

Regional Water Issues and ECOS Water Committee Response
March 2023

Regional Long Term Water Issues

1. **Regional hydrology** is changing because of climate change. Impacts include less snow and more rain with precipitation and runoff occurring earlier causing less late spring and early summer Folsom Reservoir storage. More frequent dry and critically dry water years resulting in more multiyear droughts occurring more frequently. Additionally, when storms occur, they will likely be more severe causing more unimpaired flows increasing the chance of flooding and difficulty in capture and storage.
2. **Regional water supply reliability** is significantly impacted by climate change and marginally impacted by increasing water demand. Effects due primarily to climate change include storage levels at Folsom reservoir at or near critical levels more frequently putting increased pressure on water managers to meet water supply demands. Average annual unmet surface water demand for the municipal, commercial, and industrial sectors range from 120 to 230 TAF. This demand will need to be met with groundwater, demand management, and other potential supply sources. Groundwater will also be affected by climate change and by the increase demand for its use by this need and by other groundwater users (agriculture, ag-residential, self-supplied groundwater pumpers, and groundwater remediation) SGMA requires that the region's three groundwater basins remain sustainable and at least one is not sustainable at this time so there may be limits imposed on groundwater extraction during extended periods of drought.
3. **American River health** is generally equated with the health of the American River's Salmonoid populations. Climate change and not increased growth substantially contributes to negative impacts on Salmonoid fish populations. River water temperatures are projected to exceed tolerable levels for salmonoid fish more frequently. These unsuitable fishery conditions are driven by projected declines in May storage levels at Folsom Reservoir. The lack of an extended snow pack with spring runoff to fill and maintain Folsom reservoir during the spring and early summer contribute to a much warmer reservoir and lower American River through the summer and into late fall. Additional impacts resulting from higher river temperatures may include the increased occurrence of algae blooms and other microorganisms and additional water treatment costs.

General Activities of the ECOS Water Committee

1. Water Forum participation

The Water Committee (Committee), as ECOS representative, participates as a member of the Water Forum, a regional group made up of representatives of the environmental, business, community and water purveyors. The Committee contributed to a recently completed GAP assessment of water supply sustainability and American River health conducted by Water forum

staff and consultants. The assessment's central conclusions are stated above. The assessment builds on other regional and state studies and looks out to 2050 while projecting regional water purveyor 2040 water demand projections and two climate change scenarios (central tendency and hot dry). A copy of the GAP analysis report containing the details of this assessment will be available to the public soon and will be found on the Water Forum web site.

2. Groundwater sustainability planning

The Committee participated in the development of the Groundwater Sustainability Plans (GSP) required under SGMA that were prepared for each of the region's 3 groundwater subbasins by Groundwater Sustainability Agencies (GSA). The Committee monitors and participates in GSA activities. These plans are based in part on the same middle of the road climate assessment used in the Water Forum study but do not include estimated groundwater impacts from the hot and dry climate scenario. It is apparent from recent climate science work, the world production of GHGs is tracking the RCP 8.5 path. If the world continues along the RCP 8.5 path, the impacts projected in the Water Forum analysis for the hot dry scenario are more likely than the averaged scenario and the availability of groundwater to meet all beneficial uses will be impacted. The Committee is working to ensure the next round of GSP updates scheduled for 2025 will include the impacts of a hot dry climate on regional water balances and subbasin sustainability, and that any necessary planning and management actions are taken to prepare the region for the associated impacts on future groundwater supplies.

3. Folsom Reservoir operations

The Committee participates in routine meetings with regional water managers, regulators, and the Bureau of Reclamation to discuss Folsom Reservoir operations and River health. The current Flow Management Standard (FLMS) was developed by the Water Forum to help preserve the River and the Salmonid populations. The 2017 FLMS is used to help guide Reservoir/River operations. Research continues and in light of the River impacts from climate change, the FLMS will need to be improved. The Committee will work to see that the current FLMS and subsequent improvements guide River/Reservoir operations and continue to be adaptive to the changing climate and river conditions.

4. Urban Water Management Planning (UWMP)

Every five years the region's water purveyors are required by state law to conduct comprehensive planning assessments looking at the reliability of their water supplies, future demand, demand management efforts, supply shortage contingency planning, and the impacts of climate change. The Committee participates in this planning process. The plans are used by local governments in growth planning and form the basis for purveyor supply planning. The next iteration of these plans will be in 2025.

