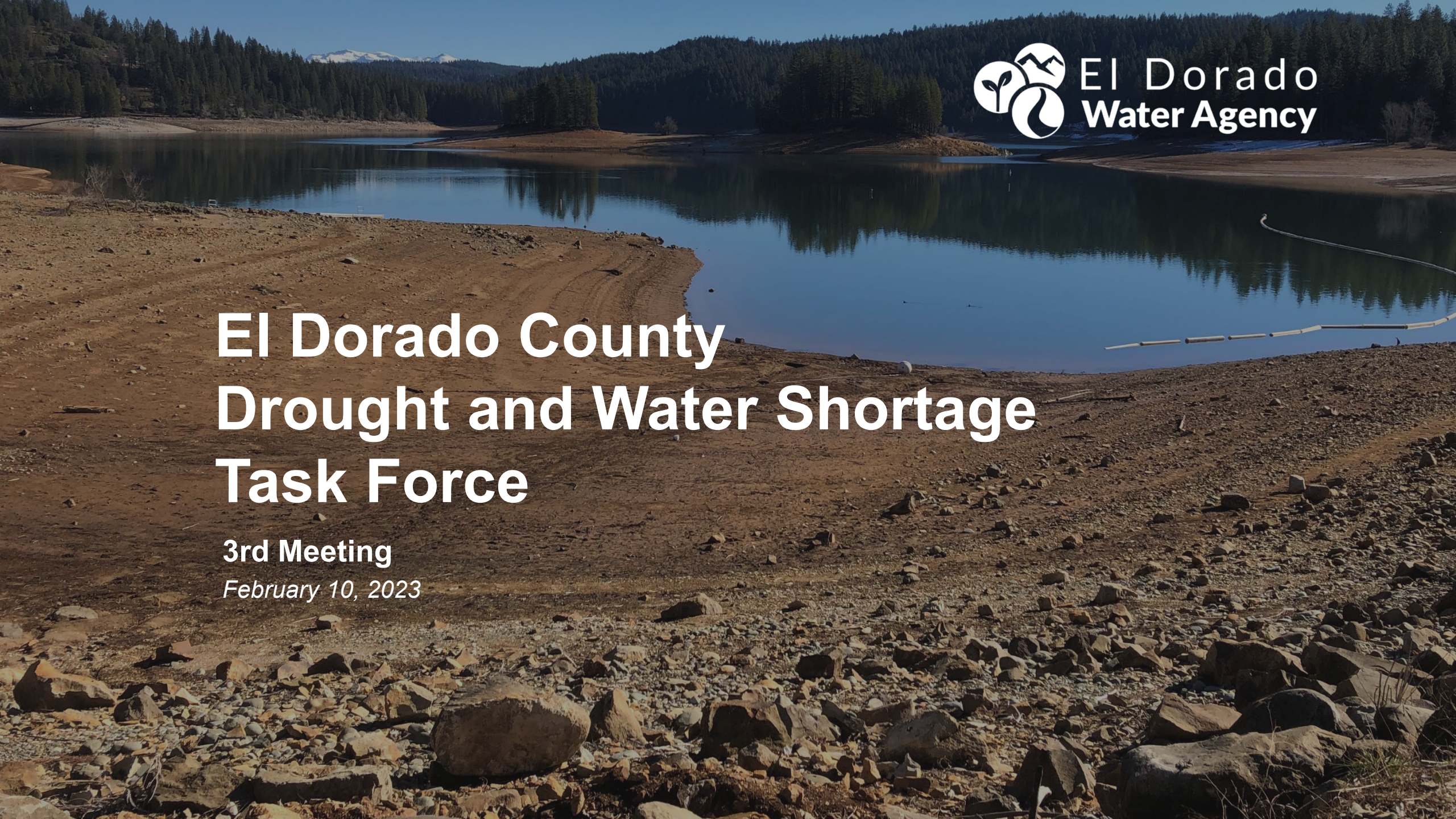


El Dorado Water Agency

El Dorado County Drought and Water Shortage Task Force

3rd Meeting

February 10, 2023

SB 552 Implementation Updates

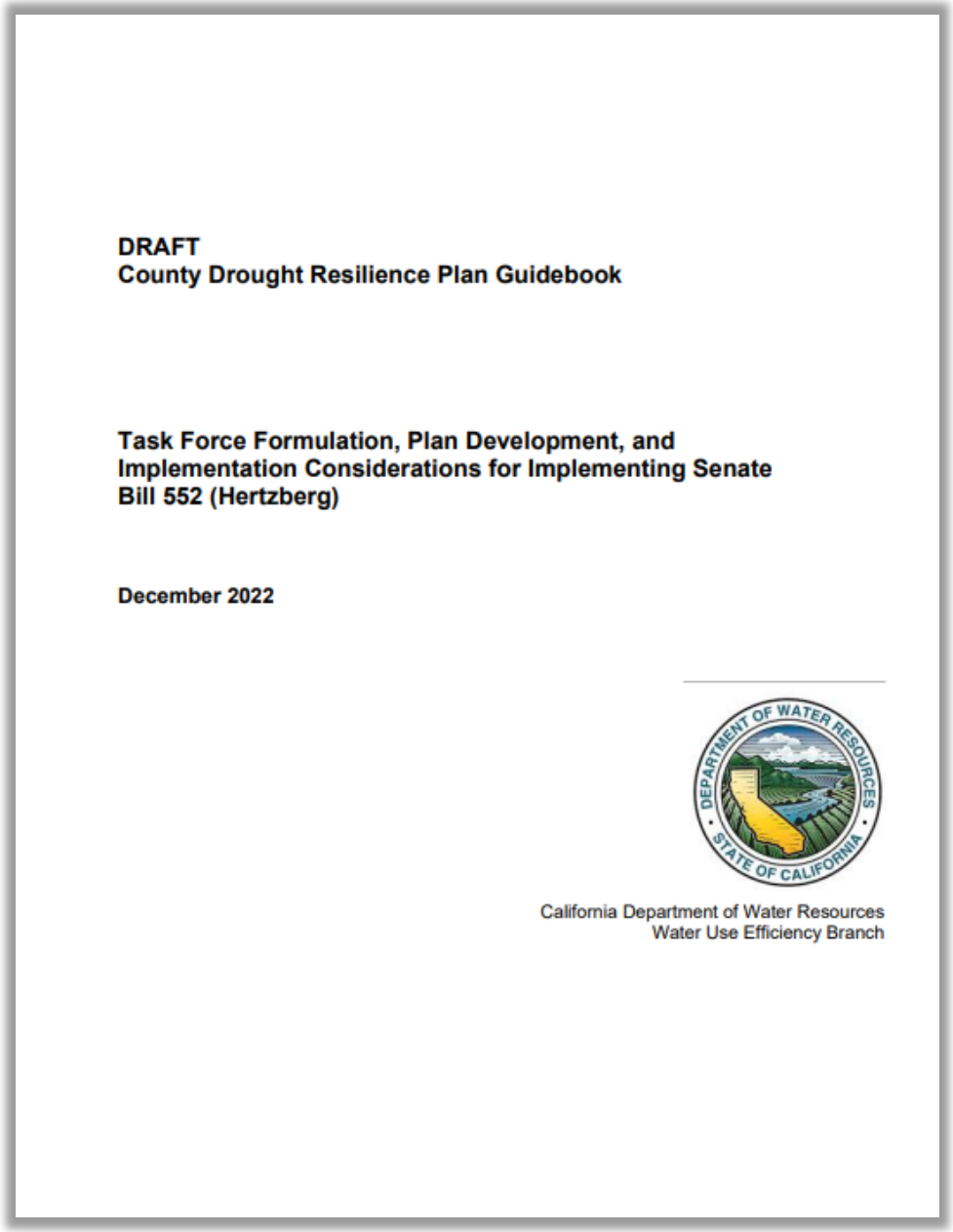
SB 552 Requirements

- County to establish a standing **county drought and water shortage task force** to facilitate drought and water shortage preparedness

- County to **develop a County Drought Resilience Plan** that includes potential drought and water shortage risk and proposed interim and long-term solutions
    - May be a stand-alone document or included to an existing county plan

Ongoing DWR Efforts

- DWR released the **County Drought Resilience Plan** Guidebook on **December 20, 2022**.
- Public comment period was between **December 20, 2022 and January 20, 2023.**


DRAFT
County Drought Resilience Plan Guidebook

Task Force Formulation, Plan Development, and Implementation Considerations for Implementing Senate Bill 552 (Hertzberg)

