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

October 15, 2025
Location: Big Sur Land Trust Office, Monterey, CA
and Zoom Conference Call

RWMG Entity Attendees:
Beth Febus – Big Sur Land Trust
Rosa Carrillo – San Jerardo Cooperative, Inc.
Shandy Carroll – Monterey County Dept of Housing and Community Development
Sarah Hardgrave – Salinas Valley Basin Groundwater Sustainability Agency
Piret Harmon – Salinas Valley Basin Groundwater Sustainability Agency
Carla James – City of Soledad
Heidi Niggemeyer – City of Salinas
Erica Parker – Monterey One Water (M1W)
Katie Siegler – California Marine Sanctuary Foundation, representing Monterey Bay National Marine Sanctuary
Sarah Wikle – Monterey County Dept of Housing and Community Development
Emily Zefferman – Resource Conservation District of Monterey County

Non-RWMG Attendees:
John Hunt – UC Davis and California Marine Sanctuary Foundation
Connor Jandreau – California Central Coast Joint Venture
Maureen Hamilton – Monterey Peninsula Water Management District (Monterey Peninsula, Carmel Bay, and South Monterey Bay IRWM Region)
Susan Robinson – Greater Monterey County IRWM Program Coordinator

Meeting Minutes

1. Brief Introductions: Katie Siegler was introduced to the group as the new representative for the Monterey Bay National Marine Sanctuary.

2. Salinas Valley Basin Groundwater Sustainability Agency (SVBGSA) — Brackish Groundwater Restoration Project Feasibility Study: Sarah Hardgrave provided an update on a feasibility study for a project referred to as the Brackish Groundwater Restoration Project (BGRP). SVBGSA has evaluated a range of project scenarios for the BGRP, which integrates the seawater intrusion extraction barrier and regional municipal supply project concepts that are included in several Groundwater Sustainability Plans.

The BGRP concept includes extraction wells to intercept brackish water in the seawater intrusion zone near the Monterey Bay coastline, preventing further inland intrusion. Extracted water is treated with reverse osmosis (RO) to produce potable-quality water. The resulting potable or agricultural-quality water can be distributed to regional end users to offset pumping or injected inland to raise groundwater levels and push back the seawater front. The brine would need to be discharged back to ocean (via M1W outfall).

Ninety-five percent (95%) of water used in Monterey County is groundwater. There have been significant declines over decades that have led to overdraft conditions and seawater intrusion. The seawater intrusion area continues to advance inland, resulting in chloride impacts and loss of wells.

More wells are being drilled into the Deep Aquifers; this is not considered a long-term sustainable solution.

SVBGSA has explored three potential types of management actions that might mitigate seawater intrusion: An extraction barrier, aquifer storage and recovery (injection of surface water), and reduced extractions (demand management). The Brackish Groundwater Restoration Project is considered at this time the only project that can meet minimum threshold for seawater intrusion. This project combines an extraction barrier with desalination for a new water supply.

First phase of feasibility analysis: How effective is this project at mitigating seawater intrusion? How would different scenarios compare with a "No Project Scenario" (no action) in terms of advancement of seawater intrusion inland in 180-Foot and 400-Foot Aquifers? Modeling includes the possibility of seawater potentially flowing downward from the 180-Ft to the 400-Ft Aquifer. Modeling also looks at chloride levels (as more seawater moves in, it increases the concentration). The year 2040 is the GSA's deadline for achieving sustainability under SGMA, with a goal to get back to 2017 levels (minimum threshold). SVBGSA asked: What's the smallest project that could achieve minimum threshold (2017 levels), and what's the largest-scale project that can achieve the "measurable objective" (the goal set in the GSP, pushing seawater intruded area back to Highway 1). And what's something reasonable between those two scenarios?

