Aquatic GDE Monitoring Workplans
Stakeholder Comments/Questions
Updated: 7/19/2022

Commentor	Comment No.	Confluence	Foster Park	Both Workplans	Other (e.g., GSP)	Comment/Question	Response
Mary Bergen	1			X		First I want to say I think the two monitoring plans are solid and the budgets reasonable.	Thank you, we appreciate this positive feedback.
Mary Bergen	2			X		I do have one suggestion and that is to plan on doing the baseline monitoring in year 2 and 3. The baseline monitoring is used to map the location of habitat features (e.g., riffles and pools) and during high flows, the locations often change. If there isn't much flow, it might not be necessary to do the additional monitoring. But with high flows, it will be needed.	The "Baseline Habitat Mapping" events are meant to serve as an initial mapping of the mesohabitats within the aquatic GDE areas to inform longer term monitoring and survey activities. We understand that conditions are likely to change during and following large storm events, and the monitoring locations will inherently require adjustment if mesohabitat characteristics are substantially changed. This assessment would be made through the subsequent biological surveys. If a large storm event occurred that substantially "reset" the channel morphology, an additional mapping event may be needed to account for the new habitat structure. We also understand that in this context, the use of the word "Baseline" is misleading because this initial mapping event is not designed to, nor will it establish baseline conditions to which the subsequent surveys will be benchmarked. Rather, this event will be an initial habitat mapping event to guide monitoring activities for the study. UVRGA will update the language in the work plans to clarify the intention and purpose of this event.
Bruce Kuebler	1		X			The plan lacks an element to evaluate the effects of recreational use at Foster Park on steelhead habitat. The park is heavily used for swimming and other water-oriented uses, especially on weekends, during summer and early fall. Even with sufficient physical parameters like flow, DO, temperature, steelhead rearing areas could be significantly affected by such use.	Thank you for this insight. While the plan is not specifically designed to address the effects of recreational use at Foster Park, monitoring activities will occur through different parts of the year that feature varying recreational characteristics. To the extent possible, our monitoring site selection will consider recreation behaviors, and corresponding data can be used to evaluate the effects of recreation on steelhead and habitat.
Bruce Kuebler	2		X			Rearing habitat at Foster Park is primarily important for juveniles coming down San Antonio Creek. Factors affecting migration include outflow from Ojai groundwater basin and suitable locations for spawning and rearing the young. Our GSP is focused on determining effects of direct and indirect depletion from groundwater pumping but the Ojai GSP is required to assess effect of its Plan on a down-gradient basin. San Antonio Creek flow is a critical part of that assessment. The monitoring plan lacks an element to evaluate this connection and this is an opportunity to work with OBGMA on a cooperative approach.	We appreciate this consideration for developing a cooperative and data-driven approach for evaluating upstream effects. The purpose of this study is to provide an initial step to assess the relationship of activities occurring within UVRGB and is not meant to address this broader extent. As such, we understand that this collaborative effort is beyond the intent and scope of this study. However, we do see that future opportunities will exist for using the data and findings from this study in conjunction with data collection activities implemented by OBGMA to evaluate the relationship of outflow from the Ojai basin. Specifically, this monitoring program will assess the conditions that are present in the aquatic GDE area, including species presence and life stage, flow conditions through the GDE, and other habitat suitability factors.
City of Ventura	1		X			It would be helpful if the section on Habitat suitability and relationship to ISW depletion had a more complete discussion of how the model will be used to determine the effects of pumping on the habitat suitability. It is not clear how the following questions from page 2 will be answered: How and when does ISW depletion affect habitat suitability conditions within the GDE? How might groundwater pumping in the Basin affect habitat suitability conditions within the GDE?	Thank you for this comment, we will clarify this point in the work plan. Results of the monitoring program, specifically the HSI Scores and species presence/absence and overall abundance data, will be further evaluated together with model derived estimates of ISW depletion to draw conclusions about the effects of depletion on the Aquatic GDE. This will happen as part of the 5-year GSP assessment and update.
City of Ventura	2		X			As indicated on Figure 1, the City of Ventura maintains 2 monitoring sites in the Foster Park Habitat area (VR1 and VR2). This data is available to view in realtime on the picovale website (provide login and password). However, if the GSA would like to utilize the data for analysis the verified daily data for specified time periods can be obtained from the City upon request. The flow data is calibrated with field measurements every 30-60 days.	Thank you for letting us know the procedure for obtaining the best available data. We will coordinate with the City as the monitoring program is implemented.
City of Ventura	3		X			Table 4 indicates that baseline habitat mapping will be conducted in the Fall of 2022. The City is planning the construction of a notch in the subsurface dam in order to facilitate fish passage through the Foster Park Habitat area. Currently, the construction window is September 15 – November 1, 2022. The City is also planning the construction of a fish passage improvement project to facilitate passage of a concrete pipe approximately 100 ft downstream of the subsurface dam. Construction of that facility is planned for Fall 2023. It is likely preferrable for the baseline habitat mapping to be conducted to avoid periods when construction is occurring and would probably be most useful if at least conducted following the construction of the notch.	Thank you for letting us know. Please see response to Mary Bergen Comment No. 2 regarding baseline habitat mapping. In addition, we will coordinate with the City to ensure the habitat mapping is completed in an appropriate manner, likely avoiding periods when construction is occurring and following construction of the notch.
City of Ventura	4		X			It is unclear what is meant by baseline habitat monitoring in the context of this monitoring plan.	Please see response to Mary Bergen Comment No. 2 regarding baseline habitat mapping.

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CDFW	1			X		CDFW Comment # 1: California Endangered Species Act (CESA) listing for Southern California Steelhead. Pursuant to section 2074.2 of the Fish and Game Code, on April 21, 2022, the California Fish and Game Commission (Commission) determined that listing Southern California steelhead (Oncorhynchus mykiss) as endangered under the CESA may be warranted. This commences an approximately one-year status review of the species, and at a future meeting, the Commission will make a decision regarding whether listing of Southern California steelhead as endangered under CESA is warranted. During the status review, Southern California steelhead is protected under CESA as a candidate species pursuant to section 2085 of the Fish and Game Code, provided that notice has been given as required by section 2074.4 of the Fish and Game Code. The Upper Ventura River Groundwater Agency's (GSA) is prohibited from undertaking or authorizing activities that result in take of any endangered, threatened, or candidate species, except as authorized by State law (Fish & Game Code, §§ 86, 2062, 2067, 2068, 2080, 2085; Cal. Code Regs., tit. 14, § 786.9).	Thank you for your comment. UVRGA does not anticipate that monitoring activities implemented as part of this study will result in take of any endangered, threatened, or candidate species. Rather, the monitoring activities are meant to develop a better understanding of local populations and to evaluate the potential effect of groundwater management activities in the UVRGB.