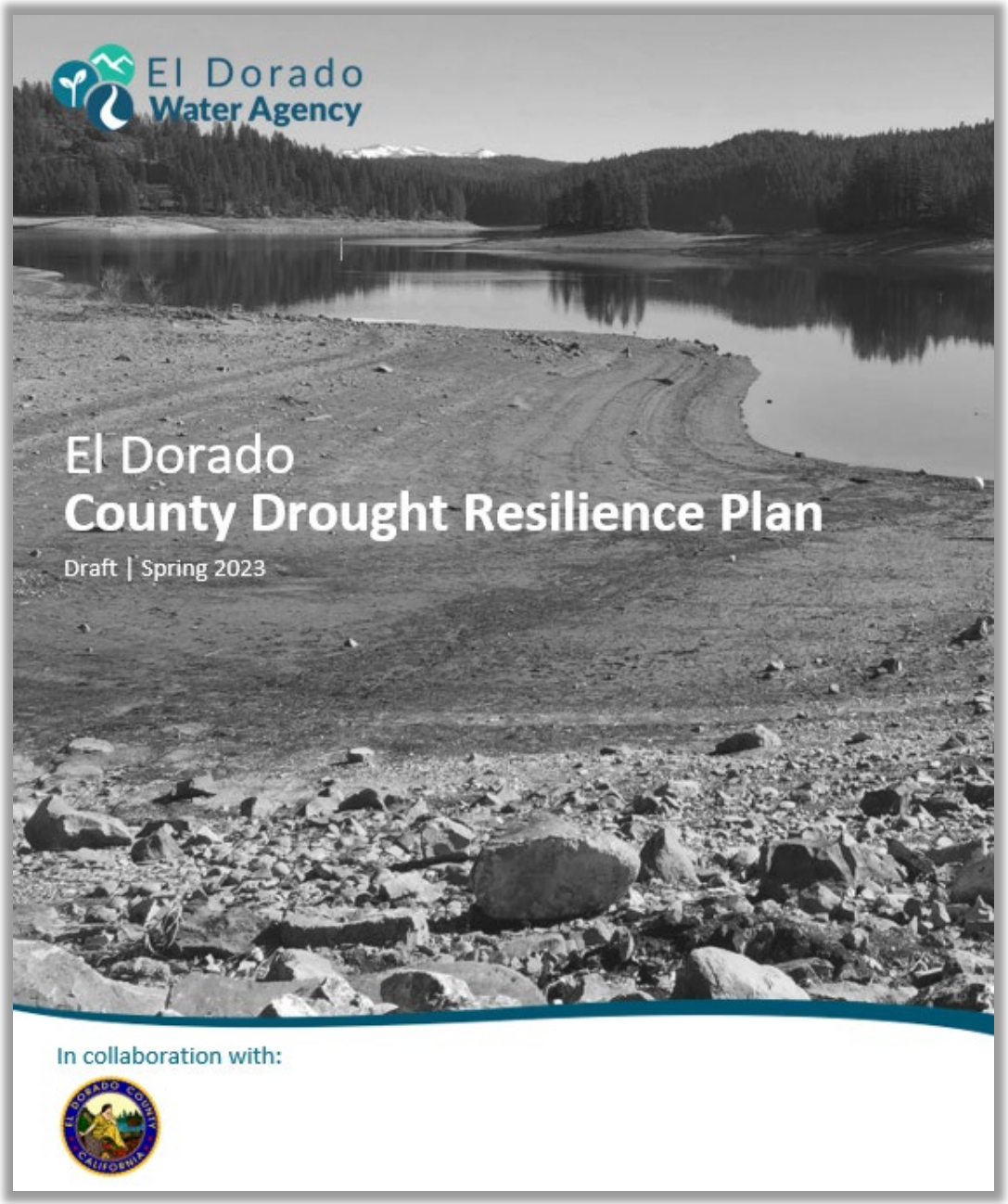
December 2022

California Department of Water Resources
Water Use Efficiency Branch

Ongoing EDWA Implementation Efforts

El Dorado County Drought Resilience Plan

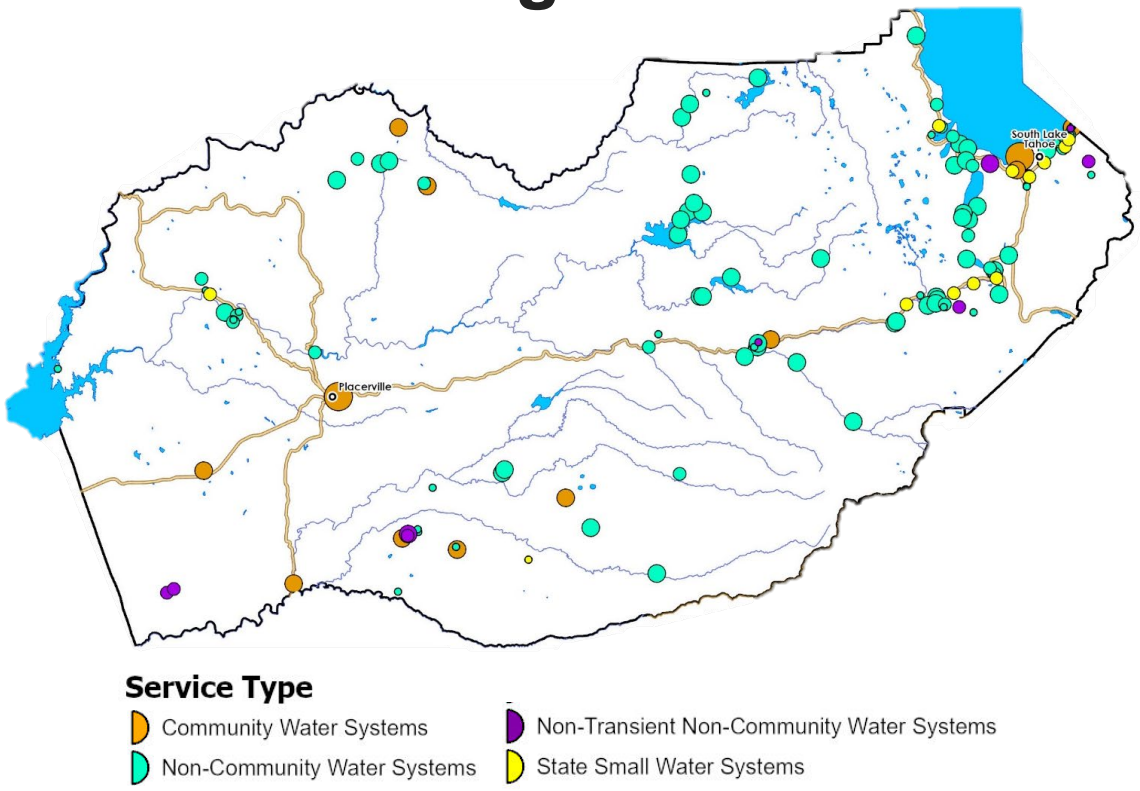
- Currently being drafted
- Initial draft is expected Spring 2023



El Dorado County Drought Resilience Plan

To address the concerns discussed in the WRDMP and UARB RDCP, **El Dorado County's Drought Plan will address all small water systems within the region.**

This goes beyond what is required by SB 552, which only requires addressing water shortage preparedness for state small water systems and domestic wells.



Small Water Systems in El Dorado County

Definitions

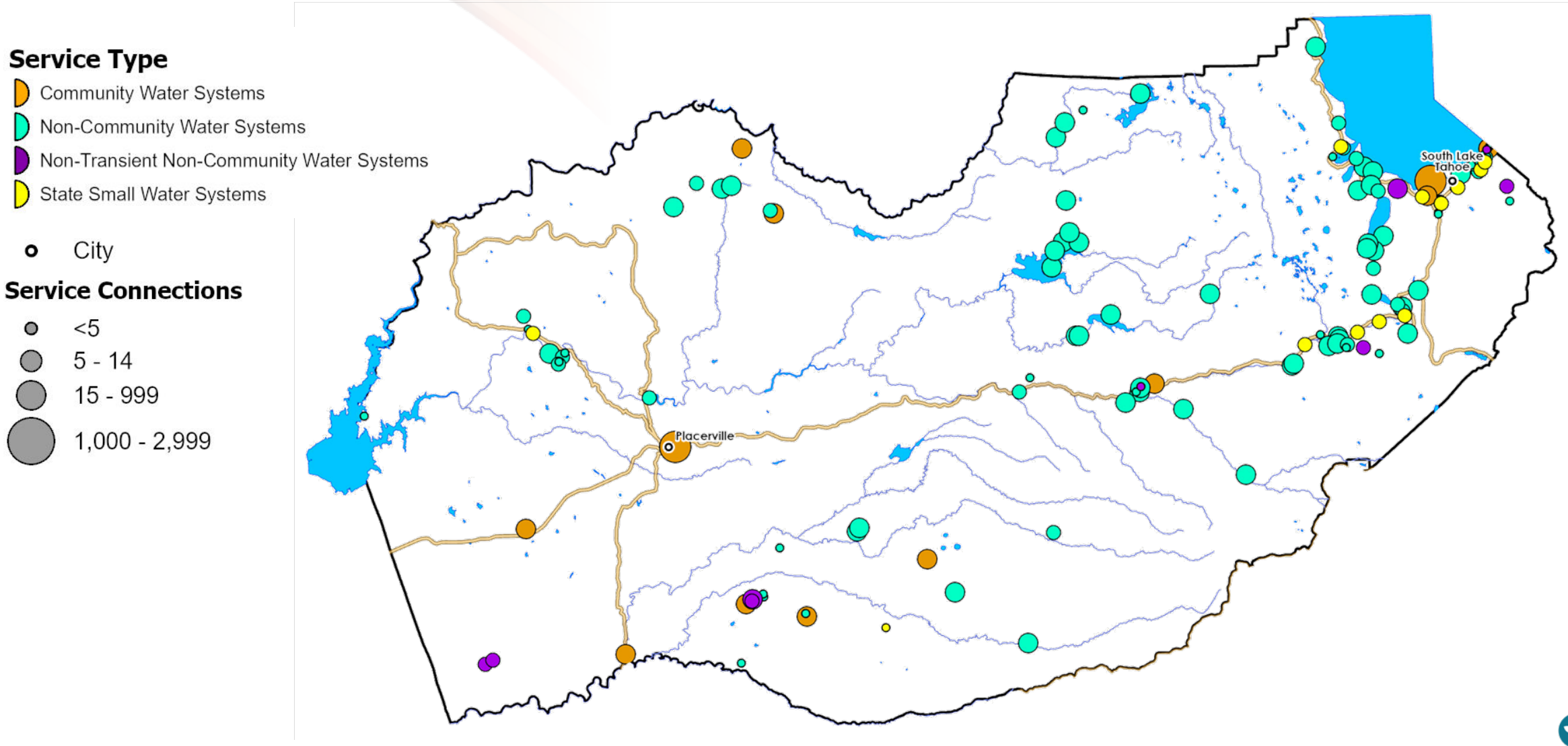
Community water system = public water system that serves at least 15 service connections used by yearlong residents or regularly serves at least 25 yearlong residents of the area

Small water suppliers = community water systems serving 15-2,999 service connections and less than 3,000 AF annually

State small water systems = water system serving 5-14 service connections and does not regularly serve drinking water to more than an average of 25 individuals daily for more than 60 days out of the year

Nontransient noncommunity water system = public water system that is not a community water system and that regularly serves at least 25 of the same persons over 6 months per year

Small Water Systems in El Dorado County



Small Water Systems in El Dorado County by Region

Region	Community Water Systems	Noncommunity Water Systems	Nontransient Noncommunity Water Systems	State Small Water System	Total
Tahoe	4	38	3	14	**59**
West Slope	11	59	6	6	**82**
Total	**15**	**97**	**9**	**20**	**141**

