

July 31, 2026
Project No: 25-18126

Bryan Bondy, PG, CHG
Executive Director
Upper Ventura River Groundwater Agency
Via email: bbondy@uvrgroundwater.org

**Subject: Proposed Amendments to the Water Year 2027 Confluence Aquatic Habitat Area
Aquatic Groundwater Dependent Ecosystems Monitoring Workplan**

Dear Mr. Bondy:

Per discussion, this letter documents formerly incorporated and newly proposed amendments to the Confluence Aquatic Habitat Area Aquatic Groundwater Dependent Ecosystem (Aquatic GDE) Monitoring Workplan (Workplan). Following guidance provided in Sections 4.9.1 and 5.8 of the Groundwater Sustainability Plan (GSP), Upper Ventura River Groundwater Agency (UVRGA) adopted the Workplan on August 11, 2022, to determine if Interconnected Surface Water (ISW) depletion is causing significant and unreasonable effects on the Aquatic GDE.

The monitoring program was designed to provide data that can inform whether sustainable management criteria (SMC) for the Depletion of ISW sustainability indicator are warranted for the Confluence Aquatic GDE. The Workplan's monitoring elements were specifically crafted to assess conditions during periods of low surface water flow during which significant and unreasonable effects to the Aquatic GDE could potentially occur. Following the initial two years of Workplan implementation (Water Years 2023 and 2024), the first round of Workplan amendments was approved by the UVRGA Board of Directors on June 13, 2024. After a third year of Workplan implementation (Water Year 2025), a second round of Workplan Amendments were approved by the UVRGA Board of Directors on September 11, 2025.

This document presents a third round of Workplan amendments based on additional information gained since fall 2025, which are proposed to be implemented beginning Water Year 2027. These proposed Workplan amendments are intended to further focus the monitoring activities on low flow conditions by shifting from rigid flow-based thresholds to condition-based triggers that allow field biologists to target monitoring when Aquatic GDE conditions are most relevant for evaluating potential effects of ISW depletion.

Summary 2024 Workplan Amendments

As a result of two consecutive high rainfall seasons in Water Years 2023 and 2024, elevated flows occurred in the Aquatic GDE and throughout the Ventura River. The Workplan established anticipated schedules for snorkel and habitat suitability surveys, continuous water quality, and flow data collection without regard to flows. While the purpose of the Workplan was to assess habitat suitability conditions at lower flows, it did not specify flow ranges or targets to trigger monitoring activities. In light of the elevated flow conditions and the need for more specificity, Workplan amendments were proposed on March 31, 2024, and ultimately approved on June 13, 2024, which clarify the monitoring schedule and establishes flow-based triggers for monitoring components. The goal of these amendments was to focus monitoring efforts during periods of lower flows that are most relevant to the GSP sustainability criteria.



The implemented modifications include:

- Continue to conduct one snorkel and habitat survey in the winter, timing dependent upon safe flow conditions for river access.
- Continue to conduct at least one snorkel and habitat survey in the summer/fall.
- Do not conduct additional summer/fall snorkel and habitat surveys if flows do not recede below 12.7 cubic feet per second (cfs) at Casitas Vista Road Bridge (location of the USGS Stream Site 11118500) unless visual inspection of the Confluence Aquatic Habitat Area suggest monitoring is warranted.¹
- Deploy continuous data loggers and conduct stream gaging activities once receding baseflow conditions allow for safe access to the river, flow is confined to a primary/main channel, and instantaneous discharge measurements can be safely collected.
 - This will require discretion based on professional judgement, and appropriate conditions are anticipated to occur around 40 - 50 cfs, measured at Casitas Vista Road Bridge.

Summary 2025 Workplan Amendments

The 2024 Workplan amendment specified flow ranges or targets to trigger monitoring activities, which clarified the monitoring schedule and established flow-based triggers for monitoring components to focus monitoring efforts during periods of lower flows that are most relevant to the GSP sustainability criteria. However, based on field observations made between spring 2024 and spring 2025, additional Workplan amendments were proposed on September 4, 2025, and ultimately approved on September 11, 2025, to further specify target ranges of low flow for the three summer/fall snorkel and habitat surveys. Additionally, the 2025 Workplan amendments added refuge water quality monitoring, which is a new monitoring component of targeted continuous water quality monitoring in areas of habitat refuge (e.g., pools) of the Aquatic GDE during low-flow conditions.