CDFW	2			X		CDFW Comment #2: Lake or Streambed Alteration Agreement. The GSA's monitoring activities may impact streams. The GSA's workplan proposes the installation of monitoring wells and monitoring stations, within or adjacent to stream areas. Please note that stream-related activities may be subject to notification under Fish and Game Code section 1602. Fish and Game Code section 1602 requires any person, state or local governmental agency, or public utility to notify CDFW prior to beginning any activity that may do one or more of the following: • Divert or obstruct the natural flow of any river, stream, or lake; • Change the bed, channel, or bank of any river, stream, or lake; • Use material from any river, stream, or lake; or, • Deposit or dispose of material into any river, stream, or lake.	Thank you for this important reminder. Although the work plan discusses new wells and stream gages within and adjacent to stream areas, the monitoring activities and equipment used for this study will be implemented and deployed in a manner to avoid the specific effects outlined by the commentor. In addition, UVRGA will take appropriate regulatory action and obtain all necessary permits for the development of the wells and monitoring stations mentioned in the work plan.
CDFW	3				X	CDFW Comment #3: The GSP Does Not Consider All Riparian Groundwater Dependent Ecosystems in the Basin. CDFW recommended in our Final GSP Comment Letter (see Attachment C) that the GSA consider all riparian GDEs in the Basin – this concern has not been addressed. CDFW recommends that the Monitoring Workplan identify the Riparian and Aquatic GDE units within the six identified hydrogeologic areas. Appendix O of the Final GSP describes 1) intermittent groundwater-surface water interconnection in the Kennedy, Santa Ana North, Santa Ana South, and northern Casitas Springs hydrogeologic areas; and 2) generally disconnected groundwater-surface water in the Robles North, Robles South, and northern Santa Ana South hydrogeologic areas. However, the Riparian and Aquatic GDE units seem to exclude these areas despite their varying degrees of groundwater-surface water interconnection. For example, the GSA excluded the Kennedy hydrogeologic area even though this area has intermittent groundwater-surface water connection and riparian mixed hardwood habitat. CDFW appreciates the GSA's efforts in developing a workplan for the Foster Park and Confluence Areas. CDFW strongly recommends that the Kennedy, Santa Ana North, Santa Ana South, and northern Casitas Springs, Robles North, and Robles South areas be included in the GDE assessment, and monitoring plans.	Thank you for this comment. While this comment does not pertain to the workplans, UVRGA would like to provide the following response for clarification purposes. The subject workplans are for monitoring of aquatic GDEs, not riparian GDEs. Riparian GDEs are addressed under the chronic lowering of groundwater levels sustainable management criterion, not the depletions of interconnected surface water sustainable management criterion for which the subject monitoring plans were prepared. The conclusion that UVRGA did not consider all riparian GDEs is incorrect. UVRGA considered all riparian vegetation and determined that some areas are or may be groundwater dependent and others are not. The evaluation of groundwater dependency is documented in GSP Section 3.2.7 and GSP Appendix O. GSP Section 5.3 describes riparian GDE monitoring planned for the South Santa Ana and Foster Park areas. Areas further north were not included in the riparian GDE monitoring network because UVRGA determined that vegetation in those areas is not groundwater dependent. Please see GSP Section 3.2.7 and GSP Appendix O for details.
CDFW	4				X	CDFW Comment #4: The GSP Minimum Thresholds, Measurable Objectives, and Sustainable Management Criteria for Interconnected Surface Waters Depletion Do Not Account for the Best Available Science. CDFW disagrees with the GSA's assertion, and stated in our Final GSP Comment Letter (Attachment C), that CDFW's Draft Instream Flow Recommendations for the Lower Ventura River and Coyote Creek (2021) (Draft Recommendations) and National Marine Fisheries Service (NMFS) Draft Biological Opinion for Foster Park Wellfield (2007) (Foster Park Draft BO) are irrelevant to determining appropriate sustainable management criteria to avoid unreasonable adverse impacts to beneficial users of ISWs. CDFW's Draft Recommendations were designed to protect Southern California steelhead by recommending flows that support passage as well as spawning and rearing habitat. Avoiding significant and unreasonable effects related to groundwater pumping is essential to the health and survival of Southern California steelhead in the Ventura River. The GSA has not provided enough information to conclude that a minimum flow threshold of two cubic feet per second is sufficient to ensure avoidance of significant and unreasonable adverse impacts (an undesirable result under SGMA) to all life cycles of Southern California steelhead. In Appendix C of the Padre study (2012), there is a comparison of the Padre study relative to other studies in the area. However, the Padre study did not consider NMFS' specific reach flow analysis that was completed as part of its 2007 consultation process for the operation of the City of Ventura's Foster Park wellfields.	Thank you for this comment. While this comment does not pertain to the workplans, UVRGA would like to provide the following response for clarification purposes. UVRGA is implementing a regulatory plan under its authority as a groundwater sustainability agency (GSA) pursuant to the powers authorized under the Sustainable Groundwater Management Act (SGMA). Importantly, SGMA empowers GSAs to determine what constitutes undesirable results and develop sustainable management criteria (SMC) to avoid those undesirable results and implement a groundwater sustainability plan (GSP) to achieve the SMC. Through this process, UVRGA has defined undesirable results for depletions of interconnected surface water (ISW) in the Foster Park area as "depletions of ISW that causes a degradation in habitat conditions that lead to substantial stress and/or potential mortality for steelhead." In this context, UVRGA determined that the Hopkins (2013) study provides the best available science for determining conditions that may lead to substantial stress and/or mortality. The CDFW instream flow recommendations (CDFW 2021a) and the NMFS Draft BO (NMFS 2007) focus on (favorable steelhead condition and recovery, avoidance of jeopardy, and adverse habitat modification), which are different goals than UVRGA has established under its SGMA authority. UVRGA agrees with maintaining surface water conditions for the health and survival of aquatic species and their habitats, including steelhead. However, SGMA does not require the

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						NMFS flow analysis in the 2007 Foster Park Draft BO represents some of the best available science available in addition to CDFW's Draft Flow Recommendations. CDFW strongly recommends the GSA incorporate CDFW's Draft Recommendations, and the Foster Park Draft BO into the analysis to adequately assess performance of the ISW depletion SMC.	UVRGA to take on the full responsibility for steelhead recovery; rather, SMGA requires UVRGA to prevent undesirable results caused by groundwater pumping. Nothing in the GSP prevents or hinders the ability of other entities such as NMFS or CDFW to pursue steelhead recovery. UVRGA suggests that the GSP instead be thought of as one of the tools to further a larger effort to address steelhead issues, specifically providing a protective backstop that protects steelhead during times when they are most vulnerable. We are optimistic that the data developed through the implementation of these work plans and the UVRGA GSP in general will aid in the understanding of current and long-term habitat and species conditions.