5. Climate Action Planning (CAP)

Local governments are in the process of assessing the implications of climate change and developing plans to become more resilient in the face of expected climate impacts. The Committee has provided comments on the elements of these plans dealing with water issues. This effort will continue through the planning process and during strategy implementation.

Near Term Committee Priorities and Issues

1. Completing Water Forum 2 negotiations

Background: Members of the Water Forum have agreed that a revised Agreement is needed given the changes that have occurred since the original agreement was made in 2000. The Committee, on behalf of ECOS, will continue to work within the Water Forum's Environmental Caucus (EC) and the Water Forum process to successfully negotiate a Water Forum 2 Agreement that addresses the issues raised above in order to accomplish the Water Forum twin goals as enumerated in the Water Forum Agreement. Water Committee participants are guided by a statement of intent available on the Water Forum web site, that was developed by the EC in its efforts to forge a new Agreement. Water Committee representatives will periodically brief the ECOS Board and Ex Com as negotiations progress.

2. Regional water planning and groundwater management coordination

Background: Continuing effort needs to be made to ensure coordination and cooperation occurs between the surface water planning and operation among purveyors and Regional Water Authority (RWA), and the separate Groundwater Sustainability Agencies that oversee the region's three groundwater subbasins. Economic, customer base, environmental, technical, and spatial issues separate these entities but given the long-term value of groundwater storage for future droughts it makes sense to plan and operate our region's water resources more holistically.

3. Local Native Plants as a climate adaptation and water conservation strategy

Background: Local native plants are low/no water use, promote biodiversity, and are very effective in carbon sequestration. Landscaping uses more than 50% of residential water use and a large portion of this water goes to non-essential turf grass. The Committee is working through the Water Forum process and the CAP processes of Sacramento City and County to encourage the City and County to take a leadership role in converting landscaping away from nonessential turf grasses and high water use nonnative plants to local native plants, and establish standards to prohibit high water use landscaping in any new development, and work through their water agencies to convert existing landscaping to low water use local native plants.

4. Federally Authorized Regional Groundwater Bank development

Background: The Regional Water Authority (RWA) is in the process of developing the organizational and management framework for a Federally Authorized Regional Groundwater Bank (FARG Bank or Bank). At present the RWA proposal is focused on serving water purveyors in carrying out conjunctive use programs. While this is an important role for the Bank it is not the only one. Banking excess storm water and recycled water, operating in the interests of all three groundwater subbasins, and serving all groundwater and surface water users who can participate in banking operations should be included within the objectives of the groundwater bank. In addition, taking advantage of natural, high potential, recharge areas and available water

conveyance systems should also be significant banking operational considerations. Finally, banking controls and impact monitoring are critical components of a successful operation – one that does no harm to the environment, which is a requirement for a FARG Bank. These include a comprehensive and transparent banking accounting system along with accurate deposit and withdrawal monitoring and verification, and subbasin monitoring and modeling to ensure the bank does not adversely impact groundwater subbasin operations by other groundwater pumpers or the operations of the GSAs to ensure subbasin sustainability. The Committee is working toward these goals and to ensure the bank’s formation and operation is carried out in an open, transparent fashion.

5. Groundwater Sustainability Plan annual reports

Background: The state’s Sustainable Groundwater Management Act has resulted in the formation of Groundwater Sustainability Agencies in each of the region’s three groundwater subbasins – North American, South American and Cosumnes. Each subbasin reports to the State every year on the progress it is making to maintain or achieve subbasin sustainability and the 2022 reports will be formulated and submitted over the next several months. Indications are that groundwater levels have been drawn down and may be approaching levels where groundwater pumping restrictions and or other actions may be necessary.

6. Operations of Folsom Reservoir

Background: Folsom Reservoir is operated to provide water to our region and elsewhere, flood control, and as a part of the Central Valley project to help maintain water quality standards in the Delta. As such it is not always operated to the full benefit of the lower American River and the region’s water needs. The Water Forum and RWA are the region’s front-line organizations for dealing with the Bureau of Reclamation and the State regarding Folsom operations.

