RWA Watersheds (American, Cosumnes, and Bear Rivers) Resilience Pilot Study Advisory Committee Meeting #4

Date: September 9, 2025
Project name: RWA Watersheds Resilience Pilot Study
Project no: W8Y34200

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Attendees

Project Team

Name	Organization
Ryan Ojakian	Regional Water Authority (RWA)
Jim Peifer	RWA
Grace Kaufman	Valley Vision
Ibrahim Khadam	Khadam Consulting
Sirisha Nemani	Jacobs
Armin Munevar	Jacobs
Vijay Kesavan	Jacobs
Tapash Das	Jacobs
Reed Thayer	Jacobs

Advisory Committee

Name	Organization
Austin Miller	Sacramento County
Brett Ewart	City of Sacramento
Brian Sanders	City of Sacramento
Christine Kohn	IN Communications
Ethan Livingston	Sacramento County
Gary Bardini	Sacramento Area Flood Control Agency
Greg Jones	Nevada Irrigation District
Laura Rodarte	Placer County Water Agency
Michael Saunders	Georgetown Divide Public Utility District
Rebecca Guo	El Dorado Water Agency
Tony Firenzi	Placer County Water Agency

Agenda

- Introductions
- Pilot Roadmap
- Updates on Vulnerability Assessment
- Updates on Technical Work
- Next Steps
- Discussion

Meeting Notes

Pilot Roadmap

- **Jim Peifer (JP)**: So far, we have completed Tasks 1 through 3 and are currently working on Task 4, conducting the vulnerability and risk assessment. We are working toward developing the adaptation plan and implementation plan; establishing monitoring and evaluation system; and releasing the watershed resilience plan.
- **Sirisha Nemani (SN**): We have also developed a website where we will share our progress for this effort and the final plan.
- **JP:** Please register on the website if you would like to be included and have not already registered.

Updates on Vulnerability Assessment

Progress to Date

- **Vijay Kesavan (VK)**: We are currently working through Task 3 (Assess Vulnerability & Risk) and throughout Task 3. We are also conducting a quantitative analysis, on which we will be asking for your feedback today.

Advisory Committee Feedback

- **VK**: Feedback received from the committee has been incorporated (including revisions to clarify the rating scales, consider the scale of effects, refine qualitative assessment, recommend adaptation strategies that address all high vulnerabilities, and focus on drivers). We have revised the ratings for adaptive capacity to have low sensitivity align with high capacity.
- **JP**: We have added the scale and scope of the effects scoring. This is new and describes the 1 through 5 rating scale as localized up to statewide and systemwide.
- **Ryan Ojakian (RO)**: Both of these changes are systemic and have more broadly refined the outcomes of the vulnerability assessment.

Vulnerability Assessment – Tables Review

- **RO**: We will distribute the spreadsheet to all. The column we want to focus on is the composite score.
- **Brett Ewart (BE)**: Where would 'community livability as a result of heat island' live in this table?
  - **VK**: This table is high level and includes inputs that we may not see at this level. For example, within 'community & equity,' we are evaluating exposure to heat, drought, wildfire, and other inputs and the impacts to the community.

  - **JP**: We will also get into more details about this table that are not shown on this slide. We hope that we can focus on the composite score, but we know that this group will want to understand the details.
  - **RO**: Impacts like extreme heat are embedded into our sensitivity rating and adaptive capacity ratings. One of the pieces of feedback we received as well was the incorporation of agriculture, which is now included in the table.
- **Michael Saunders (MS)**: How did you address the challenges with cost to infrastructure in terms of reservoirs and similar infrastructure?
  - **RO**: That is incorporated in several ways, such as in the sensitivity rating for conveyance systems in the Upper Watershed.

Drivers for Vulnerabilities

- **RO**: Drivers for vulnerabilities in the Upper Watershed include forest health, snowpack loss, community & economic resilience, and infrastructure exposure challenges.
  - **Laura Rodarte (LR)**: What is the distinction for Upper versus Lower Watershed?
  - **RO**: The line is generally drawn at Folsom Reservoir, with the four planning areas being the Upper American, Bear, Cosumnes, and Lower American.
- **RO**: Lower Watershed drivers for vulnerabilities include forest health, snowpack loss, Folsom Reservoir constraints, flood management challenges, and ecosystem stress.
  - **BE**: A major focal point of the City of Sacramento's Climate Adaptation Plan is the loss of tree canopy and heat island effects on vulnerable communities. This is not included in these vulnerabilities.
    - **RO**: We do have this information embedded in the spreadsheet, but we will go back and look into this issue.
- **TF**: In terms of value of an asset, is the Gross Domestic Product (GDP) not contemplated here (for example agriculture in Placer County)?
  - **RO**: There was no direct evaluation of GDP but this is estimated by scale of effect.
- **VK**: The scale of effect is not weighted the same as sensitivity or vulnerability; it is intended to be an additional metric to evaluate these but is weighted less than sensitivity and vulnerability.
  - **RO**: Focus on the composite score; this assessment aims to feed into our next step of adaptation strategies.
- **RO**: Lower Cosumnes drivers for vulnerabilities include minimal flood protection, floodplain management challenges, and limited resources for groundwater management.

Updates on Technical Work

Climate Change Scenarios

- **Tapash Das (TD)**: We have developed three future climate change scenarios: Central Tendency, Hot-dry, and Warm-wet; I've shared the technical approach workflow diagram.
  - **MS**: Can you include temperatures in Fahrenheit in addition to Celsius?

Analytical Tools and Key Quantitative Metrics

- **TD**: Three key modeling tools used to evaluate across sectors are Variable Infiltration Capacity, CalSim3, and HEC-5Q.

Discussion

- **MS**: This looks like a good plan so far. I recommend looking into how work in the Upper Watershed will also affect the Lower Watershed for the adaptation strategies.
- **Greg Jones**: I recommend expanding the explanation for how the quantitative assessment weighted average is achieved, including each step in the process to get the weighted average.