

Corning GSP Public Comments for CSAB Meeting

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| 1 | | 2 | | | 10/17/2021 | Kathryn Vogt-Haefelfinger Quiet Hills Ranch Co. | <p>1. Communication with Landowners on the Westside</p> <p>We are joining the conversation regarding the Groundwater Sustainability Plan Draft late in the process. This is not due to lack of interest in the subject matter. Far from that. We simply did not receive information making it clear to us that our property is in the Corning Subbasin GSP. It was not until it was pointed out to us in late August of 2021 by a westside landowner that we were made aware of such and of the possibility of being affected by a per acre tax. Moving forward, we would suggest that all landowners receive information and notifications directly from you by mail. In addition, GSP information should be shared with the public and stakeholders via local newspapers.</p> <p>It is our understanding that to this day not all stakeholders are aware of the direct impact the GSP will have on them. We believe that it is of the utmost importance that GSP information reaches all landowners and domestic well owners. Stakeholders need to understand the process and the funding mechanisms and must be made aware of the impact the GSP will have on them and on their livelihood.</p> |
| 2 | | 8 | | | 10/17/2021 | Kathryn Vogt-Haefelfinger Quiet Hills Ranch Co. | <p>2. Funding - per acre fee</p> <p>We would like to voice our concerns regarding the funding of the GSP, specifically the possible per acre fee. We must point out and underline the unfairness a per acre fee would have on Westside and Dryland Landowners.</p> <p>We understand that there are several ways to fund the GSP capital projects, activities, and management. Funding mechanisms like taxes, fees and assessment each having its own benefits, limitations, and problems.</p> <p>Fairness and equity are paramount because a "one size fits all" will have potentially profound consequences for property owners and the type of land owned, including uses thereof. For instance, some landowners such as those at Quiet Hills Ranch (established in 1930), now have numerous family members as minority owners. Due to water limitations, the land can only be used for cattle operations. Income is therefore limited. If a flat tax were imposed on a per acre basis, the result would be a permanent financial loss from operations. Such a condition is not sustainable or correctable. Fairness and equity demand a funding process which does not destroy this nearly 100-year ownership. Moreover, QHR provides substantial community benefits from its operation. Wildlife is provided protection, feed, and water. Fire danger, which could have a devastating effect on numerous other people, is minimized by the annual grazing of cattle. Roads are maintained so that emergency vehicles can easily and quickly get where they need to go. Other landowners, with more water, would be forced to convert from cattle grazing to orchards, with a substantial negative impact on groundwater.</p> <p>The owner adjacent to QHR, for example, owns 509 acres, which is leased out to third party cattlemen. There are no structures on that property. There is one pond, with water only if there is sufficient runoff from the rains. A \$2.00 per acre tax would consume the entire lease income, a result which would be unfair, unjust, and inequitable in the extreme. The GSP plan for capital projects and activities would provide no benefits whatsoever to the type of owners listed above. Those benefits should be paid by those who actually benefit therefrom, not allow them to benefit at a lower effective cost at the expense of poorer landowners who receive no benefit whatsoever.</p> <p>A tax-based system would be the most unfair and inequitable. Taxes need not be directly tied to benefits or costs. The negative consequences described above would be guaranteed results, with the further effect of potentially draining water tables and enhancing fire danger and threatening wildlife otherwise provided for.</p> <p>In short, it is of critical importance that GSP funding programs - whether of taxes, fees, or assessments - take account of the actual and practical effects on landowners in a water basin with so many different land sizes, uses, and additional community benefits.</p> |
| 3 | | 7.3.2.1 | | | 10/25/2021 | Michael Ward, Stakeholder | <p>The MA does not identify that a <u>Well Inventory MA</u> will be conducted within the Tehama County portion of the subbasin. The MA needs to be applied to the entire subbasin. The <u>Well Incident Report System MA</u> states that the GSA's "could assist" Tehama County and Glenn County with a well incident reporting program. The system of well incident reporting is important to sustaining groundwater resources in the basin. This MA appears to be more of a suggestion rather than a dedicated action. Both MA's are non-committal to a basin-wide approach.</p> |

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| 4 | | 7.3.2.1 | | | 10/25/2021 | Michael Ward, Stakeholder | Chapter 7 of the GSP documents the need for additional monitoring. See Figures 7-1 and 7-2 (Figure 7-1: <i>Areas Identified with Groundwater Concerns or Protection Needs</i> ; Figure 7-2: <i>General Project and Management Action Categories and Areas of Implementation to Assist with Groundwater Sustainability</i> .) The figures show a generalized area where domestic wells have been impacted west of the City of Corning. Chapter 3, Figures 3-20 and 3-21, illustrate the need for expanded monitoring. Section 3.2.8 <i>Groundwater Conditions Data Gaps and Uncertainty</i> identified the need for “additional wells installed and/or monitored” in this area. Why hasn’t the development of the groundwater monitoring grid in this region been identified as a MA? |
| 5 | | 7.3.2.3.5 | | | 10/25/2021 | Michael Ward, Stakeholder | The GSP states that the Tehama County well permit process will be finalized within 1-year after GSP submittal. This is a lot different than what was said during the Board of Supervisors meeting held for the consideration of the well moratorium – the draft well permit ordinance was reported to be ready within 45 days. There is no scheduled commitment to evaluate land use, water use, and well permitting policy changes. Section 7.5.1 Land Use Planning states that the GSA’s will work with Glenn and Tehama Counties etc., to assist with land use. The GSA’s role will primarily focus on general plan updates with a focus to land use development, water demands, water availability, and locations of sensitive habitat including GDEs. I believe the Tehama County General Plan update is due to begin in 2025. Glenn County’s General Plan update is in progress now (https://glenncounty.generalplan.org/). The GSAs need to coordinate on the Land Use Element as soon as GSP adoption. |
| 6 | 8-1, Bullet #8 | | | | 10/24/2021 | Lerose Lane, Stakeholder | Suggest: adding for changing watersheds characteristics due to fires |
| 7 | 8-2 | 8.1 | | | 10/24/2021 | Lerose Lane, Stakeholder | Suggest: adding an organizational chart |
| 8 | 8-3, Bullet #5 and 7 | 8.1.2 | | | 10/24/2021 | Lerose Lane, Stakeholder | Should add a minimum meeting schedule for the Advisory Board and GSA Board meeting. Perhaps, quarterly meetings would be appropriate. Suggested addition in red: The GSAs may collaborate and retain consultants and contractors to execute certain activities on behalf of the GSAs with the approval of the Advisory Board and the County Board of Supervisors such as collecting data from the GSP monitoring network, developing plans for data gap investigations... |
| 9 | 8-5 | 8.2 | | | 10/24/2021 | Lerose Lane, Stakeholder | GSA administrator shall have the ability to purchase basic operational items within their allotted budget without approval from the Corning Subbasin GSA members. Suggested addition in red: Bullet #1: The levy of fees by the GSA must be verified as being reasonable and approved by the Advisory Board, and ultimately approved by the County Board of Supervisors. |
| 10 | 8-6 | | | | 10/24/2021 | Lerose Lane, Stakeholder | There appears to be no limit on the amount of fees that can be assessed. Property taxes have already been raised 15% on many landowners this last fiscal year. I was informed by the County Assessors Office that there is a plan to raise property taxes again next year. It certainly seems that the property owners within the GSP limits could be unduly taxed. Are there going to be any limitations on how much these property tax fees can be raised for the GWP, and the GWA funding? |
| 11 | | | 8-1 | | 10/24/2021 | Lerose Lane, Stakeholder | CALFED Water use Efficiency Program - Why would our GSA provide funding for the Bay - Delta water? WaterSMART USBR - Why do we want to promote water marketing from within our GSP? Would this result in our groundwater being sold outside of our counties' jurisdictions? |
| 12 | 8-8 | 8.3.1.1 | | | 10/24/2021 | Lerose Lane, Stakeholder | Second paragraph: Shouldn't there already be a tentative agreement with DWR Northern Region Office for the GSP implementation period? |
| 13 | 8-10 | | | | 10/24/2021 | Lerose Lane, Stakeholder | The deadline for submitting the first annual report to DWR may need to be extended. Until a report format is established, along with the required content, more time may be needed for report development. April 2, 2022, is fast approaching. |