The implemented modifications include:

- Continue to conduct one snorkel and habitat survey in the winter, timing dependent upon safe flow conditions for river access.
- Thresholds for summer/fall snorkel and habitat surveys, which includes a trigger for the initial summer survey to occur after flows recede to 12.7 cfs, and additional thresholds that trigger surveys between 5.0 to 7.0 cfs and between 3.0 to 5.0 cfs. These targeted surveys at the established flow thresholds provide data for specific flow ranges that were missing from the monitoring program's dataset. Data collection within these two additional low-flow thresholds further enhances habitat suitability assessment.
- Refuge Water Quality Monitoring was added for targeted continuous water quality monitoring in areas of habitat refuge (e.g., pools) of the Aquatic GDE during low-flow conditions. This monitoring component aims to characterize differences between ambient surface water and pool water to evaluate groundwater-surface water interactions and the role of ISW in maintaining thermal refuge, dissolved oxygen (DO), and water chemistry stability, particularly during low-flow conditions. The data will also support assessments of seasonal variability and inform management decisions regarding the persistence and ecological function of aquatic refuge habitats and potential significant and unreasonable effects.

¹ This flow threshold is based on the current measurable objective included in the GSP for the Foster Park Aquatic Habitat Area GDE



- Updates to the Monitoring Program Components Overview table from the workplan to present monitoring component updates, such as the “As Needed Habitat Mapping Reset” component, as well as the addition of other details.

Proposed Additional Workplan Amendments

Additional Workplan amendments are proposed based on field observations made between spring 2025 and spring 2026. The proposed amendments would further focus the monitoring activities on low flow conditions by replacing fixed flow-based triggers with condition-based triggers that allow field biologists to mobilize monitoring when conditions are most relevant for evaluating potential effects of ISW depletion in the Aquatic GDE.

The proposed amendments are as follows:

- Continue to conduct one snorkel and habitat survey in the winter, timing dependent upon safe flow conditions for river access and water visibility.
- Following the winter snorkel and habitat survey, up to three additional summer/fall surveys may be completed during the low-flow monitoring period. Survey timing will be based on instream aquatic habitat conditions, streamflow, and the field biologist’s best professional judgement regarding whether conditions may be relevant to evaluating potential effects of ISW depletion after consultation with the UVRGA Executive Director.
 - The initial summer/fall snorkel and habitat survey is expected to occur as flows recede to approximately 7 cfs or lower, depending on surface water flow continuity, mesohabitat isolation, and potential refuge or stranding conditions.
 - A snorkel and habitat survey may be conducted earlier if any of the following criteria are met:
 - Visual surface water observations, flow continuity, mesohabitat isolation, or other field conditions indicate potential stranding risk.
 - The field biology team determines surveys are necessary to assess mesohabitat unit conditions at higher flows in order to inform future low flow surveys.
 - Mesohabitat conditions have shifted from the previous rainy season, and surveys can refine habitat mapping for future surveys without the need for a full habitat mapping reset.
 - Additional summer/fall habitat surveys may occur as flows recede, at the discretion of the monitoring team after consultation with the UVRGA Executive Director.
 - Survey timing may also be informed by visual surface water observations, fish stranding and mortality surveys, and other project activities in the area.
- Fish stranding and mortality survey timing will begin around 7 cfs or earlier if visual surface water observations, flow continuity, mesohabitat isolation, or other field conditions indicate potential stranding risk.
- Aerial imagery will be collected by drone twice during the water year and will be coordinated with selected snorkel and habitat surveys based on field conditions and with the goal of documenting low-flow conditions and/or transition to low-flow conditions
- Continuous level and water quality data loggers will be deployed within one to two weeks before the initial summer/fall snorkel and habitat survey and will remain deployed through the low-flow monitoring period.
 - Equipment will be deployed at or near the upstream and downstream locations used in prior years.

- As mesohabitat isolation occurs at lower flows (anticipated around 5-7cfs), monitoring at these locations may be discontinued to focus on refuge water quality monitoring locations (see Refuge Water Quality Monitoring component).
 - Instantaneous discharge and water quality measurements may continue at the upper and lower monitoring locations used in prior years.
 - Instantaneous water quality monitoring may be conducted at the isolated mesohabitats while continuous water quality data loggers are located at the upper and lower monitoring locations used in prior years.
- Rating curve and hydrograph development will no longer be conducted.

