



CALIFORNIA FARM BUREAU FEDERATION

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Via email:

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Jenny Marr
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Division of Statewide Integrated Water Management
California Department of Water Resources
901 P Street, Room 213A
Sacramento, CA 94236-0001

RE: Comments on Flood MAR White Paper

Dear Ms. Marr:

The California Farm Bureau Federation (Farm Bureau) appreciates the opportunity to comment on DWR's discussion draft of the Flood MAR White Paper. This White Paper helps to frame a discussion that is essential to the successful management of California's water resources for both groundwater supply and flood management purposes. Farm Bureau appreciates the Department's leadership in this area, as well as thoughtful approach to moving this critical discussion forward.

Farm Bureau is a non-governmental, non-profit, voluntary membership California corporation whose purpose is to protect and promote agricultural interests throughout the state of California and to find solutions to the problems of the farm, the farm home and the rural community. Farm Bureau is California's largest farm organization, comprised of 53 county Farm Bureaus currently representing approximately 40,000 agricultural, associate and collegiate members in 56 counties. Farm Bureau strives to protect and improve the ability of farmers and ranchers engaged in production agriculture to provide a reliable supply of food and fiber through responsible stewardship of California's resources.

As farmers and ranchers throughout California work with others in their local communities to comply with the Sustainable Groundwater Management Act (SGMA), it

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is clear that adding to our total groundwater supply is an essential piece of the solution. One of the best opportunities to do this is through managed aquifer recharge using available flood waters in times of excess runoff. Capturing high flows and using working lands to accomplish recharge not only offers the opportunity to make real improvements in groundwater conditions, but also gives local communities a sense that there is something positive and readily achievable that can be done to improve supplies. It favors system resiliency and creative solution finding, and empowers regions that will face hard decisions in the coming years.

State Interest in Flood-MAR

Farm Bureau agrees that there is a “clear state interest” in large-scale statewide implementation of Flood-MAR projects. If local communities are to successfully implement the Sustainable Groundwater Management Act (SGMA), they must have groundwater recharge using high flows available as a central part of the solution. For this to happen, there needs to be strong policy direction from the executive and legislative branches of state government and broad recognition and agreement among state and local agencies that Flood-MAR projects further the state interest in groundwater.

Working Landscapes

The White Paper recognizes the value of working landscapes and the key role they have in maximizing the potential benefits of Flood-MAR. Farm Bureau encourages DWR to maintain this perspective and to continue looking for solutions to challenges faced by landowners as they explore participating in Flood-MAR projects.

An important consideration for projects on working lands, or any private property, is that the project be done with the voluntary participation of the landowner. We appreciate that the White Paper recognizes the importance of incentives, both economic and in-kind, and would encourage clarification that voluntary participation is important.

Another issue relating to Flood-MAR on working lands is the challenge of conflicting regulatory policies. This topic, discussed in more detail below, comes up for many of our members who are both confused by and concerned about differing and often opposing policy objectives. For example, the Irrigated Lands Regulatory Program requires farmers to ensure that water does not unnecessarily pass the root zone due to concerns of nitrogen migration. While groundwater quality and avoidance of unacceptable levels of contamination are certainly important, it is also true that these same requirements could significantly constrain Flood-MAR projects intended to improve groundwater conditions by infiltrating water into underlying aquifers, in precisely those areas of the state that are the best suited for groundwater recharge. In addition, some are concerned that flooding working lands could create conditions that may subject them to restriction under State or Federal wetland regulations.

We encourage DWR to continue to work with stakeholder, other agencies, the Legislature, and Administration to reduce the barriers to landowner participation by

providing greater clarity, balancing risks and practical benefits, devising appropriate incentives, and providing for protections from regulatory risks.

Information Exchange

There are many great ideas emerging on how to accomplish efficient and effective recharge projects using Flood-MAR. To maximize these opportunities, it may be useful to develop a means to exchange the ideas and practices used for the various projects, perhaps through a website or periodic seminars. This could foster the creativity that is essential to maximize opportunities under Flood-MAR by providing a common forum for sharing of ideas and encouraging collaboration.