NMFS	1a, 1b				X	NOAA's National Marine Fisheries Service (NMFS) has previously provided comments on the Draft and Final Upper Ventura River Groundwater Sustainability Plan (Draft or Final GSP), with a focus on its relevance to the federally listed endangered southern California steelhead (Oncorhynchus mykiss). As we noted in those comments: "The Draft GSP recognized only two GDE areas: 1) Confluence Aquatic Habitat Area and 2) Foster Park Aquatic Habitat Area. This limited recognition of GDE does not accurately reflect the use of the reach of the Ventura River within the UVRGB made by the endangered southern California steelhead, and which is affected by groundwater extractions. Steelhead use the entire reach of the Ventura River within the UVRGB in completing some part of the fresh water portion of their life-cycle." p. 9	Thank you for this comment. While this comment does not pertain to the workplans, UVRGA would like to provide the following response for clarification purposes. UVRGA has quantified depletion of interconnected surface water throughout the Basin (Appendix N; GSP Section 3.2.6 and 4.9, Table 3.2-01, Figures 4.9-01 and 4.9-03) and has concluded that depletions are small relative to typical surface flows upstream of the Confluence Aquatic Habitat Area. SMC are not required for those areas because UVRGA has concluded that the small depletions do not cause significant and unreasonable effects.
NMFS	2a, 2b			X	X	The Draft Monitoring Work Plan does not include all interconnected surface waters that constitute Groundwater Dependent Ecosystems (GDE) of the Ventura River within the UVRGB that are potentially affected by groundwater extractions. The Draft Monitoring Plan also relies on sustainable management criteria (SMC) that do not effectively relate to the habitat conditions necessary to support steelhead during the incubation and rearing phases of their life-cycle.	Regarding inclusion of all interconnected surface waters, please see response to NMFS Comment No. 1. Regarding workplan reliance on SMC, it is noted that the draft monitoring plans do not rely on the SMC. Rather, the monitoring plans are designed to collect data necessary to determine whether SMC are necessary (Confluence area) and to assess the performance of and determine need for adjustments to established SMC (Foster Park area).
NMFS	3a	X				The Confluence Aquatic Habitat Area is within the reach of the UVRGB known as the Casitas Spring Reach, which is a two-mile reach of river, generally bounded on the upstream end by the confluence of San Antonio Creek, and on the downstream end by the confluence of Coyote Creek. The Casitas Springs Reach includes the Confluence Aquatic Habitat Area at its upstream end and the Foster Park Aquatic Habitat Area at its downstream end.	Comment noted.
NMFS	3b		X		X	As NMFS' previous comments on the Draft GSP noted, the: "Draft GSP indicates that the sustainable management criteria for interconnected surface waters in the Foster Park Aquatic Habitat Area GDE relied on a field study performed by Hopkins (2013). This study, which the Draft GSP characterized as "the best available science for the Foster Park Aquatic Habitat Area", identified a flow of 2 cfs measured at the USGS Foster Park gauge (1118500) as adequate to prevent significant and unreasonable effects on steelhead." p. 13 The Final GSP proposes to use this same 2 cfs as one of the SMC for steelhead and other aquatic resources in the Foster Park Aquatic Habitat Area GDE. NMFS has expressed its objections to using this SMC for steelhead in both the Draft and Final GSP1. As NMFS has indicated in previous comments cited above, a more appropriate SMC should be developed by the project proponent and then circulated among state and federal resource agencies for review and consideration. Among other elements of an effective SMC, it should identify a limit on groundwater extractions that would prevent a reduction of surface flow in the Foster Park area below the flow level necessary to sustain endangered steelhead. In this regard, the SMC must allow steelhead, principally juveniles, the ability to successfully rear (and volitionally migrate as environmental conditions change temporally and spatially). NMFS has previously identified 11 to 12 cfs (measured at the USGS Foster Park gauge 11118500) (NMFS 2007), a level significantly higher than the 2 cfs identified by Hopkins (2013), and adopted by the Final GSP, as a more appropriate SMC for the Foster Park Aquatic Habitat Area (see letters cited above).	Thank you for this comment. While this comment does not pertain to the workplans, UVRGA would like to provide the following response for clarification purposes. UVRGA is implementing a regulatory plan under its authority as a groundwater sustainability agency (GSA) pursuant to the powers authorized under the Sustainable Groundwater Management Act (SGMA). Importantly, SGMA empowers GSAs to determine what constitutes undesirable results and develop sustainable management criteria (SMC) to avoid those undesirable results and implement a groundwater sustainability plan (GSP) to achieve the SMC. Through this process, UVRGA has defined undesirable results for depletions of interconnected surface water (ISW) in the Foster Park area as "depletions of ISW that causes a degradation in habitat conditions that lead to substantial stress and/or potential mortality for steelhead." In this context, UVRGA determined that the Hopkins (2013) study provides the best available science for determining conditions that may lead to substantial stress and/or mortality. The CDFW instream flow recommendations (CDFW 2021a) and the NMFS Draft BO (NMFS 2007) focus on (favorable steelhead condition and recovery, avoidance of jeopardy, and adverse habitat modification), which are different goals than UVRGA has established under its SGMA authority. UVRGA agrees with maintaining surface water conditions for the health and survival of aquatic species and their habitats, including steelhead. However, SGMA does not require the UVRGA to take on the full responsibility for steelhead recovery; rather, SMGA requires UVRGA to prevent undesirable results caused by groundwater pumping. Nothing in the GSP prevents or hinders the ability of other entities such as NMFS or CDFW to pursue steelhead recovery. UVRGA suggests that the GSP instead be thought of as one of the tools to further a larger effort to address steelhead issues, specifically providing a protective backstop that protects steelhead during times when they are most vulnerable. We are optimistic that the data developed through the implementation of these work plans and the UVRGA GSP in general will aid in the understanding of current and long-term habitat and species conditions.