Small Water Systems in El Dorado County by Number of Service Connections

Connections	Community Water Systems	Noncommunity Water Systems	Nontransient Noncommunity Water Systems	State Small Water System	Total
1,000-2,999 Service Connections	2	0	0	N/A	**2**
15-999 Service Connections	13	46	2	N/A	**61**
5-14 Service Connections	N/A	19	5 (5)	20	**44**
<5 Service Connections	N/A	32	2	N/A	**34**
Total	**15**	**97**	**9**	**20**	**141**

N/A = not applicable per definition

Risk Assessment Overview

Risk Assessment Process

Gather existing data on small water systems

Interview and survey small water systems to gather additional information

Review and analyze existing data and information gathered during the interview process

Identify vulnerabilities and risk factors to inform County Drought Resilience Plan

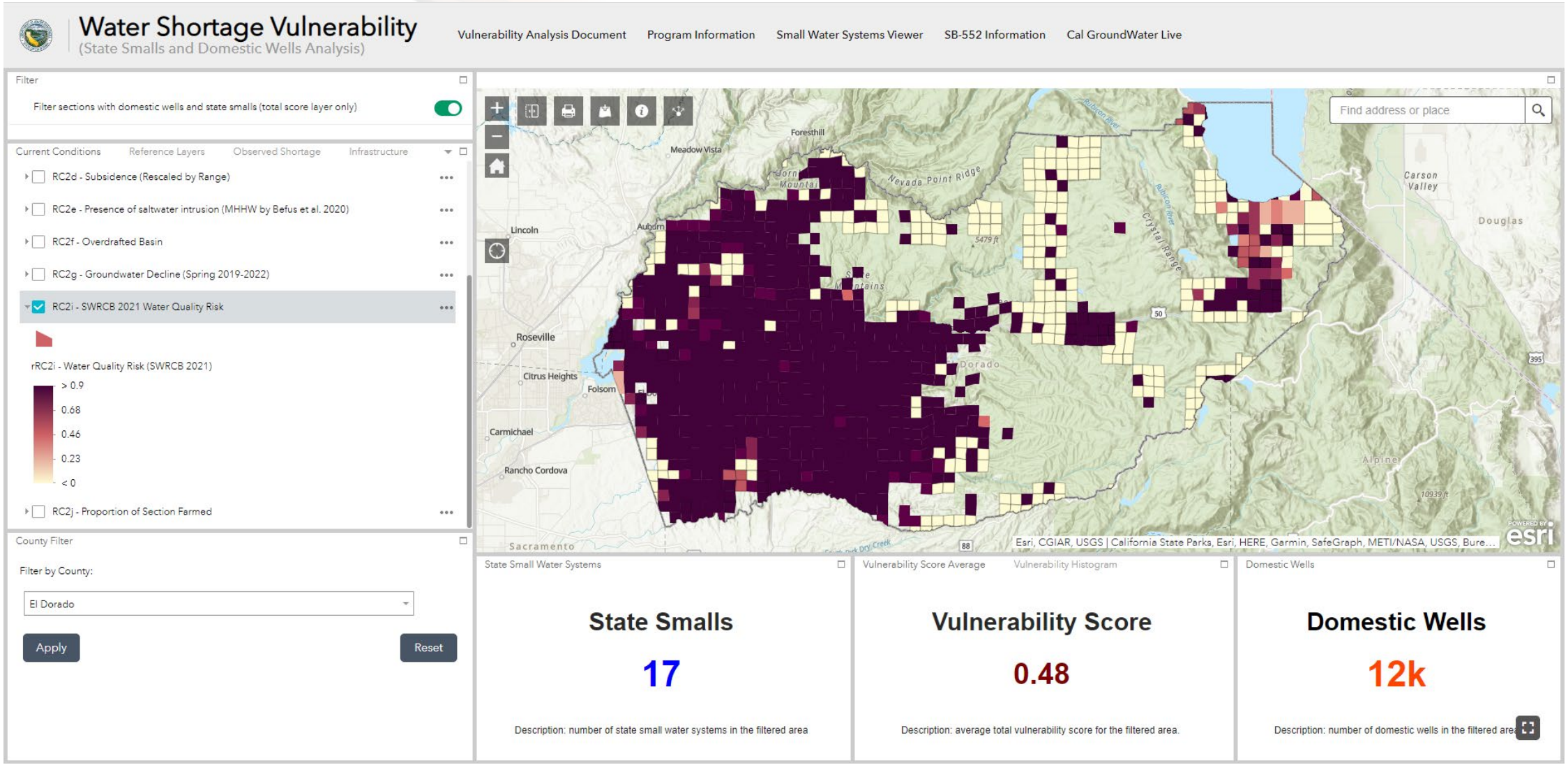
Data Collection

Compiled and reviewed existing data from:

- County of El Dorado Environmental Management Department
- 2020 Electronic Annual Report, State Water Resources Control Board
- Existing datasets (e.g., American River Basin Study, CAL FIRE, Cal-Adapt)

Interviewed water systems via phone and Google Forms survey

DWR's Water Shortage Vulnerability Tool



Interviews/Surveys to Date

Small Water Systems	Number of Small Water Systems in Each Category	Number of Interviews Completed	Number of Google Forms Surveys Completed
Community water systems serving 1,000 to 2,999 service connections, inclusive, and nontransient noncommunity water systems that are schools	7	3	3
Community water systems serving 15 to 999 service connections	13	5	4
State Small Water Systems (5-14 service connections)	20	1	6
Other small water systems not subject to SB 552 requirements	101	0	21

Risk Assessment Methodology

Vulnerabilities were identified based on DWR's County Plan Guidebook, previous drought work, and water system interviews/surveys

Identified and evaluated 32 drought- and water shortage-related vulnerabilities

Each small water system received an overall risk score (based on individual vulnerability scores)

Risk Assessment Matrix

Water Systems		Water System Information				
SWS ID	Small Water System Name	System Type	Service Classification	Water Source Type	Located in West Slope or Tahoe?	Total Connections
CA0900616	47 Milestone/Aspen Creek Tract	SSWS	NR	Well	WS	<=14
CA0900219	All Outdoors Adventure Trips	NC	Recreation Area	Well	WS	4
CA0901217	Bear State Water Works	C	Residential Area	Spring	WS	56
CA0900618	Bryant Creek/Fir Tracts Mwa	NC	Other Residential Area	Well	WS	13
CA0900206	Camp Chiquita Campground (Health)	NC	Other Transient Area	Well	WS	44
CA0900401	Camp Fleming — Campground	NC	Other Transient Area	Well	WS	20
CA0900100	Camp Fleming — Lodge	NC	Other Transient Area	Well	WS	23
CA0900205	Camp Lotus Water System	NC	Other Transient Area	Well	WS	35
CA0900516	Camp Sacramento	NC	Summer Camp	Intake	WS	20
CA0900112	Candlelight Village Mutual Water Co.	C	Mobile Home Park	Well	WS	32
CA0901219	Capps Crossing Campground	NC	Recreation Area	Spring	WS	11
CA0901222	China Flat Campground	NC	Recreation Area	Well	WS	20
CA0901223	Cleveland Corral Rest Area	NC	Highway Rest Area	Well	WS	2
CA0901260	Cody Water Association	NC	Other Residential Area	Intake	WS	54
CA0900422	Crystal Caves Mhp	C	Mobile Home Park	Well	WS	40
CA0900109	Dru Barner Campground	NC	Recreation Area	Well	WS	8
CA0900650	Echo Lake Camp	NC	Summer Camp	Intake	WS	11
[illegible]	El Dorado Id - Outingdale	C	Residential Area	Intake	WS	193

Vulnerabilities Risk Assessment Data

Environmental Vulnerabilities

SWS ID	Temperature Increase Expected	Higher Wildfire Risk Expected	Higher Population Growth Rate Expected	Projected Agricultural Development in Service Area	Dry Year in 2022	Multiple Dry Years (Over the Past Five Years)	Located in a CAL FIRE Fire Hazard Severity Zone	Located in a CPUC Wildfire Utilities Threat Area	Receives Water from Fractured Rock Aquifer	Declining Groundwater Levels	Reported Water Quality Concerns	Service Area Contains Agriculture
CA0900616	3	1	3	1	1	4	4	1	5	NR	2	1
CA0900219	1	3	1	1	1	2	2	3	5	NR	2	1
CA0901217	1	5	1	1	1	3	4	5	NA	1	3	1
CA0900618	3	1	3	1	5	5	3	1	5	NR	1	1
CA0900206	1	5	2	1	1	3	4	5	5	3	3	1
CA0900401	1	4	1	2	1	3	4	5	5	3	1	2
CA0900100	1	4	1	3	1	3	4	5	5	3	1	1
CA0900205	1	3	1	1	1	2	2	3	5	NR	1	1
CA0900516	3	1	3	1	5	5	4	1	NA	3	1	1
CA0900112	1	4	1	1	1	2	2	3	5	1	3	1
CA0901219	2	3	1	1	1	3	4	3	NA	NA	3	1
CA0901222	3	3	3	1	5	5	4	3	5	NR	3	1
CA0901223	2	4	1	1	1	3	4	3	5	NR	1	1
CA0901260	3	2	3	1	5	5	4	1	NA	NA	3	1
CA0900422	1	4	1	2	1	2	2	3	5	NR	3	1
CA0900109	2	4	1	1	1	3	4	5	5	3	2	1
CA0900650	4	1	1	1	1	4	2	3	NA	NA	1	1
[illegible]	1	3	1	1	1	2	2	1	NA	NA	1	2

Infrastructure Vulnerabilities

SWS ID	Well Deepening or Replacement	Lack of Secondary Supply	Reliance on a Single Water Source Type	Lack of Interties	Not Nearby Another Water System	High Elevation Difference Between Nearest Water System	Lack of Auxiliary Power	Lack of Groundwater Level Monitoring	Lack of Metered Connections	Reported Water Outages Due to Infrastructure Failure in 2020
CA0900616	1	5	NA	5	4	3	NR	NR	NR	NR
CA0900219	1	1	5	5	1	1	NR	NR	5	1
CA0901217	1	1	1	5	3	1	1	NA	1	5
CA0900618	1	5	NA	5	1	1	NR	NR	NR	1
CA0900206	1	5	NA	5	1	1	NR	1	NR	1
CA0900401	1	5	NA	5	1	2	1	5	5	1
CA0900100	1	1	5	5	1	2	1	5	5	1
CA0900205	1	1	5	5	3	1	NR	NR	5	1
CA0900516	1	1	1	5	2	2	1	NA	5	1
CA0900112	1	1	5	5	2	1	1	1	3	1
CA0901219	1	5	NA	5	5	5	NR	NA	5	1
CA0901222	1	1	5	5	5	5	NR	NR	5	1
CA0901223	1	1	5	5	3	4	NR	NR	5	1
CA0901260	1	5	NA	5	1	1	1	NA	5	1
CA0900422	1	1	5	5	1	1	NR	NR	5	1
CA0900109	1	5	NA	5	3	2	1	5	5	1
CA0900650	1	1	1	5	1	1	NR	NA	5	1
[illegible]	1	5	NA	5	3	3	NR	NA	1	1