Range of Scenarios Evaluated

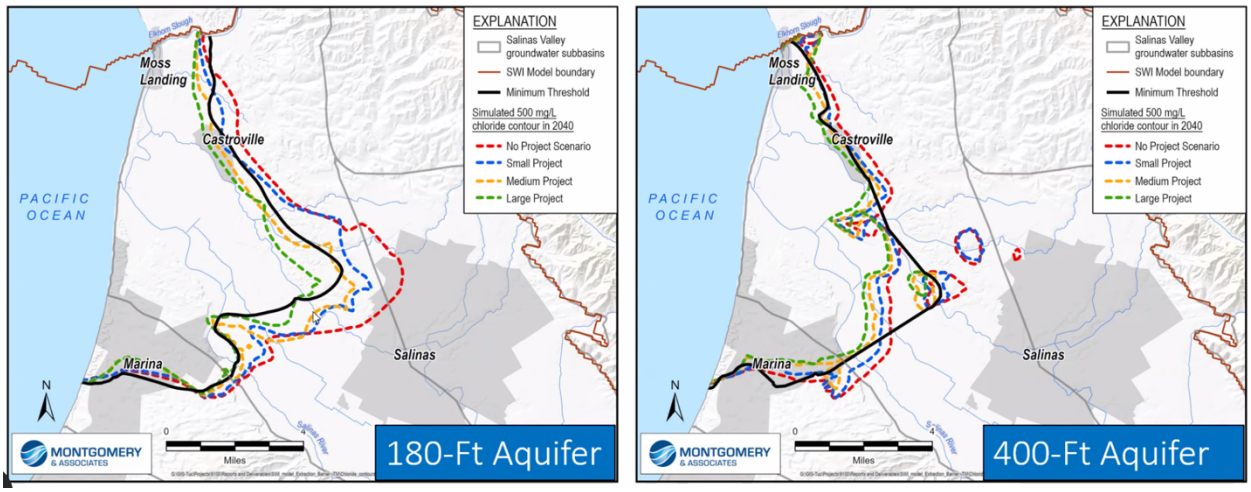
Direct Delivery Scenarios

- **Small Project** – 12 extraction wells, 28,000 AFY treated supply.
- **Medium Project** – 20 wells, 47,000 AFY supply, 12 injection wells.
- **Large Project** – 24 wells, 68,000 AFY supply, 12 injection wells + cleanup wells, broadest coverage.

Additional Scenarios

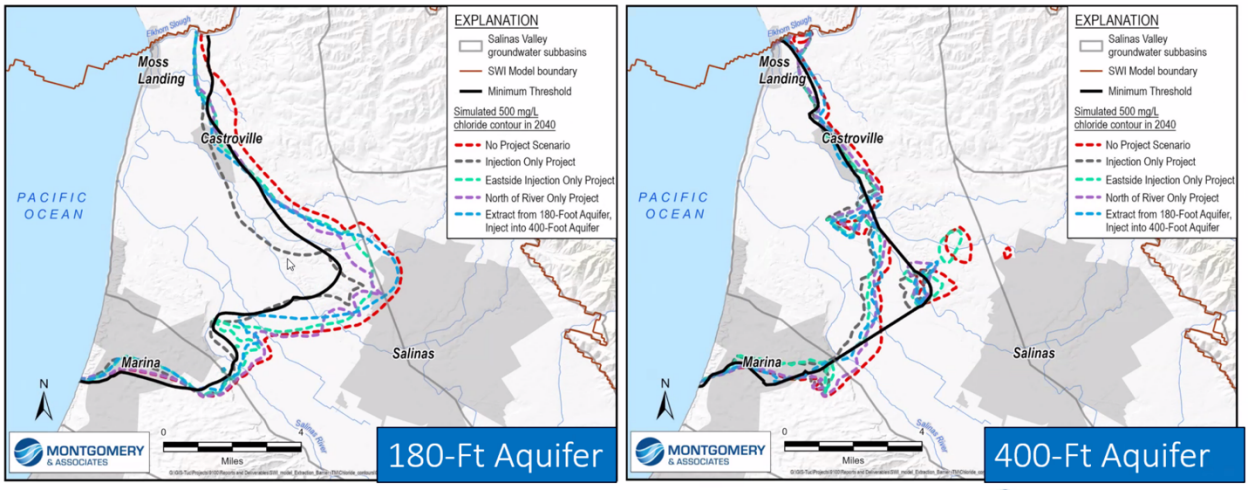
- **Injection-Only** – 20 wells, ~45,000 AFY injected, no direct deliveries.
- **Eastside Injection** – Raises water locally but limited intrusion protection.
- **North of River** – Local protection, but Marina and Salinas remain exposed.
- **Extract 180-Foot / Inject 400-Foot Aquifer** – Potential to achieve MT with refinements (e.g. cleanup wells).

Three Direct Delivery scenarios were explored, where brackish water would be extracted in wells near the coast, desalinated, and supplied to both municipalities and for agriculture (direct delivery) to provide a supply in lieu of pumping from existing groundwater wells. These scenarios also included adding injection of treated water as an additional seawater intrusion barrier. The "medium project" performed well, and the "large project" met the minimum threshold in the 180-Ft Aquifer. All three scenarios performed well in the 400-Ft Aquifer.

