

Author	Comment	Response / Recommended Action
Lucy Blake (Lemon Canyon Ranch)	While surface water helps to recharge groundwater naturally as it seeps into the ground, any attempt to artificially transfer surface water underground to augment groundwater is likely to run into strong opposition from downstream users, existing surface water users, wildlife agencies and many others.	We are now exploring opportunities in tributaries that are not adjudicated over the winter season and this seems to be a promising approach.
Lucy Blake (Lemon Canyon Ranch)	For instance, could there be a market-based program for limiting the number of agricultural wells in Sierra Valley and gradually reducing the number of wells over a 20-30-year period) Similar strategies have been used to reduce air pollutants and carbon. For roe, the specific strategy selected is less important than the discussion and adoption of a meaningful, legally enforceable and equitable way to reduce pumping in Sierra Valley.	MCR Demand Management
Lucy Blake (Lemon Canyon Ranch)	In short, while I am hopeful that Sierra Valley groundwater punppers can achieve some efficiencies through improvements in irrigation technology, plant propagation or crop selection, I do not think it is either realistic or responsible to count on “new” water supplies to solve our severe groundwater overdraft problem.	MCR PMAs
Lucy Blake (Lemon Canyon Ranch)	I was also disappointed not to see any real discussion about the likely impacts of climate change on water supply in Sierra Valley. The northern Sierra is projected to get both warmer and drier over the coming decades. This will reduce the amount of water stored in snowpack and accelerate the Spring run-off, reducing the total flow of water into the basin, as well as its availability for irrigation in summer. These climate change impacts, which we are already experiencing, are not something we can wish away. They are real and they must be incorporated into any assumptions used in the GSP about future water supplies in Sierra Valley. For instance, clearly the level of pumping I(en Schmidt considered “safe yield” in 2003 must be adjusted downward to reflect the amount, timing, and kind of precipitation Sierra Valley will be getting 10-20 years from now.	MCR Climate Change: Projected climate change impacts are Included in the updated version of Section 2.2.3. Increased warming with decreased precipitation is one of several possible future climate conditions, which was evaluated under the "2070 DEW" scenario.

<p>Lucy Blake (Lemon Canyon Ranch)</p>	<p>I am also concerned about the level of stakeholder involvement in the process. Most people in Sierra Valley depend on groundwater for their drinking water and yet most of the stakeholder opinions referenced in the draft report are heavily skewed toward individuals with large agricultural wells. Where are the other voices? Declining groundwater levels are everyone's concern. If groundwater levels drop significantly, domestic wells could run dry. That is not just a theoretical problem but one that has occurred all over California in places where agricultural pumping had been allowed to proceed unchecked. It would be unethical for us to let that happen in Sierra Valley, where we are blessed with an abundance of water.</p>	<p>Outreach and engagement strategies are described in detail in the Communication and Engagement Plan and in Chapter 2 of the GSP. We will note that traditional community outreach activities were restricted by COVID as in-person events were not always possible. However, online monthly TAC and Board meetings were publicized through the SVGMD website and through emails to interested parties. In addition all meeting materials and meeting recordings are posted on the SVGMD website. Other approaches to publicizing events are listed below.</p> <p>Moving forward, comments on the outreach and engagement process are being taken into consideration and the approach during GSP implementation is provided in a new section on outreach and engagement for Implementation that has been added to the Communication and Engagement Plan.</p> <p>As described in Chapter 2, substantial efforts to engage the public in development of the GSP have been underway since 2018 with public workshops being conducted in October 2018, December 2019, May 2021 and October 2021. These workshops were publicized through:</p> <ul style="list-style-type: none"> • Print and on-line media/newspaper announcements: Mountain Messenger; Plumas News; Sierra Booster and www.sierraville.org • Outreach partners' newsletters, websites, and social media accounts • GSA websites, with posting of TAC meeting minutes, materials and recordings on the SVGMD website • Interested parties email lists • Posting of public workshop flyers at local establishments • Distributing surveys using multiple formats: hard copies at workshops, posted as PDFs, and links to online versions <p>In addition TAC meetings have been held monthly since November 2020 and GSP updates have been provided at the monthly SVGMD Board meetings. The Board meetings are open to the public and, as noted above, all meeting materials are posted on the SVGMD website.</p>
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<p>Lucy Blake (Lemon Canyon Ranch)</p>	<p>The last concern I want to raise today is the question of who should pay to fix the problem. In the Funding Options Technical Memorandum, there is a suggestion that the cost of addressing the groundwater overdraft problem be split between people with high-capacity wells and property owners throughout the valley, whether they pump groundwater, or not. Where is the equity in that? Why should people who had no role in causing the problem be asked to fund its resolution? The cost of addressing the groundwater overdraft problem should largely be borne by those who created the problem, with whatever financial assistance is available from the State of California.</p> <p>Unfortunately, according to the memorandum (see p.9), property owners all over Sierra Valley are already paying more to cover the operating costs of the Sierra Valley Groundwater Management District than high capacity well owners.</p>	<p>Thank you for your comments. The question of cost allocation in funding GSP implementation is a valid concern in groundwater management in California. The Sierra Valley Basin has an established revenue structure that splits costs between property owners and well owners, through parcel fees and meter fees. Property owners of parcels that have large-capacity wells pay both fees, while property owners of parcels without large-capacity wells pay the parcel fee only. This revenue structure does spread costs out among both well owners and property owners in general, though it provides additional consideration to wells by imposing the meter fee. At this point a variety of options are being considered. One option presented in the Funding Options Technical Memorandum, a parcel tax, would allocate cost widely to all property owners. This mechanism would not charge based on groundwater extraction. While the advantage of this method is a lower rate for each property, it is true that it would not take usage into account.</p> <p>Several fee models presented in the Memorandum do take usage into account. These models project that any additional costs associated with GSP implementation will be borne by the well owners, through the implementation of either a regulatory fee or property related fee on wells. This would mean that whether GSP implementation costs end up closer to the low estimate or the high estimate, large-capacity well owners will bear any additional cost burden. The options of structuring of these fees are presented in the Funding Options Technical Memorandum as either an estimated usage fee, which would charge based on an estimated usage rate, or actual usage fee, which would require the use of meters on all non-de minimis wells. There are advantages to each of these methodologies, and both attempt to take usage into account. The question of cost allocation will continue to be evaluated and will consider these comments as the GSAs develop the final funding plan during the first year of GSP implementation.</p>
<p>Carl Butz</p>	<p>Adaptative management of the watershed, the very laudable goal of the SGMA, therefore, requires the Groundwater Sustainability Plan to include measures insuring all the data hydrologists need to evaluate the situation is to be gathered.</p> <p>As it stands, I am particularly concerned about the fragile Groundwater Dependent Ecosystem (GDE) of the Sierra Valley. With droughts likely to increase in frequency and duration due to climate change, I want to know if the freshwater marsh and meadow system is going to be sacrificed because of the deep wells used to produce alfalfa. Currently there simply isn't enough data to make an intelligent guess.</p>	<p>Agreed, shallow groundwater is a data gap. Four additional wells will be installed near the GDEs in the western half of the basin. This will help to better assess shallow groundwater and help to calibrate the groundwater model to assess the effects of groundwater management on GDEs.</p>

<p>CDFW</p>	<p>Comment #1 – Interconnected Surface Water Systems (2.2.2.6 Identification of interconnected surface water systems; starting page 2-87): The GSP does not include an estimate of the quantity and timing of depletions of interconnected surface water systems as required by 23 CCR § 354.16(f). a. Issue: The GSP identifies interconnected and disconnected surface waters within the subbasin and assesses vertical hydraulic gradients to identify where reaches are likely gaining, losing, or mixed. However, the GSP does not include information related to the quantity and timing of depletions from these interconnected surface waters as required by 23 CCR § 354.16(f).</p>	<p>Quantification of ISW depletion is a difficult task considering the novelty of the model and lack of surface water data and of continuous shallow groundwater data to perform calibration. In lieu of a poor estimation of ISW depletion, the Plan proposes to maintain horizontal hydraulic gradients near ISW and GDEs so additional depletion of ISW does not occur. Quantification of ISW in the form of actual stream depletion attributed to groundwater pumping will occur at the 5-year update when sufficient data is available.</p>
<p>CDFW</p>	<p>Comment #2 – Groundwater Dependent Ecosystems (2.2.2.7 Identification of groundwater-dependent ecosystems; starting page 2-93): Groundwater dependent ecosystem (GDE) identification, required by 23 CCR § 354.16(g), is based on methods that risk exclusion of ecosystems that may depend on groundwater. a. Issues: i. Depth to Groundwater Threshold: The GSP relies on a groundwater level threshold of 30-feet below the ground surface (bgs) to screen potential GDEs within the subbasin. However, there is a lack of shallow groundwater monitoring data, and few wells are located near potential GDE areas (line 2297). The GSP states that the standard deviation of 2017-2020 average groundwater elevation within one half-mile of GDEs ranges from 42 to 80 ft; 9,500 acres of potential GDEs were removed based on the 30-ft bgs threshold. These removed potential GDE areas would be reclassified as GDEs if groundwater elevations increased by one standard deviation (line 2302). Given the high level of uncertainty of shallow groundwater levels throughout the subbasin and the lack of information regarding GDE rooting depths (line 2341), relying solely on a 30-ft threshold and coarse shallow groundwater extrapolations to remove potential GDE areas is not a conservative approach to GDE identification. ii. Special Status Species: The GSP includes a list of special-status plant and wildlife species within the subbasin “that may occur within or be associated with the vegetation and aquatic communities in or immediately adjacent to potential GDEs” (page 2-95, line 2261). The GSP does not identify which GDE areas within the subbasin were found to support the special status species listed. iii. Changes in Vegetation Health Assessment: The GSP uses Normalized Difference Vegetation Index (NDVI) to assess changes in vegetation health for GDE areas within the subbasin. While assessing NDVI can be a helpful tool for determining vegetation trends, the subbasin scale used for the analysis may be too broad to capture localized NDVI trends for smaller groups of GDE areas, making it difficult to inform discrete protective management actions for localized impacts.</p>	<p>Agreed. The 30 ft threshold will be reexamined after GSP submittal to reflect variation in groundwater elevation and uncertainty due to the lack of shallow groundwater. The special status species list will be refined after GSP submittal to include GDE units based on location within the basin and hydrology. Finally, the NDVI analysis will be clarified to account for localized changes as well as larger-scale changes near monitoring points and within the large GDE complex in the western half of the basin.</p>

