

Eastside Aquifer Subbasin Groundwater Sustainability Plan Development

Comment Letters Received

[Clark. 060520](#)



June 5th 2020

To: Emily Gardner

Salinas Valley Groundwater Sustainability Agency

**RE: Salinas Valley Basin Groundwater Sustainability Agency East Side Sub-Basin Committee
Comments on Chapters 1,3,4**

Emily,

Thank you for the opportunity to provide comments on the East Side sub-basin GSP chapters 1,3, and 4.

The document is easy to read and provides valuable information on the unique character of this sub-basin that lies directly west of the Gabilan Mountain Range. My comments will focus on the unique nature of this sub-basin geology (I am not a geologist) and the unique opportunities this formation and its adjacency to the watersheds of the Gabilan Range provide. These geographic conditions support opportunities to develop projects that enhance surface water resources and restore surface water hydrologic functions which will lead to an increase in natural (although difficult to quantify) percolation into gravel layers within this sub-basin that will benefit (although difficult to quantify) groundwater users in the area and perhaps enhancement of the adjacent 180/400 sub-basin.

I have two main observations and several suggested additions to the report (specifically chapter 4.4.4) that would support future Committee discussions focusing on water budgets and the identification of projects that will lead to meeting sub-basin sustainability objectives. I argue that to not recognize the potential that surface water projects can have to increase groundwater storage (although difficult to quantify) would lead to missed opportunities. GSPs in Santa Cruz county have recognized the infiltration potential and have received state funding to investigate, design, and construct pilot projects. Failing to value and prioritize the infiltration potential of this sub-basin and describing projects and programs to further investigate their feasibility may unfairly lead to restrictions on pumping of wells within this sub-basin. Secondly, many of the agencies and stakeholder groups that are supportive and vested in the success of the Salinas Valley GSP are not yet recognized within this document as partners that have completed a number of studies, watershed characterizations and management planning exercises that can support GSP development and implementation success. Below is a list of pertinent (I believe) plans and studies that could benefit the East Side GSP planning process. These plans further document the interest of partner agencies, organizations and stakeholders in efforts to enhance both surface and groundwater sustainability in this watershed and the capacity that these groups can provide to ESGSP project development and implementation.

In short, there are many groups and agencies (mine included) that are committed to identifying and implementing sustainable water projects in the Gabilan watershed that will benefit groundwater sustainability and these parallel goals should be recognized within this GSP and developed into expanded partnerships. These partnerships can develop multi-benefit projects that are valued by all within the community and can be supported by numerous state and federal grant projects that may not be available for projects that solely meet GSA requirement.

Focused Comments:

- 1) The Report follows a standard framework with other sub-basin GSPs to aid completion of a daunting planning process, but this standardization leads to a missed opportunity to fully recognize, value, or investigate the infiltration potential of this sub-basin. Specifically:

Chapter 4.4.4 states that “*Natural groundwater recharge occurs through infiltration of surface water from the streams originating in the Gabilan Range*” and that “*Areas with excellent recharge properties are shown in green*”, and that “*areas with the highest potential for recharge are along tributary streams.*” These statements are in line with other investigations and plans. The value of these findings, however, are countered by the next paragraph which states:

“Although Figure 4-8 shows some areas of good potential recharge in the Eastside Aquifer Sub-basin, actual recharge to the productive zones of the Sub-basin could be limited because the discontinuous sediments of the alluvial fans may not provide a continuous path for recharge, and the interfingering clay lenses may retard or prevent deep recharge. This demonstrates the limited utility of potential recharge maps that are solely based on surficial soil properties. This map should not be used exclusively to identify recharge areas that will directly benefit the aquifers in the Eastside Aquifer Sub-basin. Rather, it should be used in conjunction with additional research and investigation tools.”

It is my opinion that the second paragraph disproportionately deemphasized the potential value of these infiltration opportunities to increase water supply to the sub-basin. I recommend that additional information be presented (i.e. another paragraph) that reviews what additional research and investigation tools are available and reference how the Pajaro basin (and others) has already utilized these tools to identify, design, and construct infiltration projects within their basins.