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NMFS	4a				X	The Final GSP proposes to use 2 cfs as a SMC for steelhead and other aquatic resources in the Confluence Aquatic Habitat Area GDE, based upon a field study performed by Hopkins (2013). This study, which the Final GSP characterized as “the best available science for the Foster Park Aquatic Habitat Area” has been applied to the Confluence Aquatic Habitat Area as adequate to prevent significant and unreasonable effects on steelhead. NMFS has expressed its objections to using this SMC for steelhead in both the Draft and Final GSP. As NMFS has indicated in previous comments cited above, a more appropriate SMC should be developed by the project proponent and then circulated among state and federal resource agencies for review and consideration. Among other elements of an effective SMC, it should identify a limit on groundwater extractions that would prevent a reduction of surface flow in the Foster Park area below the flow level that is believe necessary to sustain endangered steelhead. In this regard, the SMC must allow steelhead, principally juveniles, the ability to successfully rear (and volitionally migrate as environmental conditions temporally and spatially). NMFS has previously identified 11 to 12 cfs (measured at the USGS Foster Park gauge 11118500) (NMFS 2007), a level significantly higher than the 2 cfs identified by Hopkins (2013), and adopted by the Final GSP for the Confluence Aquatic Habitat Area (see letters cited above). Because the channel morphology, gradient, and riparian habitats are similar throughout the Casitas Springs Reach (including within the Confluence Aquatic Habitat Area and the Foster Park Habitat Area), NMFS believes higher flow standard identified by NMFS is the more appropriate SMC for the Confluence Aquatic Habitat Area (as well as the Foster Park Aquatic Habitat Area).	Thank you for this comment. While this comment does not pertain to the workplans, UVRGA would like to provide the following response for clarification purposes. The commentor incorrectly concludes that the SMC included in the GSP apply to the Confluence Aquatic Habitat Area. No SMC were established for the Confluence Aquatic Habitat Area. The SMC were developed for the Foster Park Area and do not apply to the Confluence Habitat Area. The GSP identifies data gaps in the Confluence Habitat Area and the sole purpose of the Confluence Aquatic Habitat Area Aquatic Groundwater Dependent Ecosystem Monitoring Work Plan is to collect data to determine if SMC are warranted and, if so, what they should be. The remainder of the comment focuses on the SMC included in the GSP for depletions of interconnected surface water for the Foster Park Aquatic Habitat Area, which is not relevant to the Confluence Aquatic Habitat Area Aquatic Groundwater Dependent Ecosystem Monitoring Work Plan and is really a comment on the GSP, but it is responded to here, nonetheless. First, UVRGA is not a project proponent, as stated in the comment. UVRGA has proposed no projects to date and is implementing a regulatory plan under its authority as a groundwater sustainability agency (GSA) pursuant to the powers authorized under the Sustainable Groundwater Management Act (SGMA). Importantly, SGMA empowers GSAs to determine what constitutes undesirable results and develop sustainable management criteria (SMC) to avoid those undesirable results and implement a groundwater sustainability plan (GSP) to achieve the SMC. Through this process, UVRGA has defined undesirable results for depletions of interconnected surface water in the Foster Park area as "depletions of ISW that causes a degradation in habitat conditions that lead to substantial stress and/or potential mortality for steelhead.” In this context, UVRGA determined that the Hopkins (2013) study provides the best current available science for determining conditions that may lead to substantial stress and/or mortality. The CDFW instream flow recommendations (CDFW 2021a) and the NMFS Draft BO (NMFS 2007) focus on (favorable steelhead condition and recovery, avoidance of jeopardy, and adverse habitat modification), which are different goals than UVRGA has established under its SGMA authority. UVRGA agrees with maintaining surface water conditions for the health and survival of aquatic species and their habitats, including steelhead. However, SGMA does not require the UVRGA to take on the full responsibility for steelhead recovery; rather, SMGA requires UVRGA to prevent undesirable results caused by groundwater pumping. Nothing in the GSP prevents or hinders the ability of other entities such as NMFS or CDFW to pursue steelhead recovery. UVRGA suggests that the GSP instead be thought of as one of the tools the further a larger effort to address steelhead issues, specifically providing a protective backstop that protects steelhead during the most times when they are most vulnerable.
NMFS	4b				X	The Final GSP proposes to use this same 2 cfs as one of the SMC for steelhead and other aquatic resources in the Foster Park Aquatic Habitat Area GDE. NMFS has expressed its objections to using this SMC for steelhead in both the Draft and Final GSP. As NMFS has indicated in previous comments cited above, a more appropriate SMC should be developed by the project proponent and then circulated among state and federal resource agencies for review and consideration. Among other elements of an effective SMC, it should identify a limit on groundwater extractions that would prevent a reduction of surface flow in the Foster Park area below the flow level necessary to sustain endangered steelhead. In this regard, the SMC must allow steelhead, principally juveniles, the ability to successfully rear (and volitionally migrate as environmental conditions change temporally and spatially). NMFS has previously identified 11 to 12 cfs (measured at the USGS Foster Park gauge 11118500) (NMFS 2007), a level significantly higher than the 2 cfs identified by Hopkins (2013), and adopted by the Final GSP, as a more appropriate SMC for the Foster Park Aquatic Habitat Area (see letters cited above).	See response to NMFS comments above.