<p>CDFW</p>	<p>Comment #3 – Sustainable Management Criteria (3.3.1 Groundwater Elevation, 3.3.3 Depletion of Interconnected Surface Waters; starting pages 3-6 and 3-17): Groundwater level and interconnected surface water sustainable management criteria (SMC) may not protect against undesirable results for fish and wildlife beneficial uses and users.</p> <p>a. Issues:</p> <p>i. Groundwater Level Minimum Thresholds (MTs): The GSP sets MTs for groundwater levels by linearly projecting groundwater decline through 2032, taking the lower of that value or the lowest post-2015 groundwater level, and then further reducing the MT by 10% of the range of historically observed groundwater levels. The Department appreciates that the GSP includes a specific analysis of the impact of the established MTs on environmental beneficial users of groundwater, and that the MTs at some representative monitoring points were adjusted as needed to be more protective of GDEs. However, additional discussion of the methods used to ensure avoidance of impacts to GDEs is needed.</p> <p>ii. Interconnected Surface Water MTs: MTs for ISW, using groundwater levels as a proxy, are set at the lowest groundwater level that occurred after January 2000. The GSP acknowledges that groundwater depletion is occurring within the subbasin but contends that the depletion is not significant or unreasonable. However, the GSP does not include evidence needed to support this claim. The GSP focuses on avoiding exceedance of the maximum rates of depletion that have previously occurred within the subbasin. Though a condition may have occurred within the subbasin previously, that does not necessarily mean that undesirable results were not occurring. For instance, in 2015, historically low groundwater levels led to adverse impacts to vegetated and aquatic GDEs and ISW including stressed or dying riparian vegetation, poor instream habitat availability, and increased water temperatures (DFW 2019). A GSP must first evaluate potential adverse impacts to beneficial uses and users of ISW, determine what depletions would lead to those unreasonable impacts, and then set mts accordingly. As the GSP does not quantify baseline ISW depletion conditions (See Comment #1) or present modeled depletion rates that would occur at the established MTs, there is insufficient information to assess potential impacts to environmental beneficial uses and users.</p> <p>iii. Undesirable Results and SMC Triggers: The GSP requires 25% of groundwater level and ISW representative monitoring wells in the subbasin to fall below their minimum thresholds for two consecutive years before identifying an undesirable result to GDEs or ISW. While environmental users are usually adapted to sustain short-term lowering of groundwater levels during dry periods, environmental users may not be able to sustain extended periods of reduced groundwater access that would result from allowing groundwater levels to fall to</p>	<p>The SMCs triggers can be adjusted if GDE health declines. SMCs were set above thresholds. MCR ISW and MCR GDE provide more details.</p>
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	<p>historic lows or deeper for two consecutive years. Under these MTs, by the time an undesirable result is declared and management actions are initiated in response to the undesirable result, environmental groundwater users will have already experienced significant stress and potentially irreversible mortality. The Department appreciates that the GSP identifies triggers for groundwater level MTs, and presumably will identify ISW triggers when Section 3.3.3.4.2 is completed, that would initiate GSA review when reached. However, the groundwater level triggers require groundwater levels to fall below their historic low for two consecutive years; as it is likely that environmental users were experiencing negative impacts at the historic groundwater low, this trigger definition will not initiate GSA review and potential management actions early enough to avoid adverse impacts to beneficial uses and users.</p>	
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CDFW	<p>Comment #4 – Monitoring Networks (3.4.1.1 Groundwater Elevation Monitoring Network, 3.4.1.4 Depletions of Interconnected Surface Water Monitoring Network, 4.2.2 Monitoring and Reporting; starting pages 3-39, 3-49, and 4-13): The GSP should include a more detailed discussion of the adequacy of the monitoring network for assessing impacts to GDEs. The GSP should include additional information related to the schedule for implementation of the planned project to improve the monitoring network.</p>	<p>New information has been discussed with the GSAs and more details on the monitoring network and on the commitment about future data collection are presented in chapter 3 and chapter 5.</p>
CDFW	<p>Comment #5 – Projects and Management Actions (PMAs) (Tier II: Potential Projects and Management Actions; starting page 4-19): The GSP should include timelines for implementation of potential PMAs related to demand management within the subbasin.</p>	<p>The GSAs will evaluate timeline for demand management once preliminary results from PMAs in Tier I (Existing and Ongoing PMAs) are evaluated. This will provide a better understanding on the actual needs for the basin.</p>
Ceci Dale-Cresmat	<p>The document clearly shows that there is a ground water over-drafting problem in Sierra Valley. The plan shows that approximately 6,000 ac ft would be sustainable, yet over twice that amount is being drafted in an average year. This is not sustainable and a target of 6,000 ac ft should be placed in the plan as a limit, with no further drafting. An assessment should be made of all the landowners' water uses and those that are using more than is sustainable should be required to reduce water use. There is technology available to use less water in crop production and those include irrigation water management, (there is a host of practices included in this such as soil moisture monitoring in fields and only applying what a crop needs, updating and improving irrigation systems so the lowest use systems are used, etc.) Other measures could include using alfalfa crop varieties that use less water or switching to dryland crops or just using the land currently under production for high water use crops to rangelands where little to no water is used.</p>	<p>MCR Demand Management</p>
Ceci Dale-Cresmat	<p>Ø Effects of high production ag wells on domestic wells and livestock wells (6-8" casing size) is not addressed in the document. When surface water dries up, livestock are dependent on livestock wells and springs for water sources. Over-drafting the ground water will have a direct effect on both livestock wells and domestic wells throughout Sierra Valley by dropping the water table. There was a reference in the document that if 6 of 10 domestic wells dry up, this would be a trigger to change ground water use by large agricultural wells (10-12" casing). What happens to landowners of those 6 wells? Does that include livestock wells? Who is going to monitor that? Bottom line is, if one dries up then that should be a trigger to change things or better yet, set a limit to ag well pumping to 6000 ac ft per year.</p>	<p>MCR PMAs</p>
Ceci Dale-Cresmat	<p>Ø There was little if any sections of the document that address what the effects will be on streams, springs, artesian wells and wetlands from over-drafting ground water. As we all know Sierra Valley is a critical part of the Pacific Flyway and negative effects to the wetlands and other surface waters could be devastating to this resource. These resource should be addressed in the plan and assurances made that no negative effects to this resource occur in the future.</p>	<p>The Plan addresses this issue by limiting future decline of groundwater levels near GDEs and ISW to the historical low groundwater elevation. Details provided in MCR ISW and MCR GDE</p>

