

NEVADA DIVISION OF
WATER RESOURCES



Nevada Department of
**CONSERVATION &
NATURAL RESOURCES**

Summary of State Water Plan Field Tours

Stakeholder Advisory Group Meeting
July 29, 2024

Nevada Division of Water Resources (NDWR)
Water Planning and Drought Resiliency
Section (WP&DR)

OVERVIEW OF PURPOSE AND PROCESS

Goals: Better understanding of water-related issues and challenges across the state, and establish working relationships with stakeholders and interested parties

Discussion Topics:

- Major *issues and challenges*?
- Potential *solutions* to these challenges?
- *Barriers* to addressing these challenges?
- How *SWP* could help address these challenges?
- *Data & information* that's most useful for you?

Process: Synthesized notes within and across field tours and categorized into 1) major themes; 2) additional themes; 3) specific challenges; 4) recommendations

Outcome: Obtain additional input for the SWP and content for facilitated stakeholder workshop

ITINERARY: TRUCKEE MEADOWS (MARCH 7, 2024)



- Truckee Meadows Water Authority (TMWA)
- Western Regional Water Commission (WRWC)
- Northern Nevada Water Planning Commission (NNWPC)

MAJOR THEMES: TRUCKEE MEADOWS

Growth

- Significant increases in water demand (domestic & industry)
- Bolstering treatment capacity
- Successful regional collaboration
- GOED – WaterWise Focus Group

Climate Change

- Complex climate change implications
 - Wildfire is a threat to water quality
 - Dealing with extremes from year to year; rain vs snow
- Reservoir management evolving

Water Supply Strategies

- Unique “One Water” perspective
- Combo of gw and sw allows for adaptive management
- Potable reuse
 - ✓ OneWater Nevada – APWF (2 mgd)

Administrative Hurdles

- Updates to statutes, codes, & regulations needed to support reuse projects
- Permitting can be cumbersome
- Using decree water can be complex

ITINERARY: CARSON & WALKER RIVER BASINS (MAY 14 & 21, 2024)



- Truckee-Carson Irrigation District (TCID)

- Walker River Irrigation District (WRID)

MAJOR THEMES: TRUCKEE-CARSON AND WALKER RIVER BASIN

Relationships & Outreach

- Locals like to see DWR staff with boots on the ground
- Meetings and updates are vital to sustaining good relationships and cooperation
- Importance of public education
- Guidance/input from the state

Funding/Capacity

- Coordinating with several states, counties, and private companies with limited staff
- Federal funding requires eligibility, match, meeting thresholds, and is time consuming to navigate and manage
- Equipment is very costly to repair
- Good studies needed for good planning

Infrastructure

- Pressure to automate and increase efficiency of infrastructure in order to increase conservation and reduce demand on limited staff

ITINERARY: HUMBOLDT RIVER BASIN (JULY 16-18, 2024)



- Upper Humboldt River Basin Ag
- Elko County NRD
- NGM Cortez Mine
- Conservation Districts Program
- Pershing County Water Conservation District (cancelled)

MAJOR THEMES: HUMBOLDT RIVER BASIN

Water Rights

- Temporary permits & extensions – concerns expressed from different industries
- Transparency on water rights transfers
- Concerns with inter-basin transfers
- Guidance from DWR

Monitoring & Reporting

- Comprehensive, consolidated, and accessible water use data and water level monitoring
- Accurate weather monitoring for rural communities

Conjunctive Management

- Surface water vs groundwater
- Groundwater vs groundwater
- Declining water levels becoming a major concern

Capacity

- Mines have a lot of staff turnover
- **Short staffing** continues to be a primary issue in rural communities

COMMON THEMES

Over-appropriation & conjunctive management continue to be concerns people want to see addressed

Capacity & turnover are major barriers for operations & projects

Comprehensive, consolidated, & accessible water use & weather monitoring data

STATE WATER PLAN

RECOMMENDATIONS FROM STAKEHOLDERS

Transparency

- NDWR policies (existing and developing) and standards
- State Engineer's vision & direction (see 2022 Strategic Plan)

Guidance

- Justification needed for extensions and rules for transfers
- Local water planning support
- Sharing of best practices and innovative knowledge

Robust & Comprehensive Monitoring (Data)

- Improve monitoring and data availability across MOUs
- Establish partnerships (e.g., NGOs) to assist with capacity issues
- Data can help with justifying & securing funding for projects
- Provide compelling data to support changes in practices

Governmental Efficiency

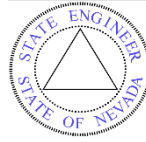
- Streamline the processing of water rights (extensions)

Education & Outreach

- For legislatures, communities, industries, etc.
- Workshops for funding opportunities
- Continue stakeholder meetings to maintain relationships, communication

Questions?