7. Flood Control and SAFCA’s excess storm water management projects

Background: The state and others have identified that a large amount of excess storm water can be available to store as part of groundwater banking programs. SAFCA is studying alternatives to store excess American River storm water in local groundwater aquifers. It is important that this option, including areas in the region most acceptable for recharge, be fully studied and if found feasible and environmentally acceptable, this option be actively added to the list of water supply projects for the region.

8. Use of the Folsom South Canal for groundwater recharge

Background: SAFCA is investigating the potential of the use of the Folsom South Canal for excess storm water conveyance to recharge areas in the south county. A concern exists that any new movement of American river water down the canal may provide support for others (El Dorado and/or San Joaquin County entities) to petition to move additional American river water out of our area thus potentially worsening the available water for regional use. The Committee is participating in these discussions and will advocate for the best solutions that benefit both recharge and American River interests.

9. Cosumnes Subbasin overdraft condition

Background: The Cosumnes subbasin water users are almost exclusively supplied with water from groundwater pumping and the Cosumnes River. The basin has been in an overdraft condition for the past 10+ years and its Groundwater Sustainability Plan calls for management actions and projects to reduce the rate of pumping so that the subbasin can return to sustainability by 2040. Unlike the two subbasins to the north, the subbasin does not have the economic resources or customer base to financially support major investment projects. Groundwater banking and or storm water diversion/infiltration projects may be the only large-scale water supply options that don't involve land fallowing. The Committee is actively monitoring the GSAs actions to assist where practical in addressing the subbasin's overdraft condition and restoration of damaged ecological resources in the area.

10. Looking for multibenefit projects and funding sources to address the Cosumnes Subbasin overdraft condition

Background: The Cosumnes Coalition and others in the Cosumnes subbasin are working to pull together multibenefit projects that help reduce the harm to the Cosumnes river and area streams and creeks that have resulted from excess groundwater pumping and other actions that have affected river flow and fish populations. The Committee aids and supports these efforts.

11. Regional Conjunctive Use

Background: RWA and member water purveyors have been engaged in developing and implementing conjunctive use programs over the past 20 years. In the broadest sense of the term, conjunctive use means making use of surface water when it is plentiful and in turn saving groundwater so that when surface water supplies are not as prevalent, excess stored groundwater can be used to replace them. Climate change is expected to exaggerate the swings between drought and wet year conditions thus expanding the need for regional conjunctive use programs.

With the advent of SGMA and the formation of Groundwater Sustainability Agencies (GSA) coupled with the adoption of Groundwater Sustainability Plans, effort to make use of the region's underground aquifers (the North American Subbasin, South American Subbasin, and Cosumnes Subbasin) as storage reservoirs requires close coordination between the GSAs and the water purveyors. This coordination is planned to take place in part through the creation of a Federally Authorized Regional Water Bank FARG Bank.

The region's subbasins can be recharged from precipitation, surface water inflow, applied surface water, or injection wells. SAFCA's Flood MAR program is directed toward the capture and storage of excess storm water in the region's subbasins. When these recharge activities result from water purveyor or other water management actions, these actions need to be coordinated with the GSAs and their results need to be formalized within the accounting structure of the FARG Bank. This stored water is then available for purveyor or water manager withdrawal from the subbasin when needed, subject to the purveyor's FARG Bank account being in good standing, and no limitations being imposed by the affected GSA(s).

Water purveyors also intend to carry out in-lieu groundwater storage as well as active storage. In-lieu storage occurs when a water purveyor with groundwater pumping facilities does not pump water from those facilities and instead uses surface water in place of the shut in groundwater. For in-lieu groundwater storage to be effective, strict accounting practices need to be maintained both by the purveyor and the FARG Bank so that actual volumes of surface water used in lieu of groundwater supplies can be monitored and the corresponding amount of groundwater shut in is recorded in the purveyor's FARG Bank account. Another potential source of FARG Bank deposits is Ground water that is used for M&I purposes and is then recycled and subsequently reinjected into the subbasins or is used for agricultural or other beneficial uses in place of groundwater normally pumped from the subbasins. Again, strict accounting practices are necessary by both the agency conducting the water recycling and the FARG Bank.

The Committee has generally supported these efforts and when appropriate has provided assistance and letters of support for grant funding.