Ceci Dale-Cresmat	∅ There has been a lack of public input in this process. The effects of this plan are broad and input from residents of Sierra Valley and surrounding areas should be sought. The effects of long term over-drafting will be felt in Sierra Valley and beyond. There are many recreational users that come to Sierra Valley and generate income to local businesses. This could be lost if desertification occurs in the area due to ground water over-drafting and the effects on streams, wetlands, domestic and livestock wells.	MCR Outreach
Tom Dotta	I agree that more people should have input. I gave up on meetings after years of going and finding that the minds were already made up prior to the meeting and my input was a joke. There are very good devices to measure the ground sinking, if something is not done to stop this not only will the valley go dry, someone will be hurt in a sinkhole. This needs action, not lip service.	MCR Outreach
Tom Dotta	Sierra Valley has a serious problem. Let's make it simple, more water is taken out than put in. To solve the problem 1. more dams are needed and irrigate with stored rain water 2. The ground is recharged by ponds or forced wells 3. Quit taking the water out for irrigation.	MCR Demand Management
Feather River Land Trust	Nonetheless, we find that several key elements of the plan are incomplete or not included in the Public Review Draft. We further understand this version of the plan has not been reviewed by the GSAs. This makes it very difficult to understand or review the plan and to provide substantive comments. We wonder if the draft we reviewed meets standards for public review.	A short summary will be added to the plan to help with future review and missing elements have been added including the water budget, estimate of sustainable yield and climate change impacts. There will be another 75-day comment period after board adoption and after submission of the plan to DWR.
Feather River Land Trust	The draft plan identifies several sources of information indicating subsidence has occurred in the basin. The plan provides no discussion of a cause-and-effect relationship between pumping, groundwater levels and subsidence, but the depictions of groundwater levels (Figure 2.2.2-4) and estimates of subsidence from InSAR data (Figure 2.2.2-7) show remarkable alignment. In addition, CalTrans has documented damage to Highway 70 from subsidence. We understand the lack of long-term onsite ground elevation data makes a direct numerical Sustainable Management Criteria (SMC) for subsidence impractical. It appears however that the current plan (Table 3.4.4) does not commit to monitoring elevations in the future (monuments to achieve this purpose are classed as “other, based on future funding availability”). Given the evidence that subsidence has negatively impacted public infrastructure, there is potential for future impacts to agricultural practices and hydrology of wetland and aquatic habitats. We believe the plan needs to commit to more direct actions to monitor and manage for subsidence.	MCR Subsidence
Feather River Land Trust	It is not clear if this estimate is based on the work of Bachand, et al (2020) or on subsequent analysis that supports this work. We realize that in talking about overdraft, average values can be misleading given the variation in wet and dry years and location within the basin. Nonetheless, it appears that available information suggests over drafting has occurred in the eastern portion of the basin. Our concern is that this basic problem does not receive more	Updated water budgets and a more thorough analysis of spatial and temporal conditions in the basin are included in Section 2.2.3. Quantification of overdraft and sustainable yield in the basin using the Sierra Valley Hydrogeologic System Model (SVHSM) is included in Sections 2.2.3.6 and 2.2.3.7. The estimate of sustainable yield from SVHSM agrees with previously published estimates for the basin.

	focus in the plan. We believe the plan should more clearly direct analysis, discussion and attention to known problem areas.	
Feather River Land Trust	We believe that the SMC for groundwater elevation is problematic because it does not target areas where change is most likely to occur. The SMC for groundwater level defines an undesirable result if 25% or more of the Representative Monitoring Points (RMP) detect groundwater below their Minimum Thresholds for two consecutive years. While we agree the overall approach to this SMC is sound, we think it is flawed in practice because it does not focus on changes in the areas of the basin where reductions in groundwater levels are most likely. It appears there are perhaps twelve to fourteen wells in the areas where groundwater level reduction (and subsidence) are most likely to occur. The current standard of 25% of wells with declines may overlook substantial changes to groundwater because the 37 RMP are spread throughout the basin.	Based on comments received and further discussion with the TAC, the numbers have all been revised and the undesirable result has been identified as more than 10% of the RMPs to fall below their Minimum Thresholds. More details are now provided in Chapter 3.
Feather River Land Trust	Like subsidence, data to precisely delineate ISW is lacking. As a result, some potential ISW is classified as a “data gap”. The most conservative approach to addressing this gap would be to treat the “data gap” ISW as ISW until data were collected to determine they were not ISW. This would include reviewing groundwater levels in the areas near these “gap ISW” and adjusting SMC as needed to protect them. A less conservative approach would be to collect data in the short to mid-term to better determine the status of the potential ISW. Because the plan does not commit to this data collection, these potential surface water habitats are at risk.	Surface water designated as a data gap maintains the same level of protection as those classified as ISW. MTs for RMPs near surface water is set at the historical low groundwater elevation.
Feather River Land Trust	The basin hydrologic model was not available at the time the draft plan was presented; we understand it will consider changes to water supply from Climate Change. Unfortunately, the draft plan seems to assume that climatic and hydrologic conditions are static. Because higher air temperatures will increase evaporation and transpiration, it is likely that less water will be available for recharge, further complicating basin overdraft. A conservative approach would be to apply assumptions about these changes to the plan. At present, we see no evidence that potential fundamental changes to the hydrology of the basin are considered.	There are several other climate factors in addition to temperature that influence recharge processes (e.g., timing of precipitation, precipitation volume, storm intensity). Changes in these could enhance, negate, or diminish any temperature change effects on recharge processes. Projected climate change impacts using the four climate change scenarios provided by DWR are included in the updated version of Section 2.2.3.
Feather River Land Trust	The draft plan includes numerous proposed potential actions to address the supply side of the recharge-groundwater use equation. While the plan does speak to increasing irrigation efficiencies, the major factor on the use side of the equation, pumping, is not addressed. The plan explains this element is not included because it would result in reduced pumping and economic costs. This reasoning lacks context in that allocations would be instituted only if other supply side elements of the plan are ineffective in providing for groundwater sustainability. We note that not including this element may serve as a disincentive to	MCR Demand Management

	groundwater users to devise ways to reduce or avoid economic loss through conservation, trading and other measures.	
Feather River Land Trust	The plan has numerous locations where additional monitoring or studies are proposed as the means to reduce uncertainties. As mentioned earlier, this includes collecting better information on potential subsidence and Interconnected Surface Waters, but these are just two examples. Nearly every aspect of the plan calls for additional information. Our concern is that these statements are not included in a monitoring plan. Our reading of the plan (Table 3.4.4) is that the only firm commitment is for up to six additional wells, used to better assess water quality. We believe that the uncertainties in the plan, including reliance on proxies, necessitate a much more robust monitoring effort. The logical alternative is to scale back the groundwater SMC to provide for greater likelihood of sustaining groundwater values in the face of the acknowledged uncertainties.	The reviewer notes that the plan identifies many data gaps and we agree that these must be filled in order to better ensure sustainable groundwater management in the SV basin. Nonetheless, the plan uses the best available information, and suggests the avoidance of significant and unreasonable impacts to beneficial users. Reducing MTs as suggested would likely lead to significant and unreasonable impacts to growers, ranchers, and municipal systems - only in the proximity of these users are groundwater levels allowed to decline beyond historical lows. Out of an abundance of caution, groundwater levels near GDEs and ISW are not allowed to decline beyond historical lows.
Feather River Land Trust	It is possible that the 2015 levels caused adverse effects to domestic wells, flows and water quality in the Middle Fork Feather River, springs and artesian wells and other values. There is no data presented to support the contention that values were or were not impacted. It is possible that instituting the SMC would bring about situations where groundwater is at or near the threshold elevations for longer periods of time than those which produced the 2015 elevation. The impact to beneficial uses and users from ground water at the target levels present over longer periods of time needs to be discussed.	MCR ISW
Feather River Land Trust	FRLT believes the plan’s delineation of GDE is flawed because it does not include either springs or artesian wells. These features are perhaps the most likely habitats to be affected by changes in groundwater availability. Springs often provide habitat for rare species, especially invertebrates, and are also often an important source of stock water. As such, these habitats would appear to be excellent indicators of both ecological and hydrologic conditions. Our concern is heightened due to possible loss of these features over time. We are concerned that they are not included as GDE and their long-term density and distribution will not be monitored.	Agreed. Springs have been added to the GDE map.

