

COMBINED ECOS COMMENTS ON LOCAL GROUNDWATER SUSTAINABILITY PLANS				
TOPIC	SUBJECT	SOUTH AMERICAN SUBBASIN GSP	NORTH AMERICAN SUBBASIN GSP	COSUMNES BASIN GSP
		Final plan changes in relation to comments are in bold		
Executive Summary		Exec summary climate change discussion; focuses too much on past efforts; define terms/concepts better Improved, but w/ notable exceptions noted below	9/28/21BLE ECOS comments discuss the need to explain how climate change model was run, "no context" Added "central tendency". Appendix P is much better as it describes the model and sensitivity analysis with Hot dry although settled on central tendency. At very end of appendix it compares CT to HD	ECOS comments requested highlighting climate change in the executive summary as a high priority & elaborating on model assumptions, etc. Additional language added to executive summary explanation.
Climate Change	Expand Description	1) Clearly describe Central Tendency Model, its assumptions, its pros/cons; 2) Expand exec summary discussion of climate change impacts, their importance in the basins's attaining sustainability The model was described but because it has yet to be formally published it is not possible to fully review its underpinnings. The executive summary and the report have a more robust description of climate change impacts.	Summary doesn't set stage for wtr bud-get; need understandable summary (eg model inputs) of ARB Study explaining future climate range, how change integrates into hist analysis, how cent tendency chosen & aligns w/ change monitoring. Ted Rauh asked for Hot Dry scenario to be included as part of his public comments at adoption hearing. New appendix includes extensive detail on model. Page 4-53 listgs significant uncertainties and hydrologic conditions/rainfall patterns & climate change are included. Consistently repeats that the data set is historical 50 yr set. Section 5.3 of P discusses climate change (page 187). Explanation of ARBS (in press) starts on 5-40. Table 5-10 (page 200) compares 2070 Central Tendency to 2070 Hot dry.	1) Expand discussion on impacts & importance re sustainability 2) explain weight given to central tendency forecasts No change to GSP. Reference to CA Code of Regs sect. 354.18 (SGMA?). Rationale offered for using ARBS Central Tendency Clim.Change Scenario; mentions DWR guidance document; modeling for PMAs shows they would reverse gw storage decline.

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Climate Change	Expand Description		Add discussion of Delta climate change vulnerability work & its summary of recent studies showing big Delta changes; discuss water impacts Delta Stewardship Council work is not addressed	
Demand Mgmt	Conservation		BLE comments addressed conservation and demand management Comments noted, no change shown to address conservation. Management Action section shows continued temporary conservation measures in times of shortage as documented in UWMP and general Urban Water Efficiency Program. MA section says they have managed extractions in the past and will continue to do so. "Additionally, the Water Bank will establish when extractions and recharge should occur and a framework for accounting for storage and recovery"	1) Discuss existing gw conserv programs by purveyorsl 2) ID any promising programs in west US Added specifics about PMA plan implementation, Section 19, including plans to explore conservation more thoroughly
GDEs	Root depths	Include a determination of appropriate root depths as mgmt action Document references need for further work to understand root depth including study and monitoring in GDE areas as well as interconnected ground and surface water areas	Determination of appropriate root depths should be included as priority mgmt action The GSP was adjusted to show a 80 foot root depth.	Support shallow/vulnerable well program but w/ more specific focus The GSP adjusted to 50 foot root depth; does not validate foothill study.
Water Quality			BLE comments addressed multiple constituents unaddressed Comment noted, not addressed	Add manganese as a constituent of concern Comment noted and explanation provided, not changed

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Wells	Data Questions	Explain how pumping range was developed, what chart points mean, how x & y axes were developed. Why do axes not line up with 0 change in gdwtr change? These technical improvements were made to the document		
Wells	Existing Wells & Monitoring	1) Urge plan to address need for deficiencies to be corrected; 2) Recognize need for more monitoring; 3) Can existing system handle future banking? The plan ID's need to improve existing well monitoring. It does not embrace our rec for more wells but does indicate further work is needed and this work may indicate the need for additional monitoring and wells. Monitoring the implementation of the GSP in this area is advisable	BLE comments address data gaps in specific areas No changes are evident in response to comments	The plan identifies data gaps & notes work is planned to fill them
Water Budget	Demand Analysis	Use 2020 UWMP use data; work to ensure 2025 GMP uses 2025 data The Plan calls for working with Water Purveyors to include 2025 UWMP water demand data in the 2025 GSP update	BLE comments addressed the need to update to 2020 data No updates were done. "Best available at the time" Water budget continues to use 2015 use estimates	1) Summarize pop & ag growth, where it will occur & gw use implications; 2) Elaborate on 6 scenarios for projected 50 yr water budget; 3) Use 2020 UWMP data in plan Implications for increased gw use and increased ag activity are discussed in section 5.3.2. Refers reader to GSP Table WB-10