- 2) The report does not reference many parallel and supportive planning efforts underway by Monterey County Water Resources Agency, the Greater Monterey IRWMP and other groups (Big Sur Land Trust) that would provide the reader with a greater understanding of the potential partnerships that could lead to the development of important multi-benefit projects. Multi-benefit projects come with multi-source funding for projects that increase recharge while also improving aquatic riparian habitat, reducing downstream flooding, and supporting regulatory compliance for the City of Salinas and farmers within the sub-basin. While this expanded scope may be seen as a distraction to the primary goals of the GSP, the multi benefit opportunities and the potential funding support that comes with multi-benefit projects should not be discounted because of this added complexity, specifically because there is support and technical capacity of the other stakeholders available to aid this expanded scope.

Parallel efforts that should be documented in this report (likely Chapter 2 but referenced in Chapter 4) include the City of Salinas stormwater protection program, flood management by the City of Salinas and Monterey County Water Resources, riparian conservation efforts in the upper Gabilan watershed by Big Sur Land Trust and The Nature Conservancy, Historical ecology work by San Francisco Estuary Institute, Watershed studies and planning completed by CSUMB, CCWG and the IRWMP (Figure 1. Excerpt of Salinas Valley Stormwater Plan), and coordination efforts led by the Monterey Grower Shippers Association to develop agriculture industry led compliance pathways to meet soon to be adopted Regional Water Board Agriculture Order 4.0 (please see below listed references). Each of these efforts supports the enhancement of water resources within this Sub-basin and should be recognized as resources in the design and implementation of the East Side GSP.

- 3) Loss of surface water hydrologic processes in the Gabilan foothills and eastern side of the East Side Groundwater sub-basin should be recognized as one factor which has led to a reduction in recharge and thus, the classification of the sub-basin as highly vulnerable. Much of the floodplain areas below the Gabilan range have been channelized, reducing the natural infiltration potential to this groundwater basin. Without recognizing this significant reduction in infiltration, any restrictions on groundwater pumping to increase groundwater sustainability will unfairly restrict some farming activities (pumping) while not recognizing and/or managing the impacts of other farming activities (channelization of natural waterways). If future water budget findings suggest that some irrigation pumping must be reduced (leading to a reduction in agriculture) then integrating reduced farming with reclamation of flood plain areas (and hence infiltration) would be the most efficient method to meet water budget needs.
- 4) The current document does not recognize (in addition to the planning efforts) the skills and capacity of partner agencies and stakeholder groups. These skills and capacities can be leveraged to increase the scope and breadth of groundwater management and project development. Two examples of this were noted in the Sub-Committee meeting. Amy from the Monterey County Water Resources Agency noted that they monitor many wells not listed within the report and have made these data available to the GSA. Similarly, the consultant noted that the GSA does not own land nor has regulatory authority of the lands within this sub-basin. This is true, but fails to recognize partner groups that do have these capacities and are interested in developing multi-benefit projects within this watershed. Limitations of the GSA should not limit the opportunities identified within the plan but should be rectified through identifying others that have those capabilities and initiate partnerships to benefit from those skills and abilities.
- 5) Finally, Surface water management and groundwater infiltration can be accomplished in unison, and if successful, will lead to numerous benefits to landowners, agriculture industry, adjacent municipalities, county agencies, down stream flood prone communities and the East Side Groundwater Sub-basin. Because of the unique character of the geology in this area, these multi-benefit opportunities should be fully recognized and integrated into this planning process. Projects should be identified that help increase our understanding of this sub-basin and the benefits such multi-benefit projects can have on GSP success. The Greater Monterey County IRWMP process (which Salinas GSA has been invited to become a member) provides a unique and valuable forum from which to investigate these partnerships.

Figure 1. Map of Gabilan watershed priority restoration and management goals. Actions listed in the legend and depicted on the map are described in Table 1.

