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

December 21, 2022
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
Alex Henson – Monterey County Water Resources Agency
Bridget Hoover – Monterey Bay National Marine Sanctuary
Alison Imamura – Monterey One Water
Erik Lundquist – Monterey County Housing and Community Development
Donna Meyers – Salinas Valley Basin Groundwater Sustainability Agency
Ileana Miranda – San Jerardo Cooperative, Inc.
Heidi Niggemeyer – City of Salinas
John Olson – California State University Monterey Bay
Paul Robins – Resource Conservation District of Monterey County

Non-RWMG Attendees:
John Hunt – UC Davis
Susan Robinson – Greater Monterey County IRWM Program Director

Meeting Minutes

1. Brief Introductions

2. Updates from Regional Water Management Group Members: The following Regional Water Management Group members provided short presentations on their latest projects.

Monterey County Housing and Community Development: Erik Lundquist, Director of Housing and Community Development, and Shandy Carroll, Management Analyst III, provided updates for the County.

Shandy reported that the County completed an EIR in 2020 and 2021, and has completed 90% design plans for the Carmel River Floodplain Restoration and Environmental Enhancement Project (Carmel River FREE). Carmel River FREE will restore habitat and help reduce flood risks for homes and businesses in the lower Carmel River watershed. There will now be two phases, east and west of Highway 1, with phase 1 anticipated for 2023, pending funding from FEMA. The County is working on a draft EIR for the Salinas River Lagoon, hoping to have that complete by summer 2023. (Let Shandy know if you would like to be notified.) The County didn't have to manage the sandbar this year; the lagoon breached the sandbar itself.

Erik noted that the County has been working on updating the Housing element for the General Plan. The Safety and Environmental Justice elements are being updated. Erik invited people to participate in the community outreach groups for those elements. The County is also working with the Resource Conservation District of Monterey County (RCDMC) to manage fuels in the coastal region, and on the

environmental streamlining permit (modeled after the Santa Cruz RCD streamlined permit). The County is also moving forward with Land Use Plans, including for Big Sur and Castroville.

Erik briefly discussed the Ag Mitigation Program, mitigating the loss of farmland as a result of re-zoning. For example, for a piece of prime farm land being annexed, the County would need to find another piece of prime farm land to preserve in perpetuity. Ross Clark brought up the recently awarded Multi-benefit Land Repurposing Program (MLRP) grant, and noted that his team will be working to acquire ag land through this program. This presents a good opportunity to partner and coordinate, determine if/how the MLRP might contribute toward environmental mitigation.

Finally, Erik mentioned that a vacation rental ordinance is in draft. Also, there will be a permit workshop on January 24, 2023 in front of the Board of Supervisors. Do attend if you're interested in learning about the complexities of the permitting process!

Monterey One Water (M1W): Alison Imamura, M1W Principal Engineer, provided a brief overview of M1W services, including wastewater service, production of non-potable recycled water for food crop irrigation, and production of potable recycled water for groundwater replenishment and urban irrigation. M1W is in the process of developing an aggressive capital improvement plan to address their aging collection system. They are working with the Monterey County Water Resources Agency (MCWRA) on upgrades to the Castroville Seawater Intrusion Project (CSIP). They are collaborating with the Salinas Valley Basin Groundwater Sustainability Agency (SVBGSA) on upgrades to the chlorine system (halfway through construction on that), and operational optimization. M1W is seeking funding for winter modifications to the plant, that would enable production of 1,000 AF of recycled water.

With Pure Water Monterey, almost 3 billion gallons of recycled water have been injected into the Seaside groundwater basin to date (providing 86% replacement supply for Carmel River and 14% storage). M1W has received $45M in grants for this project, plus a SRF loan, totaling just over $100M.

Alison discussed some collaborative efforts, including the Monterey Microgrid Project with ReGen Monterey, an effort to create a landfill run on biogas and solar. Future partnerships include the Monterey Peninsula Water Supply Project (noting the challenges associated with accepting brine to the outfall), and separate, large projects intended to replace groundwater and reduce seawater intrusion. M1W is also considering partnering with Marina Coast Water District on a potable water supply pipeline to Castroville. In addition, Salinas Projects are ongoing; M1W is in planning stage of connecting small communities to the M1W system (for example, Oak Hills near Castroville, and an area south of Spreckels).