Cost/Benefit Considerations

Groundwater recharge projects cover a wide range of variable cost/benefit considerations. At one end of the spectrum is groundwater banking, where the entity diverting water and storing it underground assumes a significant investment upfront and has strong expectations of significant direct returns in the form of stored water. At the other end of the spectrum is a farmer accepting flood releases on his cropland in order to replenish the basin for the good of all beneficial uses. In this latter case both costs and benefits are much lower than in the first instance. Meanwhile, somewhere in the middle, there perhaps is the case of an irrigation district, conducting Flood-MAR for the benefit of its constituents.

It may be useful to consider a range of options for Flood-MAR projects that look at the varying ranges of anticipated costs and benefits for the various project types, as well as the appropriate range of public policy objectives and corresponding regulatory constraints in each case. In particular, there may be significant opportunities on the low cost/benefit end of the spectrum for Flood-MAR projects. To realize such benefits, however, it will be very important to focus on keeping such projects simple and affordable.

Terminology

Groundwater terminology can be challenging, particularly when describing activities that get water underground. The White Paper helps to address some of this confusion by providing definitions for several groundwater related terms. However, because these terms appear in SGMA, and because there are instances where the terms may have been used differently, it may be useful to clarify that these definitions are for purposes of the White Paper and are not intended to alter or set any precedent in any other context

To promote this clarity, we suggest DWR add a definition for “groundwater banking.” The terms “recharge,” “replenishment,” and “banking” are sometimes used in a unclear manner to refer to the same types of activities. Accordingly, clarifying how “banking” is distinct from replenishment and recharge may be useful.

Regarding the definition of “replenishment,” there arise two questions: First, it seems that defining replenishment in relationship to a “baseline” may be placing a limiting parameter on the term that is not a part of the conventional meaning of the word. This is problematic to the extent there may certainly be instances where replenishment occurs without reference to any defined baseline condition.

The White Paper also creates some uncertainty around the definition of “replenishment” by injecting the notion of a separate public benefit associated with replenished water left underground for no other purpose than to improve groundwater conditions. While recovering and maintaining groundwater levels above certain thresholds can no doubt be an important and essential part of effective groundwater management, tying this goal a “public” stake in maintenance a static baseline condition may need further clarification.

Specific Comments

The following comments relate to specific provisions in the White Paper identified by the page number in parentheses.

Attaining Flood-MAR benefits (p. 11)

In the second method identified for attaining Flood-MAR benefits, namely lowering reservoir storage levels, it is explained that the “vacated water is transferred to groundwater storage.” Because the term “storage” may be understood to apply to the groundwater banking context, it may be useful to clarify that vacated water could be made available for any type of recharge project which is consistent with water rights.

In addition to taking water off the channel and lowering reservoir levels, there may be a third means of attaining flood risk reduction through Flood-MAR by encouraging landowners to retain water on the landscape during high precipitation events. This “slow water” concept would look to keep water out of already swollen streams by implementing practices on the landscape to retain or slow the movement of water. This could include swales, closed drains, and other simple practices. While there has been some work done in this area, additional focus would help determine the capacity of this to help flooding and recharge.

Ecosystem Enhancements (p. 12)

The White Paper helpfully describes how Flood-MAR offers the opportunity to provide benefits to flood management, groundwater recharge and, in some cases, ecosystem enhancements.

The White Paper authors should clarify that recharge occurring outside the floodplain may have ecosystem and instream benefits. (See, e.g., Scott Valley Irrigation District’s Temporary Permit 21364.) While reference is made to instream baseflow, it may be helpful to clarify that recharge projects contributing to baseflow may occur at elevations—and in geological formations—found above the floodplain.

Another issue is that landowners are often reluctant to engage on activities that result in ecosystem enhancements out of fear of what regulatory restrictions may follow those enhancements. Here, it would be useful for the White Paper to emphasize the value of incentives and assurances for landowners participating in projects that enhance ecosystems.

Suitability of Soils & Aquifer Suitability (p. 17)

Some groundwater recharge projects will directly provide base flows to streams for the benefit of instream and other surface water uses. (See e.g. Scott Valley Irrigation District's Temporary Permit 21364.) In addition to soil and aquifer suitability tools which are key to aquifer replenishment, are there tools to help provide guidance on Flood-MAR for streamflow purposes?