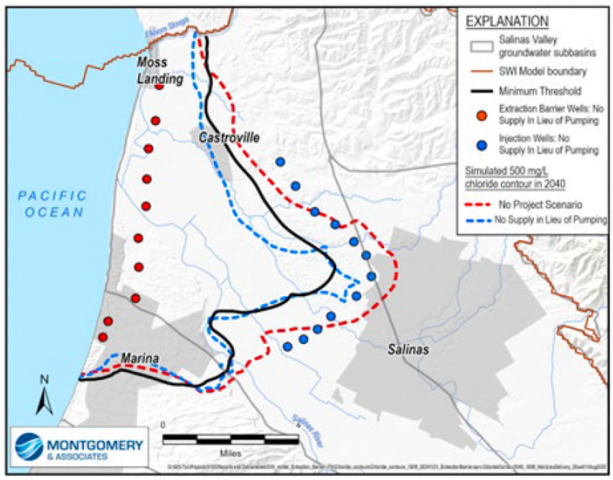


Additional scenarios were also explored, based on feedback from stakeholders. The "Injection-Only" scenario would likely achieve the minimum threshold goal in both aquifers within 10 years of operations. Any of the scenarios are a very expensive proposal, with costs ranging from $632M to almost $1.5 billion. (This is actually a comparable cost with other large water projects in other parts of the state.) Staff recommend the Injection-Only Scenario (with refinements), since it performs well and has lower operational complexity, and flexibility for refinements. None of the options fully achieve the long-term measurable goal of pushing seawater back to Highway 1 by 2040.

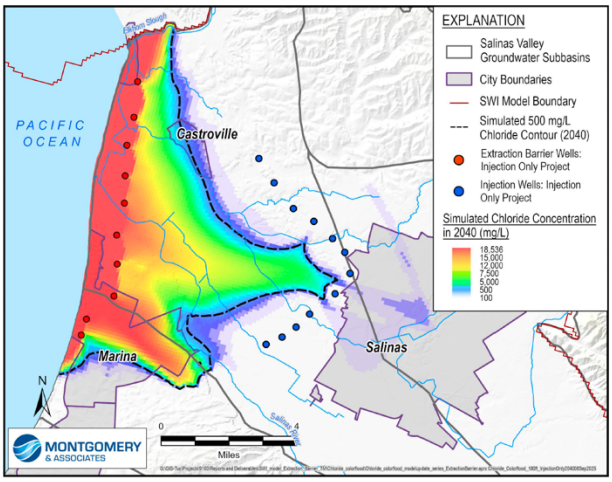
Comparison of Additional Scenarios:



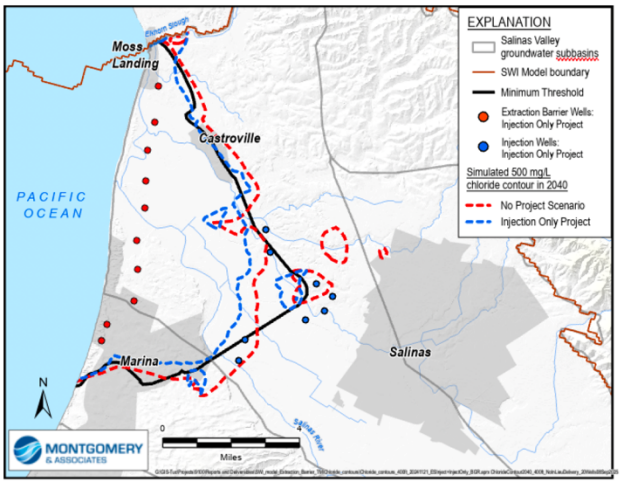
Staff recommend the Injection-Only Scenario: Place wells along coast and treat the brackish water at M1W, drill injection wells to raise groundwater levels and push seawater intrusion back toward the coast. Cost, with refinements, is estimated at $954M. The project would also hold chloride levels closer to the coast. (Black line shows "minimum threshold" that GSA is trying to achieve.)