<p>Feather River Trout Unlimited</p>	<p>Historically, Sierra Valley provided high quality habitat for native fishes, with abundant wetlands providing excellent rearing habitat. Much of Sierra Valley’s surface water is currently diverted for agricultural use during low flow periods, this has led to a reduction in the amount and quality of habitat. The plan is silent on the potential impacts of proposed groundwater levels on fish or fish habitat. Analysis of the proposed groundwater Sustainable Management Criteria (SMC) essentially says that impacts to beneficial users (including fish habitat) will be no worse than those which may have occurred when these levels previously occurred. This analysis is lacking in at least two important ways. First, no data is presented that documents these conditions. How for instance, did these groundwater levels influence surface water conditions in and downstream of the Valley? Second, there is no consideration of how groundwater levels at or near the SMC over long time periods might affect beneficial users.</p>	<p>Quantification of ISW depletion is a difficult task considering the novelty of the model and lack of surface water data to perform calibration. Besides the streamflow gage on the Middle Fork Feather River there has been no continuous monitoring of streamflow within the groundwater basin in the last ~40 years. Consequently, this is considered a data gap and will be addressed by recommendations in the monitoring plan. As this data gap is addressed we will be better able to assess how groundwater management is affecting interconnected surface water and groundwater elevations, the GSA can target areas where ISW depletion is occurring. Assessing the affect on beneficial users will require more information on groundwater elevations and ISW to target areas that might require data linking flow and groundwater changes to habitat response.</p>
<p>Feather River Trout Unlimited</p>	<p>There is very little, if any consideration of likely future changes to Sierra Valley hydrology. FRTU’s basin assessment, referenced above, incorporated projections of future hydrologic conditions as one factor in identifying priority subwatersheds. Using two climate change prediction models (ccsm4_rep85 and GFDL_A2), projections showed reductions in April 1 snowpack for both the Badenaugh (18 to 42 percent) Bonta (14 to 25 percent) subwatersheds. Both models projected slight increases in runoff (~5%) for both subwatersheds, though timing of flows would be earlier than at present. August 1 air temperatures were projected to increase by about 2 degrees F by 2040 for both areas. We are not proposing that these figures be used in the plan. They are provided only to illustrate that changes to the amount and timing of runoff to the Valley are likely to change in the future. Changes to evaporation and transpiration are nearly certain to occur. Such changes are likely to impact fish habitat in negative ways, especially if groundwater contributions to surface flows are reduced. In particular, we are concerned how cumulative changes to flow and water temperature will impact habitat in the Middle Fork Feather River. Not including consideration of such changes appears short-sighted.</p>	<p>Section 2.2.3 (Water Budget Information) of the GSP was incomplete at the time of the public release because more time was needed for model calibration and adjustment in order to improve representation of the hydrologic system. This has resulted in a model that better represents observed hydrologic conditions in the valley. Estimation of future water budgets has been performed for four different climate change scenarios provided by DWR.</p> <p>Since SVHSM is highly discretized in space and time, more detailed metrics and delineation of areas of concern are required to perform a more thorough evaluation of potential habitat effects. SVHSM is not currently capable of simulating heat transport as representation of transport processes was not included in the original scope of work. However, this could be added as part of a future task order.</p>
<p>Feather River Trout Unlimited</p>	<p>Due to lack of data, numerous uncertainties in the plan (including delineation of Interconnected Surface Water, ISW) are addressed by calling for increased or targeted monitoring to fill data gaps. In the face of uncertainty, we feel this is a reasonable approach. We are concerned that commitment to following through on these needs is not evident in the plan. The monitoring tasks outlined in Table 3.4.4, do not include monitoring of GDE or additional hydrologic data needed to validate the initial delineation of ISW and GDE. If monitoring proposed to validate plan assumption will not be conducted, then those elements of the plan should be revised.</p>	<p>As stated, uncertainty exists in the classification of ISW, which has been identified in the Plan as a data gap. Recommendations in the monitoring plan look to fill these data gaps, but the number of new RMPs must strike a balance of filling data gaps and the cost of monitoring to the SVGMD . Additional description of the proposed monitoring network for GDEs has been included in Section 3.4.4, Monitoring Networks Summary.</p>
<p>Feather River Trout Unlimited</p>	<p>Several key components of the plan, such as the hydrologic model for the basin, were not complete when the plan was released. Additionally, numerous tables are not included, and several Appendices were incomplete or not available. The lack of a complete, coherent document made the draft plan very difficult to review.</p>	<p>Hydrologic model description has been added to Section 2.2.1 and the water budget has been added to Section 2.2.3</p>

Michael Hogan	<p>§ The Plan did not contain critical information on which to base assumptions or interpretations of the potential problems or solutions since the functional water balance model was not complete at the time of the posting of the Plan. Without that information, it is impossible to analyze the validity of statements and claims in the Plan, let alone the proposed Actions.</p>	<p>Included in the updated version of Section 2.2.3</p>
Michael Hogan	<p>§ A critical chapter of the plan, Chapter 3, was re-posted 2 weeks before comments were due. I am not a legal expert but I believe that from the standpoint of both the State and County requirements, at least 30 days are required as an adequate posting period.</p>	<p>Thank you for your comment. There will be another 75-day comment period after board adoption and after submission of the plan to DWR.</p>
Michael Hogan	<p>According to the SGMA legislation, Plans should be based on broad stakeholder input in order to reflect actual stakeholder interests and values. During preparation of the Sierra Valley Groundwater Sustainability Plan, there was NO stakeholder group convened. The main stakeholder groups by actual numbers of members in the Sierra Valley are as follows: 1) Domestic well users, 2) Cattle ranchers (their use of surface waters make them a significant stakeholder group) and 3) agricultural pumpers.</p> <p>By volume of water used, as well as by greatest impact to overdrafting, agricultural pumpers are the most significant group. However, NONE of these stakeholder groups were present in developing this plan. A Technical Advisory Committee (TAC) was formed that had some members who were members of one or more of the stakeholder groups. However, this was not a stakeholder group nor were stakeholder interests discussed in depth. For instance, in terms of domestic well users, who depend on groundwater for their very existence in the Sierra Valley, the only question put before the TAC was how many domestic wells drying up would be 'too many'. That question itself is improper and was not asked of domestic well users but of the TAC in general, which, as I said, is not a stakeholder group, and was only partially made up of residents of the Sierra Valley. The TAC was not used as a stakeholder group.</p> <p>Lack of communication between TAC and GSA Board</p>	<p>The Technical Advisory Committee (TAC) is a stakeholder group comprised of representatives associated with an array of interests. Supplemental outreach activities included phone calls and follow-up, as well as occasionally convened working sessions to supplement TAC discussions. This approach is being expanded and is included in the Communications and Engagement Plan, in the new section on outreach for implementation.</p>

<p>Rachel Hutchinson, Forest Service</p>	<p>The GSP draft states: “National Resource Conservation Service has implemented meadow restoration projects in Clover Valley and Perazzo Meadows that divert water from going downstream.” If your team understands that this is an accurate statement, I suggest a reference needs to be provided for this information. There are several inaccuracies associated with this statement: There is no evidence from the groundwater and surfacewater monitoring that has occurred in these locations that water is being “diverted from going downstream.” The groundwater levels were recharged post-restoration. Reports published by Balance Hydrologics on Perazzo meadow and by The Sierra Fund for Red Clover Valley can be referenced showing that water is not diverted from going downstream. I am happy to provide these if needed. Red Clover Valley is outside of the watershed and the basin and should probably not even be included in this document. Suggest mention of this project. If you want to include another meadow within the basin where groundwater recharge occurred as a result of meadow restoration, I suggest you utilize Knutson Meadow within Carman Valley. There are several peer reviewed publications (by Jerry Davis et al. from San Francisco State University) on the benefits associated with this project, I provided those to Stillwater several months ago. NRCS did not implement the project at Perazzo Meadows, the US Forest Service did. Suggested Re-write: “the US Forest Service implemented meadow restoration projects at Perazzo Meadow and Knutson Meadow that successfully recharged groundwater levels.”</p>	<p>Thank you for this information. The suggested edit was made in Chapter 4.</p>
<p>Kristi Jamason</p>	<p>Add "agricultural" before "wells" (SVGMD only meters big ag wells.</p>	<p>edit made</p>
<p>Kristi Jamason</p>	<p>this should say "associated with large-capacity wells metered by the District..." The municipal wells may well be large-capacity, active and metered, but they are not charged this fee.</p>	<p>edit made</p>
<p>Kristi Jamason</p>	<p>Where did this sentence come from? Please remove. Totally subjective to say "minor and manageable"</p>	<p>Sentence revised</p>

Kristi Jamason	25% is too high. There is too much variability between the RPMs - locations, depths. Serious issues could arise in discreet areas without reaching a 25% threshold.	As discussed during the December 6th meeting with the TAC, this SMC has been modified so that GSAs should be notified/warned if 1.) two wells fall below MT for two consecutive years OR 2.) four wells fall below the MT in a given year. If a 'warning' occurs the GSAs will review what conditions may have changed, including increased pumping, precipitation patterns, etc.
Kristi Jamason	Clarify Figure title/heading. Suggest: Groundwater elevation minimum thresholds are not substantially below lowest recorded values (Fall 2015) and maintain...	Clarification has been included
Kristi Jamason	Funding column needs to tease out installation funding vs ongoing tasks - monitoring/reading and data analysis	Tables have been revised
Mike and Jennifer Blide	From what I understand, this process has been flawed in that there has been little representation from domestic well users in the Valley. As far as I know, there have been few public meetings; one exception was a ZOOM offering a few weeks ago that I joined and was dismayed that there were only six persons in attendance.	MCR Outreach
Mike and Jennifer Blide	Clearly, if the numbers regarding annual overdrafts of our groundwater are correct, it is only a matter of time before some domestic wells start to fail. If the only solution is to dig a deeper well at a huge cost, it occurs to me that this does nothing to solve the problem. Also, if the trigger for any kind of mitigation measures happens only after 8-10 wells fail, then we would be seriously behind in attempting to resolve the problem. It is my opinion that a crisis management plan be implemented NOW, so that we can begin to address the annual overdrafts of water.	This was discussed extensively at the TAC meeting on December 6th. SMCs, Chapter 3, will be modified to describe undesirable results according to decisions made at the December 6th meeting. Domestic well SMC has been removed until a more complete well inventory and assesment has been completed. Well inventory will be done within ~2 years and SMC can be re-evaluated for the 5-year GSP update.
Mike and Jennifer Blide	I am also aware that SPUD is trying to get a well drilled to serve as a secondary water source for the Town, as the current source is a surface water spring and some level of redundancy is needed for the future, especially in light of the current escalating drought cycles. This well would fill and maintain two large tanks that serve as the domestic water supply for over one hundred commercial and residential customers representing many times that number of individuals. They had better dig deep, it seems.	We thank the reviewer for noting this. SPUD sent an application for Small Community Drought funding and they asked for support to drill a well as a back up well or with the idea of using spring water or the well based on the type of year, etc. The model can help providing guidance on that.
Mike and Jennifer Blide	I am also concerned that the focus on deep water wells for irrigation of crops does not give proper import to the protection of habitat for the myriad of wildlife that call Sierra Valley home. As a major stopover for the Pacific Flyway migratory path for so many different species of birds, I am concerned that not enough attention is being paid to the maintenance of surface water habitats.	Interconnected surface waters were mapped by Balance hydrologics using whatever well data were available and things like hydraulic gradients. Four additional shallow wells will be located near the GDEs to better understand the interconnected of surface water and groundwater, which are not well constrained using available data. Based on current data little is known about the hydrology of the large wetlands used by birds. Additional monitoring will be required to better understand both groundwater dynamics and interconnected surface flow. This monitoring plan will be expanded in upcoming drafts of the GSP.