Determining High Flows Availability (p. 18)

One of the primary obstacles to efficiently implementing groundwater recharge projects is determining when surface water is available to use for the project. While this process must protect senior water rights and instream uses, it can be simplified for high flow conditions. The Flood-MAR White Paper provides an excellent foundation for this simplification, which will require DWR to work with the SWRCB and other agencies.

When considering a simplified process, it may be possible to develop a tiered approach to analyze when water is available to divert for recharge. The tiers would provide a spectrum across which the thoroughness of the review is correlated to the potential for concern. For example:

Tier 1: Identify conditions when there is the greatest certainty that water could be diverted without harm to senior water rights or ecosystems, e.g. flood flows. This tier would have the easiest participation, perhaps just preregistration and post diversion reporting. This would be much simpler and faster than the current SWRCB process.

Tier 2: Identify conditions when there is less certainty of no harm than Tier 1, under which additional consideration and conditions may be appropriate, but there is still sufficient certainty of no harm that CEQA is not necessary and streamlined processing is possible. For the most part, this tier could look very much like the SWRCB's streamlined temporary water right permit process under the Governor's recent drought emergency order—but, as with the other tiers, it would apply to high magnitude flows above a certain threshold across all year types, and not only in drought years.

Tier 3: All other conditions when the full permitting process is appropriate.

The WAFR is too limiting for purposes of explaining what water is available. See Kocis and Dahlke 2017 at p. 3. The appropriate description for purposes of Flood-MAR should be the water that is physically available, not what is available with current infrastructure.

As proposed in the White Paper's "Next Steps" and "Schedule" section (and also in the "Next Phase Evaluations" section of the August 2017 Phase 3 System Reoperation Study), it will be important to integrate adjusted WAFR numbers with the water supply estimates in the Department's recently completed August 2017 Phase 3 System Reoperation Study. While ranges in the WAFR study include sensitivity analyses assuming improved Delta conveyance and storage (See, e.g., WAFR Report at 56), to our knowledge they did not consider potential opportunities for reoperation.

It also appears that the System Reoperation Study defers any consideration of potential modifications to existing flood structures (e.g., spillway and outlet modifications, proposed CVFPP bypass expansions, etc), and instead looks only at the system as it currently exists.

Modest projections of potential water supplies in both the System Reoperation Study and the WAFR were predicated on conservative parameters that ignore the potential for specific system improvements.

Beyond relevant groundwater recharge and reoperation opportunities, optimized system-level integration of potential ecosystem benefits will also be important to the framing of any comprehensive statewide program.

All of these important interrelated aspects should be included in the Department's Flood-MAR "Plan of Study" and schedule for program implementation.

Conveyance (p. 20)

The White Paper should highlight the value of retaining existing infrastructure, restoring past capacity, and constructing new infrastructure capable of utilizing flood waters when available. In many areas, irrigation efficiency projects and changed crops or agricultural practices have resulted in the removal of surface water conveyance infrastructure. As communities enter SGMA's implementation phase, increased attention may well return to the role of old fashioned conveyance and distribution systems whose "inefficiencies" in fact provide valuable groundwater recharge.

The White Paper authors might consider outlining the characteristics of infrastructure that can be useful for capitalizing on Flood-MAR opportunities. This could help local proponents know what types of infrastructure should be retained or constructed to assist in being ready for Flood-MAR projects.

Methods of Recharge (p. 21)

The White Paper authors should consider adding under Active Recharge the use of conveyance infrastructure (i.e., ditches and canals for movement of water). This was the recharge method used by Yolo County Flood Control and Water Conservation District and could apply in other areas as well (Temporary Permit 21375).

Capacity for Recovery of Recharged Groundwater (p. 21)

The White Paper observes that water that is not recoverable for water supply may still be beneficial for aquifer replenishment. It is also pertinent to note that in instances where groundwater recharge is for the purpose of providing streamflow benefits, the water may not be “recovered” in the same manner as other forms of recharge.