California State University Monterey Bay (CSUMB): John Olson, Associate Professor of Freshwater Ecology in the Department of Applied Environmental Science, provided an update for CSUMB's Watershed Environments and Ecology Lab. Current work in John's lab includes:

- PhD students are measuring water chemistry samples to predict natural background water chemistry, using factors such as climate and geology. They have developed US-wide models. The model helps estimate inter and intra annual variation (e.g., wet vs. dry years).
- Students have developed high resolution vegetation maps, focused on Garland Ranch, and are developing a model.
- Several students are working on environmental DNA, shed by fish, algae, etc. into the water, and measuring how different rivers degrade DNA differently. DNA degradation is affected by depth of the river, pools, retention time of water, etc.
- One grad student is looking at microplastics in ag and urban areas. He will be conducting ecotoxicology tests on "wild" plastics.

- John and his students are working with RCDMC to study the effects of arundo removal on the Salinas River, including aerial invertebrates and effects on bats.
- They have received a 10-year support contract with Ft. Hunter Liggett to do biological assessments of streams, including environmental DNA surveys.

Two new faculty have been hired. Jimmy Guilinger has taken over Doug Smith's lab (focusing on Geomorphology, Fire/Landslides, and Sediment). Seth Gustafson will be teaching Sustainability and Civic Ecology. CSUMB will be hosting the CSU-WATER conference on April 13th. John will be reaching out to RWMG members to potentially host tours.

Erik noted potential opportunities for internships/employment at the County for John's students.

Salinas Valley Basin Groundwater Sustainability Agency (SVBGSA): Donna Meyers, SVBGSA General Manager, noted that all Groundwater Sustainability Plans have now been submitted. The 180/400 GSP has been approved by the State, and the remaining five are under review. All plans can be viewed at: https://sgma.water.ca.gov/portal/

Many of the aquifers "require action," i.e., are not in sustainable condition. Sustainability is defined for each of six "sustainability indicators," including lowering of groundwater levels, reduction of storage, seawater intrusion, degraded water quality, land subsidence, and surface water depletion (which has to do with groundwater dependent ecosystems, or GDEs). Land subsidence is not a major problem in this area, but the other five are…. The GSA is responsible for managing, or maintaining the aquifer to keep it from falling into an "undesirable" state. Donna described a "traffic signal" approach: Develop minimum thresholds, use measurable objectives, and report to the State on an ongoing basis. When the region falls below the "red line," the GSA needs to explain to the State how it will bring conditions back up to the minimum threshold.

As part of the effort to reach sustainability, the GSA is conducting scientific studies and modeling to characterize the basins. They have a portfolio approach to improvements, including: Increased recharge (including floodplain enhancement and recharge), regional alternative water supplies (such as CSIP optimization and expansion), Salinas River projects (e.g., Multi-Benefit Stream Channel Improvements, winter releases with aquifer storage and recovery (ASR), the Interlake Tunnel and spillway modifications), and surface water diversions. They are also looking at demand management options, including conservation and ag best management practices, fallowing and ag land retirement, and potential pumping allocations and controls.

The GSA received $7.6 million in grant funds to implement projects for the 180/400 Aquifer. This includes a Deep Aquifer Study, and two feasibility studies regarding ASR and feasibility of a seawater intrusion extraction barrier. They are looking to push the eastern seawater intrusion boundary back to where it was in the early 1980s. The grant also includes additional study of GDEs. An assessment is underway with stakeholders to help define a potential demand management program. CSIP optimization projects are currently underway.

The Monterey Subbasin is a medium priority basin but conditions are bad, including chronic decline in groundwater levels and storage. The GSA is looking at potential demand management options. They will be filling in data gaps, and are working on a dry well notification system, and water conservation. The Eastside Basin is in overdraft. For that basin the GSA will be looking at demand management, a drywell notification system, and will be conducting a feasibility assessment for overland flow managed aquifer recharge (MAR). SVBGSA just submitted a grant application for $21 million for SGMA Round 2 for the five subbasins.

