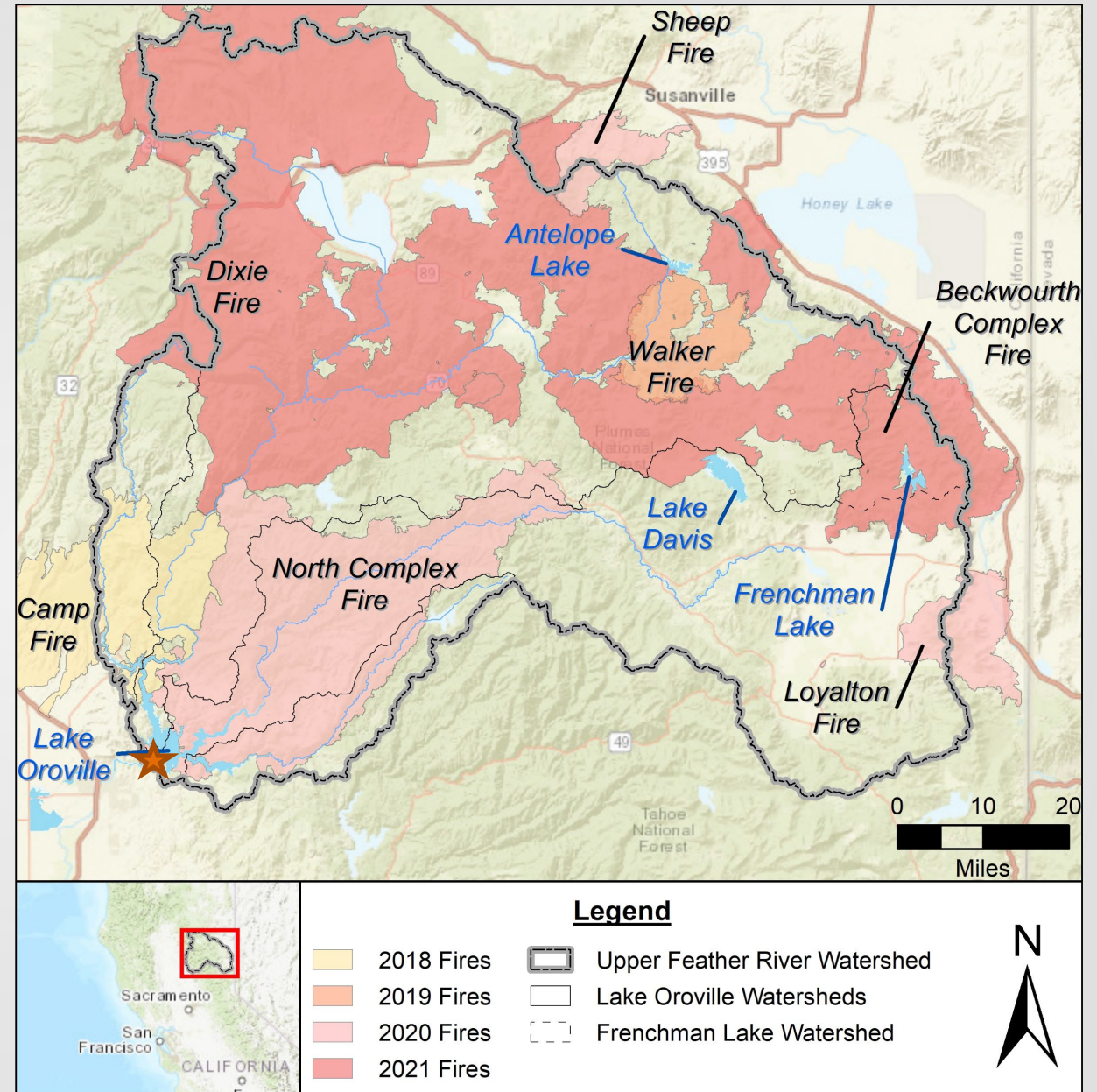
## EXPANSION OF AERIAL SNOW SURVEYS





# Fires in the Upper Feather River Watershed

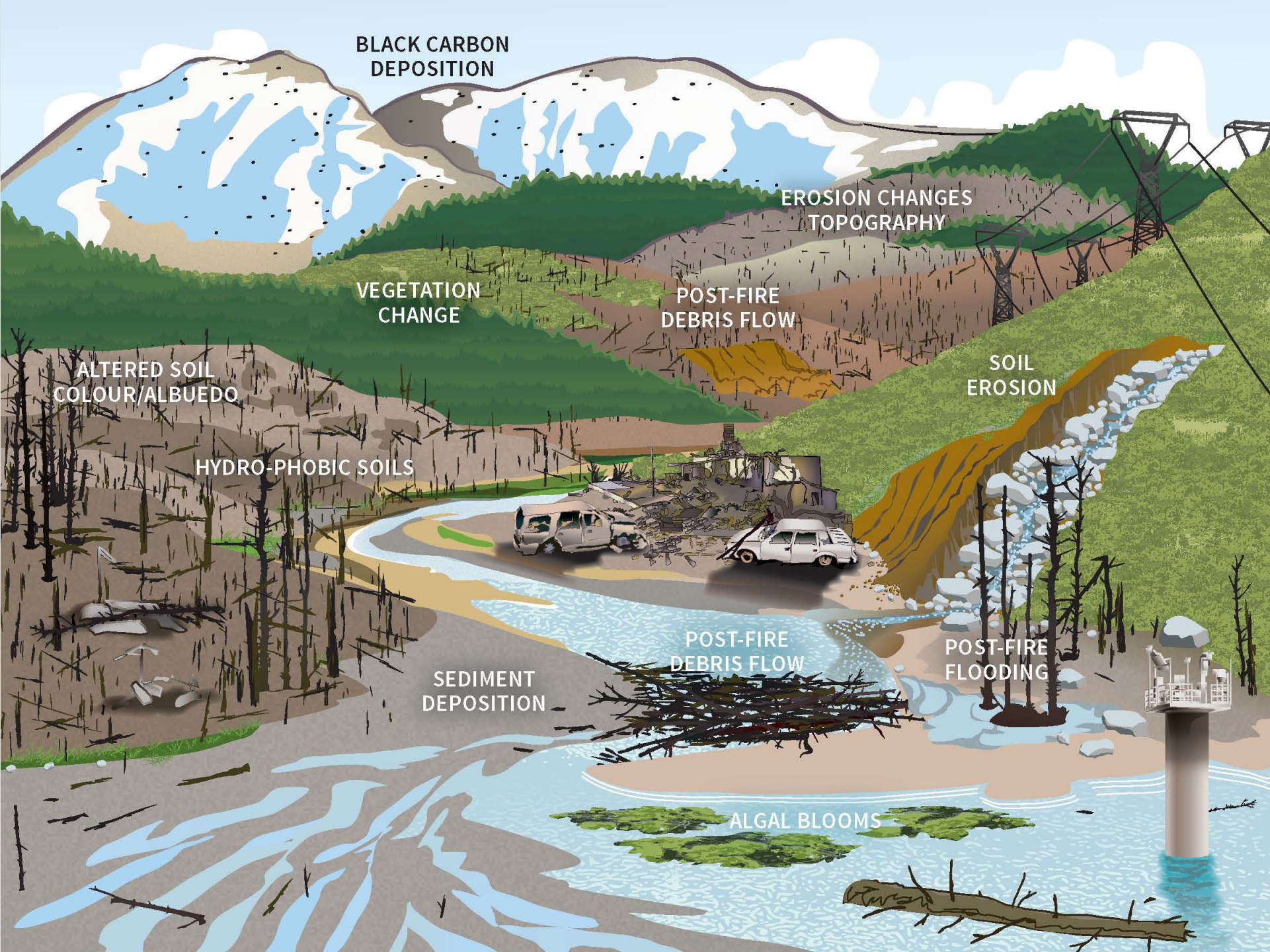
- 57% of the Upper Feather River Watershed has burned since 2018
- 27% burned at high severity (75% tree mortality)
- The majority of shoreline around Lake Oroville has burned (largely in Camp Fire and North Complex Fire)



**Watershed Area Above Lake Oroville Approx. 2.3 million acres**







BLACK CARBON DEPOSITION

EROSION CHANGES TOPOGRAPHY

VEGETATION CHANGE

POST-FIRE DEBRIS FLOW

SOIL EROSION

ALTERED SOIL COLOUR/ALBUEDO

HYDRO-PHOBIC SOILS

SEDIMENT DEPOSITION

POST-FIRE DEBRIS FLOW

POST-FIRE FLOODING

ALGAL BLOOMS



# DWR/SWP Impact Assessment and Action Planning

- Sediment and Debris
- Water Quality
- People and Grey Infrastructure
- Water Supply