NMFS	5a, 5b			X		Lastly, the Draft Monitoring Work Plan, focuses on monitoring certain physical and hydrological parameters intended to serve as indicators of “habitat suitability,” but does not propose monitoring important aspects of targeted species. For steelhead, this would include abundance, productivity, diversity, and distribution (including fish growth rate, health, etc.).	The commenter is reminded that the GSP defines undesirable results as "depletions of ISW that causes a degradation in habitat conditions that lead to substantial stress and/or potential mortality for steelhead.” Thus, the monitoring elements are appropriately limited to and focused on collecting data necessary to determine whether UVRGA is on a path to avoiding these specific undesirable results within the 20-year implementation period. Recommended additional monitoring elements, such as data to evaluate "recruitment, etc." are beyond the scope of UVRGA's monitoring needs. If UVRGA finds that establishing numeric standards aides in evaluating the performance of the SMC, UVRGA will establish them as part of first 5-year GSP assessment.

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NMFS	6a, 6b			X		The Draft Monitoring Work Plan refers to “the dry period of the year when other reaches of the river typically run dry.” However, the Draft Monitoring Work Plan does not acknowledge that this desiccation is exacerbated (i.e., extended both spatially and temporally) as a result of groundwater extractions from the UVRGB (SWRCB 2021). In addition to groundwater discharge, hyporheic flows are an important component of surface flows, particularly base flows, and can be influences by groundwater levels (SWRCB 2021). Groundwater extraction not only affects the two Aquatic Habitat Areas (Confluence and Foster Park), identified in the Final GSP, but also upstream and downstream reaches from these two Aquatic Habitat Areas that include interconnected surface waters, and that are utilized by the endangered southern California steelhead (Capelli 1997, NMFS 2012, SWRCB 2021).	Thank you for pointing out the important relationship between groundwater and interconnected surface water. Please note that the workplans are not the appropriate place for discussion of impacts of groundwater extractions on interconnected surface water, and this topic was discussed at length in the GSP (see GSP Section 3.2.6 and specifically GSP Table 3.2-01), which summarizes model-derived estimated depletions of interconnected surface water by pumping. As can be seen in GSP Table 3.2-01, pumping related depletions of interconnected surface water are small compared to surface water flows in all areas except Foster Park and, potentially, the Confluence area. For this reason, UVRGA determined that there is limited potential for undesirable results, as defined by UVRGA pursuant to its authority under SGMA, in the other portions of the Ventura River within the Basin.
NMFS	7a, 7b			X		The Draft Monitoring Work Plan is intended to assess the effects of depleting interconnected surface waters, using the SMC identified in the Final GSP. As noted, these SMC are not supported by the best available science, and are not appropriate for assessing impacts of groundwater extraction on steelhead occupying and using the Confluence Aquatic Habitat Area.	The commenter may be misunderstanding the design and purpose of these work plans, as they do not rely on SMC to assess the effect of ISW depletion. Rather, the work plans are designed to collect data necessary to determine whether SMC are necessary (Confluence area) and to assess the performance of the SMC (Foster Park area). Please also see responses to NMFS Comment Nos. 4a and 4b.
NMFS	8a		X			The Draft Monitoring Work Plan references the potential development of a monitoring program as part of a “physical solution” for the on-going Ventura River Adjudication. We would note that SGMA establishes an independent standard for managing groundwater, including monitoring groundwater usage to manage impacts to GDE. SGMA specifically requires that groundwater extractions avoid depleting interconnected surface waters in a manner that impacts beneficial uses recognized by the State and Regional Water Quality Control Boards.	Please note that while UVRGA is aware of the ongoing adjudication process, the work plan does not discuss the physical solution, nor the monitoring programs associated with it. The monitoring programs identified in Table 1 occur independently of the adjudication process, with their own regulatory drivers and objectives. Partnering with other entities to share monitoring burdens and/or relying on other monitoring networks to address GSP implementation data needs is not prohibited under SGMA and is preferred from a cost control perspective. UVRGA does not agree that "*SGMA specifically requires that groundwater extractions avoid depleting interconnected surface waters in a manner that impacts beneficial uses...*" SGMA requires that GSAs avoid undesirable results, as defined by the GSA. Determination of undesirable results by a GSA includes consideration of impacts on beneficial uses and users of water; however, not all impacts necessarily constitute an undesirable result.
NMFS	8b		X			Finally, the Draft Monitoring Work Plan outlines only a three-year monitoring program to assess the effects of groundwater extractions on interconnected surface waters in the Foster Park Aquatic Habitat Area, though the Final GSP indicates the UVRGA has 20 years to achieve sustainable management of the UVRGB. Information gathered from such a short time will have limited value in assessing the long-term sustainability of groundwater resources, or the sustainability of GDE in the Foster Park Aquatic Habitat Area. A three-year period would cover less than a single life-cycle of the endangered southern California steelhead (which may spend 2 to 3 years rearing in freshwater and 2 to 3 years maturing in the ocean before returning to spawn). Data from a three-year monitoring period would therefore provide only a limited understanding of the effects of groundwater extractions on the recruitment and viability of the steelhead population in the Ventura River. Further, the Draft Monitoring Work Plan does not contain any numeric standards by which to address the questions outlined in the Draft Monitoring Work Plan (e.g., habitat suitability to support GDE).	Section 1 of the workplan states that answering the study questions will provide the necessary information to establish a long-term monitoring plan for the Foster Park Aquatic GDE area. GSP Section 5.8 also confirms UVRGA's commitment to ongoing monitoring in this area for the remainder of the GSP implementation period. Having said this, the commenter is reminded that the GSP defines undesirable results as "depletions of ISW that causes a degradation in habitat conditions that lead to substantial stress and/or potential mortality for steelhead.” Thus, the monitoring elements are appropriately limited to and focused on collecting data necessary to determine whether UVRGA is on a path to avoiding these specific undesirable results within the 20-year implementation period. Recommended additional monitoring elements, such as data to evaluate "recruitment, etc." are beyond the scope of UVRGA's monitoring needs. If UVRGA finds that establishing numeric standards aides in evaluating the performance of the SMC, UVRGA will establish them as part of first 5-year GSP assessment. In addition, note that SS HSI Scores will be calculated at each monitoring location and used in tandem with other field collected data to assess habitat suitability conditions.