12. Monitoring New Water Supply Projects

Background: RWA and other regional water purveyors are advancing a concept of the River Arc project that will allow north county and Placer County purveyors to divert water from the Sacramento River north of the Airport to be used for their customers. In turn they would not divert American River water for this use. Instead, they would allow the American river water to flow through Folsom and down the lower American River to replace the diverted Sacramento River water. This project has significant benefits for the lower American river because the water can be managed to lower temperatures and increase flows when they are critically needed. The Committee has supported the development of an EIR for River Arc and will continue to monitor this and any other new supply projects.

13. Demand Management

Background: Current gallons per customer day water use in the region is higher than other developed areas of the state. While regional M&I demand has stayed somewhat flat over the past decade even considering the increase in regional population, we still have significant water savings potential. The Committee is making use of as many forums as possible to press for increased effort in demand management. We have commented on appropriate demand management strategies and efforts in major project EIRs, the last round of UWMPs, the first set of GSPs and in the Water Forum process.

The Water Resources Control Board will soon be adopting standards for future M&I water efficiency goals. These standards will likely result in increased efforts by water purveyors to stimulate customer use of efficient plumbing and appliances, and landscape conversion to more climate adaptive landscaping. Successful demand reduction programs may significantly reduce future M&I water demand.

14. Equitable Rates and Social Justice

Background: Low-income families and those of color have faced systemic prejudice and economic hardship within the region. This form of injustice has, and continues to, plague these members of our society in relation to water rates and conservation programs offered by regional water purveyors. For example, rates with high fixed costs that do not extract full economic and social cost of higher water use unfairly penalize this segment of society. Likewise, most of the water conservation programs offered by water purveyors largely target middle and upper class water users. Yet these programs are paid for in part by the segments of society who do not directly benefit from them. The Committee is supportive of efforts to establish water rates that charge more to those who use more than their basic allotment because of wasteful practices, large landscapes, or landscapes that require extensive irrigation. We also support water conservation programs that target low income families and those of color to ensure their water needs are met efficiently. The Committee supports the Water Forum Public Caucus' efforts to keep these issues in the forefront of the Water Forum 2 negotiations.

15. Water Rights Transfers Outside of the Region

Background: Regional water purveyors engage in conserved water transfers and other exchanges within the region to facilitate flexibility in the water supply system, promote conjunctive use and their own efficient operations. Some purveyors would like to make use of excess surface water rights and/or ground water that is not normally being used to meet their demands by selling this water to agencies outside the region. This is done in the form of water rights transfers and typically occurs when a water purveyor or group of purveyors combine water rights and groundwater supplies in a way that results in surface water flowing down the American and being diverted downstream by out of basin purchasers. The City of Sacramento has been part of this type of transfer and used part of the proceeds in part to reduce water rates for low income residents. The Committee is concerned that with the development of the FARG Bank this financial opportunity may become more attractive to water purveyors. Requirement for when and under what conditions this type of out of basin transfer should occur are critical to the ongoing health of the American River and the region's sustainable water supplies. These requirements should be included in the Individual Purveyor Agreements that are part of the Water Forum 2 Agreement, adopted as part of the FARG Bank operations and included in the GSPs to ensure that groundwater resources are not pulled from the region at the expense of the public good.

16. Water Issues Related to Habitat

Background: Groundwater Depended Ecosystems (GDEs) and points of surface water/groundwater interaction need to be monitored because if groundwater levels become depressed below the root levels for these resources for extended periods of time, they are damaged or destroyed. The GSP process has attempted to analyze and address baseline conditions for these resources at 2015 levels. The GSAs recognize the legal requirements they are under, but local resources are limited and the monitoring and modeling systems and programs in use still require refinements to fully assess the impacts to these resources. In addition the trigger points for action to preserve these resources need to be continually assessed for their ability to protect them. The Committee contributed to the technical work done on this

issue in the SASb and Cosumnes GSPs, and it continues to monitor the work of all three GSPs to protect these resources from the potential harm from subbasin pumping. The FARG Bank's operational procedures and governance will require protections for these resources and the Bank may be a vehicle to help restore the subbasin groundwater levels for GDEs.

Another key set of habitat issues includes the health and well-being of the region's surface water sources including the American, Sacramento, and Cosumnes Rivers, and the creeks, streams and wetlands that flow into them. These areas are critically important habitats for wildlife. They are also important for recreation and, in the case of the American River Parkway and parts of the Sacramento River, are major ecological and economic resources for the region. The Committee is involved in the full range of issues regarding their protection, restoration, and enhancement for all beneficial uses and users.