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| 14 | 8-16 | 8.6.2 | | | 10/24/2021 | Lerose Lane, Stakeholder | This seems to be a duplicate effort to establish a well registration program. DWR already has a database for wells, and the well drillers are required to turn over their well logs. Most crops have a water need/requirement, and established estimates for crop type could be employed for water usage. This proposal could put an additional burden on farmers for purchasing a water meter, and for providing water usage data to the GSA. |
| 15 | 8-17 | | 8-2 | | 10/24/2021 | Lerose Lane, Stakeholder | Is there a need for peak water flows for the models? |
| 16 | 8-18, last paragraph | | | | 10/24/2021 | Lerose Lane, Stakeholder | With the current drought situation, 2-3 years for a model update may be too long. |
| 17 | 8-19, Bullet #3 | | | | 10/24/2021 | Lerose Lane, Stakeholder | This bullet point is stating that our water rights will be changed as necessary. Shouldn't this be a legislative function? |
| 18 | 8-22 and 8-23 | | 8-4 and 8-5 | | 10/24/2021 | Lerose Lane, Stakeholder | Legal services of \$50,000 per year seems too high. |
| 19 | 8-25 | | 8-6 | | 10/24/2021 | Lerose Lane, Stakeholder | How much staffing (numbers and functions) is anticipated? |
| 20 | ES-1 | | | ES-1 | 10/23/2021 | Holly E. Reimers, Landowner | The map of the Corning Subbasin shows a lot of ground on the west side of the basin. Most of the ground in the western part of the basin and those lands west and south of Black Butte Lake has little if any groundwater. These land owners are receiving no benefit from being included in this basin and should be removed. |
| 21 | ES-3 | | | | 10/23/2021 | Holly E. Reimers, Landowner | The move away from surface water to the use of groundwater in the past several years should be alarming. There has been a major change away from annual crops to perennial crops. With the increase of planting of perennial crops, i.e., trees, the overdraft of the groundwater is happening now. The use of surface water should be addressed and encouraged. |
| 22 | 2-41 | 2.7.4 | | | 10/23/2021 | Holly E. Reimers, Landowner | The use of pressurized water sources to be able to use the surface water provided from the OUWUA in place of groundwater should be encouraged. The OUWUA system is in place to also move high water during the winter months to areas that can help in the recharge of the groundwater. |
| 23 | 8.2 | | | | 10/23/2021 | Holly E. Reimers, Landowner | What does not seem to be addressed is a "fee" / "tax" on those lands within the basin. This would add to the cost with no additional benefit to the landowner. It is noted that the west side of the basin is marginal ground used primarily for the grazing of livestock. To increase the amounts that we are already paying per acre would force some to look for other means to try and hold on to their ranches. As in selling their groundwater which would not benefit the groundwater situation in the Corning Subbasin. |
| 24 | | General | | | 10/23/2021 | Holly E. Reimers, Landowner | It has come to mine and other attention that there are groups that have been formed to "farm groundwater." Exporting groundwater outside of the basin should not be allowed , especially when it is leaving the Northern California area. This is NOT SUPPORTABLE! |
| 25 | | General | | | 10/23/2021 | Holly E. Reimers, Landowner | Reading through the Corning Subbasin GSP is somewhat of a monumental task. Reading through sections 3, 4, and 5 one should at least have a graduate degree in Engineering, Hydrology, and Geology just for starters. So much of this is way over the comprehension level of the normal landowner in Northern California. My overall feeling is that what you are doing is too little, too late, as domestic wells are going dry and landowners/homeowners are having to drill deeper just to find enough water to flush their toilets. It seems that the only way to correct this path that none of us want to go down, meters on wells and being told what we can or cannot do with the ground we own. |
| 26 | ES-2 | Background | | ES-2 | 09/22/2021 | Tamara Williams, Stakeholder | If keeping this figure, substitute the word "Plan" for "Design" in this figure. The GSP isn't really a design. |
| 27 | ES-2 | Background | | ES-2 | 09/22/2021 | Tamara Williams, Stakeholder | Consider deleting this figure or replacing it with one that relates to the process described in the GSP. It doesn't provide clarity, and gives the visual impression that the GSP is going down the drain. |
| 28 | ES-1 | Background | | | 09/22/2021 | Tamara Williams, Stakeholder | The GSP process will be ongoing. Add a statement that the iterative process will continue into the future. |
| 29 | ES-3 | Background | | ES-3 | 09/22/2021 | Tamara Williams, Stakeholder | The terminology in ES-3 should be consistent with that of Figure ES-2 and the description of the development process in the text. |
| 30 | ES-3 | Background | | | 09/22/2021 | Tamara Williams, Stakeholder | 1st para, 1st sentence. The water supply isn't quantified; the use is. Since use may exceed supply in this subbasin, suggest changing "Water use in the Subbasin is largely for agricultural irrigation, which uses over 90% of the Subbasin's water supply" to read "Agricultural irrigation accounts or more than 90% of the water used in the subbasin." |
| 31 | ES 3-4 | Background | | | 09/22/2021 | Tamara Williams, Stakeholder | "Achieving groundwater sustainability" may require more than conjunctive use. It isn't clear that there will be sufficient surface water available to this subbasin to offset the potential groundwater overdraft. The Executive Summary should mention other possible management actions that will be considered. |
| 32 | Global | | | | 09/22/2021 | Tamara Williams, Stakeholder | Search and replace "sub-basin" with "subbasin" |

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| 33 | ES-5 | ES-1 | | | 09/22/2021 | Tamara Williams, Stakeholder | Last sentence needs clarification. Maybe "The Advisory Board made recommendations to the GSAs for the key plan elements; the decision making authority resided with the governing bodies of the GSAs." |
| 34 | ES-6 | ES-2 | | | 09/22/2021 | Tamara Williams, Stakeholder | 1st para, 2nd sentence. Change "comprises" to "includes." Refer to Figure ES-1 here. |
| 35 | ES-6 | ES-2 | | | 09/22/2021 | Tamara Williams, Stakeholder | 2nd para. 2nd sentence. Change to read, "There are 5 Sacramento Valley subbasins adjacent to the Corning Subbasin for which..." |
| 36 | ES-6 | ES-2 | | | 09/22/2021 | Tamara Williams, Stakeholder | 4th para. Make sure the numbers in this paragraph add up, and are consistent with the data in Section 1. 195,000 AF is 93% (closer to 95% than 90%) of 210,000 AF. It looks like the "5,000 AF" for public and other uses should be "15,000 AF." |
| 37 | ES-7 | ES-2 | | | 09/22/2021 | Tamara Williams, Stakeholder | 1st line. Black Butte Reservoir is operated by USACE. USBR operates the reservoirs upstream of Black Butte (East Park and Stony Gorge). |
| 38 | ES-7 | ES-2 | | ES-4 | 09/22/2021 | Tamara Williams, Stakeholder | 2nd full sentence and Figure ES-4 title. Change "providers" to "districts." |
| 39 | ES-7 | ES-2 | | | 09/22/2021 | Tamara Williams, Stakeholder | 1st full para. My understanding is that some small farmers west of I-5 had their surface water cut off completely during 2021, and stopped irrigating their orchards and crops. Because of the low groundwater levels in this area, and the number of domestic wells that weren't deep enough to tolerate increased groundwater pumping this season, neighbors opted to cease irrigation. |
| 40 | ES-8 | ES-2 | | | 09/22/2021 | Tamara Williams, Stakeholder | 1st full sentence. CASGEM not CSAGEM. |
| 41 | ES-8 | ES-2 | | | 09/22/2021 | Tamara Williams, Stakeholder | Last paragraph. This paragraph gives the impression that the stakeholders involved in the GSP represented the range of groundwater users with concerns about sustainability. My observation is that only a few members of the public that aren't large land owners were involved. First sentence - Delete the word "robust." Last sentence - Delete the word "extensive." Effective public outreach results in public participation. In my opinion, the outreach program didn't effectively involve the public. |
| 42 | ES-9 | ES-3 | | | 09/22/2021 | Tamara Williams, Stakeholder | 2nd paragraph. Please have a Geologist review/revise this paragraph. |
| 43 | ES-10 | ES-3 | | | 09/22/2021 | Tamara Williams, Stakeholder | 3rd full paragraph. 2nd sentence. Please clarify. Don't USBR and USACE both manage for flood control and irrigation? I think it should be "The Sacramento River and Stony Creed are dammed and managed by USBR and USACE for flood control and irrigation supply." |
| 44 | ES-10 | ES-3 | | | 09/22/2021 | Tamara Williams, Stakeholder | 4th full paragraph states: "The Sacramento River and the other creeks, to a lesser extent, provides a significant source of groundwater recharge to the alluvial aquifer. Surface water flow and recharge of groundwater aquifers is greatest in the winter and spring when precipitation is highest; flow in the river and creeks in the summer and fall dry season is generally supported by baseflow from groundwater and very little groundwater recharge occurs." Doesn't Sacramento River provide groundwater recharge in the dry season? See 3.2.7.1 and Figure 3-53. |
| 45 | ES-11 | ES-3 | | | 09/22/2021 | Tamara Williams, Stakeholder | 1st bullet. "Cotemperaneous" should be "contemporaneous" |
| 46 | ES-11 | ES-3 | | | 09/22/2021 | Tamara Williams, Stakeholder | 2nd bullet. Definition of the aquifer properties is limited throughout the Corning Subbasin. No need to call out the Tehama and Tuscan here. |
| 47 | ES-12 | ES-3 | | | 09/22/2021 | Tamara Williams, Stakeholder | Last paragraph. Second sentence. There wasn't a "positive" change in storage; that would be reflected by rising water levels over time. In fact, water levels away from the Sacramento River generally had a gradual overall decline through the 20th century. Maybe say "with minor change in storage over time." |
| 48 | ES-14 | ES-3 | | | 09/22/2021 | Tamara Williams, Stakeholder | Interconnected Surface Water. First paragraph. Last sentence. Include seasonal observations of streambed conditions, including the presence or absence of water in the streams in areas of concern. The magnitude of streambed erosion and aggradation (local changes in streambed elevation), compared with static as well as pumping groundwater level elevation fluctuations will be important to understand, monitor, and address impacts on interconnected surface water. |
| 49 | ES-15 | ES-3 | | | 09/22/2021 | Tamara Williams, Stakeholder | Groundwater Dependent Ecosystems. For context, suggest referencing DWR's California Groundwater Update 2020 - Highlights, which states that "groundwater dependent ecosystems and interconnected surface water are management topics in need of greater attention, engagement, and data collection across the state." |
| 50 | ES-15 | ES-3 | | | 09/22/2021 | Tamara Williams, Stakeholder | Groundwater Dependent Ecosystems. Low groundwater level conditions over the past few decades likely reduced the extent of groundwater dependent ecosystems. The GSAs and the GSP should provide for the eventual recovery of those ecosystems where they would be expected when water levels recover and stabilize. |