A summary of the Confluence Aquatic GDE monitoring program components, including data collected, purpose, schedule, locations, and references/protocols are provided as an attachment. In addition, a monitoring program decision flow chart is included as an attachment to provide simplified summary of the monitoring program approach.

Sincerely,

Rincon Consultants, Inc.



Charleen Rode
Lead Aquatic Senior Biologist



Kiernan Brtalik
Director of Watershed Sciences

Attachments

Monitoring Program Components Overview
Aquatic GDE Monitoring Program Flowchart

Attachments



Monitoring Program Components Overview

Monitoring Component)	Data Collected	Purpose	Schedule	Locations	References/Protocols
Initial Habitat Mapping	Map aquatic mesohabitats in the Confluence Aquatic Habitat Area Aquatic GDE	Will provide in-depth information on existing habitats within the GDE and allow for identification of specific mesohabitats to monitor	Once at beginning of the program (likely during Fall 2022)	Entire Confluence Aquatic Habitat Area Aquatic GDE (approximately 3,450 feet in length)	California Salmonid Stream Habitat Restoration Manual (Flosi et al. 2010)
As-Needed Habitat Mapping Reset	In the event of a habitat resetting flood event, aquatic mesohabitats in Confluence Aquatic GDE would be mapped.	Provides in-depth information on mesohabitats within Confluence Aquatic GDE and allows for identification of specific mesohabitats to monitor.	Will only occur if a significant flooding event occurs and substantially changes the river channel and habitat structures (based on best professional judgement).	Entire Confluence Aquatic GDE.	California Salmonid Stream Habitat Restoration Manual (Flosi et al. 2010).
Fish Stranding and Mortality Surveys	Document any observed fish stranding and/or mortality that might occur as streamflow recedes and becomes discontinuous. The extent of wetted and dry portions of the river will also be documented to illustrate areas that can lead to stranding or habitat isolation.	Provides important information on steelhead migration habitat within the GDE, as well as fine scale data on when and how streamflow recedes within this area following varying climatic conditions and modeled ISW depletion estimates.	Begin monthly surveys once streamflow reaches 12.7 cfs or (cfs) approximately 7 cfs or earlier if visual surface water observations, flow continuity, mesohabitat isolation, or other field conditions indicate potential stranding risk. Increase to weekly surveys as flows continue to recede, based on professional judgement and observed habitat conditions.	Designated monitoring locations at important riffles and isolated pools within the Confluence Aquatic Habitat Area Aquatic GDE	Pedestrian Bank Surveys (assumes no in-stream access is necessary).

**Proposed Amendments to the Confluence Aquatic Habitat Area Aquatic Groundwater Dependent Ecosystems Monitoring Workplan**