Regulatory and Organizational Vulnerabilities

SWS ID	Water Curtailments in 2021	System Not Near a Major Transportation Corridor	Stringent Water Distribution Operator Certification Requirements	Stringent Water Treatment Operator Certification Requirements	Serves Socioeconomically Vulnerable Customers	Serves Disadvantaged Communities	Outdated Water Rates	Flat Rate Structure	Previously Required Drought Assistance	Lack of Drought Preparedness or Water Shortage Contingency Plan
CA0900616	1	1	1	NR	3	1	NR	NR	1	5
CA0900219	1	3	1	NA	2	1	NR	NR	1	5
CA0901217	5	5	2	5	4	1	2	NR	1	5
CA0900618	1	1	1	NA	3	1	NR	NR	1	5
CA0900206	1	5	1	NA	4	1	NR	NR	1	5
CA0900401	1	5	1	NA	4	3	NR	NR	1	5
CA0900100	1	5	1	NA	4	3	NR	NR	1	5
CA0900205	1	3	1	NA	3	1	NR	NR	1	5
CA0900516	1	1	1	2	3	1	NR	NR	1	5
CA0900112	1	5	1	NA	5	3	NR	NR	1	5
CA0901219	1	5	1	NA	4	3	NR	NR	1	5
CA0901222	1	1	1	NA	3	1	NR	NR	1	5
CA0901223	1	1	1	NA	1	1	NR	NR	1	5
CA0901260	1	1	3	2	3	1	NR	NR	1	5
CA0900422	1	5	1	NA	5	1	NR	NR	1	5
CA0900109	1	5	1	NA	4	1	NR	NR	1	5
CA0900650	1	1	1	2	1	1	NR	NR	1	5
[illegible]	1	5	2	3	3	1	3	1	1	1

Note: These are preliminary results for today's discussion only. **Please do not distribute.**

Risk Assessment Vulnerabilities

Risk Assessment Vulnerability Categories

Environmental Vulnerabilities – Evaluates the effects of current and future environmental or natural resource conditions.

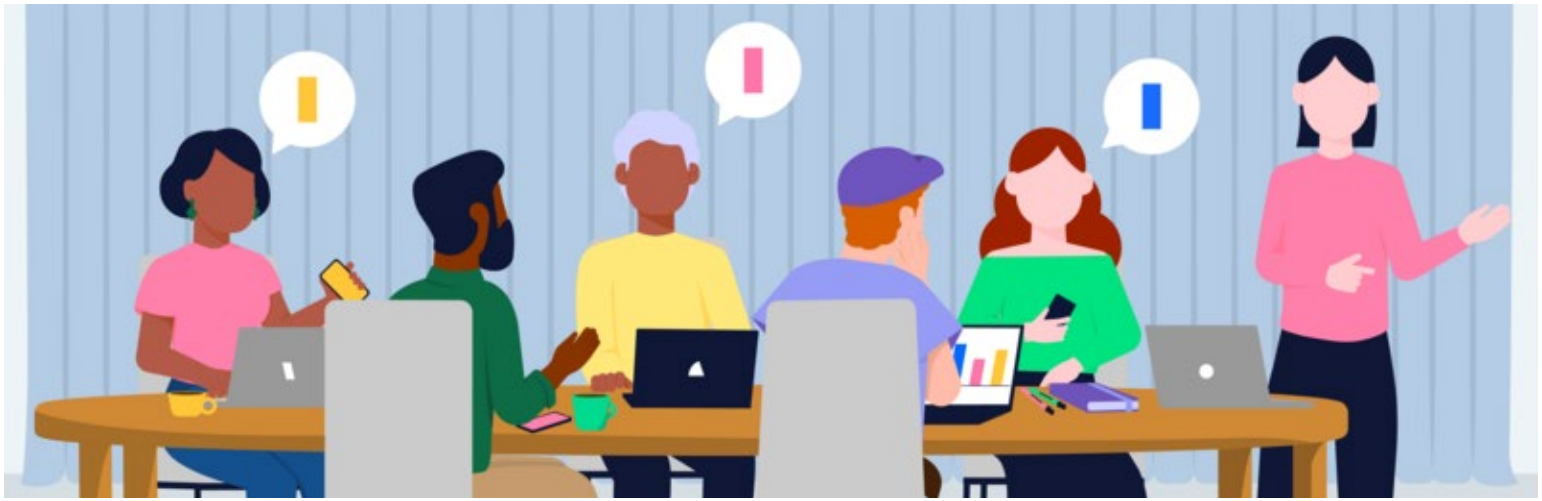
Infrastructure Vulnerabilities – Evaluates water system supply and facility conditions.

Regulatory and Organizational Vulnerabilities – Evaluates the effects of regulations, funding, and water system framework/planning.

Group Activity

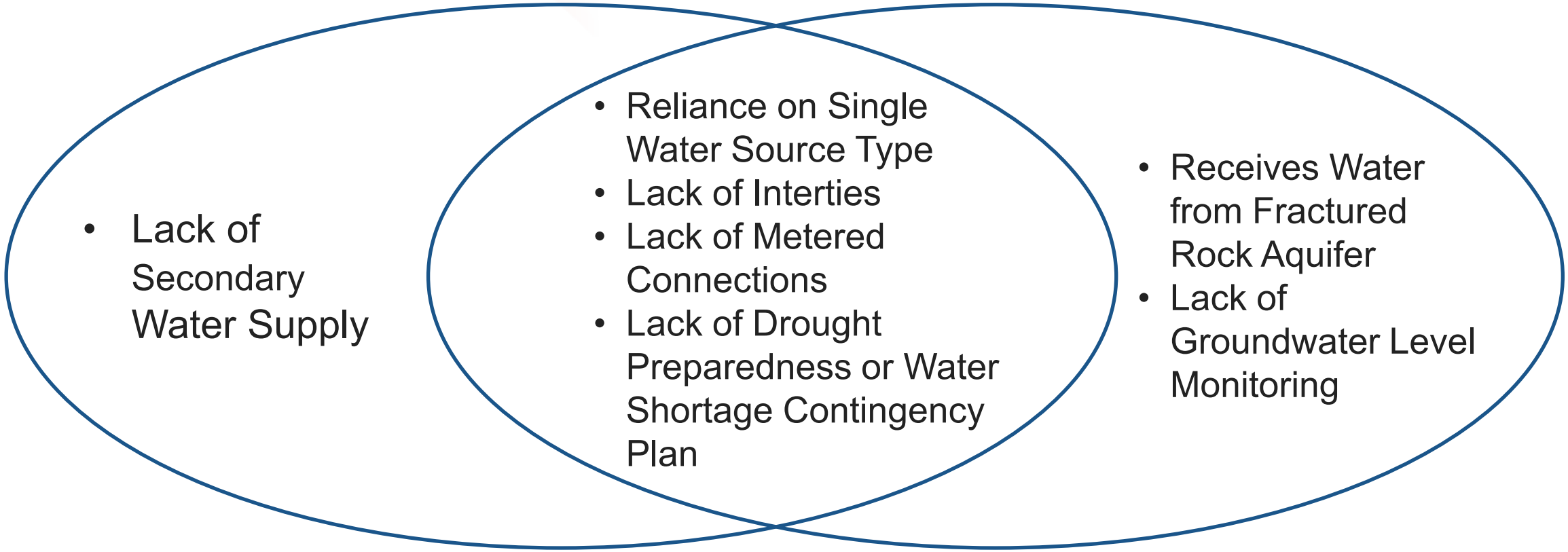
Rate the drought- and water shortage-related vulnerabilities based on:

- How likely the vulnerability is to contribute to a drought or water shortage event (i.e., **low, medium, or high risk**)
- If applicable, the likelihood of the vulnerability occurring in the future (i.e., **low, medium, or high frequency**)



Risk Assessment Results and Trends

High Scoring Vulnerabilities by Region



High Scoring Vulnerabilities in Tahoe by System Type

<table>
<tr><th>Community Systems</th><th>Noncommunity Systems</th><th>Nontransient Noncommunity Systems</th><th>State Small Water Systems</th></tr>
<tr><td rowspan="2">• Located in CAL FIRE Fire Hazard Severity Zone
• Reliance on a Single Water Source Type
• Serves Socioeconomically Vulnerable Customers</td><td colspan="3">• Lack of Secondary Supply
• Lack of Drought Preparedness or Water Shortage Contingency Plan</td></tr>
<tr><td>• Lack of Interties</td><td>• Lack of Metered Connections</td><td>• Lack of Interties</td></tr>
</table>

High Scoring Vulnerabilities in the West Slope by System Type

Community Systems	Noncommunity Systems	Nontransient Noncommunity Systems	State Small Water Systems
	• Reliance on Fractured Rock Aquifers • Lack of Interties		
• Higher Wildfire Risk Expected	Lack of Drought Preparedness or Water Shortage Contingency Plan		
• Serves Socioeconomically Vulnerable Customers	• Lack of Metered Connections	• Reliance on a Single Water Source Type	• Lack of Secondary Supply

Key Points and Takeaways

- Most systems in the County lack interties and a Drought Preparedness or Water Shortage Contingency Plan (Drought Plan)
    - Community systems tend to be the only systems with a Drought Plan
- Community systems are often located in higher wildfire risk areas and serve socioeconomically vulnerable customers
- Systems that lack a secondary water supply are predominately located in Tahoe

Risk Assessment Matrix

Water Systems / Water System Information

SWS ID	Small Water System Name	System Type	Service Classification	Water Source Type	Located in West Slope or Tahoe?	Total Connections
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Vulnerabilities Risk Assessment Data