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| 51 | ES-15 AND Section XX | ES-3 | | | 09/22/2021 | Tamara Williams, Stakeholder | Sustaining groundwater in perched zones, which in turn support GDEs, should be addressed in this document. While it may be beyond the scope of this GSP to characterize all the perched aquifers in the subbasin, the basinwide potential for their recovery and sustainability should be included. Monitoring for changes in GDE vegetation using satellite imagery should not be limited to just those areas where GDEs are present under today's conditions. |
| 52 | ES-15 | ES-3 | | | 09/22/2021 | Tamara Williams, Stakeholder | Last 2 paragraphs - It's not clear how these statements regarding Data Gaps pertain to Seawater Intrusion. Should there be a separate Data Gaps heading? |
| 53 | ES-17 | ES-4 | | | 09/22/2021 | Tamara Williams, Stakeholder | 1st bullet - How can there be a gain in groundwater storage when groundwater levels have been declining over the historical period? |
| 54 | ES 16 - 19 | ES-4 | | | 09/22/2021 | Tamara Williams, Stakeholder | SECTION ES-4 -- This discussion is much too difficult to follow for an Executive Summary. Reiterate the relationship between water level elevations and groundwater storage. Part of the confusion here is that groundwater storage is not a function of time; it's an instantaneous metric. If recharge to the basin keeps up with production, there should be no change in storage. If recharge is induced by pumping near the river, for example, there can be an increase in groundwater production with no change in storage. But if water levels are declining in a portion of the subbasin, there is, by definition, a decrease in groundwater storage in that portion of the subbasin. |
| 55 | ES-19 | ES-4 | | ES-7 | 09/22/2021 | Tamara Williams, Stakeholder | The 2070 Simulation Pie Chart shows "Net Groundwater Discharge to Streams" as being an inflow. Please correct this. Either it's recharge from streams/streams, or it belongs on the outflow side of the pie chart. |
| 56 | ES-20 | ES-5 | | | 09/22/2021 | Tamara Williams, Stakeholder | 1st paragraph, last sentence. Suggest modifying to read, "... to manage for and demonstrate sustainability...." |
| 57 | ES-23 | ES-6 | ES-1 | | 09/22/2021 | Tamara Williams, Stakeholder | Chronic Lowering of Groundwater Levels, Reduction of Groundwater Storage, and Depletion of Interconnected Surface Water in areas of declining wells - The SMC (specifically the Minimum Thresholds, Measurable Objectives, and Undesirable Results) for Declining Wells are not protective of the shallower groundwater resources, well owners/users whose wells are not deep, and groundwater dependent ecosystems in the areas of declining wells. In areas of declining water levels, the 2015 water levels likely represented overdraft conditions, and should be revisited during the implementation of the GSP for their appropriate use as a Measurable Objectives for these Sustainability Indicators. |
| 58 | ES-24 | ES-7 | | | 09/22/2021 | Tamara Williams, Stakeholder | Second bullet -- Include non-agricultural water uses. Best practices should be developed and implemented for any significant commercial, industrial, recreational, or other future water use in the subbasin. |
| 59 | ES-25 | ES-7 | ES-2 | | 09/22/2021 | Tamara Williams, Stakeholder | Well Management Program - Purpose -- Include better understanding of groundwater use in this Management Action. ("Better understand well and groundwater use distribution in the Subbasin...") |
| 60 | ES-27 | ES-8 | | | 09/22/2021 | Tamara Williams, Stakeholder | 4th bullet -- Include informing the public as part of the purpose of the annual and 5-year reports. ("...to inform DWR and the public on the status...") |
| 61 | 1-10 | 1 | | | 10/01/2021 | Tamara Williams, Stakeholder | 1st paragraph. The statement "The water budget was based on the best available information and an integrated hydrologic modeling tool," seems misleading. The model doesn't accurately represent the observed reduction in storage, as evidenced by declining water levels in the subbasin. The inconsistency between the modeling results and observed conditions should be discussed. |
| 62 | 2-63 and 2-78 | 2.16 | | | 10/25/2021 | Tamara Williams, Stakeholder | Notice and Communication. As a stakeholder and interested party who participated in the GSP process, I'd like to share my perspective and observations. (Part 1) About me: I came to the process as a native of the Corning Subbasin (Corning Union High School class of 1971) with a keen interest and professional background in groundwater. Both my parents were born in Corning. My father, Glen Williams, was a licensed water well drilling contractor in Tehama County from the 1940s until the 1990s. He learned the trade from his father-in-law, Orenzo L. Wilder (born near Paskenta in 1882), and Orenzo's brother-in-law, Henry Grieve, who began drilling water wells in the area in the 1920s. Fascinated by the subsurface, I received a Bachelors Degree in Geology from UC Davis in 1975, and began working in geology and groundwater consulting in 1977. I became a California Registered Professional Geologist in 1985, and Certified Engineering Geologist in 1989. Much of my career involved groundwater resource development, protection, and remediation. Since 2015, I've been retired. My mother, Katherine "Faye" Wilder Williams still lives in Tehama County. Our family owns and continues to manage the property Mom was born on in Corning (just west of I-5), which includes about 10 acres of Sevillano olives. We have a 450' deep irrigation/domestic well. |

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| 63 | 2-63 - 2-78 | 2.16 | | | 10/25/2021 | Tamara Williams, Stakeholder | <p>Notice and Communication. As a stakeholder and interested party who participated in the GSP process, I'd like to share my perspective and observations. (Part 2)</p> <p>My participation in the Corning Subbasin GSP. From the first meeting of the Corning Subbasin Advisory Board (CSAB) that I attended (virtually, due to the Covid-19 pandemic restrictions) in 2020, I have been concerned about the limited involvement of other domestic well owners and small farmers. The opportunities for public comment during CSAB and Tehama County Groundwater Commission meetings have involved minimal feedback, response, or follow-up from board and commission members. The GSA staff and consultants have been helpful and encouraging. My understanding is that the limited participation by domestic well owners and small farmers in the GSP process is common in rural subbasins such as Corning. I have made suggestions for improving outreach, and have expressed my concerns regarding the lack of consideration and protection for domestic well owners and groundwater dependent ecosystems during the GSP development process. Most of them are reiterated in these comments on the Public Review Draft. I hope some of them will be considered and incorporated in the GSP implementation phase. I have tried to channel my father and grandfather's stewardship perspective on the incredible, but fragile groundwater resources of this area.</p> |
| 64 | 2-65 | 2.16.2 | | | 10/23/2021 | Tamara Williams, Stakeholder | The importance of protecting the shallow groundwater in the western half of the Corning Subbasin is heightened by the fact that the groundwater users comprise a Disadvantaged or Highly Disadvantaged Community. Having wells go dry here is not acceptable from a social justice perspective if there are measures that could be taken to reduce/reverse drops in water levels. Identifying the DACs is an important first step. |
| 65 | 2-65 | 2.16.2 | | | 10/25/2021 | Tamara Williams, Stakeholder | Implementation of the GSP, including adaptive management, will require direct representation of the interests of all basin users. This should be included as a Data Gap, and a Management Action should be added to ensure the GSP implementation considers and protects the interests of all beneficial users. |
| 66 | 2-65 | 2.16.3 | | | 10/23/2021 | Tamara Williams, Stakeholder | Section 2.16.3 states that, "The C&E Plan will be updated prior to finalization of this GSP to reflect changes and adaptations to the process and will constitute a living document for further updates during GSP implementation." The C&E Plan included in this Public Review Draft of the GSP (Appendix 2A) only covers the period of GSP development (2019-2022). Public review of the Final C&E Plan needs to be accompanied by increased outreach and involvement, particularly among the Disadvantaged and Highly Disadvantaged Communities (Figure 2-22) that make up the west side of the subbasin. Without that, the GSP process will continue to be an elitist effort, controlled by large groundwater user interests. I recommend that the GSAs assign a local community liaison who is responsible for ongoing face-to-face outreach, participant coordination, and representation for the domestic well and small farm owners. |
| 67 | 2-69 | 2.16.3.2 | 2-11 | | 10/23/2021 | Tamara Williams, Stakeholder | Themes 3 and 4. The way that these apparently conflicting themes were addressed allows for shallow wells to go dry, while maintaining "operational flexibility" for deeper, high production wells. This results in an apparent bias in that favors the large groundwater producers. |
| 68 | 2-75 | 2.16.3.4 | | | 10/23/2021 | Tamara Williams, Stakeholder | Public contact was primarily electronic. This skewed the profile of members of the public who have been involved in the Corning Subbasin GSP. Many people in the more rural areas of the subbasin don't have good internet access and aren't skilled in electronic communication. |
| 69 | 2-78 and 4-2 | 2.16.4; App 2F; 4.1.1 | | | 10/23/2021 | Tamara Williams, Stakeholder | Clarification of Comment and Response during Comments on Section 4. Comment #8 and GSP Development Team Response. Meeting minimum thresholds, which are based on static water levels, will not prevent localized upwelling of saline groundwater which could happen during pumping, but wouldn't be evident in the static water level data. |
| 70 | 3-1 | 3.1.2 | | | 10/18/2021 | Tamara Williams, Stakeholder | North lateral boundary description should read: "North – Thomes Creek from around Flournoy in the <u>west</u> to its junction with the Sacramento River in the <u>east</u> ." |
| 71 | 3-21 | 3.1.6.1.4 | | | 10/18/2021 | Tamara Williams, Stakeholder | Black Butte Fault description should read, "... cutting through the <u>western</u> half of the Subbasin..." |
| 72 | 3-52 | 3.2.2.2 | | | 10/18/2021 | Tamara Williams, Stakeholder | The description of the trends in water level elevations are accurate, showing an overall decline from 2000-2018. While the increase in groundwater reliance is due, in part, to the shift from surface water to groundwater for irrigation, the increase in irrigation due to planting of new crops and associated installation of new ag wells also contributed to the increased groundwater extraction, and should be mentioned here. |
| 73 | 3-57 | 3.2.2.3 | | | 10/18/2021 | Tamara Williams, Stakeholder | The final sentence of the West area description reads, "Expansion of orchards and other irrigated crops will continue to increase demand for groundwater and result in a decrease in groundwater levels in this area." This is an acknowledgement of the unsustainability of the land development trend here. |