NMFS	9a	X				Finally, the Draft Monitoring Work Plan outlines only a three-year monitoring program to assess the effects of groundwater extractions on interconnected surface waters in the Confluence Aquatic Habitat Area, though the Final GSP indicates the UVRGA has 20 years to achieve sustainable management of the UVRGB. Information gathered from such a short time will have limited value in assessing the long-term sustainability of groundwater resources, or the sustainability of GDE in the Confluence Aquatic Habitat Area. A three-year period would cover less than a single life-cycle of the endangered southern California steelhead (which may spend 2 to 3 years rearing in freshwater and 2 to 3 years maturing in the ocean before returning to spawn). Data from a three-year monitoring period would therefore provide only a limited understanding of the effects of groundwater extractions on the recruitment and viability of the steelhead population in the Ventura River. Further, the Draft Monitoring Work Plan does not contain any numeric standards by which to address the questions outlined in the Draft Monitoring Work Plan (e.g., habitat suitability to support GDE).	See response to NMFS Comment No. 8b.

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NMFS	10a / 9b			X		Figure 1. Confluence Aquatic Habitat Area Location / Foster Park Aquatic Habitat Area Location Page 3. The map depicts the entire UVRGB, with a smaller inset for the Confluence Aquatic Habitat Area, and is therefore not sufficient scale to clearly depict the Confluence Aquatic Habitat Area / Foster Park Aquatic Habitat Area and the location of the related features (e.g., planned stream gauges and monitoring wells). The revised Draft Monitoring Work Plan should include a separate larger scale map that depicts the Confluence Aquatic Habitat Area / Foster Park Aquatic Habitat Area, with existing and proposed facilities.	We are happy to revise the work plans to present this separate larger scale map that depicts the aquatic habitat area GDEs with the existing and proposed facilities.
NMFS	11a / 10b			X		Table 1. Relevant Monitoring Programs and Previous Studies within the UVRGB Pages 4-5. In addition to the monitoring programs identified in Table 1, the California Department of Fish and Wildlife (CDFW) is engaged in a steelhead monitoring program in the Ventura River. This program involves conducting annual spawner surveys, as well at the deployment of DIDSON and ARIS cameras (Evans 2019, and Evans and St. George 2020). Additionally, the CDFW will begin implementing the recently developed monitoring protocols for southern California steelhead, which includes monitoring juvenile rearing O. mykiss in the Ventura River (Boughton et al. 2022).	Thank you for this information, we will add this to Table 1.
NMFS	11b	X				Groundwater Level Monitoring: Notes: The Final GSP proposed 5 additional wells; however, the Figure 1 only identifies 4 additional wells (A, B, C. and D).	Thank you for this review, we will update Figure 1.
NMFS	12a / 12b			X		Table 2. Existing and Planned UVRGB Monitoring EffortsPage 6.Streamflow Monitoring: Notes: The Final GSP proposes a baseflow gauge at the Camino Cielo road crossing, which consists of a set of box culverts. This crossing is proposed to be replaced with a full-span bridge as part of the Matilija Dam Removal and Ecosystem Restoration Project, and may not be suitable for low-flow measurements.Visual Stream Monitoring: Description of Data Collection/Study: It is proposed to only monitor (visually) the spatial extent of surface water flows. Streamflow monitoring should also include measured pool and riffle width, length, and depth, as well as velocity of flows, at selected cross-sections.	UVRGA is aware of the planned bridge replacement at Camino Cielo and will assess alternative flow monitoring options when necessary. Visual stream monitoring is conducted in accordance with SGMA requirements, GSP Emergency regs 354.34.C.6.B. Per these requirements, UVRGA identifies the date, time, and location of where stream ceases as surface water flow. Note that surveys completed as part of the aquatic habitat area GDE work plans will include the level of detail within the study area as described by the commenter.
NMFS	13a / 13b			X		2. Monitoring Program Components Pages 7-12. The Draft Monitoring Work Plan does not include the monitoring protocols for steelhead that are described in NMFS' and CDFW's recently published "Integration of Steelhead Viability Monitoring, Recovery Plans and Fisheries Management in the Southern Coastal Area" (Boughton et al. 2022). The Draft Monitoring Work Plan should be modified to specifically reference these protocols, and coordinate their implementation with the CDFWs steelhead monitoring program for the Ventura River.	The GSP defines undesirable results as "depletions of ISW that causes a degradation in habitat conditions that lead to substantial stress and/or potential mortality for steelhead." Thus, the monitoring elements are appropriately limited to and focused on collecting data necessary to determine whether UVRGA is on a path to avoiding these specific undesirable results within the 20-year implementation period. Recommended addition monitoring elements, such as data to evaluate "recruitment" are beyond the scope of UVRGA's monitoring needs. If UVRGA finds that establishing numeric standards aides in evaluating the performance of the SMC, UVRGA will establish them as part of first 5-year GSP assessment. The UVRGA has reviewed the protocols in Boughton et al. 2022 and will has referenced them in the work plans. These protocol will be implemented in the monitoring program as is applicable to meet the goals of our monitoring approach specific to answering questions pertaining to undesirable results.
NMFS	14a / 14b			X		The Draft Monitoring Work Plan indicates, "much of the Ventura River is designated as critical habitat for the federally endangered southern California DPS of steelhead." In fact, all of the mainstem of the Ventura River is designated as critical habitat for steelhead, and most of the major tributaries (e.g., Coyote Creek, Santa Antonio Creek Matilija Creek, and North Fork Matilija Creek). Additionally, Intrinsic Potential Steelhead Spawning and Rearing Habitat has been identified in a significant portion of the watershed, including the Confluence Aquatic Habitat Area. See Figures 1 and 2.	Thank you for pointing out this error. We understand these conditions, as is discussed in Section 3 of the work plans, and we will correct this language.
NMFS	15a / 15b			X		The Draft Monitoring Work Plan indicates, "It is not anticipated that any permits will be required for implementation of the monitoring program components." It should be noted that handling or other actions that involve direct interactions with the endangered southern California steelhead require consultation with NMFS.	Thank you for this important reminder. We do not anticipate our work will involve direct interactions with endangered southern California steelhead, and we will take appropriate action to avoid this interaction.