<p>Mike and Jennifer Blide</p>	<p>Finally, the costs of operating the Groundwater Management District, as well as the future costs of mitigating the overdraft problems, should be borne using some sort of pro-rata system whereby those property owners who are utilizing the most water should be paying the most money.</p>	<p>MCR GSA Rate Structure</p>
<p>Jill Slocum</p>	<p>Special Status Species animals have not been adequately researched, reviewed, and identified. The lack of accuracy in the bird lists make me wonder about the veracity of other species. More work needs to be done on these as well as accurately identifying the Interconnected Surface Water (ISW) and Groundwater Dependent Ecosystems (GDE) they depend upon. I still feel that the full methodology outlined in the Plan has not been followed.</p>	<p>We used the best available data to compile the list of special status species and acknowledged that Sierra Valley is an important bird area. Our sources for sensitive species included: the California Natural Diversity Database (CNDDDB), California Native Plant Society (CNPS) Manual of California Vegetation (2021), Harnach (2016), eBird (2021), TNC freshwater species lists generated from the California Freshwater Species Database (CAFSD) (TNC, 2021), USFWS’s Information for Planning and Consultation (IPaC) portal (USFWS, 2021), Feather River Land Trust Sierra Valley Birder’s Guidebook (Feather River Land Trust n.d.), Vestra (2005), and CDFW’s BIOS database. We will happily add information from additional reports after the GSP is submitted if they are made available to us.</p>
<p>Jill Slocum</p>	<p>The identification of GDE’s and ISW’s needs work. These are of course critical for animal and plant species dependent on these habitats. There is much more work needed to know how these systems relate to and are dependent on deep and shallow water aquifers. Work on these areas, including monitoring and reporting, must be addressed in the first year of implementation of the Plan.</p>	<p>The monitoring plan suggested in Chapter 3 and chapter 5 will provide a unique set of continuous data that will be used to calibrate the groundwater model. With better data and a more refined model, it will be possible to answer questions about how different systems react to and are dependent on either shallow or deep groundwater or both. The impact of pumping on these systems will then also be evaluated.</p>
<p>Jill Slocum</p>	<p>Other Beneficial Users, including those with domestic and municipal wells, as well as ranches dependent on surface water and shallow groundwater systems need more consideration. There needs to be immediate further studies, including ongoing accurate monitoring and reporting of the flow and levels of these systems. I doubt anyone currently knows the number households and people directly dependent on these waters at this time, but the percentage of people and livelihoods dependent on them are clearly greater than those of the large ranches with high capacity wells tapping into the deep groundwater aquifers. Sierra Valley needs all of these communities to thrive in order to maintain the health of the local economy and quality of life.</p>	<p>More details about including inventory of domestic and shallow wells are now included among the PMAs. Some more in depth understanding of the current situation and of the number of wells eventually at risk of going dry is critical to design a better management plan.</p>
<p>Jill Slocum</p>	<p>I have a tremendous amount of respect for the large ranchers with high capacity wells who are largely dependent on the deep groundwater aquifers. They are a significant part of what makes the Sierra Valley the special place that it is. However, the concept of “Taxation Without Representation” keeps going through my mind. At present there is inadequate representation of the varied interests on the District Groundwater Board. I believe that it is critical for the membership of the Board be changed so there is diversity on the Board, reflecting the interests of all of the Beneficial Users in the District</p>	<p>Decision on this topic is up to the SVGMD Board and not directly associated with GSP development</p>

Jill Slocum	Meaningful action needs to be taken now to solve the overdraft problem. Seemingly everyone recognizes that the current annual practice of over drafting more deep groundwater than is recharged has been occurring for years. Now is the time for action to resolve this critical problem. To state the obvious, while the economic health of the large agricultural ranches that rely on high capacity wells is crucial for the economic health of the Basin, this issue will not disappear and the sooner steps are taken to reverse this practice, the better for all	Thanks for your comments. The SMC defined in chapter 3 are looking into stabilizing groundwater levels as quickly as possible to minimize further impacts to other beneficial uses and users of groundwater. PMAs in chapter 4 are also expected to help reversing some of the current conditions: succes of different PMAs will be evaluated and, as needed, more stringent actions will be eventually considered in future updates of the plan.
Jill Slocum	And finally, as many others others have expressed, it is really unacceptable the we are now reviewing a document that has yet to be approved by the Board. It is critically important that there is adequate public review of the actual Plan the Board puts forward	Thank you for your comment. There will be another 75-day comment period after board adoption and after submission of the plan to DWR.
Kim McKinney	My first concern is that there is little in the Plan to address constraints on groundwater overdrafting. The very title of the proposed Plan contains the word sustainability and yet the Plan provides minimal, if any triggers to prevent or reduce chronic overdrafting.	MCR Demand Management
Kim McKinney	My second concern is ancillary to my first in that chronic overdrafting could result in domestic wells running dry. Because of this concern I feel that all members of the Sierra Valley Groundwater Management District need to be briefed regularly on the status of water usage in the basin in an easily digestible format. Many members work and are unable to attend meetings, but I would think a quarterly newsletter could disseminate information. This would give members, who pay a District Management fee in their property taxes an informed voice at the table.	This sugggestionwill be incorporated into the Communication and Engagement Plan, in the new section on Outreach and Engagement for Implementation.
Donna Lindquist	I found the report to be cumbersome, longer than needed, full of confusing acronyms and difficult to follow. There are many important gaps in the analysis that I will mention below. The technical information and long-winded discussions should be moved to appendices to avoid overwhelming the non-technical reader. An executive summary that is less than 3 pages is needed to CLEARLY summarize background, objectives, studies to date, and the recommended long-term solutions. The existing summaries are too long and complicated for the lay-reader to understand or to keep their attention.	A short summary will be added to the plan.
Donna Lindquist	The TAC is composed of major stakeholders but has no official representation from domestic well users who represent the largest part of the community in Sierra Valley. There are domestic well users on the TAC but they have competing interests that conflict with small or non-ag producers. Broadening the TAC to include more small domestic well users is needed as well as more continuous outreach to educate water users on overdraft issues and consequences.	See Appendix C in the Communication and Engagement Plan.
Donna Lindquist	The SVGPS, along with other technical data, indicate significant aquifer overdraft in certain parts of the valley but this report concludes any chronic long term impacts are manageable. I find that hard to believe since both technical and physical evidence does not support this conclusion which indicates that additional analysis is needed to better understand the sustainability of current extraction practices.	Estimation of the overdraft and sustainable yield of the basin based on two different analyses has been included in Sections 2.2.3.6 and 2.2.3.7, respectively. SGMA mandates that significant and unreasonable impacts to beneficial users of groundwater (e.g., industrial, domestic, and environmental uses) are avoided. The Plan details groundwater management

		that avoids such impacts, and also lays out where data gaps hinder the assessment of such impacts and how to "fill" those gaps.
Donna Lindquist	Many technical reports (including the recent Cal Trans report on damages to Highway 70) document serious levels of subsidence especially in the NE end of the valley. The SVGSP largely ignores these data and concludes that the situation is manageable over the long term, even with the current rate of subsidence. The Plan has missed the mark on this point and a more in depth study and analysis needs to be done. Groundwater pumping needs to be reduced to protect natural resources in the valley and the livelihood of residents.	Subsidence was discussed extensively by the TAC on December 6 in response to this and other public comments. It was decided to revise the subsidence discussion to indicate it needs closer monitoring. Monuments will be installed in the area mentioned and InSAR data will initially be used to monitor subsidence. Additional surveys will be conducted if InSAR subsidence increases by 50% of the average annual subsidence from baseline period (2015-2021). The GSAs may at their discretion elect to survey monuments more frequently, pending available funds.
Donna Lindquist	Groundwater and surface waters are hydrologically connected yet the Plan includes little data on surface waters and how they interact with aquifers. This is a large data gap that needs to be addressed. There is already evidence of surface water and springs declining or even disappearing in the northern part of the valley. Surface waters also support ecological values that are unique and critical to Sierra valley, including wetland plants, fish, wildlife and an amazing and diverse bird population. The beneficial uses of these resources needs to be protected and factored in to any decisions on groundwater extraction.	See MCR GDE and MCR ISW; In addition, this is a data gap to be filled by recommendations in the monitoring plan The planned additional shallow wells near the GDEs coupled with the groundwater model should help to clarify. In the absence of this data, the Plan limits the decline of groundwater levels near GDEs and ISW to the historical low groundwater elevation.
Donna Lindquist	There is minimal mention of the impact of subsidence, aquifer depletion and surface water reduction on stock water and ranching operations. Ranching is important to the Sierra Valley economy and lifestyle. This needs to be addressed since it will significantly impact this industry over time. As surface water dries up, those beneficial users will be adversely affected.	MCR PMAs
Donna Lindquist	Not enough effort has been put into engaging the public on the overextraction and subsidence issues that could seriously affect their financial standing and quality of life. I talked with several Sierra Valley residents who still are not aware of the issues and how they might be impacted. It seems a few large ag producers are spearheading this Plan, while other users are unaware of the potential consequences. More educational work is needed.	MCR Outreach
NGO Consortium	The GSP states that there are three Disadvantaged Communities (SDACs) in the basin, but these areas are not mapped nor is the population of each provided. Provide a map of the DACs in the basin. The DWR DAC mapping tool can be used for this purpose.	DAC spatial layers have been added to the Data Management System (DMS). Inclusion of a specific figure within the GSP was deemed unnecessary as the boundaries can easily be obtained through other sources and do not affect SMCs developed for the basin.

