



# Addressing drought and climate change in Southern NV

Keely Brooks



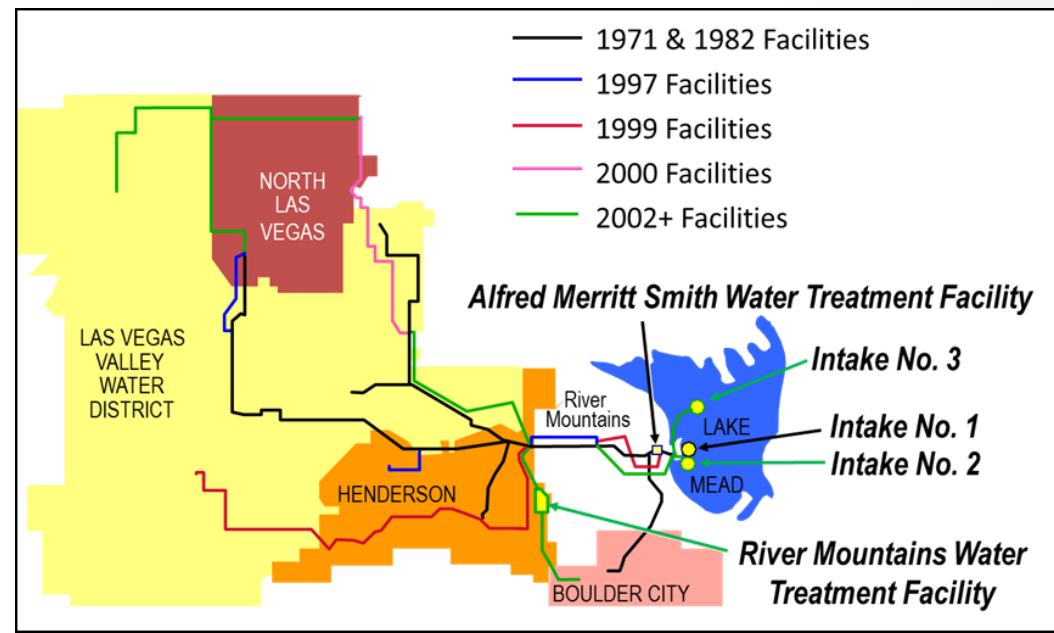
SOUTHERN NEVADA WATER AUTHORITY®





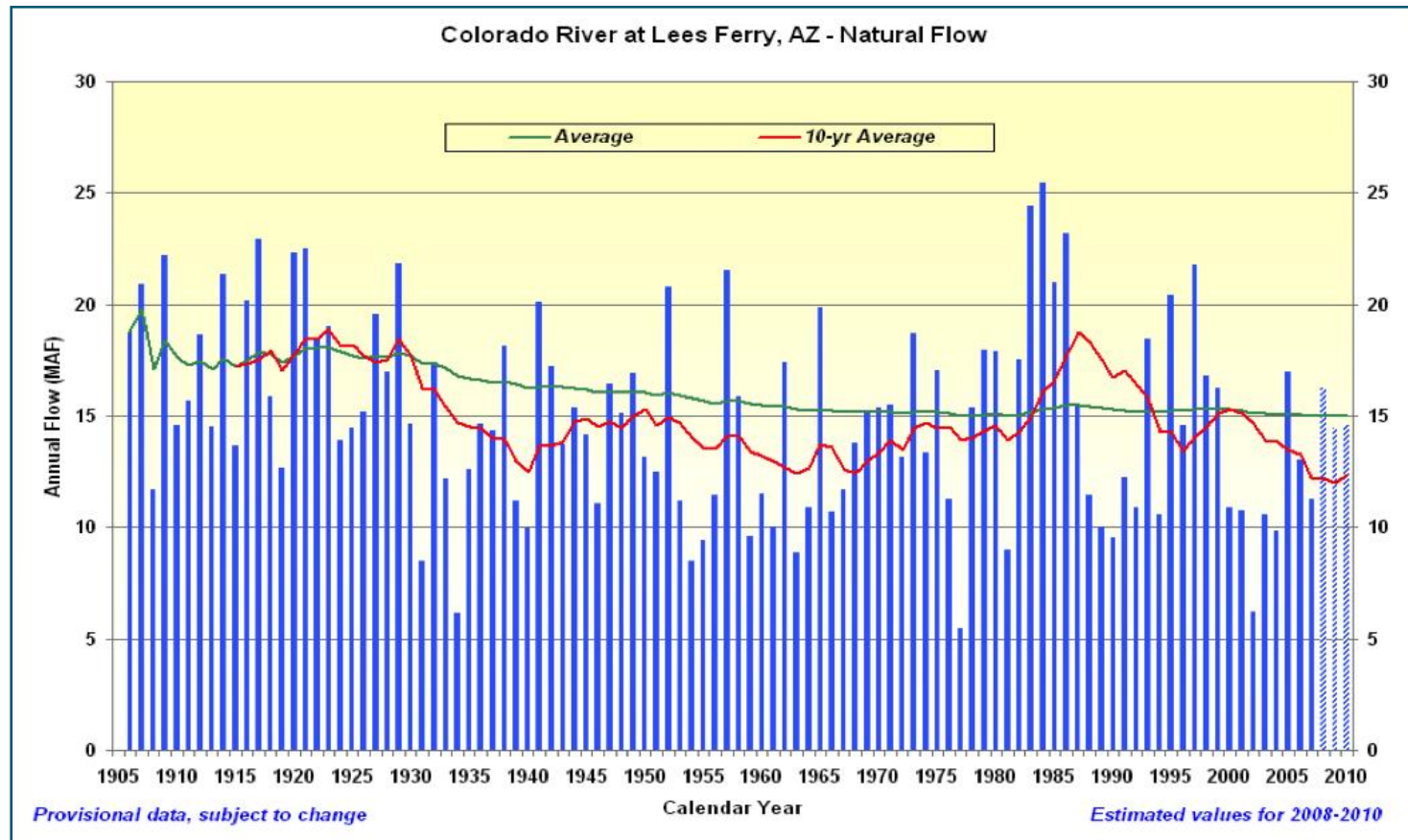
# SOUTHERN NEVADA WATER AUTHORITY®

- **Seven member agencies**
- **90% of supply from Colorado River**
- **Withdrawal from Lake Mead**
- **Critical Intakes in Lake Mead**



# TRADITIONAL SUPPLY PLANNING

- Based on observed weather and hydrology