NEVADA DIVISION OF
WATER RESOURCES



Nevada Department of
**CONSERVATION &
NATURAL RESOURCES**

SWP Draft Progress Updates

Stakeholder Advisory Group Meeting
July 29, 2024

Nevada Division of Water Resources (NDWR)
Water Planning and Drought Resiliency
Section (WP&DR)

CLIMATE AND WATER RESOURCES DRAFT COMMENTS

Thank you for taking the time to provide comments.

- Big-picture
- Detail-oriented, thorough
- Helpful!

- Attempted to keep the reading level appropriate for a broad audience (including legislators)
- Some comments will be better addressed in upcoming chapters



GOALS OF THE CLIMATE SECTION

Describe Nevada's "average" climate (temperature, precipitation, extreme events)






Discuss model projections for statewide temperature and precipitation

Summarize how the potential changes in climate could impact water resources

Provide links to additional resources for entities to obtain more localized data

CLIMATE UPDATE SUMMARY

- Added citations
- Had to limit getting into more regional/local details, but some additional information and clarification were added

Hydrologic Indicator	Climate Impacts
Drought 	<ul style="list-style-type: none"> • Increasing temperatures will increase evaporative demand and wildfire risk [1,11]. • Droughts are likely to become more frequent and intense, potentially causing water shortages from decreasing supplies and increasing demands [10]. • Aridification, or the transition of the climate and hydrology to drier conditions, is occurring in southern Nevada [17].
Snowpack 	<ul style="list-style-type: none"> • In the western U.S., snowpacks have been decreasing, the elevation of the snow line has been increasing, and more precipitation has been falling as rain rather than snow [14,19]. • There will likely be a shift from snow to rain during the winter and earlier snowmelt during the winter and spring [10]. • Maximum snow water equivalent (SWE), or the amount of water available in the snow, in the Sierra Nevada and Great Basin is likely to decrease, while the date of maximum SWE becomes more variable and shift earlier [7,9].
Runoff & Streamflow 	<ul style="list-style-type: none"> • Reduced spring snowpack and earlier melt onset are affecting streamflow volume and timing [2,5]. • Projected streamflow losses are greatest in high elevation subbasins, where sensitivity to changes in climate is heightened due to the importance of snowpack on streamflow [13]. • Reduced snowpacks and slower melt rates [15] may result in less streamflow, but individual model results are highly variable and project both increases and decreases in streamflows [2,13,20].
Floods 	<ul style="list-style-type: none"> • Year-to-year precipitation variability is projected to increase [10]. • Atmospheric rivers are projected to become more intense. There is also the potential for expansion of the season when atmospheric rivers occur, extending beyond the winter months and into the fall and spring seasons [4]. • Research suggests a large potential for continued regional warming to increase flood risk [6].
Groundwater 	<ul style="list-style-type: none"> • The current understanding of climate impacts on groundwater is extremely limited [5]. • Changes in the amount and timing of snowmelt, and/or increases in evapotranspiration, may lead to decreases in groundwater recharge and increases in groundwater demand, but the impacts will be influenced by the hydrology and water use patterns of an area [12].



GOALS OF THE WATER RESOURCES SECTION

Provide a descriptive overview Nevada's surface water and groundwater resources

Communicate data with visual representations

Acknowledge how water quality impacts water availability

Provide links to additional resources for entities to obtain more localized data

WATER RESOURCES UPDATE SUMMARY

- Added a short conjunctive management description
- Updated some references
- Made some terminology clearer and more consistent
- Incorporating additional evaporation data, but still have limitations

Conjunctive Management:

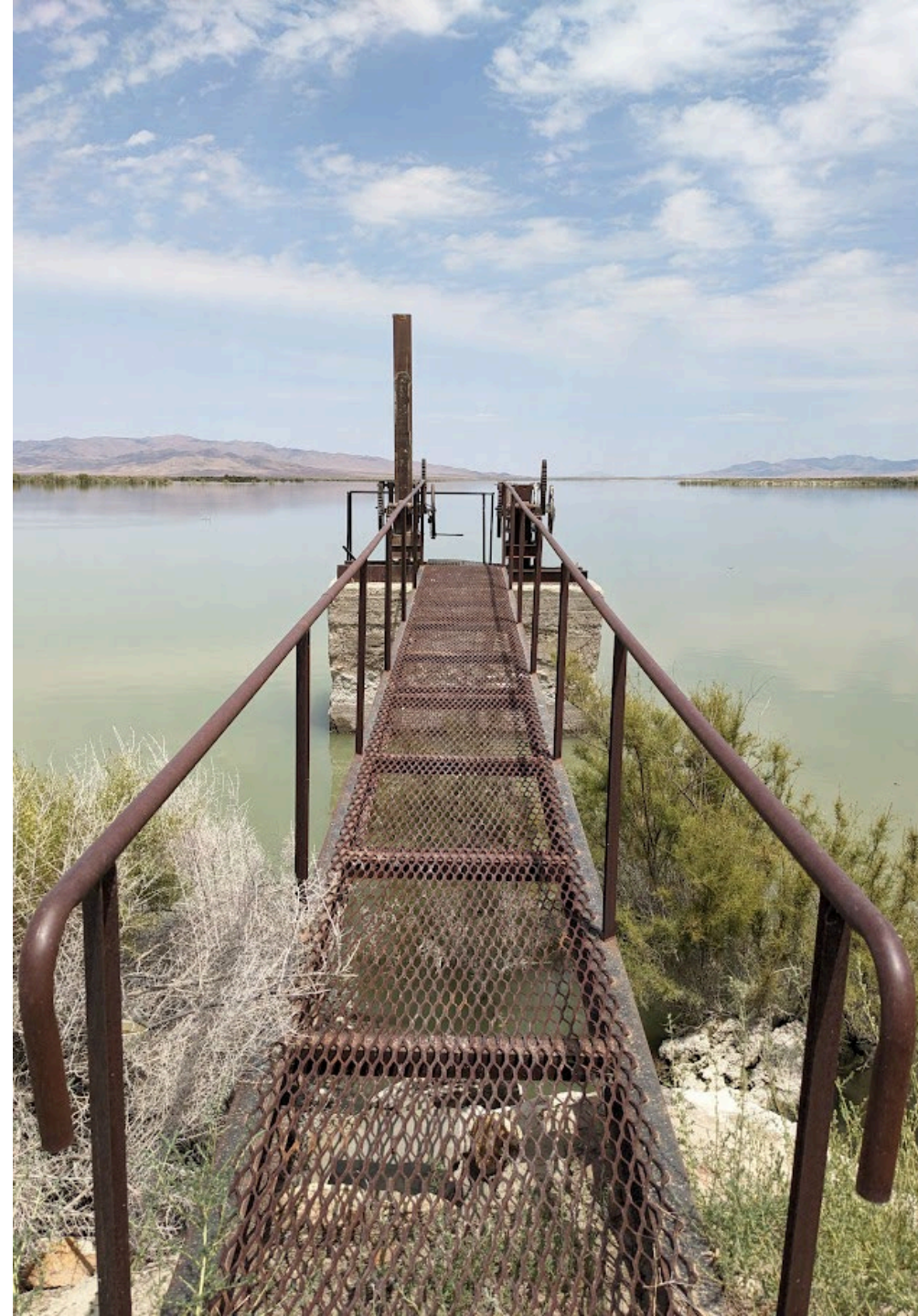
A coordinated water resource management approach that acknowledges the connectedness of surface water and groundwater.

It involves considering the interaction between surface water and groundwater and implementing strategies to optimize their use while minimizing conflict.

Essentially, it's about managing water resources holistically to ensure sustainability.

PROGRESS ON OTHER CHAPTERS

- **Water Use:** 2021 pumpage data being collated, gaps being filled
 - Additional ag data from DRI
- **Supply/Demand Strategies:** Bob beginning to draft text
- **Issues and Recommendations:** stakeholder meetings and upcoming workshops to provide valuable input that can be refined for the plan



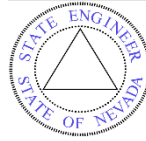


QUESTIONS?

Nicole Goehring, Water Resource Specialist
Water Planning and Drought Resiliency Section
Nevada Division of Water Resources

Phone: 775-684-2847

Email: ngoehring@water.nv.gov



NEVADA DIVISION OF
WATER RESOURCES



Nevada Department of
**CONSERVATION &
NATURAL RESOURCES**

Nevada State Water Plan: Future Activities

Stakeholder Advisory Group Meeting
July 29, 2024

Presented by:
Bunny Bishop

Nevada Division of Water Resources (NDWR)
Chief, Water Planning and Drought Resiliency Section



OVERVIEW

State Water Plan Activities:

- State Water Plan Workshop Series
- Next SAG meeting winter 2024/2025
- Potential Funding

STATE WATER PLAN WORKSHOP SERIES

Planning for
last two weeks
in September
2024

In-person

Facilitated

Four
workshops in
the series



Considering two workshops during the
last two weeks in October!

NEXT SAG MEETING

- **Next meeting in winter 2024/2025.**
- **Share and review content from the State Water Plan Workshop Series.**
- **A Doodle Poll will be sent out.**



POTENTIAL FUNDING

Potential funding to support plan development.

- Projections for population and economic growth.
- Water use based on a range of projections.





Questions?

Contact

Bunny Bishop

Chief, Water Planning and Drought Resiliency Section

Nevada Division of Water Resources

Phone: 775-684-2834

Email: bbishop@water.nv.gov