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| 74 | 3-60 | 3.2.2.4 | | | 10/24/2021 | Tamara Williams, Stakeholder | 1st paragraph. Last sentence states: "Wells located closer to the Sacramento River may benefit from a greater degree of applied surface water, direct recharge from the river, and direction of groundwater flow from east to west toward the Sacramento river." Suggest deleting the last statement; groundwater flow toward the river would be from west to east. Localized flow directions likely depend on groundwater pumping and river level conditions. Consider stating that wells closer to the Sacramento River benefit from less groundwater pumping due to the availability of surface water for irrigation (if that's correct), and generally good hydraulic connection with the Sacramento River which has artificially sustained flow through the dry season. The fact that shallow wells (<100' deep) near the river have been going dry suggests that groundwater recharge from the river isn't keeping up with pumping stresses near the river and upgradient during dry periods. |
| 75 | 3-69 | 3.2.2.7 | 3.6 | 3.29 | 10/18/2021 | Tamara Williams, Stakeholder | p. 3-69. 2nd sentence. The collapsing of the vertical gradients exhibited at this well cluster is worth exploring further during the implementation of the GSP. It could be due to increased vertical conductivity caused by installation of wells in the area, or simply the overstressing of the deeper zones with pumping exceeding recharge. |
| 76 | 3-73 and 3-74 | 3.2.3 | | | 10/18/2021 | Tamara Williams, Stakeholder | If the model is accurate, the simulated storage picture described here (with an average annual increase in storage of 6,900 AF) should be reflected in increased water levels over time, which we haven't seen subbasin-wide. It would appropriate to mention this in the text, with a brief discussion of how the model input might be adjusted in the future to better simulate the changes in storage evidenced by the hydrographs of observed water levels. |
| 77 | 3-95 | 3.2.6.3 | | | 10/18/2021 | Tamara Williams, Stakeholder | The statement " the lower zone is generally no deeper than 250-300 feet bgs within the Subbasin," is confusing. Should it read, "the upper zone is generally no deeper than 250-300 feet bgs with the Subbasin"? |
| 78 | 3-109 | 3.2.7.1 | | | 10/18/2021 | Tamara Williams, Stakeholder | Thomes Creek. To the extent Thomes Creek becomes disconnected and goes dry due to pumping, shouldn't the GSPs for the Corning and Red Bluff Subbasins be addressing this depletion of surface water and the effects on riparian users and ecosystems? |
| 79 | 3-124 | 3.2.8 | | | 10/18/2021 | Tamara Williams, Stakeholder | Groundwater Conditions Data Gaps and Uncertainty. Given the discrepancy between simulated storage and hydrographs of observed water levels, this should be identified here, and actions should be proposed in Section 7 to better quantify changes in storage. |
| 80 | 4-2 | 4.1.1 | | | 10/25/2021 | Tamara Williams, Stakeholder | Bottom of model is no-flow boundary representing base of freshwater. Make sure that there is a methodology for ensuring that upward migration of high-TDS water doesn't happen due to upward vertical gradients created during pumping. Clarification of Comment and Response during Comments on Section 4. Comment #8 and GSP Development Team Response. Meeting minimum thresholds, which are based on static water levels, will not prevent localized upwelling of saline groundwater which could happen during pumping, but wouldn't be evident in the static water level data. |
| 81 | 4-16 | 4.1.4 | | | 10/19/2021 | Tamara Williams, Stakeholder | The first bullet is misleading. It begins, "As viewed over the entire historical period, the Corning Subbasin has not been subject to overdraft, as the change of groundwater in storage is positive, with groundwater inflows exceeding groundwater outflows". Suggested revision: "As simulated over the entire historical period, it would appear that the Corning Subbasin has not been in overdraft, with simulated inflows exceeding simulated outflows; however..." |
| 82 | 4-16 | 4.1.4 | | | 10/19/2021 | Tamara Williams, Stakeholder | 3rd bullet. Last sentence. This key water budget take-away point highlights the critical need to coordinate analysis and management across subbasin boundaries during GSP implementation. Inter-subbasin coordination, particularly between the Red Bluff and Corning Subbasins, should be incorporated into the immediate actions to be taken. |
| 83 | 4-16 | 4.1.4 | | | 10/19/2021 | Tamara Williams, Stakeholder | 4th bullet. States "Cumulative and annual change in storage is slightly declining in the current water budget simulation compared to the historical water budget; therefore, if water management strategies remain the same as they are now, the Subbasin will continue to experience groundwater level and storage declines and an overall worsening of conditions compared to historical conditions." This is a critical point. Make sure it is clearly addressed in actions to be taken. |
| 84 | 4-16 | 4.1.4 | | | 10/19/2021 | Tamara Williams, Stakeholder | 5th bullet. Last 2 sentences are misleading. Suggest modifying to read: "The simulated historical average annual change of groundwater in storage is 6,900 AF, which would indicate a subbasin generally in balance over the historical time period. The calculated cumulative gain in groundwater storage of 290,300 AF over the historical simulation period is not consistent with the observed declining trends in water levels, indicating that the model needs calibration during the GSP implementation phase. " |
| 85 | 4-17 | 4.1.4 | | | 10/19/2021 | Tamara Williams, Stakeholder | 1st full bullet on p. 4-17. Unless it's required by SGMA guidance, suggest not calculating comparisons based on the simulation of historic conditions which do not appear to be consistent with observed overall decrease in storage. |
| 86 | 4-17 | 4.1.4 | | | 10/19/2021 | Tamara Williams, Stakeholder | 4th bullet. 2nd sub-bullet: Suggest adding statement that management actions and/or projects may be needed. |
| 87 | 4-17 | 4.1.4 | | | 10/19/2021 | Tamara Williams, Stakeholder | 4th bullet. 3rd sub-bullet: Management actions and projects will definitely be needed under these conditions. The GSP should be clear about this. |

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| 88 | 4-18 | 4.1.4 | | | 10/19/2021 | Tamara Williams, Stakeholder | In the spirit of SGMA, suggested revision: Simulated projected water budgets, incorporating changes in conditions as well as projects and management actions undertaken , along with sustainability indicator monitoring and SMC evaluation, will provide "proof" of continued sustainability during GSP implementation." |
| 89 | 4-19 | 4.1.4 | | Fig 4-6 | 10/19/2021 | Tamara Williams, Stakeholder | General notes on groundwater budget simulations. 1. The increase in storage shown on the pie charts for simulated historic and current conditions doesn't pass the straight-face test. 2. Confirm that the text is clear that the simulation input for net subsurface inflow (or outflow) will need to be consistent with the adjacent subbasin simulations and reporting. |
| 90 | 4-69 | 4.4.2 | | | 10/19/2021 | Tamara Williams, Stakeholder | The following important statement seems hidden here: "Trends in land and surface water use not incorporated in these simulations, such as increases in total irrigated acreage or conversion from non-irrigated lands to orchards, may further exacerbate any changes associated with climate change and result in a less sustainable groundwater budget." A statement such as the following needs to be included somewhere (if it's not already clear in Sections 7 and 8): "Any increases in irrigated acreage or orchards will need to be offset by conservation or other management actions to maintain groundwater sustainability." |
| 91 | 5-14 and 5-17 | 5.2.6 | | 5-4 and 5-5 | 10/20/2021 | Tamara Williams, Stakeholder | p. 5-14. 3rd full paragraph. Please check text vs. figures. The data gap noted "along the Sacramento River to the southeast of Corning" is not shown on either of the referenced figures. |
| 92 | 5-27 | 5.4.1.6 | | 5-8 | 10/20/021 | Tamara Williams, Stakeholder | Consider including additional wells in the monitoring network to identify potential salinity increases due to upward migration of poor quality water from the deep zones that are below the base of fresh water. There's a data gap for the TDS SMC on the west side of the basin, where such degradation could occur due to deep wells locally reducing the head and inducing upward flow from the deeper non-potable units. Alternatively, a small separate project could be implemented to gather and evaluate data in that area, with the possibility of expanding the monitoring network or taking other management action. |
| 93 | 5-31 | 5.4.3 | | | 10/20/021 | Tamara Williams, Stakeholder | 1st paragraph, 3rd sentence states: "There are currently no prominent spatial data gaps in the groundwater quality monitoring network." See comment on 5.4.1.6 regarding the data gap on the west side of the basin. |
| 94 | 5-42 | 5.7.1 | | | 10/20/021 | Tamara Williams, Stakeholder | p. 5-42. Bulleted list of monitoring well attributes. In addition to screened intervals, please confirm that the DMS includes the gravel packed interval(s) for each well. Many deep wells in this subbasin are gravel packed over a much larger interval than the screens, which can lead to errors in data interpretation. |
| 95 | 4 of 60 | App. 6A | | 6A-2 | 10/20/021 | Tamara Williams, Stakeholder | Excluding domestic wells greater than 30 years old for this analysis is not protective of domestic well owners, who comprise the outlying rural communities of Tehama County. Many shallow wells much older than 30 years are still in use; the owners have no intention of replacing them simply based on their age. It isn't valid to assume that those well owners should bear the inconvenience and financial burden of replacing or deepening their older shallow functional wells in order to allow uninhibited pumping of deeper (primarily large agricultural) wells that contribute to the lowering of groundwater levels in the aquifer system. |
| 96 | 6 of 60 | App. 6A | | | 10/20/021 | Tamara Williams, Stakeholder | While it's not the measurable objective put forward in the current Draft GSP, it's worth noting that the text states: "The measurable objective was refined to be the maximum spring water level in 2012; this value provided more operational flexibility than the initial proposed 2012 minimum values." The concept of operational flexibility (setting objectives that are less protective of shallow wells) appears to be for the benefit of large pumpers and the GSA, since the GSA would be required under SGMA to take action if the measurable objective is not being met. It provides insight into the priorities of the CSAB at that meeting. |
| 97 | 6-7 | 6.5 | 6-1 | | 10/20/021 | Tamara Williams, Stakeholder | Chronic Lowering of Groundwater Levels - Minimum Thresholds. The purpose of the 20-ft buffer for Stable Wells, and the 20%-of-minimum-groundwater-depth buffer is unclear. These buffers don't seem protective of shallow wells prior to the 2042 goal for meeting measurable objectives. |