It is also important to recognize that it can be extremely difficult to identify how recharged water is recovered (including the specific point of redirection and application to one or more, specific beneficial uses). However, where water in the basin is being extracted and used for any number of beneficial uses in the basin, the time and cost associated with this exercise may not in fact be worth the effort. The White Paper should consider exploring ideas for simplified analysis where it can be demonstrated that surplus flows used to recharge an aquifer where groundwater are being subsequently used, in some generally quantifiable sense, to supply the needs of the basin across all beneficially uses in the basin. If surface water is in excess of any reasonable downstream need or demand, its use for groundwater recharge is causing no serious environmental harm and, on the contrary, it is generally benefitting the basin as a whole, then the need for strict accounting and permitting may serve little purpose.

Barriers and Challenges – Cooperation and Governance (p. 26)

Consider adding a bullet to explain that the risks of inaction should also be considered.

Barriers and Challenges – Water Rights (p. 26)

A water availability analysis is needed to ensure that there is no harm to existing rights and that environmental water needs are appropriately considered.

Barriers and Challenges – Regulatory (p. 27)

We would like to emphasize the challenges that are posed by CEQA compliance for temporary water rights. Because the benefits of Flood-MAR projects are often broadly distributed for those conducting the activity, full CEQA compliance could, in many cases, render an otherwise beneficial and readily implementable project economically impractical. A long-term solution is needed to ensure CEQA does not become a procedural obstacle to Flood-MAR.

Please consider also adding a bullet point identifying wetland, water quality, and food safety regulations as other potential obstacles.

As mentioned already, conflicting regulatory mandates are an obstacle for landowners. For many years now, such conflicting regulatory requirements have too often created perverse incentives for landowners to avoid certain otherwise environmentally beneficial practices (for example, retaining water to form what could be a wetland, allowing wildlife habitat to develop on private lands, allowing water to penetrate below the root zone, or allowing water to come into contact crops due to potential food safety concerns).

While in some instances there may be a direct conflict between the objectives of Flood-MAR and other environmental regulatory requirements, in most instances the actual environmental risk may be minimal, yet it is simply very difficult for landowners to take the perceived risks associated with Flood-MAR given the high risk of regulatory consequences when compared to the low prospects of direct benefit from the activity itself. Potential system-level benefits to a basin as a whole could be great, but they are never realized due to the fear of negative consequences at the individual level.

To avoid this problem, the costs and potential risks at the individual level must be lowered, and any actual or perceived environmental risks of Flood-MAR groundwater recharge must be rationally weighed the net system-level benefits of the same practice. If the system-level benefit significantly outweighs the risks on the individual and environmental sides, then the activity is providing a net benefit to society, to a basin, a local economy, from a statewide climate change adaptation standpoint, or to the State of California more generally, and simplified processes to remove unreasonable obstacles should be put in place.

Barriers and Challenges – Policy (p. 27)

As noted above, sustainable groundwater management will require consideration of tradeoffs between various state policies including groundwater recharge, water quality, instream flows, potential downstream water rights impacts.

Barriers and Challenges – Land Use (p. 27)

Consider adding a bullet identifying landowners' concern that Flood-MAR projects may expose them to greater risk under environmental laws for creating certain conditions or habitats (e.g. wetland protection, endangered species habitat, water quality).

Barriers and Challenges – Conveyance (p. 27)

Consider adding a bullet identifying the need to encourage maintenance and restoration of existing, and construction of new, infrastructure to facilitate Flood-MAR.

Plan of Study

It is important to recognize that, without effective regulatory and water rights fixes in place, opportunities for statewide Flood-MAR may remain very limited. From this perspective, beyond exploration of opportunities within existing constraints, DWR and

State of California should be simultaneously focusing effort on coordination with stakeholders and other agencies to achieve necessary legislative solutions and changes in policy.

Conclusion

The Flood-MAR White Paper is a leap forward in thinking about using high flows for groundwater recharge. Thank you for this groundbreaking work and for considering these comments. If you have any questions or would like to discuss this further please contact Jack Rice at jlrice@cfbf.com or (916) 561-5667 or Justin Fredrickson at jef@fbf.com or (916) 561-5673.

Thank you

Very truly yours,

A handwritten signature in black ink, appearing to read "JL Rice".

Jack L. Rice
Senior Counsel

A handwritten signature in black ink, appearing to read "Justin Fredrickson".

Justin Fredrickson
Environmental Policy Analyst