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Water Budget	Demand Analysis	Describe how "various year types" were developed, who determined them and how they relate to basin mgmt. Why are these appropriate w/ dramatic climate change coming? The adopted plan includes water budgets and basin sustainable pumping levels both with and without climate change assumptions	BLE comments addressed the need for context for climate change analysis as well as a re-look at water supply with climate change and curtailments Data inputs for climate change were addressed in an appendix (P). No re-look at curtailments evident. Water budget discussion continues to use "with and without climate change" without addressing how analyzed. Used historical data for extrapolation	1) Explain why R Seco needs regular wtr supply & ID wtr supply for SMUD nat gas plantL 2) Discuss contingencies/timeframes for demand options History of SMUD Rancho Seco and current SMUD Cosumnes Power Plant and related water supply discussed
Water Budget	Demand Reduction	Not included in report A demand reduction evaluation was included in the report but it was not included as a management action to help reduce demands on groundwater. This continues to be a shortcoming of the Plan. Demand reduction actions are contained in the UWMPs and the GSP needs to be integrated with these local plans so that actions can be taken by water purveyors if the GSAs determine gwtr pumping must be curtailed	BLE comment included the need for demand reduction. Ted Rauh comments at public hearing reiterated. Not included- see comment above "we have managed extractions in the past"	
Water Budget	Drought Analysis	Explain how basin could survive 4 straight extreme drought years.		
Water Budget	Drought Analysis	Need baseline calculation for 2015 storage level Plan asserts there will be sufficient water supplies given the projected drought scenario as part of the base case climate change assesment. A hot dry climate assessment may indicate that this is not the case. Plan calls for future climate change assessments for use in the 2025 plan update		

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Water Budget	Surface Rights Limits		BLE comments included the need to realistically portray curtailments during drought years. No discussion added	Provide realistic view of how curtailed surface rights will affect gdwtr w/drawals in dry yrs Strategies discussed in intro to comment response
Water Budget	Sustainable Yield	Fully explain in lay terms why sust yield has dropped fr 273-235k afy Plan describes sustainable yield estimates but describes the new evaluation as an evalution of the analysis from that used to establish the old, higher level. It is not clear how the average pumping calculations and storage will be managed over time to maintain the sustainability of the subbasin. This is an area that will require monitoring over time		
Water Budget	Water Banking		1) Clearly explain how previously banked gw fits into budget & importance of accounting in and outputs; 2) Address how gdwtr rights to be banked can be ascertained; 3) GSP minimum thresholds for wtr banking need to be detailed in the plan so that a) the impacts of amounts of previously banked wtr can be ascertained & b) how a minimum threashold that could become an operational constraint & regular gdwtr level seen in dry yrs w/ bank withdrawals can be understood Comment noted. "to be addressed in future Water Bank discussions"	
Water Budget	Well Pumping	Why is pumping btwn 210 & 270K afy acceptable? Need good reasons See comment above		

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Water Budget	Action Trigger	Not ok to drop below 2015 gw elevation for 3 consec yrs before action. Set trigger levels higher-- when reach 2015 benchmark This continues to be a major shortcoming of the Plan. The GSP contains a three-year exceedance criteria before corrective action is considered. This approach could allow the basin to deteriorate for as long as 4 years before corrective actions. The NA Subbasin has adopted a one year exceedance requirement. This Plan makes no argument as to why it should be less protective. The exceedance criteria may warrant a letter to the State DWR calling for action to require its revision		Object to criteria implying that ok to drop below 2015 gw levels Discussion of CWC section 10721 restrictions re "chronic lowering of gw levels..." and "overdraft during a period of drought". GSAs decided to remove 2 drought year qualifier to make the definition of Undesirable Results more conservative
Action Items	General	Include benefits of individual GSP projects Write ups of project benefits have been improved	NASB has specifics of regional conjunctive use project modeling included	
Action Items	General	Expand to include speciifc work, studies & monitoring improvements This area has been improved		
Action Items	Aquifer Recharge	Add description of benefits of aquifer recharge/flood protection studies While some discription of recharge areas is included in the individual project descriptions & in some of the techical description of the basin there is no focused assessment of high value recharge areas & what might be done to protect/utilize them	NASB has added detail to both the conjunctive use and water banking management discussions in the GSP. Cites benefits and specifics of where the project is in the process	1) Provide detail on Cosumnes R diversion & FloodMar; 2) ID wtr rights status of excess wet yr wtr, how it is determined & by whom; 3) More clearly explain how phase yields were dtermined & why big difference; 4) Explain why gw gains will be 700 afy/yr Added clarifying text to PMAs section