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| 98 | 6-7 | 6.5 | 6-1 | | 10/20/021 | Tamara Williams, Stakeholder | Section 6.6 text-- Chronic Lowering of Groundwater Levels - Undesirable Result. "20% of groundwater elevations measured at RMP wells drop below the associated minimum threshold during 2 consecutive years. If the water year type is dry or critically dry then levels below the MT are not undesirable if groundwater management allows for recovery in average or wetter years." <i>What does this mean? How many RMP wells are there (20% of RMP wells = ?? wells) Do WLS need to stay below the MT throughout two years, or just drop below for one measurement during each year? When is the water year type announced, and how might that effect the users? How will it be determined that the WLS can recover? What if we don't have an average or wetter year for a long time?</i> The GSAs shouldn't allow the Corning Subbasin to fall below the MTs, even if DWR doesn't consider it an Undesirable Condition. Making the commitment to sustainability in the face of extreme conditions will provide more assurance that the GSAs remain in control of the Subbasin management. Given the potential dire consequences of not taking action during an extended dry or critically dry period, the GSP should provide a proactive approach to protecting users from low water level conditions during and after "unexpected" dry times. It would be prudent for the GSP to include increased vigilance and protective actions, despite the allowances made in SGMA for the GSAs not being held accountable during those times. |
| 99 | 6-7 | 6.5 | 6-1 | | 10/20/021 | Tamara Williams, Stakeholder | Section 6.8 text -- Degraded Groundwater Quality - Undesirable Result. "At least 25% of representative monitoring sites exceed the minimum threshold for water quality for two (2) consecutive years at each well where it can be established that GSP implementation is the cause of the exceedance." <i>What does this mean? 25% of monitoring sites exceed the MT for 2 consecutive years at each well? How many monitoring sites? (25% of monitoring sites = ?? wells) What does "at each well" mean? This doesn't seem to protect against a localized problem caused by overpumping. Suggest replacing "At least 25% of representative monitoring sites exceed" with "Any monitoring site exceeds."</i> |
| 100 | 6-7 | 6.5 | 6-1 | | 10/20/021 | Tamara Williams, Stakeholder | Section 6.10 text. Depletion of Interconnected Surface Water - The SMCs don't address the potential for impacts to GDEs supported by perched groundwater away from streams. <i>Include in data gaps and conduct field survey of green areas shown on potential GDE map that are away from the Sacramento River and main creeks. Using the buffered MTs proposed for Chronic Lowering of Groundwater Levels may not be protective of GDEs. I don't think we have sufficient inventory and understanding of the hydrologic requirements of the species in these GDEs. Suggest field surveys of all mapped potential GDEs?</i> |
| 101 | 6-10 | 6.6.2.1 | | | 10/20/021 | Tamara Williams, Stakeholder | Last paragraph. 2nd sentence. The GSP seems to avoid attributing water level declines to increased pumping for new orchards. Suggest replacing "increased reliance on new wells which lead to increased groundwater pumping" with "increased reliance on groundwater for crops previously irrigated with surface water, and pumping of new wells for new orchards." |
| 102 | 6-11 and 6-12 | | | 6-1 and 6-2 | 10/20/021 | Tamara Williams, Stakeholder | The areas of "Decline" and Slight Decline" in both Shallow and Deep RMP Wells are very similar to the areas delineated as Disadvantaged and Highly Disadvantaged Communities (Figure 2-22). As stated in Section 2.16.2, "Identification of DACs helps ensure the GSP adequately protects all beneficial users." |
| 103 | 6-13 | 6.6.2.1 | | | 10/20/021 | Tamara Williams, Stakeholder | Projected model simulation results. If the simulations indicate that water levels will drop 10-20 feet over the planning period if water use remains the same, shouldn't the GSP be designed to keep the subbasin in balance instead of allowing mining of groundwater to a "new low level" in the face of changing climate conditions? Establishing "buffers below historical groundwater levels to account for projected climate change impacts" is not a sustainable approach to groundwater management. |
| 104 | 6-13 | 6.6.2.1 | | | 10/20/021 | Tamara Williams, Stakeholder | Revised minimum thresholds. I strongly oppose the use of "buffers" below historic low water levels to establish MTs. While this approach might seem easier and more flexible (i.e., less conflict with large pumpers) to gain buy-in and implement in the near term, it has the potential to delay the tough decisions (e.g., pumping restrictions) to a point where the basin can't get avoid being in long-term overdraft. |
| 105 | 6-20 | 6.6.2.2 | | | 10/20/021 | Tamara Williams, Stakeholder | 2nd paragraph, 2nd bullet states, "Filter out wells drilled earlier than 1991 (or 30 years old, which is a typical and anticipated lifespan for domestic wells in the area)." SEE COMMENT on APPENDIX 6A, p. 6 of 40. |
| 106 | 6-20 | 6.6.2.2 | | | 10/20/021 | Tamara Williams, Stakeholder | Last sentence. Keeping 25 feet of water above the bottom of a domestic well really isn't conservative, or protective of the well owner; it's practical. Consider deleting this statement. |
| 107 | 6-21 | 6.6.2.2 | | | 10/20/021 | Tamara Williams, Stakeholder | First sentence. For clarity, revise to read, "...approximately 16% of domestic wells <i>installed since 1991</i> are at risk of getting impacted." |
| 108 | 6-21 | 6.6.2.2 | | | 10/20/021 | Tamara Williams, Stakeholder | Last sentence. Suggest modifying this sentence to read: "As a comparison, fall 2015 groundwater elevation intersected with domestic wells depths showed approximately 4% of those domestic wells potentially dry (Figure 6-7)." |
| 109 | 6-22 through 6-24 | 6.6.2.2 | | 6-5, 6-6, and 6-7 | 10/20/021 | Tamara Williams, Stakeholder | It's odd that the well locations don't seem to plot the same on all three of these figures. And some wells are shown on one figure and not the others. Maybe add a brief note explaining why. |

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| 110 | 6-25 | 6.2.2.2 | | | 10/20/021 | Tamara Williams, Stakeholder | Top of page. I disagree with the statement, "...it is impractical to manage a groundwater basin in a manner that fully protects the shallowest wells." The shallowest wells have already gone dry in the absence of aggressive basin and land-use management. |
| 111 | 6-25 | 6.2.2.2 | | | 10/20/021 | Tamara Williams, Stakeholder | 1st paragraph, 3rd sentence states, "During the 5-year update to this GSP, a more robust database of domestic wells may be available for the Subbasin in order to estimate potential impacts of minimum thresholds on a well-by-well basis and identify domestic wells that are no longer in use or should be replaced to comply with more recent well standards." How should a shallow well owner respond to this? Please offer something other than a robust database, and a condemnation of their well. |
| 112 | 6-26 | 6.2.2.3 | | | 10/20/021 | Tamara Williams, Stakeholder | Land Subsidence. Provide support for the statement, "However, the potential amount of pumping-induced subsidence should disappear within the 20-year timeframe for achieving sustainability." Maybe explain that the maximum amount of subsidence associated with XX feet of water level decline could be YY feet. If there's irreversible subsidence, it won't "disappear within the 20-year timeframe," but it might not be serious. |
| 113 | 6-26 | 6.2.2.3 | | | 10/20/021 | Tamara Williams, Stakeholder | Depletion of Interconnected Surface Waters. It sounds like the water level MTs are not protective of interconnected surface waters. Is that OK? |
| 114 | 6-38 and 6-39 | 6.7.4.1 and 6.7.4.2 | | | 10/20/021 | Tamara Williams, Stakeholder | 6.7.4.1 - last paragraph states: "Low quantities of groundwater in storage during unanticipated future droughts or unanticipated climatic conditions do not constitute an undesirable result." This appears to be the opposite of what's stated on the next page. 6.7.4.2 - 2nd bullet: "Drier than expected conditions may reduce groundwater in storage to an undesirable result." One of these needs to be corrected. It would be good to avoid the confusion between "Undesirable Result" as defined by SGMA, and a result that would be undesirable for groundwater users/uses but not from a SGMA compliance standpoint. Maybe use a term like "actionable" or "red-flag" or "condition of concern," in which case the GSAs would take a conservative approach and commit to evaluating management actions or projects to reduce the risk of long-term unsustainability. |
| 115 | 6-45 | 6.8.4.2 | | | 10/20/021 | Tamara Williams, Stakeholder | 2nd paragraph. This discussion implies that, for the purpose of determining undesirable results, implementation of the GSP is limited to GSA projects or activities. It seems that this should extend to water quality degradation resulting from groundwater extraction that would otherwise be allowed under the GSP. In other words, lack of intervention could result in water quality degradation that would be considered an undesirable results. |
| 116 | 6-61 | 6.10.2 | 6-5 | | 10/20/021 | Tamara Williams, Stakeholder | The minimum threshold as applied to these near-stream wells does not appear to be protective against the depletion of interconnected surface waters. For this indicator, consider using the minimum Fall groundwater elevation since 2012 for the minimum threshold, with no buffer. |
| 117 | 6-64 | 6.10.2.3 | | | 10/20/021 | Tamara Williams, Stakeholder | In adjacent subbasins, "The methods used to select the minimum thresholds were slightly different in each case but generally result in minimum thresholds that are equivalent to or slightly lower than the historical minimum measured groundwater levels." Using the minimum Fall groundwater elevation since 2012 for the minimum threshold, with no buffer would be more consistent with adjacent subbasin minimum thresholds than including the 20 foot buffer. |
| 118 | | 7.2.4 | | | 10/25/2021 | Tamara Williams, Stakeholder | Consider incorporating action(s) that could be taken to refine inflow and outflow estimates for the storage simulations such that simulated conditions better reflect measured water levels and trends. (see comment on Section 3.2.8) |
| 119 | 7-11 | 7.3.2.1 | | | 10/21/2021 | Tamara Williams, Stakeholder | Well Management Program. Education and Outreach. This program should provide for well-instrumented aquifer testing by third parties in areas where shallow wells are going dry to better understand the local relationship between deep well pumping and shallow groundwater levels. This will enable a more informed approach to cooperative groundwater management and reaching sustainability. Facilitating conversations between domestic well owners and nearby ag well owners is critical to building the trust needed for an effective GSP. |
| 120 | 7-12 | 7.3.2.1 | | | 10/21/2021 | Tamara Williams, Stakeholder | Well Incident Reporting System. Last sentence. In addition to well owners and drillers, include pump service folks in the outreach and communication for this action. |
| 121 | 8-3 | 8.1.2 | | | 10/21/2021 | Tamara Williams, Stakeholder | 4th bullet. Public Outreach and Notification. This is a critical role of the GSAs, and one that needs improvement over the performance during GSP development. Electronic communication is not an effective way to engage the rural community members in this subbasin. Methods such as door-to-door outreach, leafletting or paper mailing, community bulletin boards in local businesses, coverage in local papers (beyond the legal notices that have been placed in the Corning Daily Observer and Red Bluff Daily News), use of marquees, and radio announcements should be budgeted for and pursued. |
| 122 | 8-4 | 8.1.3 | | | 10/21/2021 | Tamara Williams, Stakeholder | Communication and Outreach. This effort must improve going forward. While the Corning Subbasin website is useful for those of us who are comfortable with our computers, many stakeholders simply do not get their information that way. It will be imperative for the GSAs to have a face in the communities they serve. |