- Assumes historic variability, history repeats, stationary climate



# CLIMATE IMPACTS ARE HAPPENING TODAY



Hoover Dam, Lake Mead

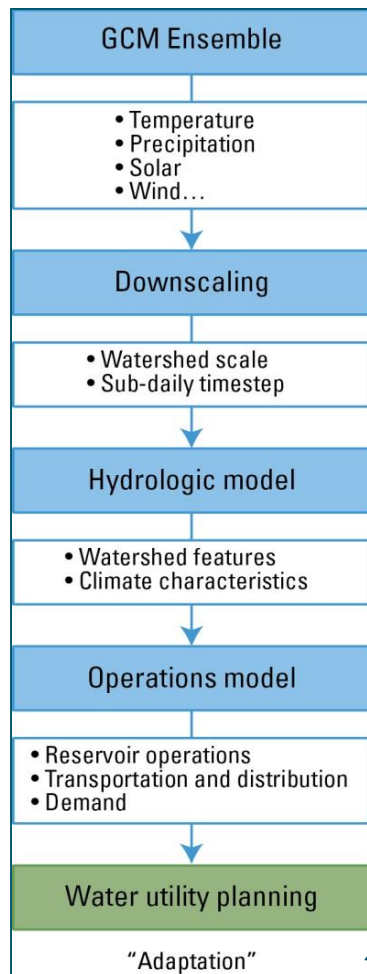
2014

**The Colorado River Basin is  
in a severe drought.**

**Lake Mead is at its lowest  
elevation since the reservoir  
was filled in the 1930s.**

# INTEGRATING CLIMATE CHANGE INTO WATER UTILITY PLANNING

Illustration of “Chain of Models”



• What will the future climate be like?