Routine Habitat Suitability and Snorkel Surveys	Survey habitat suitability parameters, including sediment type, riparian vegetation/cover, water depth, and various in-stream structure, as well as all species observed, within predetermined pools, riffles, and runs. Steelhead presence/absence will be documented during snorkel surveys. Fish stranding/mortality will also be documented.	Provides detailed information on existing conditions for assessment of habitat suitability for steelhead, CRLF, and other aquatic organisms. Conditions can be quantified and compared with streamflow, as well as climatic data, groundwater levels, and modeled ISW depletion.	Up to four times during the Water Year, as follows: Survey #1: Will occur during the winter season when streamflow conditions are safe and with good water visibility Survey #2: Occurs when flows decrease to ≤ 12.7 cfs Survey #3: Occurs when flows are between 5.0 to 7.0 cfs using best professional judgement Survey #4: Occurs when flows are between 3.0 to 5.0 cfs using best professional judgement. Up to four surveys per water year: one winter survey when access and visibility allow, and up to three summer/fall surveys during low-flow monitoring. Summer/fall survey timing will be condition-based, using streamflow, habitat conditions, and the field biologist's professional judgement to target conditions relevant to the potential ISW depletion effects after consultation with the UVRGA Executive Director. The initial summer/fall survey is expected to occur as flows recede to approximately 7 cfs or lower, considering flow continuity, mesohabitat isolation, and refuge/stranding conditions. Earlier surveys may occur to evaluate stranding risk, assess mesohabitats at higher flows, or refine habitat mapping after seasonal changes. Additional summer/fall surveys may occur as flows recede, at the monitoring team's discretion	Designated monitoring locations (e.g., pools, riffles, runs) within the Confluence Aquatic Habitat Area Aquatic GDE	SS HSI (Normandeau Associates, Inc. 2015, Padre Associates, Inc. 2013) California Salmonid Stream Habitat Restoration Manual (Flosi et al. 2010), Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog (USFWS 2005), NWFS and CDFW Integration of Steelhead Viability Monitoring, Recovery Plans and Fisheries Management in the Southern Coastal Area (Boughton et al. 2022).
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Monitoring Component)	Data Collected	Purpose	Schedule	Locations	References/Protocols
			after consultation with the UVRGA Executive Director. Related observations, including surface water conditions and stranding/mortality surveys, will inform survey timing.		
General Water Quality and Flow Monitoring	Continuous water level, DO, pH, and temperature during targeted low-flow periods; instantaneous discharge and in situ water quality at selected locations.	Provides continuous flow level and water quality data that can then be correlated with streamflow and habitat suitability, as well as climatic data, groundwater levels, and modeled ISW depletion.	Continuous data collection, data downloaded during each field visit. Continuous level and water quality loggers will be deployed one to two weeks before the initial summer/fall habitat and snorkel survey and remain through the low-flow monitoring period. Instantaneous measurements may be collected at selected upper and lower monitoring locations.	Up to 11 two designated locations within the Confluence Aquatic GDE, at upstream and downstream locations used in prior years. ³ If mesohabitat isolation occurs at lower flows, continuous water quality monitoring at these locations may be discontinued to focus on refuge water quality monitoring locations (see Refuge Water Quality Monitoring component). If continuous water quality monitoring is discontinued at upstream and downstream locations, instantaneous flow and water quality monitoring may be continued.	LARWQCB ¹ Basin Plan (2014), USGS ² standards for stream gauge installation, UVRGA Monitoring and Data Collection Protocols (2018)