Environmental Vulnerabilities

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CA0900206	1	5	2	1	1	3	4	5	5	3	3	1
CA0900401	1	4	1	2	1	3	4	5	5	3	1	2
CA0900100	1	4	1	3	1	3	4	5	5	3	1	1
CA0900205	1	3	1	1	1	2	2	3	5	NR	1	1
CA0900516	3	1	3	1	5	5	4	1	NA	3	1	1
CA0900112	1	4	1	1	1	2	2	3	5	1	3	1
CA0901219	2	3	1	1	1	3	4	3	NA	NA	3	1
CA0901222	3	3	3	1	5	5	4	3	5	NR	3	1
CA0901223	2	4	1	1	1	3	4	3	5	NR	1	1
CA0901260	3	2	3	1	5	5	4	1	NA	NA	3	1
CA0900422	1	4	1	2	1	2	2	3	5	NR	3	1
CA0900109	2	4	1	1	1	3	4	5	5	3	2	1
CA0900650	4	1	1	1	1	4	2	3	NA	NA	1	1
CA0910018	1	3	1	1	1	2	2	1	NA	NA	1	2

Infrastructure Vulnerabilities

SWS ID	Well Deepening or Replacement	Lack of Secondary Supply	Reliance on a Single Water Source Type	Lack of Interties	Not Nearby Another Water System	High Elevation Difference Between Nearest Water System	Lack of Auxiliary Power	Lack of Groundwater Level Monitoring	Lack of Metered Connections	Reported Water Outages Due to Infrastructure Failure in 2020
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CA0900219	1	1	5	5	1	1	NR	NR	5	1
CA0901217	1	1	1	5	3	1	1	NA	1	5
CA0900618	1	5	NA	5	1	1	NR	NR	NR	1
CA0900206	1	5	NA	5	1	1	NR	1	NR	1
CA0900401	1	5	NA	5	1	2	1	5	5	1
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CA0900422	1	1	5	5	1	1	NR	NR	5	1
CA0900109	1	5	NA	5	3	2	1	5	5	1
CA0900650	1	1	1	5	1	1	NR	NA	5	1
CA0910018	1	5	NA	5	3	3	NR	NA	1	1

Regulatory and Organizational Vulnerabilities

SWS ID	Water Curtailments in 2021	System Not Near a Major Transportation Corridor	Stringent Water Distribution Operator Certification Requirements	Stringent Water Treatment Operator Certification Requirements	Serves Socioeconomically Vulnerable Customers	Serves Disadvantaged Communities	Outdated Water Rates	Flat Rate Structure	Previously Required Drought Assistance	Lack of Drought Preparedness or Water Shortage Contingency Plan
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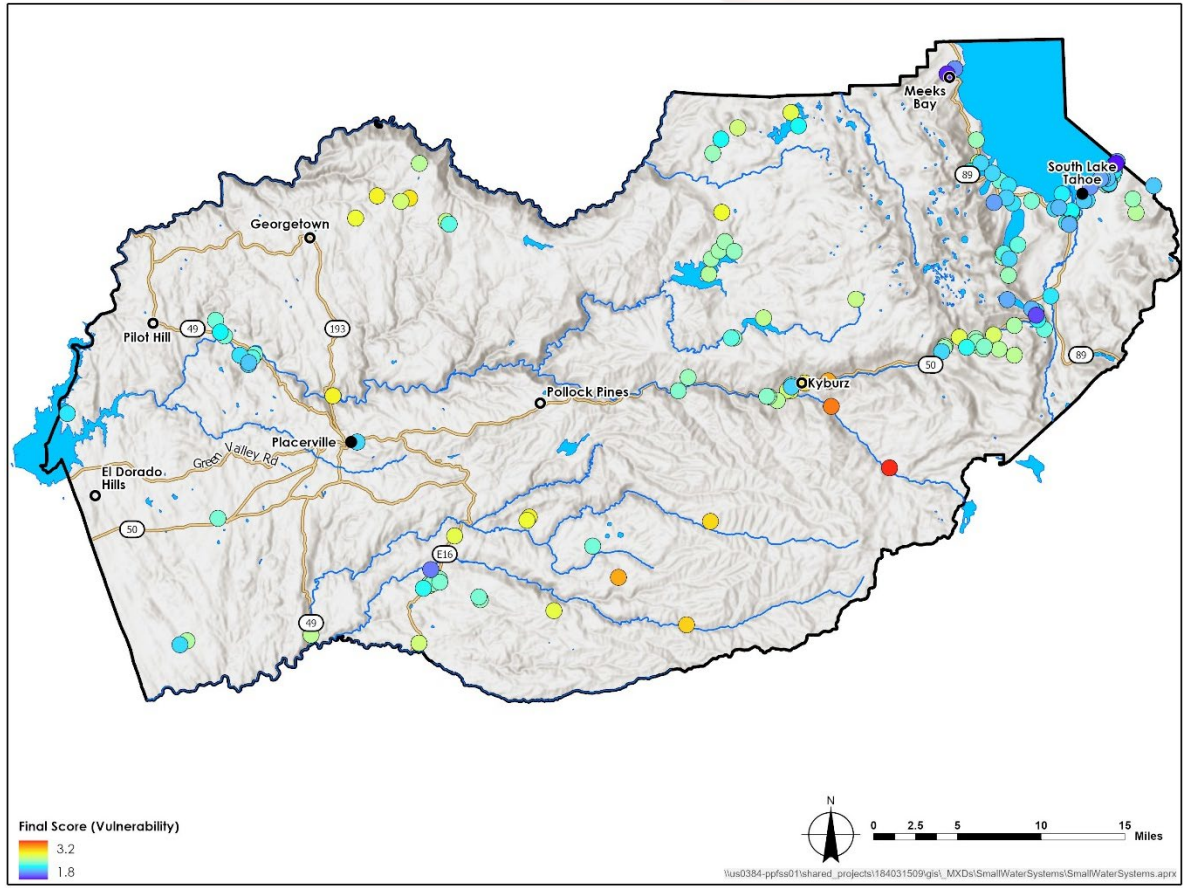
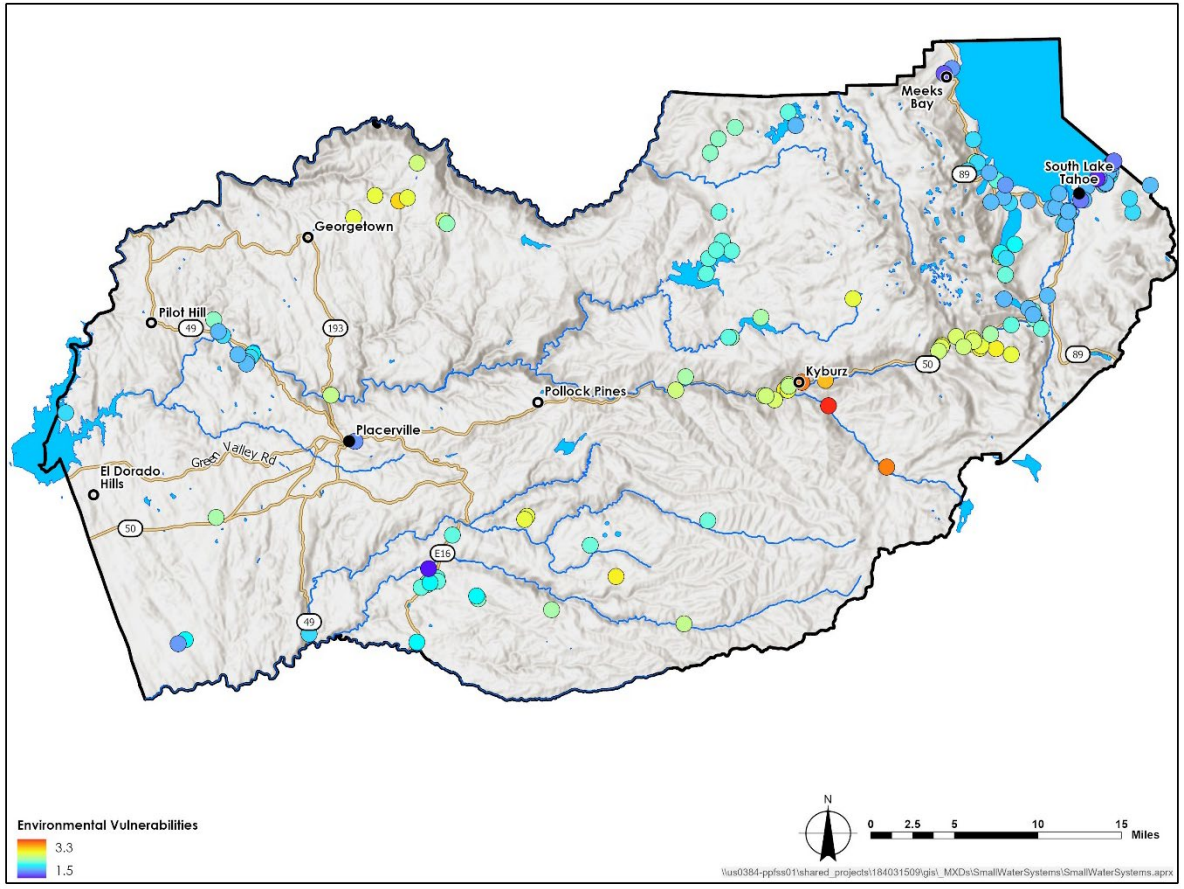
CA0900219	1	3	1	NA	2	1	NR	NR	1	5
CA0901217	5	5	2	5	4	1	2	NR	1	5
CA0900618	1	1	1	NA	3	1	NR	NR	1	5
CA0900206	1	5	1	NA	4	1	NR	NR	1	5
CA0900401	1	5	1	NA	4	3	NR	NR	1	5
CA0900100	1	5	1	NA	4	3	NR	NR	1	5
CA0900205	1	3	1	NA	3	1	NR	NR	1	5
CA0900516	1	1	1	2	3	1	NR	NR	1	5
CA0900112	1	5	1	NA	5	3	NR	NR	1	5
CA0901219	1	5	1	NA	4	3	NR	NR	1	5
CA0901222	1	1	1	NA	3	1	NR	NR	1	5
CA0901223	1	1	1	NA	1	1	NR	NR	1	5
CA0901260	1	1	3	2	3	1	NR	NR	1	5
CA0900422	1	5	1	NA	5	1	NR	NR	1	5
CA0900109	1	5	1	NA	4	1	NR	NR	1	5
CA0900650	1	1	1	2	1	1	NR	NR	1	5
CA0910018	1	5	2	3	3	1	3	1	1	1