NMFS	16a / 16b			X		Baseline Habitat Mapping: Data Collected: See comment above. Schedule: Annual baseline conditions are highly variable, and a one-time observation should not be interpreted as necessarily representative. Reference protocols: See Boughton et al. (2022) for a discussion of "Hydrological Sample Frame."	Thank you for this comment and reference to Boughton et al. (2022). Please see response to Mary Bergen Comment No 2. The UVRGA has reviewed the protocols in Boughton et al. 2022 and has referenced them in the work plans. These protocols will be implemented in the monitoring program as is applicable to meet the goals of our monitoring approach specific to answering questions pertaining to undesirable results.

Commentor	Comment No.	Confluence	Foster Park	Both Workplans	Other (e.g., GSP)	Comment/Question	Response
NMFS	17a 17b			X		Routine Habitat Suitability and Snorkel Surveys: Data Collected, Schedule, Locations, Reference/Protocols: See Boughton et al. (2022) for discussion of “Snorkel Surveys” and “Calibration”.	Thank you for this comment and reference to Boughton et al. (2022). The UVRGA has reviewed the protocols in Boughton et al. 2022 and has referenced them in the work plans. These protocols will be implemented in the monitoring program as is applicable to meet the goals of our monitoring approach specific to answering questions pertaining to undesirable results.
NMFS	18a / 18b			X		Aerial Photography: Data Collected, Reference Protocols: The nature of the aerial photography proposed is unclear, but using traditional areal photography has limited interpretive value. Other aerial surveys such as Landsat and Sentinel-2 collect data globally every five to sixteen days, and PlanetScope is generally available at more frequent intervals. These data sets, as well as others such as VegCamp, can be used not only to map vegetation, but in combination with vegetation, models (based on multiple endmember spectral analysis) can be used to assess the condition of the vegetation, and in particular, how water availability is constraining vegetation growth and condition.	Thank you for this information. Vegetation monitoring is not part of these workplans but is addressed through other ongoing monitoring efforts by UVRGA. This comment will be considered as these additional monitoring efforts are implemented. For these work plan studies, aerial photography will be used for visual analysis of the overall GDE study area to assess conditions over time and during different hydrologic and climatic conditions.
NMFS	19a / 19b			X		The Draft Monitoring Work Plan indicates that the initial survey “will provide data on the aquatic habitat present” and randomly or systematically chosen locations used in subsequent mapping surveys. For the selection of aquatic habitats to be surveyed for the purpose of assessing the status of O. mykiss, see the discussion in Boughton et al. (2022) regarding “Snorkel Surveys” and “Calibration”.	Thank you for this comment and recommendation. The UVRGA has reviewed the protocols in Boughton et al. 2022 and has referenced them in the work plans. These protocols will be implemented in the monitoring program as is applicable to meet the goals of our monitoring approach specific to answering questions pertaining to undesirable results.
NMFS	20a / 20b			X		For steelhead snorkel surveys, the Monitoring Work Plan should follow the protocols described in Boughton et al. (2022). See, in particular the discussion of “Snorkel Surveys” and “Calibration.”	Thank you for this comment and recommendation. The UVRGA has reviewed the protocols in Boughton et al. 2022 and has referenced them in the work plans. These protocols will be implemented in the monitoring program as is applicable to meet the goals of our monitoring approach specific to answering questions pertaining to undesirable results.
NMFS	21a / 21b			X		The SMC are expressed in terms of groundwater levels, storage, water quality and depletion of interconnected surface waters, and do not adequately relate these physical and hydrological characteristics to the habitat conditions necessary to support steelhead during the incubation and rearing phases of their freshwater life-cycle.	The GSP defines undesirable results as "depletions of ISW that causes a degradation in habitat conditions that lead to substantial stress and/or potential mortality for steelhead.” Thus, the SMC and monitoring elements are limited to and focused on determining whether UVRGA is on a path to avoiding these specific undesirable results within the 20-year implementation period. The rainbow trout HSI evaluations are focused on habitat suitability for all life stages of rainbow trout.
NMFS	22a	X				When analyzing impacts on steelhead or other aquatic organisms resulting from surface water and groundwater extractions, identifying flow levels that effectively support essential life-history phases of a species is critical (Barlow and Leake 2012). Specifically, it is essential to determine what flows adequately supports steelhead migration and emigration during the winter and spring, and juvenile rearing year-round. Without an understanding of these hydrologic/biotic relationships, and monitoring these relationships, the Monitoring Work Plan cannot adequately inform the management of the UVRGB, and ensure that significant and unreasonable adverse impacts from groundwater depletion are avoided (Heath 1983, Belin 2018, CDFW 2019). As noted above, SGMA specifically requires that groundwater extractions avoid depleting interconnected surface waters in a manner that impacts beneficial uses recognized by the State and Regional Water Quality Control Boards.	Thank you for your comment. We understand the importance of this consideration, especially in how it relates to identifying flow objectives for steelhead recovery in the Ventura River. While we agree that it is important to understand the flow regimes for the success of steelhead at various lifecycle stages, we understand that this work is being completed by others in the basin. In addition, the data interpretation and evaluation completed for this study may reference these flow objectives. However, the purpose of this work plan is specific to evaluating the aquatic GDE habitat conditions and assess how those change over time in relation to depletion of ISW and if those results are considered undesirable as defined by the GSA (see response to NMFS Comment No 21). We realize these data are just a piece of the larger mission for steelhead recovery, and we are optimistic that this study will be helpful to NMFS and others working in the basin while addressing the specific requirements of SGMA. Additionally, UVRGA does not agree that "*SGMA specifically requires that groundwater extractions avoid depleting interconnected surface waters in a manner that impacts beneficial uses recognized by the State and Regional Water Quality Control Boards*." SGMA requires GSAs avoid undesirable results, as defined by the GSA. Determination of undesirable results by GSA includes consideration of impacts on beneficial uses and users of water; however, not all impacts necessarily constitute an undesirable result.
NMFS	22b		X			When analyzing impacts on steelhead or other aquatic organisms resulting from groundwater and related streamflow diversions, identifying flow levels that effectively support essential life-history phases of a species is critical (Barlow and Leake 2012). Specifically, it is essential to determine what flows adequately supports steelhead migration and emigration during the winter and spring, and juvenile rearing year-round. Without an understanding of these hydrologic/biotic relationships, and monitoring these relationships, the Monitoring Work Plan cannot adequately inform the management of the UVRGB, and ensure that significant and unreasonable adverse impacts from groundwater depletion are avoided (Heath 1983, Belin 2018, CDFW 2019).	Please see response to NMFS Comment No. 22a.