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Action Items	Groundwater Transfers	Add action directing GSAs to adopt process for dealing w/ gw transfers There is no action calling for the GSAs to develop criteria and procedures for the conduct of groundwater transfers and water banking so that these operations are protective and ensure basin sustainability. It has been acknowledged that these groundrules are needed. This is a deficiency that may warrant a letter to DWR		
Action Items	Management Actions		Delineate efforts to improve consistency between the 3 subbasin plans. Particularly re overarching analytical tools and mgmt approaches. Ted Rauh provided public comment at adoption hearing regarding coordin- ation. Also asked for NASB to actively coordinate with other subbasins to adopt a 1 year exceedence standard. Comment noted, but no specific action item added. The water banking discussion specifies that the North and South basin will coordinate on the model	1) Expand to include specific work, studies & monitoring improvements & ID responsible GSAs; 2) Add climate impact 5 yr assessments; 3) Add policy/procedure for review/comment on gw transfers; 4) Clarify and expand description of PMA implementation in Chapters 18 and 19. review/comment on gw transfers Clarified and expanded description of PMA implementation

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Action Items	Outreach		<p>1) Rvw websites & outreach efforts to involve all reg'l stkhlders in monitoring/wtr bank operating criteria & GSP update; 2) GSA's present monitoring data so that landowners can track relevant in- fo; 3) consider public advisory grp</p> <p>Comment noted, but no specific changes. Did add additional domestic/shallow well data collection and communication program. Most of the programs are to start upon adoption of GSP</p>	
Action Items	Pumping Levels	<p>Need mgmt action to establish agmts w/ purveyors who will use basin for conj use to ensure pumping levels are consistent w/ plan There is no mention in the plan that discussions and/or agreements with water purveyors regarding the management of conjunctive use programs will be compatible with pumping levels that match hydrologic concidtions and maintain basin sustainability. This is a major shortcoming that may warrant a comment to DWR</p>		
Action Items	Water Banking		<p>BLE comment: Need near term actions and integration of water banking amounts with GSP gross input/out modeling.</p> <p>Comment noted - deferred to Water Banking discussions</p>	

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Action Items	Well Monitoring	Incorporate telemetry on real time basis into well monitoring plan Plan does not endorse our recommendation for telemetry but does indicate further work is needed in monitoring. This area requires our monitoring as the plan is implemented.	BLE comment: Gap in well monitoring network in NE corner of GSA where density of disadvantaged, and southern area with domestic wells. Comments addressed	
Action Items	Well Monitoring	Need description of monitoring or mgmt actions to be undertaken to ensure drawdown does not exceed allowable pumping levels. Comment addressed		
Action Items	Well Permitting	Well permit coord pgm should 1)focus on shallow wells that dry out; 2) engage w/ owners; 3) start w/ voluntary private owner data gathering, & 4) look at tie betwn shallow wells & conjunctive use & recharge opps. Comment addressed	BLE comments Asked for suggested action to address lack of local oversight of wells near rivers and tributaries.	Discussion of GSP consideration of impacts on shallow wells in relation to the PMAs. More monitoring info needed; enhanced monitoring will help guide GSP implementation. Discussion of formation of Citizens Advisory Comm to guide GSA implementation; vulnerable wells can be addressed in that forum. More data welcome; contact Stephen Julian
Action Items	Well Protection	Specify responsibilities/time frames for shallow well protection program Comment addressed	Develop backup approach to ensure domestic & disadvantaged community wells don't run dry. Consider SoAm Subbasin program. Get more info on 6400 unknown wells. Ted Rauh reiterated in public comments on adoption. Comment noted: added additional data gathering and communication	Support shallow/vulnerable well program but w/ more specific focus Noted plans for outreach efforts to well owners to identify changes in groundwater conditions.