Note: These are preliminary results for today’s discussion only. **Please do not distribute.**

Vulnerability Score Maps

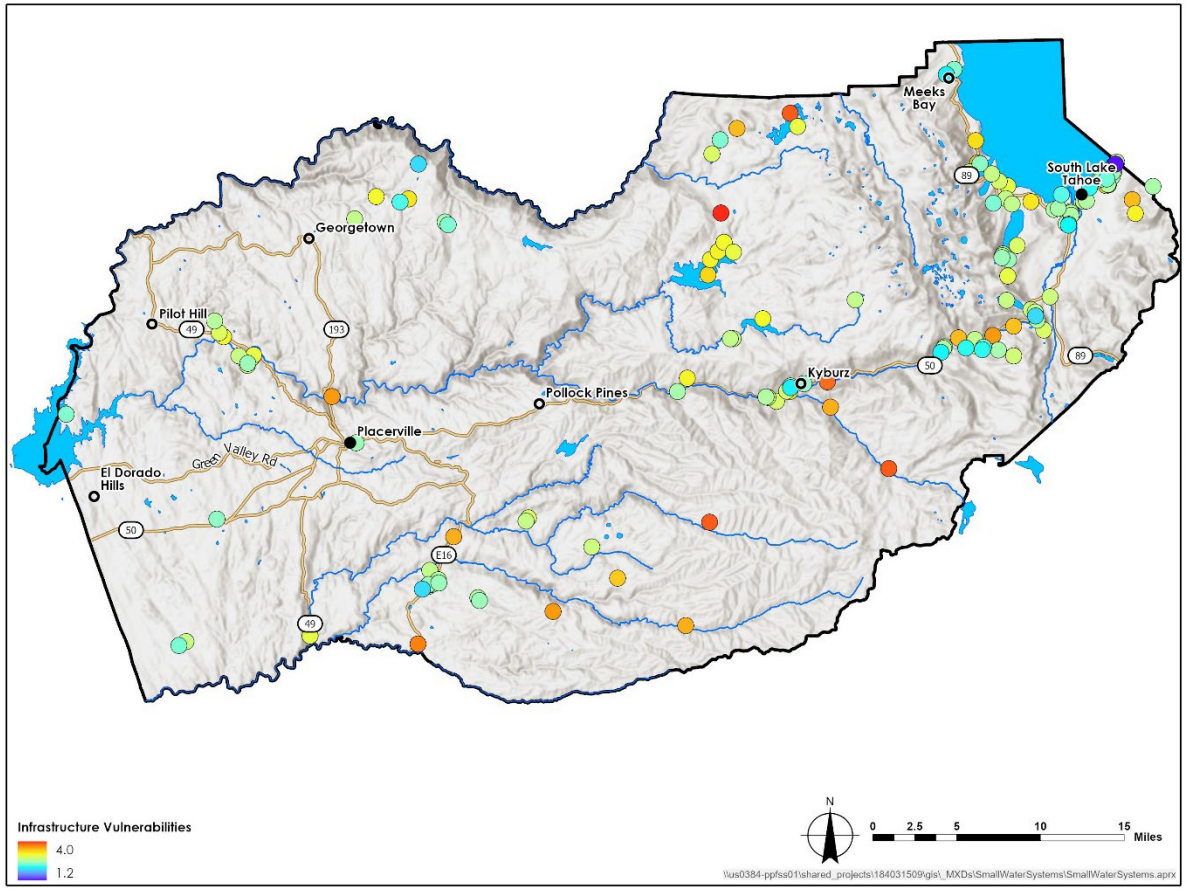


Total Score

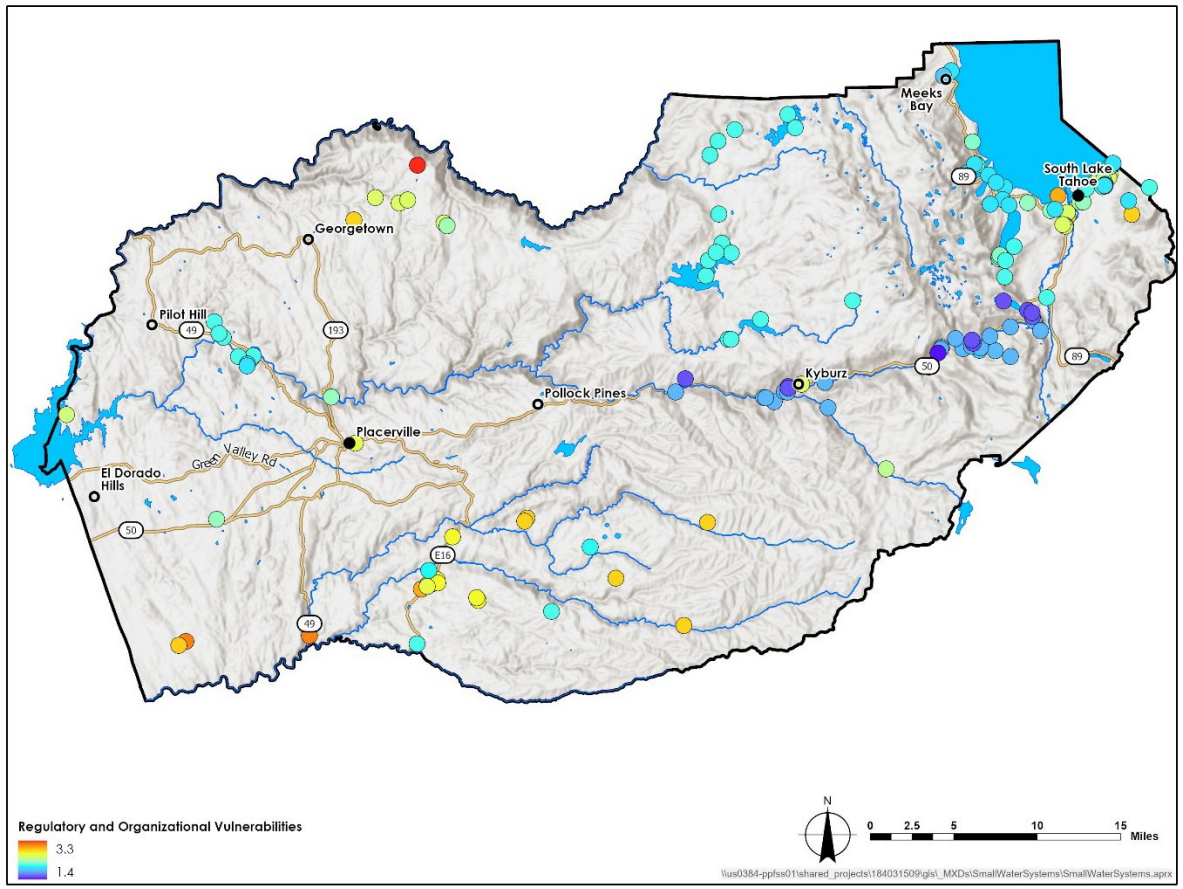


Environmental Score

Vulnerability Score Maps

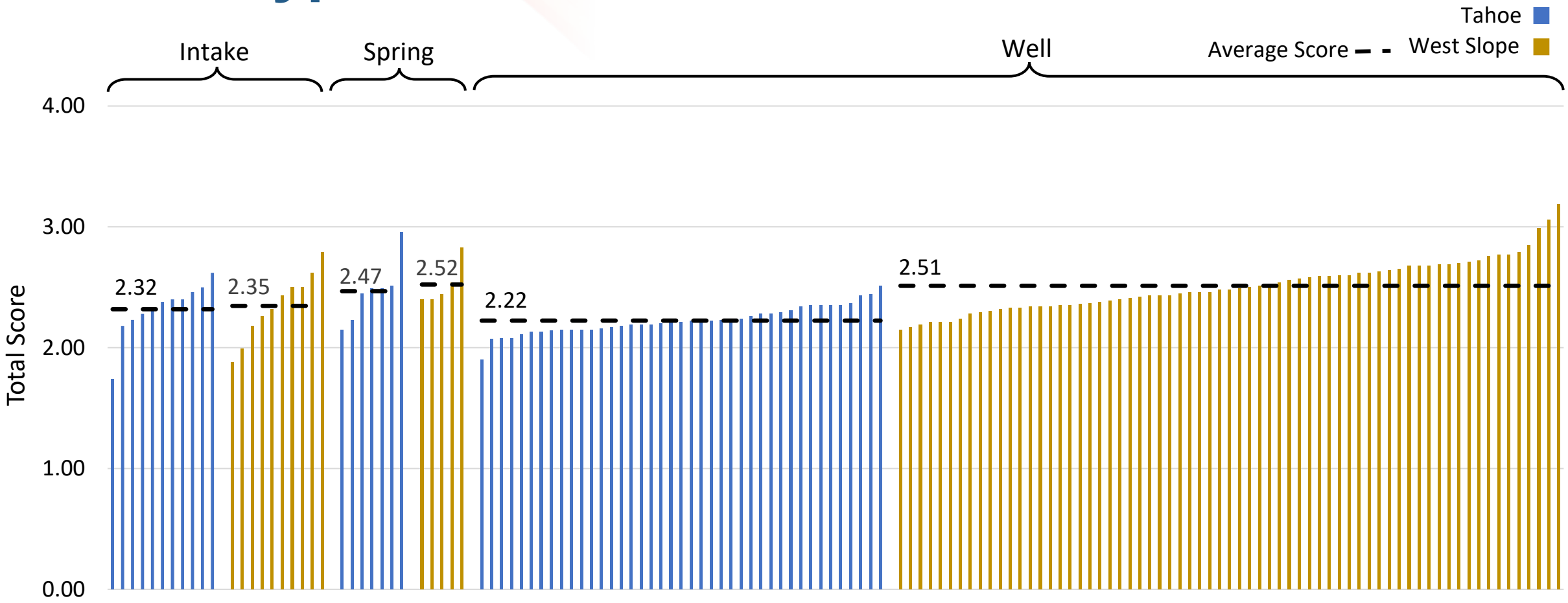