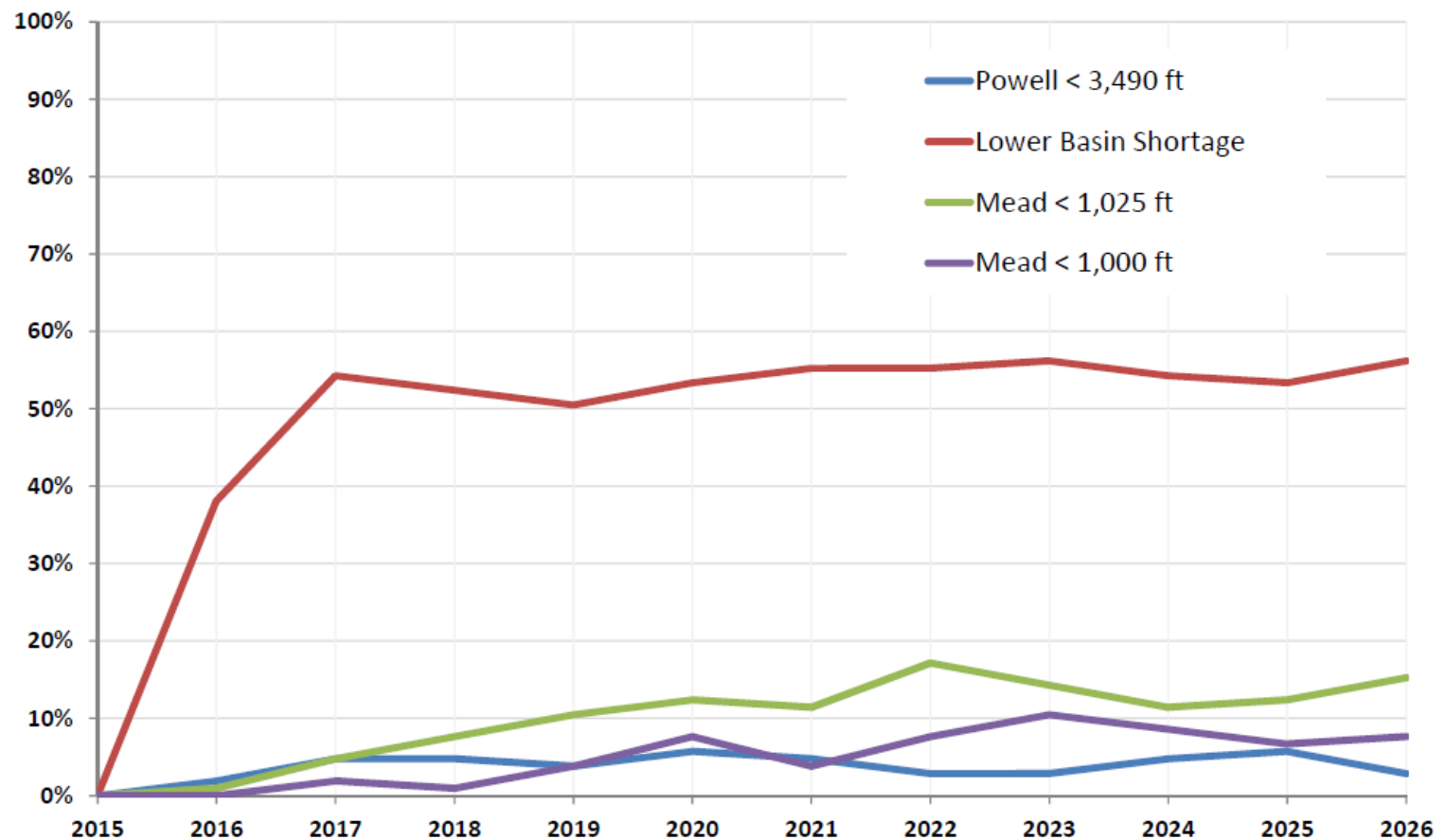
• Impact on water supply, water demand, infrastructure?

• What's the biggest risk to our utility?