NMFS	23a / 23b			X		See comments above regarding the CDFW’s on-going steelhead monitoring program for the Ventura River and the recently developed steelhead monitoring protocols for southern California steelhead (Boughton et al. 2022).	We appreciate these comments, please see response to NMFS comments above.

Commentor	Comment No.	Confluence	Foster Park	Both Workplans	Other (e.g., GSP)	Comment/Question	Response
NMFS	24a / 24b			X		As noted above, the Draft Monitoring Work Plan contains a number of deficiencies, including but not limited to, providing inadequate steelhead population data (e.g., productivity, abundance, diversity, and distribution, as well as other aspects of the status of individual fish such as growth rate, health, etc.). Additionally, information gathered from only a three-year period will have limited value in assessing the long-term sustainability of groundwater resources, or the sustainability of GDE in the Confluence Aquatic Habitat Area / Foster Park Aquatic Habitat Area.	The GSP defines undesirable results as "depletions of ISW that causes a degradation in habitat conditions that lead to substantial stress and/or potential mortality for steelhead." Thus, the SMC and monitoring elements are appropriately limited to and focused on determining whether UVRGA is on a path to avoiding these specific undesirable results within the 20-year implementation period. Finally, the work plans specify that in striving to answer the study questions (page 2), UVRGA will develop the information critical for establishing a long-term monitoring plan for the GDE or evaluating whether one is needed for the case of the Confluence Aquatic Habitat Area. We realize these data are just a piece of the larger mission for steelhead recovery, and we are optimistic that this study will be helpful to NMFS and others working in the basin while addressing the specific requirements of SGMA.
OVLC	1			X		After conversations with concerned environmental organizations, OVLC endorses the comments of officials at the National Marine Fisheries Service (NMFS) in their detailed comments and suggestions for revisions to the Draft Work Plans for the Foster Park and Confluence GDEs. OVLC recommends that UVRGA work proactively with NMFS and California Department of Fish and Wildlife (CDFW) to obtain data from ongoing studies in the Ventura River. These data can help to ensure that monitoring protocols utilize best available science.	Please see responses to NMFS comments. UVRGA is willing to partner with other data collection efforts that support GSP implementation, and we are optimistic that the data collected to satisfy the requirements and objectives of other stakeholders and interested parties will benefit the other.
OVLC	2				X	Furthermore, OVLC continues to stress the importance of including GDEs in the Robles Reach in the GSP and recommends that UVRGA develop a Draft Monitoring Work Plan for this Habitat Area. OVLC owns and manages several parcels surrounding the Confluence GDE and OVLC's Ventura River Preserve overlays all of the Robles GDEs, OVLC looks forward to working with UVRGA to provide access to sites and facilitate any monitoring efforts.	With respect to riparian GDEs, UVRGA maintains its position that the vegetation in the Robles Area is not groundwater dependent. Please see the evaluation of groundwater dependency documented in GSP Section 3.2.7 and GSP Appendix O. With respect to aquatic GDEs, the GSP quantified depletion of interconnected surface water throughout the Basin (please see GSP Appendix N; GSP Section 3.2.6 and 4.9, Table 3.2-01, Figures 4.9-01 and 4.9-03). This analysis showed that interconnected surface water depletions are small relative to surface flows in the Robles Area and, therefore, depletions of interconnected surface water are not causing significant and unreasonable effects under SGMA. Therefore, UVRGA is not required to include SMC for the Robles Area nor is UVRGA required to perform studies or monitoring of biological conditions therein. In fact, SGMA does not include any express requirements for biological studies or monitoring. If OVLC and/or other concerned environmental organizations are interested in further monitoring the conditions in the Robles Area, UVRGA is happy to share data pertaining to groundwater levels and depletion of ISW on an agreed-upon schedule.
OVLC	3				X	NMFS has expressed concerns about both the effectiveness of UVRGA's Sustainable Management Criteria (SMC) established for flows and the limitations of proposed monitoring protocols for steelhead habitats in the Ventura River. First, UVRGA should consider State and Federal agencies' comments concerning the SMC set for flows, and utilize the three-year monitoring period to evaluate if a more appropriate SMC is warranted for Foster Park and Confluence. Second, the monitoring protocols proposed for both Draft Work Plans are limited and only use hydrologic parameters as indicators of habitat suitability. UVRGA should consult with agency officials at NMFS and CDFW to include their recently published steelhead monitoring protocols and obtain best available data from the agencies' ongoing monitoring efforts and studies within the basin. OVLC enjoys strong relationships with the regional offices of these agencies and can facilitate meetings with these partners for proactive engagement on UVRGA's Final Work Plans.	Please see responses to CDFW and NMFS comments.
OVLC	4				X	In addition, OVLC reiterates its position on the Final GSP that the GDEs present in the Robles Reach (where OVLC's Ventura River Preserve is located) should be included in the analysis and monitoring. We recommend that the UVRGA should also submit a Draft Monitoring Work Plan to identify SMCs for these GDEs. All of the mainstem Ventura River is designated as critical habitat for southern steelhead (which have been seen in the Robles Reach) and other species. The GDE's in the Robles Reach also provide outstanding water-related recreational benefits to the public. Furthermore, due to the underground flows that the UVRGA has identified downstream of the Robles Reach, any proactive groundwater management efforts in the Robles Reach will provide benefits to GDE's occurring in downstream areas. OVLC looks forward to the opportunity to work with the UVRGA to assess potential impacts of groundwater depletions on interconnected surface water in the Robles Reach to determine whether an SMC is necessary to prevent significant and unreasonable impacts.	Please see response to OVLC Comment No. 2.

Commentor	Comment No.	Confluence	Foster Park	Both Workplans	Other (e.g., GSP)	Comment/Question	Response
OVLC	5			X		OVLC is excited about the continued partnership with UVRGA and looks forward to assisting on groundwater management projects to achieve sustainability in our basin.	Thank you for this comment. UVRGA is also looking forward to partnerships moving forward.