Infrastructure Score

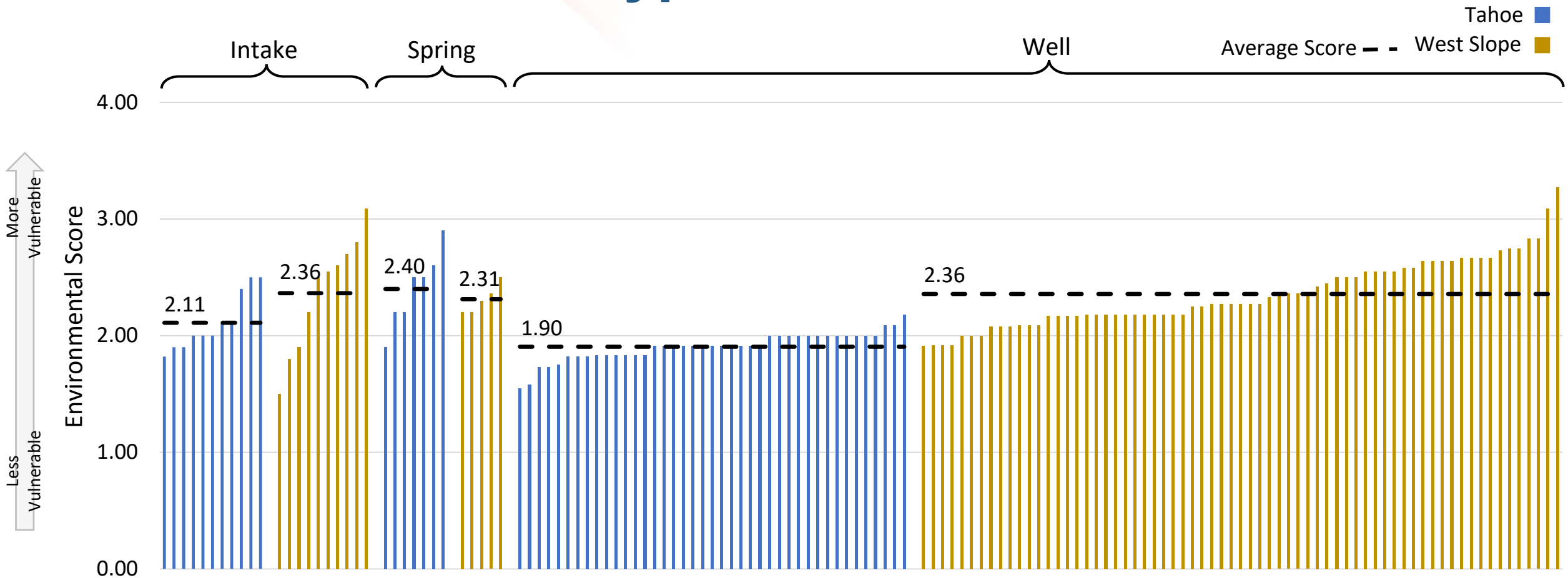


Regulatory Score

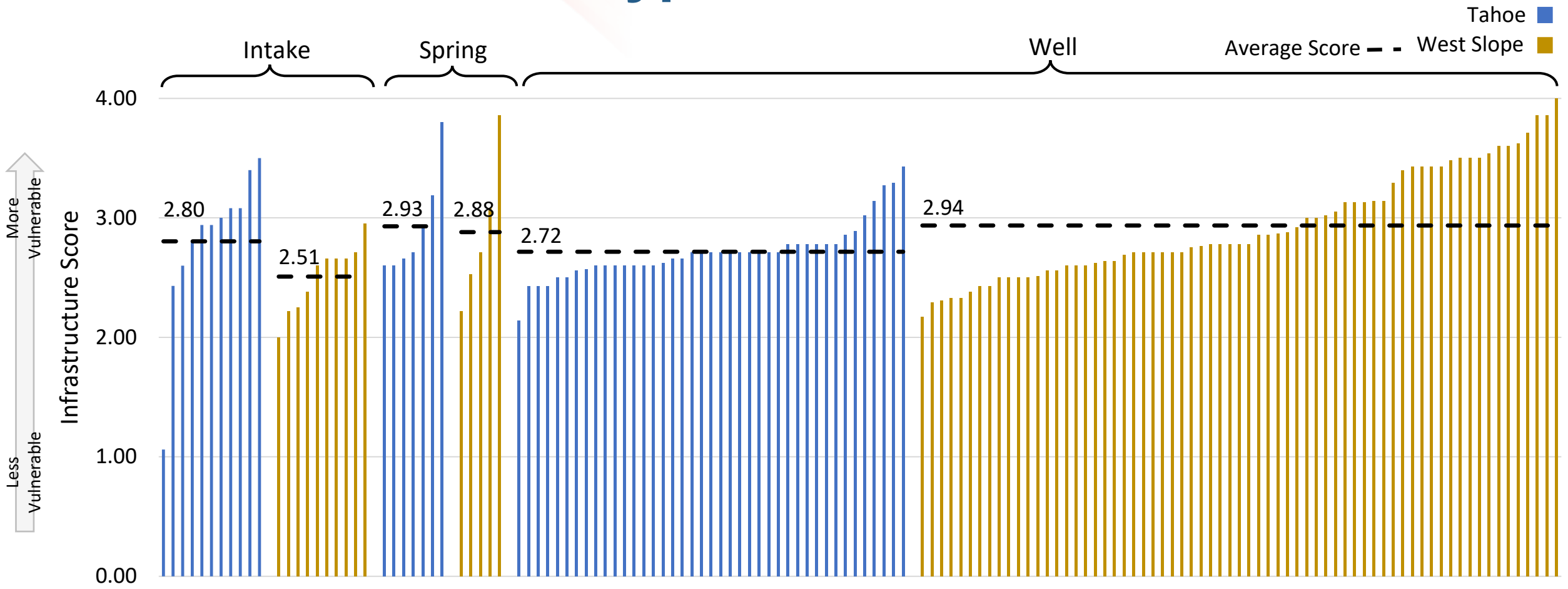
Total Vulnerability Score by Region and Water Source Type



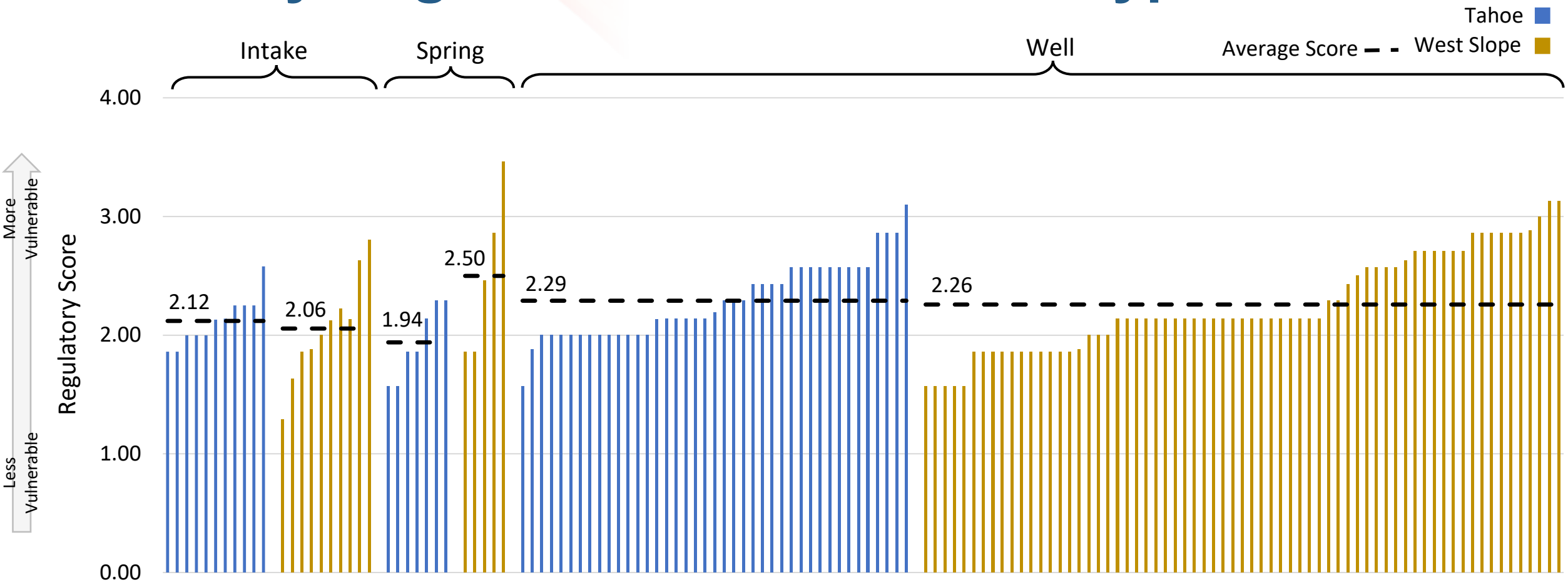
Environmental Vulnerability Score by Region and Water Source Type