NGO Consortium	While the plan describes the historical and cultural affiliations of several tribes in the subbasin, the plan fails to map the locations of tribal lands or tribal interests in the subbasin.	No federally recognized tribal lands are present in Sierra Valley.
NGO Consortium	<p>The GSP provides a map of domestic well density in Figure 2.1.1-7, but fails to provide depth of these wells (such as minimum well depth, average well depth, or depth range) within the basin.</p> <p>Include a map showing domestic well locations and average well depth across the basin.</p>	Available well information in the basin, including location and screened intervals, can be accessed via the Data Management System (DMS). Two additional figures are provided in the Appendix (Vulnerable well impact analysis in the Sierra Valley Subbasin) that show the distribution of well depths per well type, and the depth of wells over time per well type.
NGO Consortium	<p>The GSP fails to identify the population dependent on groundwater as their source of drinking water in the basin. Specifics are not provided on how much each DAC community relies on a particular water supply (e.g., what percentage is supplied by groundwater).</p> <p>Identify the sources of drinking water for DAC members, including an estimate of how many people rely on groundwater (e.g., domestic wells, state small water systems, and public water systems).</p>	We thank the reviewer for noting this, and maintain that our sustainable management criteria protect domestic wells from impacts. Therefore, such an analysis would not substantively change the fact that projected groundwater management is not expected to impact domestic wells in the basin. To our knowledge, all domestic and municipal users in the basin are solely reliant on groundwater.
NGO Consortium	<p>Figure 2.2.2-12 presents the map of interconnected surface water in the subbasin. The map labels areas with groundwater elevation data gaps, but it is unclear whether these reaches in these areas are retained as potential ISWs in the GSP.</p> <p>Use seasonal data over multiple water year types to capture the variability in environmental conditions inherent in California’s climate, when mapping ISWs. We recommend the 10-year pre-SGMA baseline period of 2005 to 2015. Overlay the subbasin’s stream reaches on depth-to-groundwater contour maps to illustrate groundwater depths and the groundwater gradient near the stream reaches. Show the location of groundwater wells used in the analysis. Consider any stream segments with data gaps as potential ISWs and clearly mark them as such on maps provided in the GSP.</p>	<p>The streams classified as a data gap in Figure 2.2.2-12 are retained as potential ISW. MTs of RMPs in these areas were set with this in mind by limiting decline of groundwater levels near ISW to the historical low groundwater elevation.</p> <p>To map ISW, we conservatively chose a wetter than average period by using groundwater elevation for springs of 2017-2020 which represented the highest groundwater elevations since 2006. Figure 2.2.2-12 will be modified to show depth to groundwater contours and wells used in the analysis.</p>
NGO Consortium	Clarify the legend labels used on the GDE map (Figure 2.2.2-13). Clarify the data source for GDE polygons. For example, label polygons retained, removed, or added to/from the NC dataset (include the removal reason if polygons are not considered potential GDEs, or include the data source if polygons are added).	Agreed and will include in subsequent draft (by August 2022)

NGO Consortium	Provide further description of the groundwater data used in the GDE analysis, including the location of monitoring wells and their screening depth. Ensure the wells are monitoring the shallow principal aquifer.	The groundwater level data used for the GDE analysis is the same groundwater level data used in all other analyses in the GSP and the data is provided in Appendix 3-1. It contains the RMPs and additional data that were not selected for the RMP monitoring network. Section 3.3.1.4 now provides additional detail on the monitoring wells used, their depth (less than 300 feet), and how only the shallow groundwater levels from multi-completion wells were used in the interpolation.
NGO Consortium	If insufficient data are available to describe groundwater conditions within or near GDE polygons, include those polygons as “Potential GDEs” in the GSP until data gaps are reconciled in the monitoring network. Label the potential GDEs on the GDE map.	Given the lack of shallow groundwater data and uncertainty in the vegetation map, all of the GDEs are best described as potential GDEs. This has been clarified in Chapter 2 of the GSP.
NGO Consortium	Use depth-to-groundwater data from multiple seasons and water year types (e.g., wet, dry, average, drought) to determine the range of depth to groundwater around GDE polygons. We recommend that a baseline period (10 years from 2005 to 2015) be established to characterize groundwater conditions over multiple water year types.	We agree with the reviewer, and confirm that the groundwater level elevation data used encompasses all water year types. Please see Figure 3.3.1-1 to view a subset of these data and note that they span 20 years beginning in 2000.
NGO Consortium	Provide the depth-to-groundwater contour maps discussed in the GSP text. Show the location of groundwater wells used to create the map, and further discuss the screening depths of the groundwater wells to ensure they are monitoring the shallow principal aquifer. Refer to Attachment D of this letter for best practices for using local groundwater data to verify whether GDE polygons are supported by groundwater in an aquifer.	Depth to groundwater data have been used to map both GDEs and ISW locations: due to the significant uncertainty on well screening and actual well depth, a lot of uncertainty has been included in the final maps that have been produced. Because of this uncertainty, a large part of ISW and GDE have been named as potential, with the goal of collecting more data (see monitoring network and data gaps) over the very preliminary phases of plan implementation.
NGO Consortium	Quantify and present all water use sector demands in the historical, current, and projected water budgets with individual line items for each water use sector, including native vegetation.	Details are included in Section 2.2.3 (Water Budget) which has been added.
NGO Consortium	State whether or not there are managed wetlands in the subbasin. If there are, ensure that their groundwater demands are included as separate line items in the historical, current, and projected water budgets.	We are not aware of managed wetlands in the Sierra Valley Basin
NGO Consortium	Lack of outreach to some groups. In the Stakeholder Communications & Engagement Plan, describe active and targeted outreach to engage DACs, drinking water users, tribes, and environmental stakeholders throughout the GSP development and implementation phases. Refer to Attachment B for specific recommendations on how to actively engage stakeholders during all phases of the GSP process. Utilize DWR’s tribal engagement guidance to comprehensively address all tribes and tribal interests in the subbasin within the GSP.	MCR Outreach
NGO Consortium	In the well impact assessment, include well data from older wells (>31 years old) to better represent minimum threshold impacts to wells across the subbasin.	Older wells in the basin are those most likely to have limited construction information. Furthermore, 30 years is the standard operational lifetime assumed for most wells.