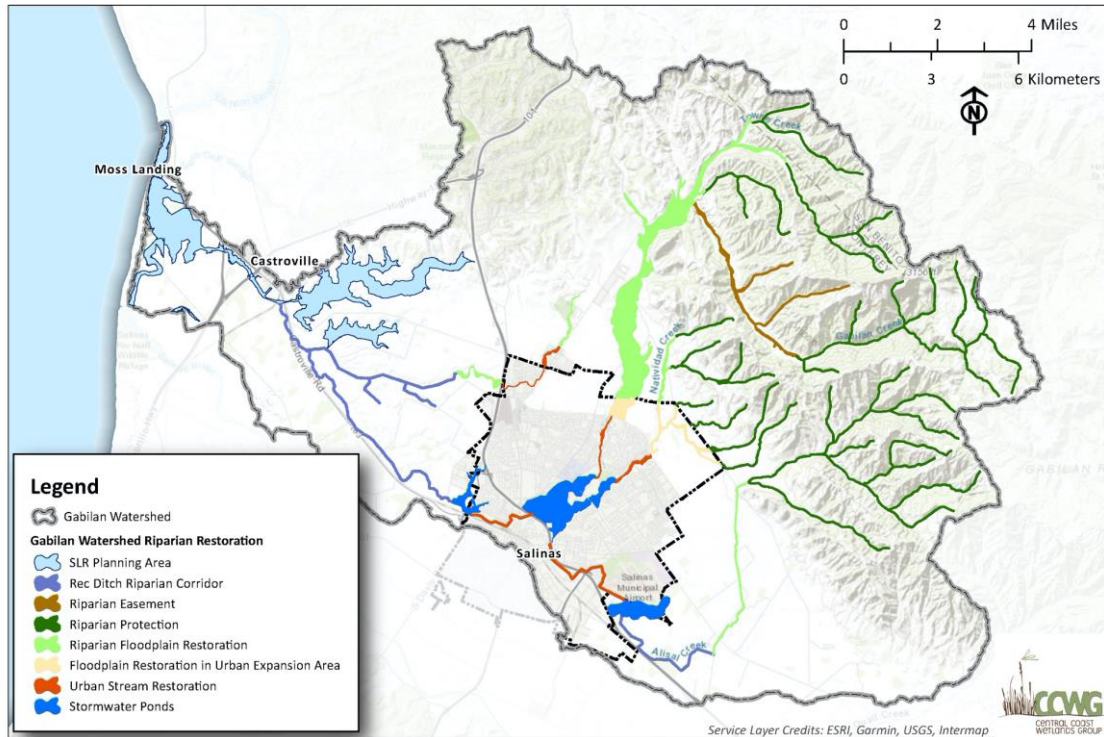


Table 1. Gabilan watershed priority restoration and management goal descriptions (From Stormwater Resources Plan)

Action descriptions for Figure 7	Goal: Stream miles	Goal: Acres of habitat
SLR Planning Area: Agricultural land owners have committed to working with our team to develop a farm adaptation and resiliency program that will transition vulnerable agriculture lands to creek and wetland habitat and provide critical connectivity among isolated areas of habitat refugia, increasing coastal habitat complexity and resilience to SLR.	N/A	2482
Rec. Ditch Riparian Corridor: increase flow capacity while enhancing wetland habitat and water quality by creating a linear restoration project along the Reclamation Ditch between the City of Salinas and Moss Landing. This enhanced drainage system will support flood control and environmental goals while also providing a recreational opportunity to north Monterey County residents (Figure 8).	15	444
Riparian Easement: establish riparian zone protection easements in areas of the upper Gabilan watershed that have been identified in future land use maps as agricultural zones.	8	246
Riparian Protection: in areas of current grazing land use, implement riparian zone cattle exclusion fencing in the upper Gabilan watershed. In other areas, investigate necessary management actions to establish proper riparian zone protection.	68	1612
Riparian Flood Plain Restoration: Storm runoff from the Gabilan Mountains presents one of the greatest flood risks to Salinas. As runoff passes through agricultural fields it picks up sediment, nutrients, pesticides and other pollutants that are further concentrated as flow continues downstream to Carr lake and onward to Moss Landing Harbor and Monterey Bay. This action proposes to negotiate the seasonal lease or land sale of up to 247 acres of floodplain lands around the City of Salinas and restore proper riparian floodplain functions.	21	1617
Floodplain Restoration in Urban Expansion Area: Floodplain infiltration and natural corridor enhancement will be integrated into future development plans for the City of Salinas eastern expansion zone.	5	247
Urban Stream Restoration: Work with the City of Salinas and existing urban stream restoration programs including CSUMB's Return of the Natives to implement riparian zone restoration actions within the urban core of the City of Salinas.	9	216
Stormwater Ponds: Changes in rainfall patterns, rising coastal ocean levels and upstream land uses are leading to increased flooding of the Lower Gabilan/Salinas Valley watershed. Summer water resources are overburdened and Salinas Valley water purveyors are looking to identify	N/A	994