• How do we reduce that risk, given the uncertainty

# FUTURE OUTLOOK – ASSUMES HISTORICAL

## Current Projections: Historical Hydrology

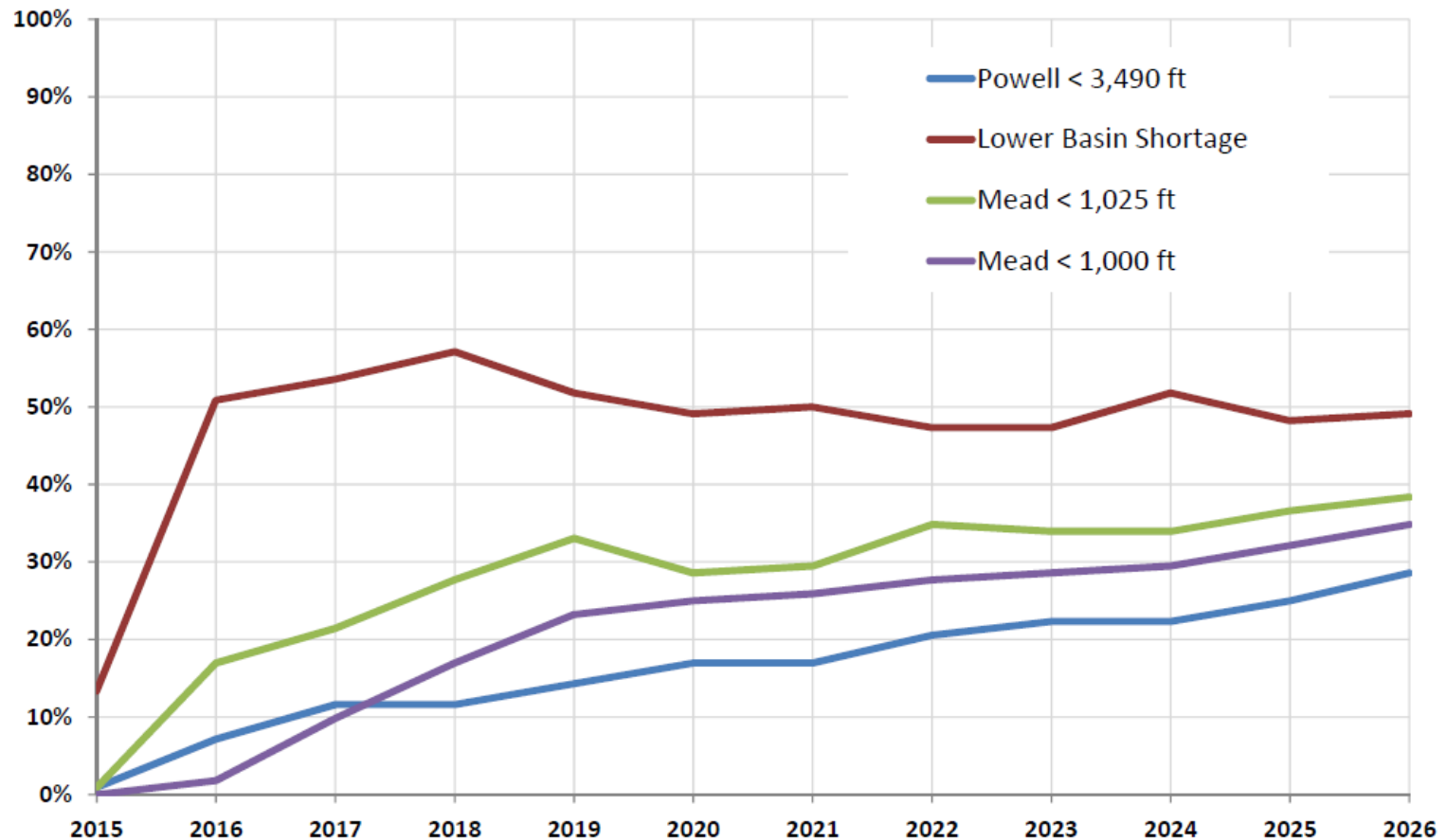


\* Projected using January 2014 CRSS



# FUTURE OUTLOOK –WITH CLIMATE CHANGE

## Current Projections: GCM-Driven Hydrology



\* Projected using January 2014 CRSS

# What We Are Doing – Adaptation

**Reducing  
Demands**

**Working  
with  
Colorado  
River  
partners**

**Safe-  
guarding  
our  
access**

**Securing  
short and  
long-term  
supplies**

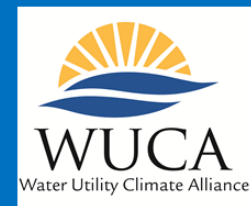


# Learning from each other

## Water Utility Climate Alliance

[www.wucaonline.org](http://www.wucaonline.org)

43 million drinking water customers



### Mission Statement

The Water Utility Climate Alliances provides leadership in assessing and adapting to the potential effects of climate change through collaborative action. We seek to enhance the usefulness of climate science for the adaptation community and improve water management decision-making in the face of climate uncertainty.

# KEY TAKE AWAYS

- **Change planning assumptions/methods**
- **Impacts are happening now**
- **Future outlook grim**
- **Start adapting now**
- **Working together is essential**



# Keely Brooks

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