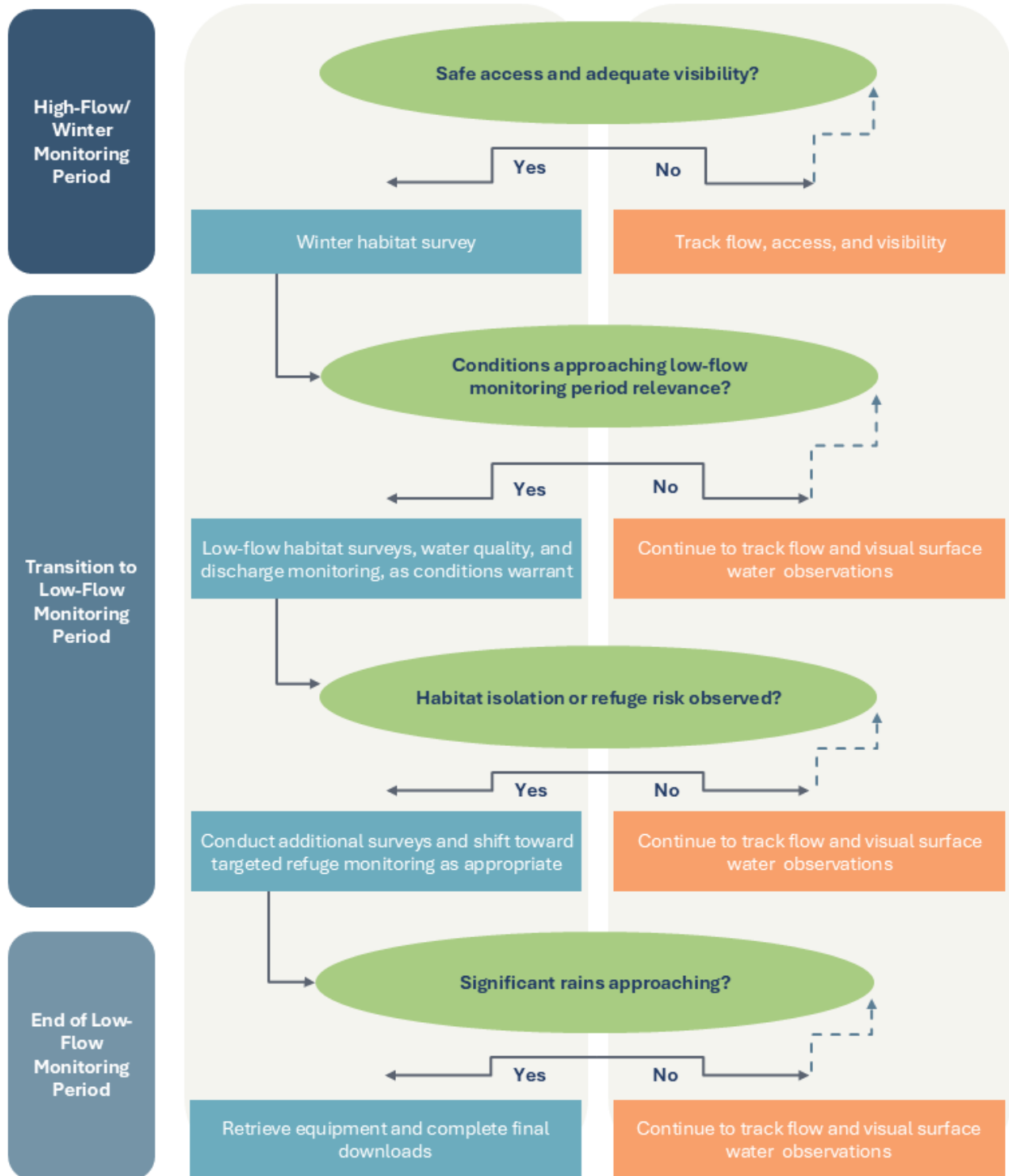
Refuge Water Quality Monitoring	Continuous water quality monitoring at targeted refuge areas (e.g., pools) for water temperature, DO, and pH.	Provides localized data pertaining to areas of potential refuge.	During receding flows, coordinated with the initial summer/fall survey and refuge pool conditions , based on best professional judgement.	Two data loggers will be installed within the same designated refuge area. One shallow logger will be deployed to collect near surface water quality measurements, and another will be deployed deeper to measure water quality at depth near areas of suspected groundwater inflow. One set of data loggers will be installed within the Confluence Aquatic GDE. The general monitoring locations may be relocated to targeted refuge pool and adjacent ambient, non-pool surface water within the Confluence Aquatic GDE. Up to two data loggers will be installed within the same designated refuge area, considering near surface water quality conditions and deeper water quality conditions at depth near areas of suspected groundwater inflow. Instantaneous water quality monitoring may be conducted at the isolated mesohabitats while continuous water quality data loggers are located at the general monitoring	UVRGA Monitoring and Data Collection Protocols (2018).
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Monitoring Component)	Data Collected	Purpose	Schedule	Locations	References/Protocols
				locations (see General Water Quality and Flow Monitoring component).	
Aerial Photography	Aerial images	Provides a visual time series of overall conditions within Confluence Aquatic GDE and allows for comparison of conditions over time and during different hydrologic and climatic conditions	Up to four times per year, concurrent with habitat suitability and snorkel surveys. Twice during the water year, coordinated with selected snorkel and habitat surveys based on field conditions. Selection is based on goal of documenting low flow conditions and/or transition to low-flow conditions.	Aerial photographs will be taken of the upper, middle, and lower portions of the Confluence Habitat Area Aquatic GDE	General photography and FAA rules.
Repeat Ground Photography	Photographs of instream and riparian habitat from fixed locations	Will provide a visual time series for each monitoring location that will allow for comparison of habitat conditions over time and during different hydrologic and climatic conditions	Up to four times per year, concurrent with habitat suitability and snorkel surveys. During habitat and snorkel surveys and other relevant field visits, as appropriate.	Photographs will be taken from fixed locations at each mesohabitat that is monitored during the habitat suitability and snorkel surveys	General photography
¹ . Los Angeles Regional Water Quality Control Board ² . U.S. Geological Survey ³ . City of Ventura stream gage location at Lower Confluence ("VR-1") may be used upon approval of UVRGA.					

Aquatic GDE Monitoring Program Decision Flowchart



Monitoring timing may be adjusted based on field conditions, professional judgement, and UVRGA Executive Director consultation.