# DCR 2023 Climate Change Enhancements Plan

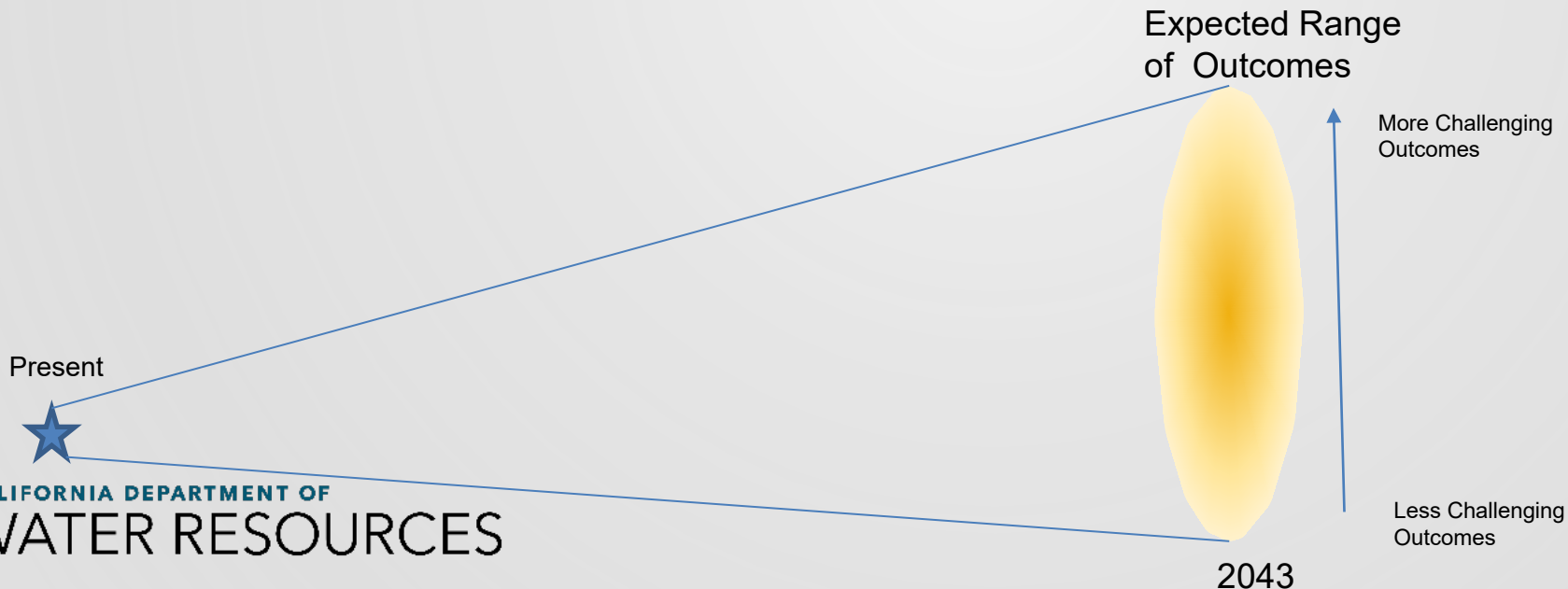
- ❖ Historical data adjustments to account for climate changes already observed
- ❖ New risk informed future climate projections
- ❖ New guidance on using risk informed climate projections





# New Risk Informed Future Projections

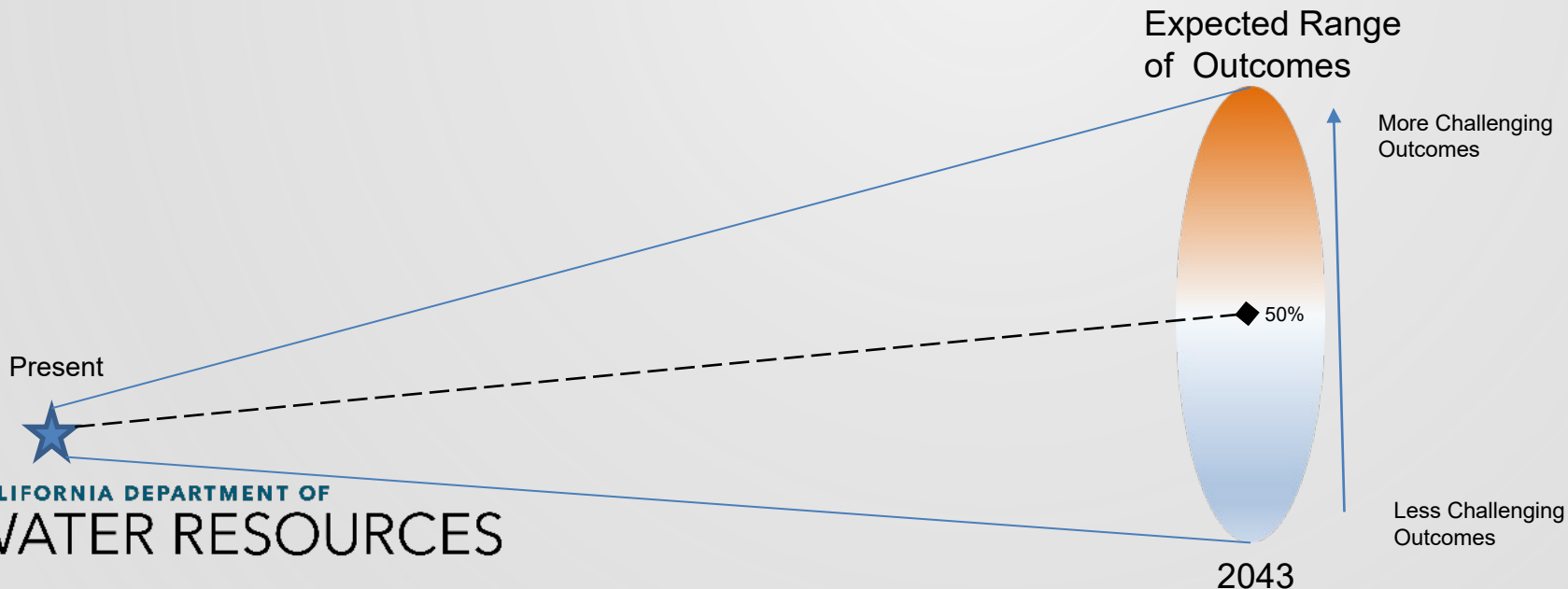
- Future conditions scenarios will evaluate combinations of climate changes (temperature, precipitation, and sea level rise) that represent different levels of risk tolerance. The risk tolerance will be represented by a probability number that describes the percent of climate outcomes that would result in better system performance outcomes.