<p>NGO Consortium</p>	<p>Describe direct and indirect impacts on DACs, drinking water users, and tribes when describing undesirable results and defining minimum thresholds for chronic lowering of groundwater levels.</p>	<p>We thank the reviewer for noting this, and maintain that our sustainable management criteria protect domestic wells from impacts. Therefore, such an analysis would not substantively change the fact that projected groundwater management is not expected to impact domestic wells in the basin. To our knowledge, all domestic and municipal users in the basin are solely reliant on groundwater.</p>
<p>NGO Consortium</p>	<p>Describe direct and indirect impacts on DACs, drinking water users, and tribes when defining undesirable results for degraded water quality.¹⁴ For specific guidance on how to consider these users, refer to “Guide to Protecting Water Quality Under the Sustainable Groundwater Management Act.</p>	<p>We thank the reviewer for noting this, and maintain that our sustainable management criteria are protective of groundwater quality. Therefore, such an analysis would not substantively change the fact that projected groundwater management is not expected to impact domestic wells in the basin. To our knowledge, all domestic and municipal users in the basin are solely reliant on groundwater. It is noted that the current MTs for the network are based on existing exceedances in the monitoring network, therefore providing protection against an increased number of exceedances. This methodology is protective of groundwater quality, and avoids undesirable results by preventing further degradation.</p>
<p>NGO Consortium</p>	<p>Evaluate the cumulative or indirect impacts of proposed minimum thresholds (expressed in the GSP as maximum thresholds) for degraded water quality on DACs, drinking water users, and tribes.</p>	<p>We thank the reviewer for noting this, and maintain that our sustainable management criteria are protective of groundwater quality. Therefore, such an analysis would not substantively change the fact that projected groundwater management is not expected to impact domestic wells in the basin. To our knowledge, all domestic and municipal users in the basin are solely reliant on groundwater. It is noted that the current MTs for the network are based on existing exceedances in the monitoring network, therefore providing protection against an increased number of exceedances. This methodology is protective of groundwater quality, and avoids undesirable results by preventing further degradation.</p>
<p>NGO Consortium</p>	<p>Set maximum thresholds and measurable objectives for all water quality constituents within the subbasin that are impacted or exacerbated by groundwater use and/or management.</p>	<p>As stated in the GSP, based on a comprehensive water quality evaluation of historic and current data and reports, SMCs were developed for two constituents of concern in the Subbasin: nitrate and TDS. Arsenic, boron, iron, manganese, and pH are considered constituents of concern in the Subbasin but were not assigned SMCs because they are naturally occurring; these constituents will be monitored as part of the GSP and Basin Plan to track any potential mobilization of elevated concentrations. MTBE is identified as a potential constituent of concern; however, no SMC is defined as it is associated with contaminated sites with dedicated monitoring and cleanup (additionally, no exceedances have occurred in the last 6 years).</p>
<p>NGO Consortium</p>	<p>Set maximum thresholds that do not allow water quality to degrade to levels at or above the MCL trigger level.</p>	<p>Maximum thresholds are set for nitrate and TDS at their MCL (10 mg/L for nitrate, and 500 mg/L for TDS). Wells in the groundwater quality monitoring network already exceed this threshold for TDS, and these wells are expected to continue to exceed in the future. Therefore, the MT has been defined to not allow an increased number of wells with exceedances.</p>
<p>NGO Consortium</p>	<p>Provide discussion that adaptive changes in SMC for GDEs will be made, if GDE groundwater or biological monitoring reveals that existing SMC are not protective of these ecosystems.</p>	<p>As part of the GSP the health of GDEs will be tracked using NDVI coupled with measurements of shallow groundwater elevations near GDEs. If the interconnected surface water flows and the health of GDEs (as measured by NDVI) decline around the monitoring points and the change in due to groundwater management, the MTs and MOs will be reevaluated.</p>

<p>NGO Consortium</p>	<p>When defining undesirable results for depletion of interconnected surface water, include a description of potential impacts on instream habitats within ISWs when minimum thresholds in the subbasin are reached. The GSP 16 should confirm that minimum thresholds for ISWs avoid adverse impacts on environmental beneficial users of interconnected surface waters as these environmental users could be left unprotected by the GSP. These recommendations apply especially to environmental beneficial users that are already protected under pre-existing state or federal law.</p>	<p>We are not aware of available data that could be used to assess impacts of changes to ISW on environmental users of the basin. This has been clarified in the GSP.</p>
<p>NGO Consortium</p>	<p>Present calculations and descriptions (i.e., in tables, figures, and text) for the projected water budget. Ensure that the GSP incorporates climate change into all inputs of the projected water budget.</p>	<p>Included in the updated version of Section 2.2.3</p>
<p>NGO Consortium</p>	<p>Integrate climate change, including extreme climate scenarios, into all elements of the projected water budget to form the basis for development of sustainable management criteria and projects and management actions.</p>	<p>Included in the updated version of Section 2.2.3</p>
<p>NGO Consortium</p>	<p>Calculate sustainable yield based on the projected water budget with climate change incorporated.</p>	<p>Included in the updated version of Section 2.2.3</p>
<p>NGO Consortium</p>	<p>Incorporate climate change scenarios into projects and management actions.</p>	<p>Climate change has been considered in the uplands management and restoration PMA, groundwater recharge PMA and fuels reduction PMA. The GSAs also acknowledges data gaps and existing uncertainty in its SV integrated hydrological model, as outlined in Appendix 2-5. While the model was developed based on the best available science and data and provided a sufficient understanding of Basin conditions, further improvements are needed to conduct climate change studies and simulate future scenarios. GSAs has sought to coordinate with local and regional stakeholders in generating and conducting climate change scenarios to include the largest spectrum of expected changes possible. This will help the GSA include the changes to reservoir operation and surface water availability in the Basin. Surface water availability can have significant impacts on the Basin and need to be incorporated into future scenarios.</p>
<p>NGO Consortium</p>	<p>Provide maps that overlay current and proposed monitoring well locations with the locations of DACs, domestic wells, and GDEs to clearly identify monitored areas.</p>	<p>Chapter 3 provides now more refined maps to highlight the ongoing plan for monitoring.</p>
<p>NGO Consortium</p>	<p>Increase the number of RMPs in the shallow aquifer across the subbasin as needed to map ISWs and adequately monitor all groundwater condition indicators across the subbasin and at appropriate depths for all beneficial users. Prioritize proximity to DACs, domestic wells, GDEs, and ISWs when identifying new RMPs.</p>	<p>There are a limited number of existing shallow groundwater wells in the Basin and of those even fewer have existing groundwater data or are suitable for collecting groundwater data. RMPs for ISW and GDEs represent those existing shallow groundwater wells suitable for monitoring and several new wells. The number of new wells is intended to strike a balance of filling data gaps and the cost of those wells to the SVGMD. If data gaps continue to exist the Plan can be modified at the 5-year update to include additional RMPs.</p>

NGO Consortium	Ensure groundwater elevation and water quality RMPs are monitoring groundwater conditions spatially and at the correct depth for all beneficial users - especially DACs, domestic wells, and GDEs.	Groundwater level RMPs are based on shallow groundwater conditions and the analyses presented in Section 3 protect shallow domestic wells, ISW, and GDEs.
NGO Consortium	Describe biological monitoring that can be used to assess the potential for significant and unreasonable impacts to GDEs or ISWs due to groundwater conditions in the subbasin.	The monitoring program currently includes NDVI assessment additional shallow groundwater wells, and monitoring of ISW. NDVI monitoring has been clarified in the text of the GSP.
NGO Consortium	For DACs and domestic well owners, include a drinking water well impact mitigation program to proactively monitor and protect drinking water wells through GSP implementation. Refer to Attachment B for specific recommendations on how to implement a drinking water well mitigation program.	See NGO-004
NGO Consortium	For DACs and domestic well owners, include a discussion of whether potential impacts to water quality from projects and management actions could occur and how the GSAs plan to mitigate such impacts.	See NGO-004
NGO Consortium	Recharge ponds, reservoirs, and facilities for managed aquifer recharge can be designed as multiple-benefit projects to include elements that act functionally as wetlands and provide a benefit for wildlife and aquatic species. For guidance on how to integrate multi-benefit recharge projects into your GSP, refer to the "Multi-Benefit Recharge Project Methodology Guidance Document."	The "Multi-Benefit Recharge Project Methodology Guidance Document" will be referenced and used to update Section 4.3.10, as necessary.
NGO Consortium	Develop management actions that incorporate climate and water delivery uncertainties to address future water demand and prevent future undesirable results.	Chapter 4 introduction describes the concept of "adaptive management" which is at the core of deciding which projects and management actions to implement. This will help address the uncertainties associated with climate change and future surface water supply availability. Also, see NGO-025
Cindy Noble	I am not sure residents of Sierra Valley are aware of the large-scale subsidence in the northeast corner near the town of Vinton. This information was presented to the SGMA process by the CA Department of Transportation and should be of great concern to both Agricultural water users and domestic well owners in the area.	MCR Subsidence
Cindy Noble	I believe that the process that produced the current draft plan did not meet the standard of "Community Based" inclusion. I attended a single community meeting where there were maps and as I remember a group of consultants who worked on this process provided a great deal of very interesting information. Sadly, there was zero follow up and I never heard of any other Community engagement in the Sierra Valley Sustainable Groundwater planning process.	MCR Outreach
Cindy Noble	As early as 2006 the Sierra Valley Groundwater District was told that Overdraft of the aquifer was a problem. This information was published in Ken Schmidt's study that was produced on behalf of the district. Sadly, it appears nothing has been done to address this problem.	Comment noted.

