Greater Monterey County Integrated Regional Water Management Program Regional Water Management Group Meeting

February 15, 2023 Zoom Conference Call

RWMG Entity Attendees:

Jenny Balmagia – Central Coast Wetlands Group Shandy Carroll – Monterey County Housing and Community Development Ross Clark – Central Coast Wetlands Group Emily Gardner – Salinas Valley Basin Groundwater Sustainability Agency Alex Henson – Monterey County Water Resources Agency Bridget Hoover – Monterey Bay National Marine Sanctuary Ileana Miranda – San Jerardo Cooperative, Inc. Heidi Niggemeyer – City of Salinas John Olson – California State University Monterey Bay

Non-RWMG Attendees:

Kelli Camara – Resource Conservation District of Santa Cruz County (RCDSCC) Andy Fisher – University of California Santa Cruz (UCSC) Dan Hermstad – Resource Conservation District of Santa Cruz County John Hunt – UC Davis Lisa Lurie – Resource Conservation District of Santa Cruz County Susan Robinson – Greater Monterey County IRWM Program Director

Meeting Minutes

1. Brief Introductions

2. Managed Aquifer Recharge (MAR) in Santa Cruz County: Presentation by:

- Lisa Lurie, Executive Director, RCDSCC
- Andy Fisher, Professor of Hydrogeology, UCSC
- Dan Hermstad, Ag Program Specialist, RCDSCC
- Kelli Camara, Consulting Technical Director, RCDSCC

<u>Summary</u>: Through a local collaborative effort in the Pajaro Valley, private landowners, the Resource Conservation District of Santa Cruz County, Pajaro Valley Water Management Agency (PV Water), and University of California Santa Cruz are implementing the Recharge Net Metering Program (ReNeM), that incentivizes private landowners to install Managed Aquifer Recharge (MAR) systems on their land. Since 2014, this collaborative has:

- assessed regional suitability and developed information and decision support tools to optimize storm runoff collection and MAR project siting,
- planned, permitted, implemented, and continue to monitor three MAR projects on private lands,
- developed a first-of-its kind incentive program, funded by PV Water, that gives rebates on participating landowner's water bill based on measured performance of the MAR project to help offset operation and maintenance costs.

Lisa provided context: There's been a long-standing process in place in Santa Cruz County for understanding water supply vulnerabilities, including PV Water's work on the Basin Management Plan, which emphasized: 1) optimized use of existing water supplies, 2) development of new water supplies, and 3) conservation as a key strategy to achieving groundwater sustainability. The ongoing community dialogue recognized that existing groundwater use was not sustainable, and that ag was part of the problem and had to be part of the solution. Out of this conversation came partnership building and a solutions-oriented framework – with the GSA promoting big projects and a separate workstream around MAR on private lands.

Andy noted three trends in California:

- 1. increased water demand
- 2. shifting land use (urbanization, more developed ag)
- 3. more intense rainfall resulting from climate change

These last two result directly in diminished groundwater recharge... Groundwater needs to be replenished. Recharge is influenced by *land use*, which has an impact on water quality.

There are many forms of MAR. In general:

- There needs to be a convenance of some sort
- There needs to be water supply of some sort (e.g., storm water, desalinated water)

On one end of the spectrum is LID: Generally small in scope, close to runoff source, benefits typically aren't measured directly. On the other end is regional infiltration, typically undertaken by urban areas (expensive). In the middle: distributed stormwater collection.

RCDSCC, UCSC, and PV Water together took the lead in developing the ReNeM landowner incentive program. MAR suitability maps were developed for Santa Cruz County and northern Monterey County. There are various tools for evaluating recharge suitability, including electromagnetic survey technique, and direct push rods which show soil types down to 80'+. All of this information together, plus on-the-ground site assessments, permitting considerations, etc. – determine whether a project is a good candidate. Andy showed some examples, including Bokariza Ranch and Kelly-Thompson Ranch, the latter of which drains 1300 acres.

There is plenty of landowner interest. Why aren't there more sites? MAR takes land out of production, plus the landowners need to maintain the recharge basins: MAR requires a pretty good size commitment on the part of private landowners. Hence the need to create incentives.

The solution – Recharge Net Metering – was modeled after net energy metering (distributed generation of energy). The rebate is dependent on the amount of water recharged. In some cases, the rebate can even exceed the cost of water (i.e., the landowner is putting more water into the ground than they're taking out). The GSA (PV Water) agreed to pilot the program for five years. The third-party certifier for the program is RCDSCC and UCSC. The agreement is: "We promise to do the best job we can measuring the benefits, and no one will argue with it." Also, growers agree to provide access to their property for monitoring, etc. At the end of the year, the agency issues a rebate according to a formula. They have now collected 11 years of data.

There are four main components to the ReNeM program:

- 1. Determining where to site the projects, and obtaining funds
- 2. Designing and implementing the projects
- 3. Validation work (UCSC-led collaboration)
- 4. Rebate (comes out of PV Water's conservation program)

There's a paper currently in review that compares groundwater net metering with Pajaro Valley GSP alternatives. The cheapest alternative is conservation, but besides that, all of the supply projects in the

plan are more expensive than Recharge Net Metering. ReNeM sounds like groundwater banking but it's different. The focus with recharge is on *infiltration*, i.e., water moving through the ground. The incentive is performance based. There's a 50% return on infiltration. Keeping water in the basin is a *broad benefit* – good for wetlands, good for habitat, etc.

Lisa noted that a great deal of effort and time went into *establishing* the program, agreements, etc. Then finding and analyzing suitability of sites. So much of it comes down to relationships – particularly, having willing landowners and tenants. There's no lack of landowner interest now, but assessment needs to occur to determine whether a site is suitable: Can the site recharge 100 AFY?