Monterey Bay National Marine Sanctuary: Bridget Hoover, Director for the Sanctuary's Water Quality Protection Program, noted that the Sanctuary is celebrating its 30th anniversary. Bridget provided an overview of priorities for FY2023-FY2027. Marine debris is a big priority, with a large watershed focus (including land-based plastics). Other priorities include: whale conservation (ship noise, entanglements), the kelp forest crash (assess needs for recovery, plus monitoring), climate change (climate vulnerability assessment and adaptation planning), and vessel incidents (improve emergency response). The Sanctuary is also working to expand outreach and create/increase awareness with stakeholders. Three new staff members have been hired, in resource protection, urban water quality, and ag water quality protection.

On the Marine Debris front, Pam Krone and Jazmine Mejia-Muños are heading up ag efforts to recycle mulch, and have initiated ocean trials to assess how biodegradable mulch behaves in the ocean system. They have started a pilot project with the Waste Management District to bring drip irrigation tape in bails for recycling. They are conducting ocean micro-plastic monitoring and research. The Sanctuary has submitted a grant proposal for $15M for NOAA Marine Debris grant funds for removal of sunk vessels and abandoned fishing gear.

On the Research front: The Sanctuary has been conducting near-shore characterization for years, and working with Caltrans to identify areas where it's safe to do side casting. They are also conducting a kelp restoration site assessment. For the climate vulnerability assessment, they have 44 different marine organisms that will be studied in nine different habitats and ecosystem function systems this year.

Vessel incidents: The Sanctuary typically responds to 10-15 groundings/year. The Sanctuary is working with harbors to prevent incidents and conduct clean ups asap.

Water Quality Protection Program: This year's First Flush event occurred in September – the earliest ever! They now have over 20 years of data summarized, and have seen positive results from management practices: statistically significant reductions in stormwater contaminant levels for both wet weather and dry weather. Other ag efforts include: two healthy soils projects, DPR pesticide application decision tool, and reinvigorating the Agriculture Water Quality Alliance (AWQA).

Resource Conservation District of Monterey County (RCDMC): Paul Robins, RCDMC Executive Director, said that RCDMC received a 319(h) grant, in collaboration with the Central Coast Wetlands Group and California Marine Sanctuary Foundation, to install two bioreactors and three linear treatment wetlands along the Blanco Drain. The Blanco Woodchip Bioreactor was installed with Tanimura & Antle. FlowWest designed the bioreactor. The design includes a vertical flow system, where the water drains to the bottom of the bioreactor, then flows up and out the top. Perforated pipes carry the water out. Total installed cost was $175K.

There were some challenges, including permitting. RCDMD is working with the County to improve this with streamlined permitting. Finding high quality woodchips was also challenging, and expensive. Current status: The goal was 50 gallon/minute, but the flow has been lower than that (11 GPM), mostly due to clogging issues. Installing a strainer helped to address that issue. Results: With a goal to achieve 75% reduction in nitrogen, they have exceeded those expectations! The longer the residence time, the higher the reduction. With reduced air temperatures and flows, there is a lower reduction rate.

Preservation Inc. owns a mobile bioreactor. It's less expensive, but has a higher maintenance cost. The nutrient reduction is remarkable! Where rates were 70 ppm at the inlet, at the outlet they were reduced to 0-15 ppm. The mobile bioreactor doesn't use woodchips but plastic, inoculated with pseudomonas. The residence time is just hours (whereas woodchip bioreactor is designed for 2-day residence time).

See video that features the work that RCDMD is doing with Spanish-speaking farmers: https://www.ksbw.com/article/santa-cruz-organization-helps-farms-transition-to-green-farming-systems/42090653

Central Coast Wetlands Group (CCWG): Ross Clark, CCWG Director, noted that the CCWG operates with just six staff, supported entirely through grants. CCWG works on:

- Monitoring Program
- Restoration, including Moro Cojo Slough restoration over the past 26 years; CCWG is now in the process of drafting a long-term monitoring and maintenance plan for Moro Cojo Slough.
- Water quality analysis, including nutrient reduction, and how that might reduce harmful algal blooms (HABs) on the Central Coast
- Planning and policy