<p>Plumas Audobon Society</p>	<p>It is hard to understand why we are being asked to review a draft of an extremely complex and detailed GSP at this point. As you must be well aware, the draft is challenging to adequately comment on because there are so many data gaps and critical pieces of information that are missing. It is also our understanding that the District Board has neither decided nor released for public comment what will be put forward as the actual GSP that will be submitted to the state. We feel that the public will be better served when there is an opportunity to review the complete GSP, without data gaps, that will be approved by the District Board.</p>	<p>Thank you for your comment. There will be another 75-days comment period after board adoption and after submission of the plan to DWR and we hope that the final version of the plan will provide all the missing details and information.</p>
<p>Plumas Audobon Society</p>	<p>The areas of critical concern to our organization are how all of the Beneficial Users will be impacted by the GSP. Specific concerns include adequate identification of and plans to monitor all Interconnected Surface Waters (ISW) and related Groundwater Dependent Ecosystems (GDE) as well as an accurate accounting of all Sensitive Species in Sierra Valley. As you are aware, one of our board members, Jill Slocum, was asked to serve on the Technical Advisory Committee and she has kept our chapter informed of the process. She has repeatedly expressed concern about the methodology used to determine Sensitive Species, particularly bird species, in Sierra Valley as well as their dependence on ISW and accurately identifying GDE's. To date the information in the GSP remains inaccurate and incomplete. The National Audubon Society has designated Sierra Valley as an Important Bird Area; it includes critical habitats for migrating and breeding bird populations. There are excellent sources available for an accurate assessment of Special Status Species in Sierra Valley. It seems that all of the resources listed in the document were not fully reviewed and included in the findings. This is unacceptable.</p>	<p>We used the best available data to compile the list of special status species and acknowledged that Sierra Valley is an important bird area. Our sources for sensitive species included: the California Natural Diversity Database (CNDDDB), California Native Plant Society (CNPS) Manual of California Vegetation (2021), Harnach (2016), eBird (2021), TNC freshwater species lists generated from the California Freshwater Species Database (CAFSD) (TNC, 2021), USFWS's Information for Planning and Consultation (IPaC) portal (USFWS, 2021), Feather River Land Trust Sierra Valley Birder's Guidebook (Feather River Land Trust n.d.), Vestra (2005), and CDFW's BIOS database. We will happily add information from additional reports after the GSP is submitted if they are made available to us.</p>
<p>Plumas Audobon Society</p>	<p>More rigorous work needs to be done on this. The proposed management actions are a good start, but it is necessary to specify which Integrated Surface Waters as well as Groundwater Dependent Ecosystems will be monitored, when and how this will begin, what the ongoing commitment will be, and how data for each selected site will be reported. This is critical and the monitoring should start at the beginning of the implementation phase, i.e. February, 2021.</p>	<p>Monitoring sites for ISW will occur at the list of RMPs in table and figure 3.3.3-1. Additional monitoring sites are proposed in table and figure 3.4.1-3. The number of new RMPs strike a balance of filling data gaps and the cost of monitoring to the SVGMD.</p>

<p>John Preschutti (Plumas Forest Project)</p>	<p>As a 48-year resident of Mohawk Valley, who has been active in promoting the environmental and social health of all of eastern Plumas County, I feel that I should be considered a “stakeholder” (as anyone with these interests living in this area would be — primarily due to declining groundwater storage capabilities of the Sierra Valley Groundwater Basin and its subsequent effect on the surface water of the Upper Middle Fork of the Feather River Watershed — including Mohawk Valley.) As such, I was surprised that I was not made aware of this planning process and potential opportunity for public involvement from any official source. The lack of a physical local newspaper for almost two years due to Covid has probably contributed to this deficiency. I used to subscribe to the Feather River Reporter and would look through every issue with an eye toward articles or notices about these kinds of things. For some reason, like many others, I imagine, I didn’t make the switch to reading the newspaper online in the same manner. The “outreach” part of the documentation doesn’t address this huge hole in public outreach capabilities. Therefore, I ask that you extend the comment period due to the insufficient time I have had to review the plan, bring myself up to speed on the issues, and adequately comment. It should also be extended to such a time that a sufficient outreach program has been instituted. Additionally, the area of potential stakeholder status should be expanded to include areas of Eastern Plumas County outside the immediate groundwater basin (particularly downstream), such as Mohawk Valley.</p>	<p>We are very glad to have you engaged in this process. We will ensure that you receive the materials and information that is sent out to all interested parties. Please note that basin boundaries are established by the California Department of Water Resources. Also, a new public comment period will be after the approved GSPs are submitted to DWR; this will be noticed to all interested parties.</p>
<p>John Preschutti (Plumas Forest Project)</p>	<p>In conclusion, what I do know about existent Sierra Valley subsidence, and the associated permanent loss of the aquifer’s storage capacity, the plan should have adequate provisions for timely measuring and preventing of any groundwater overdraw.</p>	<p>Inelastic (permanent) subsidence is a physical process where the arrangement of fine-grained materials (typically clays and silts) is altered such that compaction occurs. While this compaction does result in some loss of storage in these fine sediments, the majority of useable groundwater is stored and transmitted in coarse-grained sediments which are unaffected by subsidence. Therefore, subsidence is a concern because differential deformation of the land surface can have adverse effects on engineered structures and conveyance systems (bridges, railroads, canals, etc.) on the land surface, not because of reduced subsurface storage capacity.</p> <p>The known extent and vertical displacement of subsidence in Sierra Valley is discussed in Section 2.2.2.5 of the GSP.</p>
<p>Steven Roberts</p>	<p>I believe that the habitats the ranchers use for agriculture is important; the history of our valley IS all about ranching. However, at the expense of Sierra Valley property owners, the “well is running dry” and I believe that the State, the Sierra Valley Groundwater Management District Board and the public must address and implement a sustainable groundwater plan before there is no water to split between the domestic users and the high capacity well owners. Unlike the ‘olden days’ when our water was free, I foresee a cost to water usage for all parties. The Sierraville Utility Water District recently (September 2021) implemented a substantial rate/fee increase and reduced the maximum gallon usage per household and I am monitored for usage; over-usage fees are significant. The high capacity,</p>	<p>MCR Demand Management</p>

	high volume water users should also be adequately monitored, and overdraft usage charged particularly in drought years.	
Kevin Starr	<ul style="list-style-type: none"> • A plan of this scope and size should be a multi-year process with numerous opportunities for public engagement- not just something I hear about in passing with neighbors. 	MCR Outreach
Kevin Starr	<ul style="list-style-type: none"> • Overdrafting by large scale agriculture operations in the Sierra Valley are contributing to subsidence, which should be heavily weighted in the management plan and continued abuse should come with commensurate punitive actions. 	MCR Subsidence
Kevin Starr	<ul style="list-style-type: none"> • Has impact to surface water been thoroughly studied and the water dependent ecosystems that rely on it? 	This is a data gap to be filled by recommendations in the monitoring plan described in Section 3.4.4.3
Kevin Starr	<ul style="list-style-type: none"> • The benchmark to trigger an amendment to the plan by having a certain number of domestic wells run dry would have severe, negative economic impacts to property owners. 	MCR PMAs
Kevin Starr	<ul style="list-style-type: none"> • The proposed payment structure to fund and implement the plan to fall on every property owner is not fair and should reflect a structure based on use. 	MCR GSA Rate Structure
TAC	<p>While we were provided with information regarding various aspects of the plan, the TAC essentially reviewed plan elements as they were prepared. With very few exceptions, the TAC was not engaged in collaborative planning. Our feedback was primarily provided in writing.</p> <p>Comments of individual TAC members were not shared with other TAC members, issues and concerns raised in written comments were not discussed by the group. Disposition of the comments were not shared with either the commenters or the group. In short, we feel the TAC essentially served as a group of individual plan reviewers, not a Technical Advisory Committee.</p>	More details on the TAC roles and responsibilities have been included in the attachment C of the Communication and Engagement Plan (Appendix 2-3).

TAC	Perhaps due to deadlines, we find that the draft plan we have been asked to review is incomplete and difficult, if not impossible to review. Many sections are incomplete. Some sections are completely absent. Additionally, the Groundwater Basin Model, which is required by SGMA, was not completed by the time of the Public Review Draft was released, and did not inform many critical pieces of the plan.	We understand the challenges of reviewing a plan which was still under production. There will be another 75-day period for public comments after submission to DWR.
TAC	The role of the TAC needs to be clarified. The GSAS are responsible for development and implementation of the GSP. In effect, the TAC serves at their request. We think a logical first step would be for the GSAs to articulate what they desire and expect from a TAC. This would hold for both revisions to the draft Plan and potentially, assistance in monitoring, implementing and revising the final plan. It could be that the GSAs do not wish to use a TAC, and would instead rely on their own experience and expertise.	More details on the TAC roles and responsibilities have been included in the attachment C of the Communication and Engagement plan (Appendix 2-3).
K Tanner	Portola Reporter no longer extant. Incorporated into Plumas News (www.plumasnews.com)	Comment noted.
K Tanner	quadriperforata rather than Quadriperforata	Change made
K Tanner	What is written is clear & makes sense but there seems to be a disjunction between this & statements made by at least one SVGWMD board member at the 11/03/21 meeting. The board member repeatedly stated “curtail and cut pumping is the only way” to reduce the lowering of ground water levels. Given that sentiment, perhaps this should be addressed as a primary management action. Also, if drought conditions persist, it may not be reasonable to wait 5 years to reassess this as a primary management action.	Developing a groundwater allocation system is discussed in Chapter 4, Section 4.3.7 Groundwater Trading and Allocations System. The section stated "Because this water management approach [pumping allocations] would have direct economic impact through reduced irrigation water volumes, and would require additional administration actions by the SVGMD, it is not identified in the GSP as a primary management action. Due to numerous comments/request, changed text to list pumping allocations as a potential management action IF other PMAs fail to address overdraft. Added text describing pumping can also be redistributed vertically and spatially. For example, deep ag wells can be limited to pumping from deep aquifer layers while GDEs and domestic users can extract from the upper aquifer layer.