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| 123 | 8-12 | 8.4.2 | | | 10/21/2021 | Tamara Williams, Stakeholder | 1st paragraph in 8.4.2. The statement, "Results of the various data gaps investigations will be incorporated into the required GSP 5-year update," should be broadened to ensure that annual reports include the evolving understanding of basin conditions. As stated in 8.3.2 Reporting, Annual Reports, "the annual reports may also serve as amendment(s) to the GSP as the monitoring networks are refined and understanding of basin conditions are enhanced." |
| 124 | 8-12 | 8.4.2 | | | 10/21/2021 | Tamara Williams, Stakeholder | Aquifer Testing. The potential objectives of aquifer testing in this subbasin should be clarified. While the criteria identified for wells suitable for including in a aquifer test are valid, it would be useful to describe the purpose of aquifer testing, along with a brief summary of appropriate test methodologies to answer specific questions about subbasin sustainability should be expanded upon. Do we need pumping tests, step tests, constant head tests? Additionally, if a particular well is suspected of causing unacceptable impacts to other users, it shouldn't be excluded from testing just because it doesn't meet all the criteria listed. |
| 125 | 8-13 | 8.4.2 | | | 10/21/2021 | Tamara Williams, Stakeholder | GDE Mapping. GDE mapping shouldn't be limited to areas immediately adjacent to streams. The vigor of native trees and other deep-rooted vegetation should be monitored to ensure that avoidable lowering of shallow groundwater levels aren't contributing to the loss of native vegetation away from streams or wetlands. For example, Valley Oaks are considered groundwater dependent, even though they occur outside the hyporheic zone. |
| 126 | 8-16 | 8.7 | | | 10/21/2021 | Tamara Williams, Stakeholder | Implementation of the Corning Subbasin GSP will need to be closely coordinated with the Red Bluff Subbasin GSP. Please consider having the same technical team involved in both subbasins going forward. |
| 127 | 8-19 and 8-28 | 8.8 - 8.10 | | | 10/21/2021 | Tamara Williams, Stakeholder | The description of Implementation of Projects and Management Actions reads as though no corrective actions will be needed/undertaken in the first 5 years of GSP implementation. Given the declining water levels, and the apparent increase in agricultural pumping, the plan should at least provide the framework, and describe the authority and mechanisms for taking immediate action. |
| 128 | | 7 | | | 10/24/2021 | Matt Hansen, landowner | Project and Management Actions: The water budget implies the subbasin appears to have been stable but is now operating at a deficit. The obvious expansion of water intensive crops, the movement from surface water to groundwater and recent drought conditions are to blame. |
| 129 | | 7 | | | 10/24/2021 | Matt Hansen, landowner | Project and Management Actions: This is not third world agriculture. Management programs aimed at educating local farmers about water efficiency is ludicrous. California farmers are the most efficient users of water because it is expensive. The crops they chose to plant, and ET dictates the amount of water the farmer will need over the course of a year. Because orchardist have developed more efficient micro sprinkler and drip systems, they are capable of planting water intensive orchards in ground that would not otherwise sustain a permanent crop. Management actions need to focus on the groundwater demand and the easiest way to limit the demand is to restrict land use in critically over drafted areas. |
| 130 | | 7 | | | 10/24/2021 | Matt Hansen, landowner | Project and Management Actions: A comprehensive grid of monitoring wells must be established as a priority so informed decisions can be made, and domestic wells can be protected. |
| 131 | | 7 | | | 10/24/2021 | Matt Hansen, landowner | Project and Management Actions: In addition to increased oversight of well construction, orchard development requirements may also benefit groundwater recharge. Containment berms could be built around orchards to hold winter storm water, resulting in more percolation, and less run off. |
| 132 | | 7 | | | 10/24/2021 | Matt Hansen, landowner | Project and Management Actions: Production wells in local areas that hit minimum thresholds should be required to meter and reduce consumption until such time the sustainable management criteria is met. Those failing to meet reduction numbers could be charged for their overage. This could be an alternative to a well moratorium. |
| 133 | | General | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | the Draft Plan contemplates neither the existence of the Tribe's water rights nor the impact of those rights on the Draft Plan or the viability of management mechanisms contemplated therein. Those omissions detract from numerous parts of the Draft Plan. Future iterations of the plan must account for these water rights or the plan will remain fundamentally flawed. |
| 134 | 1-2 | 1.3.3 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | The Paskenta Band is developing its own groundwater monitoring and management plans. The Tribe may share details of these plans with the GSAs at a suitable time and provide coordination with the GSP. |

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| 135 | 2-3 | 1.3.3 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | Groundwater in the subbasin is recharged naturally from precipitation, streams, and rivers. Most precipitation occurs during the winter months in the Coast Range. This precipitation is a component of recharge to the aquifer in the subbasin. There is uncertainty to interconnected surface water in the base of the Coast Range foothills in the western portion of the subbasin and the subbasin aquifer. Recharge may occur a great distance from the location of use. During the implementation of the GSP, a better understanding of the connection of surface water and groundwater from the base of the Coast Range foothills should be included. Understanding the western spatial extent of the aquifer and the inflows from the base of the foothills would also support the uncertainties in the water budget and changes in groundwater storage. |
| 136 | 2-4 | 2.1.3 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | The Paskenta Bands federally reserved water rights have not been accounted for. |
| 137 | 2-26 | 2.5.2 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | The Tribal Lands are completely reliant on groundwater for drinking water and irrigation, making the implementation of groundwater monitoring and management plans a priority for the protection of their water resources. The GSP does not account for the Tribe's federally reserved water rights, which cover additional future development and water use. |
| 138 | 3-37 | 3 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | "Substantial" is not defined in terms of ranges of subsurface inflow from the Coast Range foothills and intermittent drainages. Without a range or error measurement, "substantial" is open to interpretation. Infiltration from precipitation in the drainages of the foothills should be accounted for since contributions to groundwater will likely reach the aquifer beneath the Reservation. The GSP states there is a presence of highly permeable alluvial sediments in and along the subbasin's watercourses, including intermittent or ephemeral streams. There are several intermittent drainages in the western area of the subbasin which are connected to the alluvial, Tehama, and Tuscan aquifers. A better understanding of the volume of recharge from the foothills of the Coast Ranges that reaches the aquifer is needed. |
| 139 | 3-49 | 3.2.2.1 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | Groundwater movement is toward the central area of the basin and is directed toward the Reservation. Water quality should be monitored to establish a current baseline, and to recognize any reductions in water quality over time. There is heavy land use for agriculture north of the Reservation and groundwater contamination is possible from pesticides and fertilizers. Groundwater from these agricultural lands flows toward the Reservation, a potential impact to the groundwater supplies for the Reservation. |
| 140 | 3-49 | 3.2.2.1 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | As discussed previously, the importance of understanding the volume of water that contributes to the alluvial aquifer will help refine the hydrologic model and ultimately lead to a better understanding of groundwater storage. |
| 141 | 3-82 | 3.2.2.2 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | There is an apparent lag effect for recovery of groundwater elevation after prolonged drought in the central area of the Subbasin. Better planning for dry years and distributing surface water supplies can lessen the impact to future groundwater recoveries in the central area of the Subbasin. |
| 142 | 4-13 | 4.1.3 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | The water budgets cumulative and annual change in storage is declining in the current water budget simulation relative to the historical water budget simulation. This decline appears to be a continuing trend in future water budgets and, if so, the subbasin would continue to experience groundwater level and storage declines compared to historical conditions. The model used to estimate the water budgets is designed from uncalibrated estimates and is susceptible to greater error. Numerical or analytical groundwater flow models may be able to better predict future water budget trends in localized areas of the Subbasin. Then sharing the results and data for the regional hydrological model calibration during GSP implementation. |
| 143 | 4-16 | 4.1.4 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | The hydrologic model predicts pumping from crop requirements, not real flowrate data. Using actual pumping data and pumping estimates based on well depth and size among other factors, would provide a better estimate of outflow from wells in the water budgets. |
| 144 | 5-15 | 5.2.6 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | Currently there are a few localized spatial data gaps for monitoring wells in the western one-third of the subbasin in the limited agricultural land use areas. Understanding groundwater elevations near recharge areas will help understand the inputs to groundwater storage. |
| 145 | 5-19 | 5.4 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | The well networks should be spatially distributed throughout the Subbasin as data gaps are identified and resolved during implementation of the GSP. |
| 146 | 6-4 | 6.2 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | This description omits any mention of the Paskenta Band's federally reserved water rights. The Tribe has a right to water resources, including groundwater, necessary to sustain existing and future needs. The Tribe should be included in the list of agencies with whom coordination is needed. |