Strategic Recommendations for consideration:

- The Salinas Valley GSA should join GMC-IRWMP as a voting member to increase collaborative opportunities with partner agencies/stakeholders and to participate in the development of multi-benefit projects for state funding.
- Review 2019 IRWMP Stormwater Plan as a valuable analysis of watershed opportunities to retain and reuse winter stormwater resources. Management concepts within the Stormwater Plan that could benefit GSA goals should be identified within the plan.
- Develop/prioritize a pilot project focused on identifying infiltration potential of areas identified in various geologic surveys and maps (see Pajaro GSA model).
- Recognize in the Plan the likelihood that GSA infiltration opportunities lie outside (east) of the GSA boundaries.
- Recognize in the Plan the value of infiltration opportunities in this basin even though direct quantification of benefits is challenging.

Thank you for your consideration of these comments as part of the East Side Sub-Basin planning process.

Ross Clark

Director Central Coast Wetlands Group
Moss Landin Marine Labs
East Side Sub-Basin Committee Member

Previous Studies and Reports:

Storm Water Resource Plan for the Greater Monterey County IRWM Region:

<http://www.greatermontereyirwmp.org/documents/planning/>

Improving California's Riverine and Wetland Management Efforts:

<https://www.mlml.calstate.edu/ccwg/wp-content/uploads/sites/23/2020/01/RLF-CCWG-final-report-2019.2.22.pdf>

Comprehensive Watershed Management Solutions to Nonpoint Source Pollution in the Salinas Valley and Pajaro River Basin: <https://www.mlml.calstate.edu/ccwg/wp-content/uploads/sites/23/2020/01/comprehensivewatershedmanagementsolutionstononpointsourcepollutioninthesalinasvalleypajaroriverbasin1997.pdf>

Northern Salinas Valley Watershed Restoration Plan- Final Report 1997:

https://www.mlml.calstate.edu/ccwg/wp-content/uploads/sites/23/2020/01/northern-salinas-valley-watershed-restoration-plan-final-report-1997_compressed.pdf

Final Report: Monterey County Water Resources Agency- Reclamation Ditch Management Strategy: https://www.mlml.calstate.edu/ccwg/wp-content/uploads/sites/23/2020/01/final_rec_ditch_management_r.pdf

Final Report: Monterey County Water Resources Agency- Reclamation Ditch Watershed Assessment: https://www.mlml.calstate.edu/ccwg/wp-content/uploads/sites/23/2020/01/final_rec_ditch_management_r.pdf

Historical Gabilan Maps: <https://drive.google.com/open?id=0B4qUY-zc8V-WLThySTZoWDFKQzA>

Natividad Creek Wetland and Upland Habitat Restoration Plan:
<https://www.mlml.calstate.edu/ccwg/wp-content/uploads/sites/23/2020/01/natividadcreekwetlanduplandhabrestplan.pdf>

Natividad Creek, Creek and Wetland Restoration Plan Phase II – Expanding the Vision:
<https://www.mlml.calstate.edu/ccwg/wp-content/uploads/sites/23/2020/01/natividadcreekwetlanduplandhabrestplan-1.pdf>

Update to Natividad Creek Park Restoration Plan- Water Reuse and Flood Protection around V.R. Barton School and Laurel Lake: <https://www.mlml.calstate.edu/ccwg/wp-content/uploads/sites/23/2020/01/updatenatividadcreekparkrestplanwaterreuse.pdf>

Santa Rita Creek at Ferrasci Park Habitat Restoration Assessment:
https://www.mlml.calstate.edu/ccwg/wp-content/uploads/sites/23/2020/01/Santa-Rita-CRAM-Report_final_1.27.16.pdf

School Yard Habitat Project – Santa Rita Elementary School:
https://drive.google.com/open?id=1TZ-Rg1rNmybZdire0N782_YH02-cWYt8

Castroville Community Outreach Summary Report: https://www.mlml.calstate.edu/ccwg/wp-content/uploads/sites/23/2019/12/Castroville-Community-Outreach-Report_4.7.17.pdf