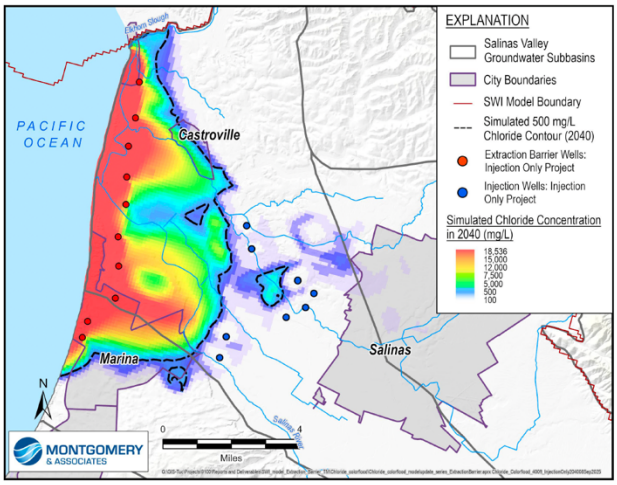
Injection Only Project Scenario Modeling Results 180-Foot Aquifer



Injection Only Scenario Chloride Concentrations Modeling Results 180-Foot Aquifer



Injection Only Project Scenario Modeling Results 400-Foot Aquifer



Injection Only Scenario Chloride Concentrations Modeling Results 400-Foot Aquifers

Next steps by February 2026: refine the Injection Only Scenario and evaluate, following US Bureau of Reclamation feasibility guidelines. Additional analysis: compare to other similar alternatives and perform economic analysis. SVBGSA is evaluating several other projects currently as well.

Q&A

Connor asked, when brackish water is pulled from the ground, it creates a vacuum. What backfills that vacuum; is it necessarily fresh water? Sarah responded that groundwater pumping creates a vacuum, pulling seawater inland. The push of the ocean is following path of the lower groundwater levels; so the idea is to reverse the gradient.

Emily asked if existing wells would continue pumping as status quo. Sarah responded that the Direct Delivery scenarios include reducing (or shutting down) pumping from coastal wells, and directly matching that pumping redution volume with treated brackish water. In the other scenarios, existing wells would continue to operate, there would be no direct deliveries to existing well users.

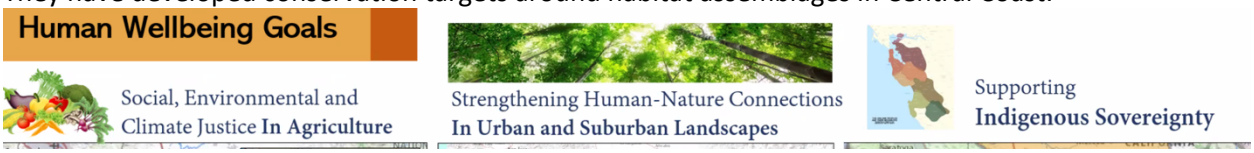
Carla asked if the SVBGSA has explored combinations of Demand Management and the Injection-Only Scenario. Sarah responded yes, they are looking at a combination of actions (using demand management to reduce the scale of the project and bring costs down).

Emily asked if the modeling factors in CalAm's proposed desal plant in Marina. Sarah responded that if the project moves forward, an environmental impact analysis will have to look at cumulative effects of other projects in the area, including CalAm's proposed desal project.

3. California Central Coast Joint Venture — Salinas River Collaborative: Connor Jandreau, Director and Partnerships Coordinator, California Central Coast Joint Venture (C3JV) shared efforts to formalize the final region of the Migratory Bird Joint Ventures in the United States, as well as introduce the emerging Salinas River Collaborative as an informal gathering of partners exploring opportunities for a holistic watershed stewardship across the whole of the Salinas River.

Joint Ventures is a partnership model within Canada, US, and Mexico developed in the 1980s in response to large-scale population decline of migratory bird species, especially water fowl. There are about 36 migratory bird partnerships, covering the entire US (and parts of Canada and Mexico), with the California Central Coast being the last region to form a Joint Venture. C3JV is just a small team of two! C3JV has been in process of building this partnership over last five years, guided by an Implementation Plan. The Implementation Plan will get recognized and funded through Congressional appropriation (someday…); it was approved by US Department of the Interior and is awaiting Senate and House appropriations. The C3JV region spans most of the Central Coast from south San Mateo County through Santa Barbara. The Central Coast has the highest ecological diversity in the US.

The aim is to achieve synergistic strategies that meet conservation and human goals simultaneously. They have developed conservation targets around habitat assemblages in Central Coast.



The Implementation Plan includes 150 strategies across six habitat types – an inclusive document! It includes a focus on: 1) how to support and build a stewardship-based livelihoods, working with CalPoly and others to develop those programs, and partnering with California Conservation Corps; 2) implementing the Avian Monitoring Network (C3JV is obligated to monitor and track population trends for focal migratory species); 3) the Salinas River Watershed as a focal landscape at the confluence of human wellbeing and conservation targets. Coastal Resilience is a cross-cutting theme that intersects all of these pillars. The team is currently working to develop projects and strategies.