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| 147 | 6-6 to 6-7 | 6.5 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | The Paskenta Band has a federally reserved water right that includes the availability of groundwater on its Reservations. This should be part of the SMC. |
| 148 | 6-7 | | 6-1 | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | Reduction in groundwater storage (second row), Minimum Threshold refers to groundwater levels "same as chronic lowering of groundwater levels minimum thresholds." There are two minimum thresholds for groundwater levels - one for stable wells and one for declining wells. Are there two thresholds for groundwater storage? If so, an explanation of how this would be applied is needed. |
| 149 | 6-7 | | 6-1 | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | Degraded groundwater quality (third row), Interim Milestone is "Identical to current conditions." Are the TDS values at all wells currently under the SMCL of 500 mg/L? The Undesirable Result is qualified by "where it can be established the GSP implementation is the cause of the exceedance." Why have this qualification? Shouldn't the GSP be concerned about degraded water quality whatever the cause? |
| 150 | 6-7 | | 6-1 | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | Depletion of interconnected surface waters (fifth row). Measurement seems to be missing a word. Should it be "A subset of shallow wells used for <i>monitoring</i> the chronic lowering of groundwater levels...?" |
| 151 | 6-13 | 6.6.2.1 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | The minimum threshold for wells with declining groundwater levels was set to the fall of 2012 measurement..." This appears to be different from Table 6-1, which states the minimum threshold for declining wells is "minimum fall groundwater elevation since 2012." |
| 152 | 6-26 | 6.6.2.3 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | For land subsidence, the GSP allows that since the groundwater level minimum thresholds are lower than current conditions, that may "temporarily induce additional subsidence in some areas." How do we know this would be temporary? |
| 153 | 6-27 | 6.6.2.5 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | The urban land uses and users sub-section states that "excessive urban growth is not predicted." This does not account for the Tribe's federally reserved water rights and may conflict with the Paskenta Band's goals. In general, Indian reservations serve as permanent homelands for tribal members and may encompass a wide array of water uses. |
| 154 | 6-35 | 6.6.4.3 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | This section discusses the undesirability of having the 20% allowable exceedances occur in the same geographic area. "To avoid this, the monitoring system was developed to have broad geographic coverage, ensuring that minimum threshold exceedances will not be clustered in a single area." It is not clear how having broad coverage in the monitoring system prevents exceedances from occurring in the same area. It seems likely that exceedances would occur in the same area given the zones of similar water trends. |
| 155 | 7-1 | 7.1 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | Second set of bullet points, first bullet point. "Additional vetting by all necessary stakeholders, since implementing projects and management actions will be a collaborative effort between the GSAs and coordinating partners such as the USBR, TCCA, and local water districts." This sentence should also include "tribal" in the list of partners. |
| 156 | 7-2 to 7-7 | 7.2 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | In general, the Paskenta Band was not consulted or considered in the development of projects and management actions. The Tribe's federally reserved rights are not mentioned in Section 7.2.1. Data from the Tribe is not included in Section 7.2.2. The Tribe is not listed as one of the stakeholders in Section 7.2.3. |
| 157 | 7-7 to 7-24 | 7.3 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | While the Paskenta Band is not necessarily opposed to the goals of the GSP, any management actions that impact the Tribe must recognize the Tribe's sovereignty and authority to manage its own resources. The Tribe's participation in the management actions including data sharing, reporting, well management, ordinances, land use, and best management practices must be negotiated independent of any other agency or stakeholder. |
| 158 | 7-24 to 7-61 | 7.4 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | See previous comment. Any mitigation project must be evaluated to ensure it does not impact the Paskenta Band's federally reserved water rights or tribal sovereignty. Projects that do potentially impact the Tribe must be negotiated and approved by the Tribe. Otherwise, such activities will risk violating federal law regarding tribal water rights. |
| 159 | 7-41 to 7-47 | 7.4.3.4 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | At least one of the mentioned ephemeral creeks (Brannin Creek) has the potential to impact the Paskenta Band. Development of groundwater recharge on this creek and possibly others will require consultation with and approval by the Tribe to the extent they impact the Tribe's interests. |
| 160 | 7-47 to 7-51 | 7.4.3.5 | | | 10/25/2021 | Andrew Alejandre Tribal Chairperson Paskenta Band of Nomlaki Indians | At least two of the mentioned ephemeral creeks (Brannin Creek and Rice Creek) have the potential to impact the Paskenta Band. Development of off-storage for these creeks or other unnamed tributaries will require consultation with and approval by the Tribe to the extent they impact the Tribe's interests. |

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| 161 | 7-61 | 7.5 | | | 10/25/2021 | Andrew Alejandro Tribal Chairperson Paskenta Band of Nomlaki Indians | The Paskenta Band should be added as one of the entities with whom collaboration will be required. |
| 162 | | General | | | 10/25/2021 | Holly Dawley Glenn-Colusa Irrigation District Water Resources Manager | GCID provided a comment letter supporting the adoption of the GSP by the GSAs to meet the January 31, 2022 deadline for submittal to DWR. Further, GCID expressed concern about groundwater surface water interactions quantification and potential future impacts. |
| 163 | | 7.4.3.6 | | | 10/25/2021 | Kristina Miller City Manager, City of Corning | Proposed Priority Project 6 Proposed Priority Project 6 (Section 7.4.3.6) is not thoughtfully considered. All other proposed priority projects include relevant measurable objectives, expected benefits and evaluation of benefits, public noticing, permitting and regulatory processes, circumstances for implementation, implementation schedule, legal authority, and estimated costs. While Priority Project 6 may be a good idea, it needs to be evaluated similar to all other priority projects prior to being included as a priority. Since this project is less developed, Priority Project 6 should be listed as an alternative project. |
| 164 | | | | | 10/25/2021 | Kristina Miller City Manager, City of Corning | Proposed Priority Project 7 The City of Corning already requires LIDs as part of new development projects. Any requirements or costs to increase LIDS to previously developed parcels or the installation of dry wells should not be worn solely by residents and businesses within the city limits of Corning because it benefits the subbasin as a whole. |
| 165 | 8-6 | 8.2 | | | 10/25/2021 | Kristina Miller City Manager, City of Corning | The GSAs are committed to working collaboratively <u>and meeting regularly</u> with other local agencies and stakeholders to implement projects and management actions that achieve the Sustainability Goal. Some activities carried about by the GSAs may receive funding support from local partners. In addition, some activities may be implemented by a local partner using their own sources of funding and not require a financial contribution from the GSAs. The GSAs may coordinate with local partners to incentivize activities that improve sustainable groundwater management and <u>project support</u> their implementation. <u>The GSAs will coordinate with local partners to identify funding mechanisms to support proposed projects and activities located within the respective jurisdictions. Local partners will not be required to solely fund projects within their jurisdiction that benefit the whole.</u> |
| 166 | | 8.2.1 | | | 10/25/2021 | Kristina Miller City Manager, City of Corning | Grants will be pursued as they become available and based on their applicability to priority implementation activities <u>and projects</u> . The GSAs will coordinate with local partners carrying out on proposed activities and projects <u>within their jurisdictions</u> that support sustainable groundwater management. |
| 167 | | 6.6 | | 6-1 and 6-2 | 10/25/2021 | James Strong General Manager Deseret Farms of California | Figures 6-1 and 6-2 of the draft GSP should be refined using the "polygon approach." Section 6.6 of the Sustainable Management Criteria (SMC) chapter, regarding the Chronic Lowering of Groundwater Levels identifies three general zones with similar groundwater level trends. (See Draft GSP, Section 6.6.2.1 (Pg. 6-11).) The grouping of these three general zones, as illustrated in Figures 6-1 and 6-2, demonstrates the variability of groundwater conditions across the Subbasin <i>using oval shapes</i> . The "west" general zone demonstrates the area within the Subbasin in which groundwater levels are declining the most. The "central" general zone demonstrates the area within the Subbasin in which groundwater levels are only slightly declining. And finally, the "east" general zone demonstrates the area within the Subbasin in which groundwater levels are stable. Notably, however, this "oval approach" creates overlaps between each of the three general zones. This overlapping could result in unclear data and therefore affect the GSAs' overall understanding of the Subbasin and the unique characteristics of each general zone. To avoid this issue, The GSAs should refine Figures 6-1 and 6-2 using the "polygon approach." |
| 168 | 6-6 | 6.4 | | | 10/25/2021 | James Strong General Manager Deseret Farms of California | The draft GSP should establish management zones using those newly established polygons. Currently, the GSAs have not established management areas within the Corning Subbasin. (Draft GSP, Section 6.4 (Pg. 6-6).) Notably, however, the GSAs expressly "reserve the right to establish management areas, if deemed necessary." (<i>ibid.</i>) As noted above, the GSAs have already identified significant differences in three areas within the Subbasin. Accordingly, we do not believe that the GSAs should subject the entire Subbasin and its stakeholders to the same management practices. Instead, we believe that management areas are necessary, and therefore recommend that the GSAs establish such management areas as appropriate to reflect the polygons discussed above, once established. Based on some of the already existing data, it seems that organizing these management areas from east (around the Sacramento River) to west (around steeper terrain) would be best. |

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| 169 | | | | | 10/25/2021 | James Strong General Manager Deseret Farms of California | The draft GSP should revise the Measurable Objectives and Minimum Thresholds The draft GSP establishes Measurable Objectives (MO) and Minimum Thresholds (MT) for each SMC beyond what is required to achieve the GSA's sustainability goal for the Subbasin. We strive to work with the GSAs in achieving the sustainability goal for the Subbasin and protecting sustainability constructed domestic wells. To further these pursuits, we recommend that the GSAs revise the MOs and MTs to provide landowners with sufficient operating flexibility to help them realistically and timely achieve the purpose of the MOs and MTs, while allowing for flexibility to weather the next 20 years and beyond as we endeavor together to reach sustainability. |
| 170 | | 2 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: Provide a map of tribal lands in the subbasin. |
| 171 | | 2 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendations: Describe the population of each identified DAC and 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). |
| 172 | | 2 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendations: Include a map showing domestic well locations and average well depth across the subbasin. |
| 173 | | 3 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: Further describe the groundwater elevation data and stream flow data used in the modeling analysis. Discuss screening depth of monitoring wells and ensure they are monitoring the shallow principal aquifer. Discuss temporal (seasonal and interannual) variability of the data used to calibrate the model. |
| 174 | | 3 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: Discuss stream reaches in the interior of the subbasin. For example, discuss whether they were included in the groundwater model and discuss relevant depth to groundwater data. Clearly state that they are considered to be disconnected, if that is the case, and what data was utilized to support that conclusion. |
| 175 | | 3 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: To confirm the results of the groundwater modeling analysis, overlay the stream reaches shown with depth-to-groundwater contour maps to illustrate groundwater depths and the groundwater gradient near the stream reaches. For the depth-to-groundwater contour maps, use the best practices presented in Attachment D. Specifically, ensure that the first step is contouring groundwater elevations, and then subtracting this layer from land surface elevations from a Digital Elevation Model (DEM) to estimate depth-to-groundwater along streams and other land surface depressions where GDEs are commonly found. |
| 176 | | 3 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: Describe data gaps for the ISW analysis in the ISW section, in addition to the discussion in Section 5 (Monitoring Network). On the ISW map (Figure 3-53), clearly label the areas with data gaps. While the GSP identifies data gaps and their locations in the text, we recommend that the GSP considers any segments with data gaps as potential ISWs and clearly marks them as such on maps provided in the GSP. |