Water rights: complicated! The benefits of recharge accrue to the entire basin; the intent is not for the landowner to have a right to the water that is recharged.

A near-term goal for the program is at minimum 1,000 AFY. They are also wondering: How can the program be scaled more broadly statewide?

Jenny Balmagia asked about floodplain restoration: how can recharge be quantified/measured in that situation? Andy noted the challenge with measuring FloodMAR projects. There are thermal probes that can measure daily change in the temperature as water moves down through the soil – but that won't tell you what the average infiltration rate is. Jenny: Is there a baseline amount of recharge that can be expected? Andy: You can measure current channel losses, look at the soils in the river, can figure out a rating curve.... But it's not straightforward.

John Hunt asked what is done with the fine sediment that is scraped off the recharge basins. Andy responded that it is (ideally) trucked off the property.

Susan Robinson asked whether they had ever considered developing a collective maintenance workforce, rather than depending on individual landowners to be liable for maintenance. Andy said it was considered, but too cumbersome; more efficient if landowners themselves take on this responsibility. Lisa added that it is difficult to find grant funds for maintenance activities, hence the importance of the rebate for helping to offset those costs.

There was discussion about vegetation for improving water quality (injection wells "can be a nightmare for water quality"). Emily Gardner asked about their experience with vegetation standards and food safety concerns. Dan Hermstad emphasized that food safety is a genuine challenge for growers, but he's starting to see an evolution... Jenny asked, when treatment wetlands can't be installed (due to food safety concerns, for example), how do they ensure water quality? Andy responded that they monitor. They are also experimenting with carbon, adding mulch (almond shells have shown particularly promising results): microbes consume up to 2 feet/day of nitrate! Andy says they're still figuring it out – but noted that the soils should be amended in the places where recharge occurs. Heidi Niggemeyer pointed out that pesticides need to be removed as well.

Jenny asked about outreach strategies: Would they recommend starting with a map and proactively contacting landowners, or letting landowners come to them? Kelli Camara noted that the ReNeM program grew out of a long community dialogue. The Santa Cruz County partnership relies heavily on peer-to-peer communication. The RCD also helped spread the word through their one-on-one technical assistance programs. A map was created later on, used mainly as a presentational tool, but they left it up to landowners to decide for themselves if they were interested or not. It should be noted that a map will show only broad suitability potential; suitability can't be determined until site assessments are conducted.

Heidi asked if anyone has been promulgating the ReNeM program in Monterey County. Lisa said the Santa Cruz County RCD has been collaborating with the Monterey County RCD – but it will take much more inter-agency support and partnership to get a MAR program in Monterey County off the ground (RCD, SVBGSA, UCSC, CSUMB, CCWG/Moss Landing Marine Labs...). Emily pointed out that a suitability map will help "elevate the conversation..." Heidi noted that the City has a stormwater recharge and infiltration map that shows potential areas of recharge, based on soil maps from the County. It's fairly rudimentary, but may be useful.

Dan announced that the AEM survey data for Monterey County is now online - check it out!

3. Add Project to Storm Water Resource Plan: Susan reminded everyone that Central Coast Wetlands Group's project, "Multi-Benefit Water Quality Enhancement Projects in the Salinas Valley," was approved for the IRWM Plan and is part of the Region's Prop 1 Round 2 IRWM Implementation Grant application that was submitted last month. To be eligible for Prop 1 funds, the project must also be included in a Storm Water Resource Plan (SWRP). Susan made a motion to approve the addition of the project into the SWRP; Bridget seconded. All voted in favor, none opposed. (Prior to the meeting, Susan had received electronic "yay" votes via email from the following additional RWMG members: Big Sur Land Trust, City of Soledad, RCD of Monterey County, and Elkhorn Slough Foundation.) The project is formally approved for incorporation into the Greater Monterey County Storm Water Resource Plan.

4. April RWMG Meeting: Susan will not be available to facilitate the April 19th RWMG. It was decided that the meeting should be canceled rather than re-scheduled.

5. Updates/News from RWMG Members and Stakeholders:

<u>Monterey County</u>: Shandy Carroll said the County has been working with Monterey County Water Resources Agency on a Salinas Valley Groundwater Basin Investigation (initiated a long time ago...). It should be completed by June. The Carmel River Floodplain Restoration and Environmental Enhancement Project (Carmel River FREE) is expected to go to construction early next year. FEMA is providing 60-75% of the funding. The County just published the NOI for environmental review.

<u>Greater Monterey County IRWM</u>: Bridget reminded everyone about the annual call for funding for IRWM Coordination (to support Susan's position).

<u>Central Coast Wetlands Group</u>: Jenny announced that CCWG was just awarded \$1M from US Fish and Wildlife Service for a National Coastal Wetlands Conservation Grant. The grant will fund partial acquisition plus planning and design for the first phase of Castroville to the Coast. Once that phase is complete, CCWG can potentially request funds for additional phases.

<u>City of Soledad</u>: Susan announced (via email from Don Wilcox, February 9, 2023) that the City of Soledad is being awarded an Urban Community Drought Relief Grant for \$16.6M to finish their recycled water distribution system. This project was started with support in 2011 from Prop 84 IRWM Implementation Grant funds, which funded the first leg of the City's Recycled Water system from Soledad's Water Reclamation facility to the City.

<u>Monterey County Water Resources Agency</u>: Alex Henson announced that MCWRA has released for public comment the EIR for the Interlake Tunnel and Spillway Modification project.

The next RWMG meeting will be held on Wednesday, June 21, 2023, 1:30pm – 3:30pm.