CCWG restored a 35-acre parcel of ag land that was no longer being farmed on the Tottino property (Ocean Mist Farms). CCWG re-established the land as part of the floodplain, re-establishing brackish water conditions. A combination of restoration and water quality projects over the years has led to documented watershed-scale water quality improvements, as demonstrated by CCAMP and Preservation Inc. data. During the 2016-2019 monitoring period, there have been no nitrogen exceedances whatsoever! CCWG is working with the Central Coast Regional Board and Preservation Inc. to identify ways in which growers can see regulatory benefits of meeting TMDLs through these treatment projects. With proven success in Moro Cojo Slough, CCWG is now focusing these efforts on the larger Salinas Valley. The Storm Water Resource Plan identified different areas in the Gabilan Watershed where projects could occur, with potential groundwater recharge and floodplain benefits. There is aquifer recharge potential especially in the foothills, which is being designated for future urban growth. CCWG is looking to work with the County, City of Salinas, and SVBGSA on how to preserve those areas with high permeable soils.

CCWG is also identifying the benefits of the Carr Lake project, and assessing the potential for restoration of the Rec Ditch between Salinas and Moss Landing Harbor, along with restoration of former lakes for water quality enhancement. Progress is being made toward implementing the Castroville to the Coast project to re-establish floodplain along the Rec Ditch between Castroville and the Old Salinas River, with reduced flooding, improved water quality and habitat, and potential recreational benefits. CCWG is in the early stages of negotiations with farmers. The project will provide important coastal access for the community of Castroville.

Ross highlighted the Multi-Benefit Land Repurposing Program grant, in partnership with the SVBGSA and California Marine Sanctuary Foundation. The vision is to work with a broad coalition of stakeholders to strategically and voluntarily repurpose the least viable, irrigated, agricultural lands in the Lower Salinas Valley that can provide multiple water resource benefits. Four committees will be convened to lead implementation: Governance, Policy and Project Development, Technical, and Acquisition. Committees will meet beginning in January. Work on the MLRP Plan will begin in February/March. Meanwhile, CCWG will begin conversations with landowners on projects that were identified in the Storm Water Resource Plan ("low-hanging fruit"). CCWG will be matching the IRWM Round 2 grant, "Multi-benefit Water Quality Enhancement Projects in the Salinas Valley."

City of Salinas: Heidi Niggemeyer, City of Salinas NPDES Program Manager, provided updates:

- The City is waiting on a Green Street grant for Closter Park, which will include flood mitigation and work toward meeting TMDLs.

- The City is working on a Green City Master Plan, identifying locations where green infrastructure can be installed.
- The City is updating the Stormwater Master Plan, should be finished mid-2023. The plan will take into account climate resilience, based on 2055 rainfall levels. Heidi would like the plan to take into account new development.
- The City is putting in No Parking Streets signage for street sweeping.
- The City has a pollutant load reduction plan to help meet TMDLs. Meeting TMDLs is challenging since the city is surrounded by agriculture. The plan will go out for public comment soon.
- The City is preparing an Engineering Assessment to determine repair needs and estimated costs to repair inlets for dry basins in Cesar Chavez Park. The park drains over 600 acres of City land.
- The Lincoln Avenue Green Street project is back on the table; Heidi is seeking grant funds.
- The City is working on a stormwater asset management program.
- The City is working on a pesticide reduction plan, focusing on pyrethroid.

There was general discussion about possible coordination/collaboration on various projects. Erik and Ross plan to discuss larger development concepts, including CCWG's ambition to establish better functioning creeks, which might benefit from the streamlined permitting project. Heidi suggested that Ross take a look at the West Area Specific Plan and Central Area Specific Plan. "Trying to put a wetland in the middle of that plan may be difficult because it's development oriented…" Ross responded that a project wouldn't necessarily take a lot of land, but would prevent flooding, etc. Heidi commented that it would be interesting to see where in the Rec Ditch vegetation could be installed (the Rec Ditch is managed by MCWRA). There may not be opportunities for on-site mitigation for projects, so perhaps opportunities for off-site mitigation can be discussed.

The next RWMG meeting will be held on Wednesday, February 15, 2022, 1:30pm – 3:30pm.