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| 177 | | 3 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: 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 NC dataset polygons. We recommend that a baseline period (10 years from 2005 to 2015) be established to characterize groundwater conditions over multiple water year types. Refer to Attachment D of this letter for best practices for using local groundwater data to verify whether polygons in the NC Dataset are supported by groundwater in an aquifer. |
| 178 | | 3 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: Provide depth-to-groundwater contour maps, noting the best practices presented in Attachment D. Specifically, ensure that the first step is contouring groundwater elevations, and then subtracting this layer from land surface elevations from a DEM to estimate depth-to-groundwater contours across the landscape. |
| 179 | | 3 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: Refer to Attachment B for more information on TNC's plant rooting depth database. Deeper thresholds are necessary for plants that have reported maximum root depths that exceed the averaged 30-ft threshold, such as valley oak (<i>Quercus lobata</i>). We recommend that the reported max rooting depth for these deeper-rooted plants be used, if these species are present in the subbasin. For example, a depth-to-groundwater threshold of 80 feet should be used instead of the 30-ft threshold, when verifying whether oak polygons from the NC Dataset are connected to groundwater. |
| 180 | | 3 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: If insufficient data are available to describe groundwater conditions within or near polygons from the NC dataset, include those polygons as "Potential GDEs" in the GSP until data gaps are reconciled in the monitoring network. |
| 181 | | 3 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: Include an inventory of the fauna and flora present within the subbasin's GDEs (see Attachment C of this letter for a list of freshwater species located in the Corning Subbasin). |
| 182 | | 4 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: 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 managed wetlands. |
| 183 | | 2 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: In the Communications and Engagement Plan, describe active and targeted outreach to engage DAC members, domestic well owners, 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. |
| 184 | | 2 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: Utilize DWR's tribal engagement guidance to comprehensively address all tribes and tribal interests in the subbasin within the GSP. (6) |
| 185 | | 6 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: Chronic Lowering of Groundwater Levels - Describe direct and indirect impacts on drinking water users, DACs, and tribes when describing undesirable results and defining minimum thresholds for chronic lowering of groundwater levels. |

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| 186 | | 6 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: Degraded Water Quality Describe direct and indirect impacts on drinking water users, DACs, and tribes when defining undesirable results for degraded water quality. For specific guidance on how to consider these users, refer to "Guide to Protecting Water Quality Under the Sustainable Groundwater Management Act." |
| 187 | | 6 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: Degraded Water Quality Evaluate the cumulative or indirect impacts of proposed minimum thresholds for degraded water quality on drinking water users, DACs, and tribes. |
| 188 | | 6 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: Degraded Water Quality Set minimum thresholds and measurable objectives for all water quality constituents within the subbasin. Ensure they align with drinking water standards. (12) |
| 189 | | 6 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: Define chronic lowering of groundwater SMC directly for environmental beneficial users of groundwater. When defining undesirable results for chronic lowering of groundwater levels, provide specifics on what biological responses (e.g., extent of habitat, growth, recruitment rates) would best characterize a significant and unreasonable impact on GDEs. Undesirable results to environmental users occur when 'significant and unreasonable' effects on beneficial users are caused by one of the sustainability indicators (i.e., chronic lowering of groundwater levels, degraded water quality, or depletion of interconnected surface water). Thus, potential impacts on environmental beneficial uses and users need to be considered when defining undesirable results in the subbasin (13). Defining undesirable results in the crucial first step before the minimum thresholds can be determined. (14) |
| 190 | | 6 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: 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. ¹⁵ The GSP 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. (6,16) |
| 191 | | 6 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: When establishing SMC for the basin, consider that the SGMA statute [Water Code §10727.4(l)] specifically calls out that GSPs shall include "impacts on groundwater dependent ecosystems". |
| 192 | | 4 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: Integrate climate change, including extremely wet and dry scenarios, into all elements of the projected water budget to form the basis for development of sustainable management criteria and projects and management actions. |
| 193 | | 7 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: Incorporate climate change scenarios into projects and management actions. |

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| 194 | | 5 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: Provide maps that overlay current and proposed monitoring well locations with the locations of DACs, domestic wells, tribes, GDEs, and ISWs to clearly identify potentially impacted areas. |
| 195 | | 5 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: Increase the number of RMPs in the shallow aquifer across the subbasin as needed to adequately monitor all groundwater condition indicators across the basin and at appropriate depths. Prioritize proximity to DACs, domestic wells, tribes, and GDEs when identifying new RMPs. |
| 196 | | 7 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: 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 GSA plans to mitigate such impacts. |
| 197 | | 7 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: The GSP discusses potential options for additional surface water storage. Note that 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."21 |
| 198 | | 7 | | | 10/25/2021 | NGO Consortium (Clean Water Action, Union of Concerned Scientists, Audubon, Local Government Commission, The Nature Conservancy) | Recommendation: Develop management actions that incorporate climate and water delivery uncertainties to address future water demand and prevent future undesirable results. |
| 199 | | | | | 10/25/2021 | Ritta Martin, Glenn County Farm Bureau | We do not consider the currently proposed per acre fee to be a viable option. |
| 200 | | | | | 10/25/2021 | Ritta Martin, Glenn County Farm Bureau | We are also concerned about the dry-land landowners being inadequately represented on the Corning Subbasin board. Currently, there is no one representing the westside / dryland landowners, even though a local landowner offered to represent at the beginning of this process. Over 50% of the Glenn County acreage in the Corning Sub-basin is non-irrigated. In addition, over 70% of the Tehama County acreage is non-irrigated, also without adequate representation. |
| 201 | | 4 | | | 10/26/2021 | Amy Dutschke Regional Director Bureau of Indian Affairs | Section 4 – Water Budget, Appendix 4A: Potential Model Uncertainties The Groundwater Sustainability Plan (GSP) is utilizing existing groundwater modeling (C2VSimFG calibration and data development by DWR) that documents historical groundwater conditions across the Central Valley. The Corning Subbasin GSP lists Sustainability Management Criteria (SMC), Reductions in Storage, but, we were not able to locate the Corning subbasin volume of groundwater storage for the subbasin. It would be useful to list the hydrologic groundwater storage volumes in a table, so the stakeholders have an understanding of the subbasin groundwater storage supply (Section 354.28 of the GSP Regulations). |
| 202 | 2-21/2-22 | Industrial | | | 10/20/2021 | Debbie Dotson, stakeholder | I recommend adding MTM Trailer Wash which is a high volume livestock trailer washout located on Road 9 in Orland. It is a 24/7 facility. The facility has at least a 2,000 gallon holding tank at the wash location and recently another holding tank was added at the well location. There is also another Truck Wash in Corning which should be noted. Both use alot of water. |

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|----------------|------|------------|-------|--------|-----------|--------------------------|--|
| 203 | 58 | 6 | | | 9/29/2021 | Cathy Marcinkevage, NMFS | The locally defined significant and unreasonable conditions for depletions of interconnected surface water (i.e., avoiding depletions beyond those observed in 2015) are likely to negatively affect ESA-listed fish and their habitat, and thus are inappropriate. Basic hydraulic principles dictate that groundwater flow is proportional to the difference between groundwater elevations at different locations along a flow path. Using this basic principle, groundwater flow to a stream or, conversely, seepage from a stream to the underlying aquifer is proportional to the difference between water elevation in the stream and groundwater elevations at locations away from the stream. 2015 was the fifth year of California's recent historical drought, meaning that groundwater levels during fall 2015 likely represent the lowest groundwater elevations ever recorded. These groundwater levels would create historically high streamflow depletion rates, resulting in instream conditions that negatively affect ESA-listed salmonids and green sturgeon, and their critical habitat, including EFH. During the first few years of GSP implementation, the GSA should design and implement studies that better inform appropriate minimum thresholds and measurable objectives for streamflow depletion. Studies should investigate what streamflow depletion rate or volume avoids significantly and unreasonably impacting surface water beneficial uses (e.g., migration, cold-water fishery, and spawning/early development) that support ESA-listed species. In the interim, we suggest the GSA follow guidance by the California Department of Fish and Wildlife (2019) that recommends conservative sustainability management criteria be established to ensure groundwater dependent ecosystem protection. |
| 204 | | 6 | | | 9/29/2021 | Cathy Marcinkevage, NMFS | The proposed minimum thresholds and measurable objectives for streamflow depletion are also inappropriate for the same reasons as outlined above. A groundwater elevation threshold set at "the minimum fall groundwater elevation since 2012 minus a 20-foot buffer" will lead to historically high streamflow depletion consistent with California's recent historical drought. Furthermore, the draft section does not appear to adequately address the following requirement for minimum thresholds as spelled out in the SGMA regulations: "The relationship between the minimum thresholds for each sustainability indicator, including an explanation of how the Agency has determined that basin conditions at each minimum threshold will avoid undesirable results for each of the sustainability indicators." (CCR 23 §354.28(b)(2)) Any proposed minimum threshold for streamflow depletion should include a rational, fact-based discussion of how the threshold will avoid significant and unreasonable impacts to surface water beneficial uses. The draft Section 6 does not include this required component. |
| 205 | | 6 | | | 9/29/2021 | Cathy Marcinkevage, NMFS | Please include ESA-listed salmon, steelhead, and sturgeon as identified beneficial users of interconnected surface water. |
| 206 | | 6 | | | 9/29/2021 | Cathy Marcinkevage, NMFS | The draft section contains the following sentence: "Considering all the beneficial uses and users, the CSAB determined that surface water depletion was not significant and unreasonable in 2015 for the Subbasin stream reaches of the Sacramento River, Stony Creek, or Thomes Creek." The above sentence begs several questions. Were salmon, steelhead, and green sturgeon considered as a beneficial user of surface water? What identified beneficial uses were considered? What monitoring for undesirable results was undertaken in 2015, and what were the results of that monitoring? What reasoning was offered by the Corning Subbasin Advisory Board (CSAB) regarding why 2015 depletion rates, which again were likely historically high, were not significant and unreasonable? The GSA should elaborate fully on the reasoning why surface water depletion was not significant and unreasonable in 2015. |
| 207 | | 7 | | | 9/29/2021 | Cathy Marcinkevage, NMFS | NMFS recommendation for future Projects and Management Actions: We suspect that groundwater recharge projects are likely to be an important action implemented as part of the effort to achieve groundwater sustainability in the Corning subbasin. NMFS encourages the GSA to consider implementing recharge projects that facilitate floodplain inundation, which offer multiple benefits including downstream flood attenuation, groundwater recharge, and ecosystem service. Managed floodplain inundation can recharge floodplain aquifers, which in turn slowly release stored water back to the stream during summer months. These projects also reconnect the stream channel with floodplain habitat, which can benefit juvenile salmon, steelhead, and sturgeon by creating off-channel habitat characterized by slow water velocities, ample cover in the form of submerged vegetation, and high food availability. As an added bonus, these types of multi-benefit projects likely have more diverse grant funding streams that can lower their cost as compared to traditional off-channel recharge projects. NMFS stands ready to work with any GSA interested in designing and implementing floodplain recharge projects. |