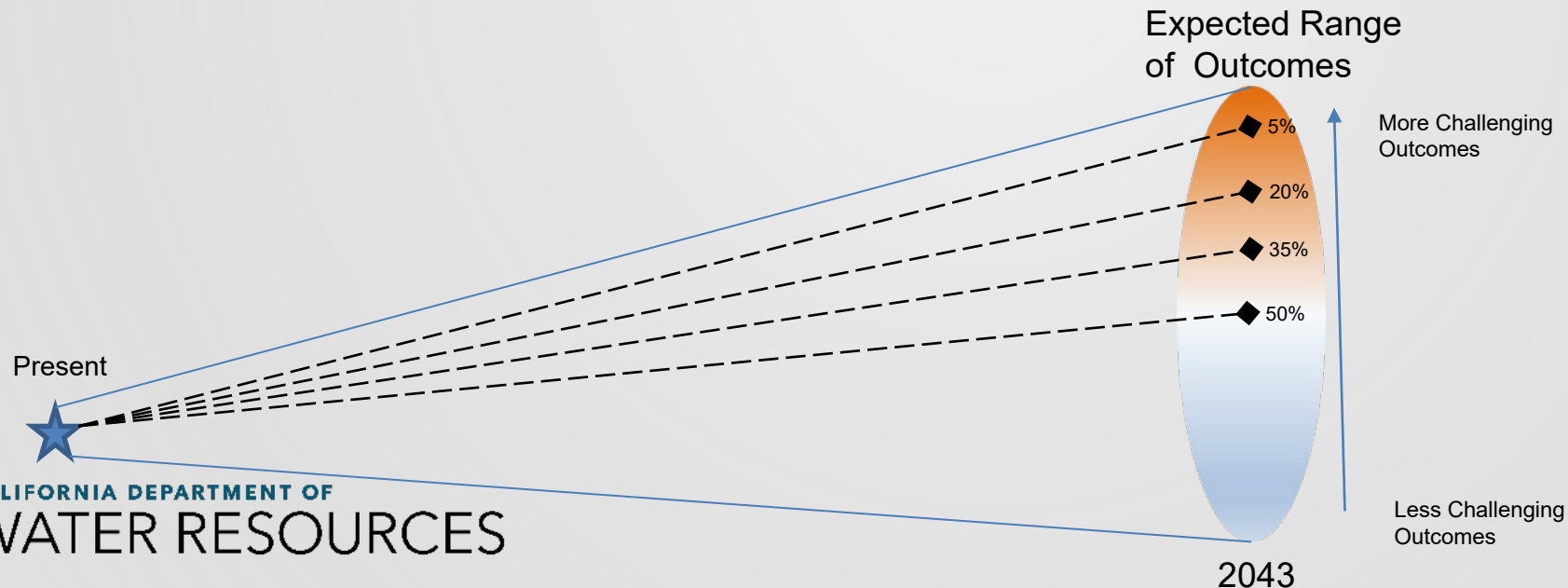
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# Resilient Water Management

- Improved planning
- Increased transparency
- The future is uncertain with a range of possible outcomes
- Each agency may have different risk tolerance and dependance on SWP supplies



# SWP Adaption Investigation

- Structural Measures
- Operations and Management Measures





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- Structural Measures
  - Delta conveyance
  - California aqueduct subsidence project
- Operations and Management Measures



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- Operations and Management Measures
  - Forecast informed reservoir operations (FIRO)
  - Improved seasonal forecasting
  - Lake Oroville water control manual update
  - Feather River watershed wildfire mitigation





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  - SWP enhanced asset management



Any  
**Questions?**