The Salinas Watershed represents 70% of the C3JV region. It is the largest coastal watershed in CA, supporting a $9 billion ag industry, and also includes one of the most degraded ecosystems. The region seems underrepresented in federal and state-funded projects. In Fall 2024 C3JV brought partners together to develop an initial conversation to discuss strengths, successes, challenges, obstacles, gaps and opportunities, and primary pressures acting upon the system. They have launched a regular cadence in conversation among a number of partners (40-50 people engaged), meeting monthly to continue to develop concepts and ideas around a "Salinas River Collaborative."

Concept of Riverbank Communities: How do we stitch together access, stewardship, ownership, health, wellbeing of those communities? The challenge: Balancing agriculture, wildlife, water and health in the Salinas Valley. Salinas crosses a lot of jurisdictional boundaries, and resource-based fragmented management. There are many dominant voices, and some marginalized, including the erasure of indigenous presence in the Salinas River watershed. There is a disconnect between ecological health and sustainable productivity – the Salinas River is the lifeline of the richness of the Central Coast, so the aim

is to foment that connectedness. There is a need to build trust. And there are ecological pressures – broadscale decline of species, etc.

Because the Salinas River Collaborative is a non-structured, very informal gathering at this point, it is operating under common visions of where the work should focus. They are open to refinement. General themes at the moment include: reducing contaminants, supporting sustainable ag, building monitoring capacity, fostering collaboration, recovery of species, and *connecting people to the river* (it is hard to build a relationship with a river that you have very little access to). The Collaborative is taking a holistic approach from headwaters to the estuary, seeking to be cross-boundary and cross-sector, and built around community-informed focus. That has led to some developments of a Theory of Change model.

The Salinas River Collaborative effort is in early development stages. They are currently trying to figure out how to fund initial efforts. They recently submitted three grant proposals:

1. California Department of Fish and Wildlife: Salinas River Restoration and Stewardship: Designing a restoration prioritization map for the river in coordination with RCDs and other partners, including monitoring and community engagement.
2. Department of Pesticide Regulation: A Sustainable Pest Management project supporting peer-to-peer learning, developing and testing alternatives to rodenticides, evaluating wildlife exposure, and supporting grower adoption.
3. National Fish and Wildlife Foundation: Working with ranchers to develop strategies for grassland and freshwater wetland enhancement, improving habitat and soil health.

Meanwhile, C3JV is continuing to build the Collaborative, expanding partnerships, implementing demonstration sites and monitoring frameworks, securing funding, sharing data and lessons, and building communications. In November, they will be focusing on "groundwater intersectionality." In December, the focus will be Multi-benefit Land Repurposing (MLRP).

Q&A

Heidi wondered if C3JV partners with groups like Audubon. Connor responded that he works for the American Bird Conservancy – so they're plugged in!

Susan asked whether the Collaborative is being led by C3JV, and Connor responded that C3JV is not "leading" the Collaborative per se, just coordinating the effort to get it off the ground.

John Hunt noted the vast amount of planning work being done in the Salinas Watershed and the many "networks" (such as IRWM and the new Monterey Bay Climate Adaptation Action Network). He suggested that Connor share strategies with these other collaboratives. John also asked if this effort will ultimately lead to on-the-ground projects. Connor responded that part of the work has been in recognizing all of the collaborative work going on and to *connect the dots*. They have tried to do partner mapping – John's comments underscore the importance of that exercise! Connor added that the goal of the Salinas River Collaborative effort is to have shovel-ready implementation projects.

Susan asked if Connor might share their Implementation Plan, and he agreed to share it with this group (though it is not available publicly on the website at this time).

MLRP: Jenny Balmagia and Central Coast Wetlands Group have been involved in the C3JV effort from the start. Jenny will be presenting on MLRP in December. The goal is to strategize for broader implementation.

Food safety: Taylor Farms and UC Davis researchers shared their knowledge and goals with the Collaborative two months ago. They are having facilitated discussions like this to try to "touch on all complications" within this broader watershed, such as the food safety issue, which limits opportunities for riparian restoration and beneficial practices such as vegetated ditches.

4. Other News/Updates

There were no updates.

The next Regional Water Management Group meeting is scheduled for December 17, 2025, location TBD.