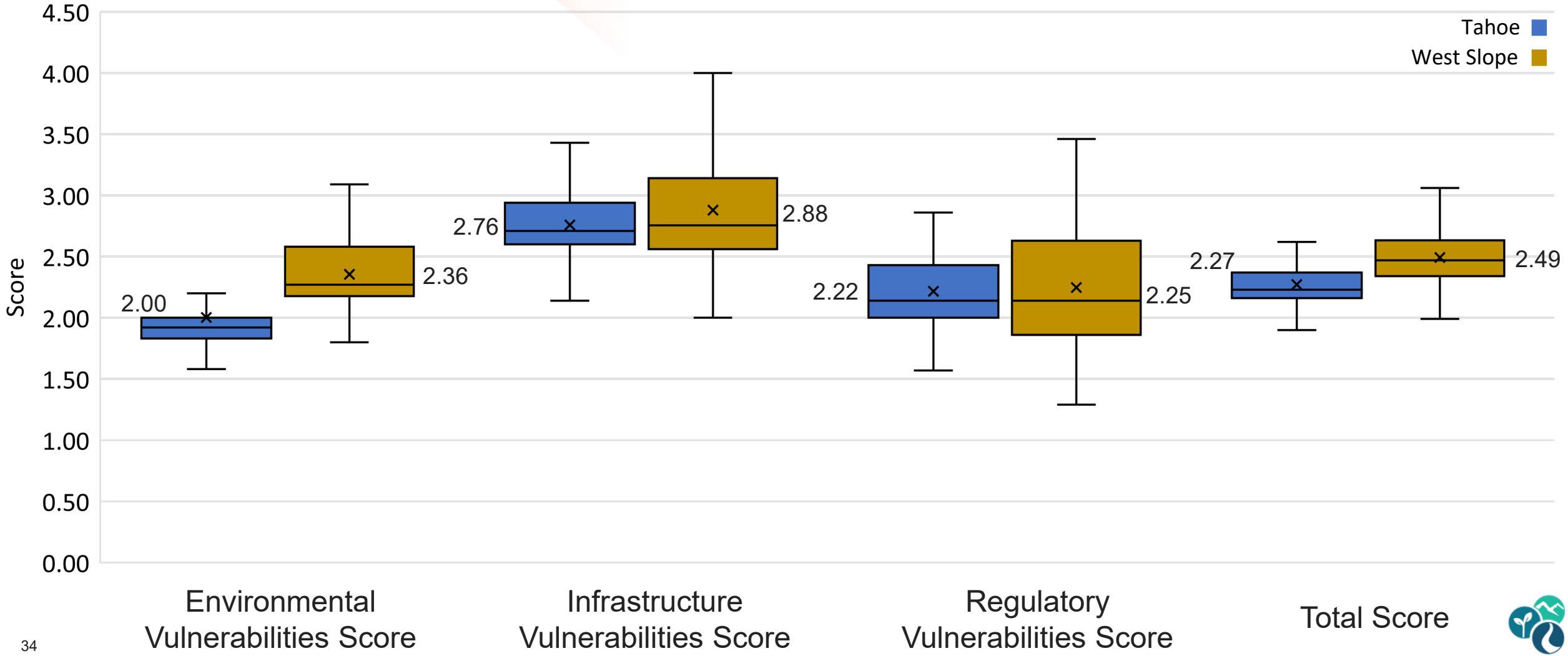
Infrastructure Vulnerability Score by Region and Water Source Type



Regulatory and Organizational Vulnerability Score by Region and Water Source Type



Vulnerability Scores by Region and Category

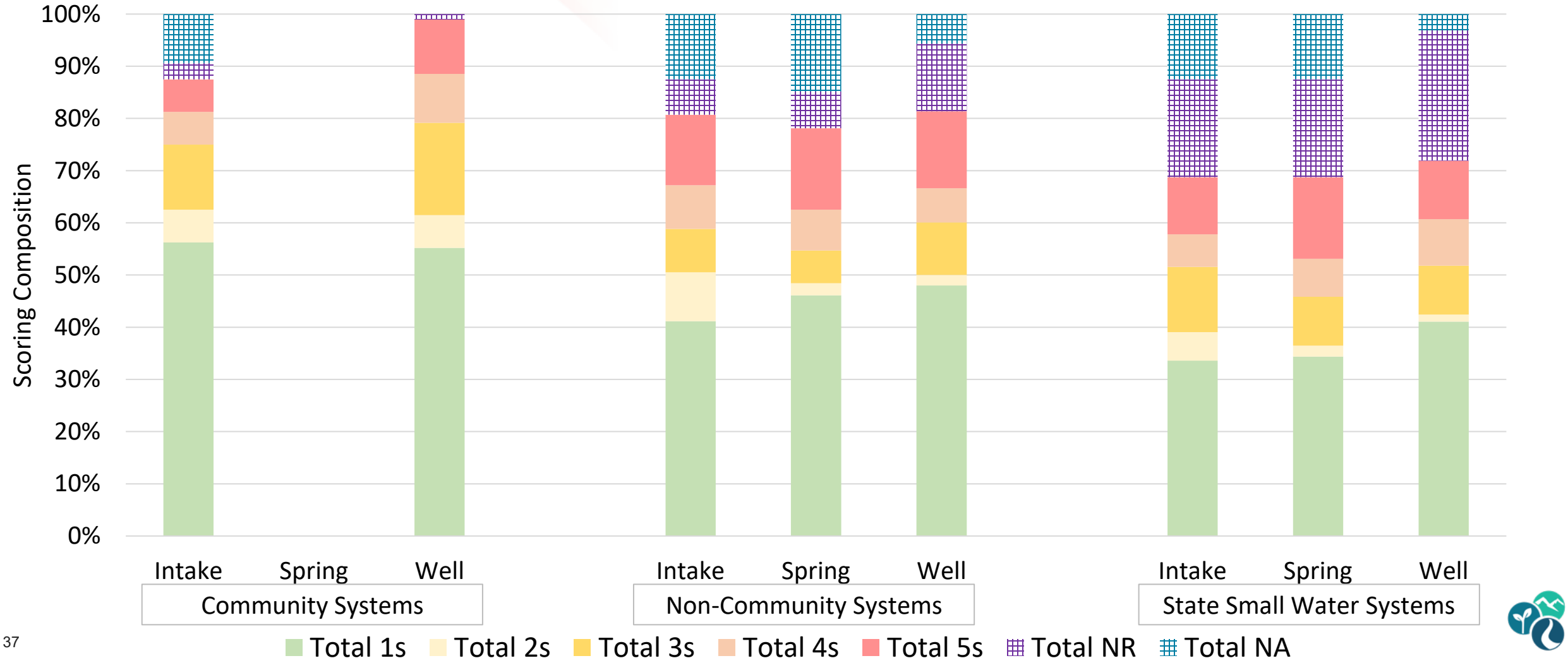


Key Points and Takeaways

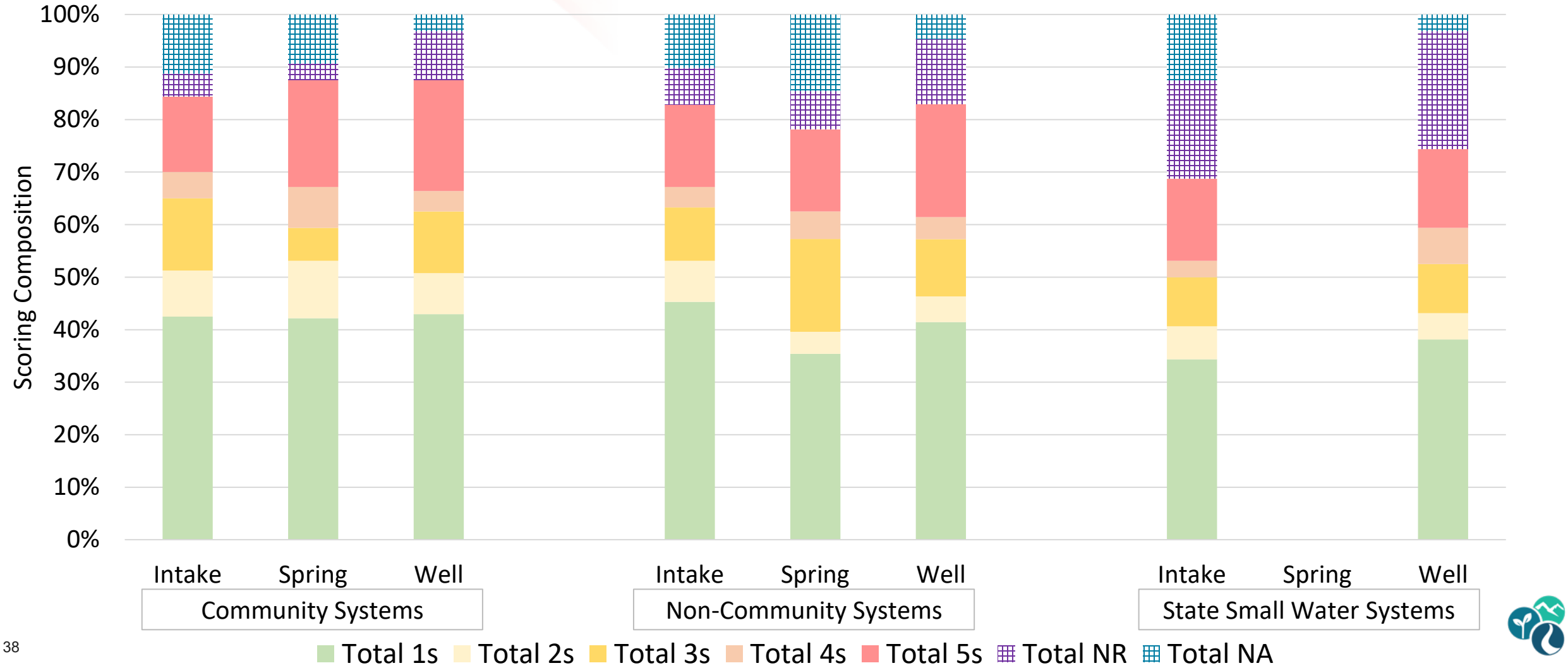
- Infrastructure vulnerabilities were the highest (i.e., worst) scoring category
  - Next highest scoring vulnerability category was:
    - Regulatory and Organizational vulnerabilities for Tahoe
    - Environmental vulnerabilities for the West Slope
- The West Slope scores higher for the total vulnerability score and all vulnerability categories
  - Differences are most pronounced for the Environmental and Infrastructure vulnerability categories
  - Well systems appear to be driving this disparity

Scoring Breakdown by Vulnerability

Scoring Breakdown by System and Water Source Type (Tahoe)



Scoring Breakdown by System and Water Source Type (West Slope)



Key Points and Takeaways

- Large numbers of No Responses for:
  - SWRCB's eAR Data (e.g., lack of auxiliary power and rate-related vulnerabilities)
  - State small water systems
- In both Tahoe and the West Slope, community systems tend to score the lowest (i.e., best)
- State small water systems and noncommunity systems had the highest average total score in Tahoe and the West Slope, respectively

Moving Forward

Next Meeting

April 2023*

- Regulatory and legislative updates
- Review of preliminary response and mitigation actions for the County Drought Resilience Plan
- Drought preparedness planning for upcoming summer

* Additional meetings may be scheduled based on ongoing county drought conditions

Thank you!