

# Agenda

Upper San Luis Rey Groundwater Subbasin G.S.A  
Executive Team - Stakeholder Outreach  
Monday, November 15, 2021, 4:00 P.M.  
34928 Valley Center Road, Pauma Valley, California

**This meeting will be held via Zoom.**

Join Zoom Meeting

<https://us02web.zoom.us/j/7607423704?pwd=L05lQzF1bVNrMHo4aHhRdzkxYktrUT09>

Meeting ID: 760 742 3704

Passcode: 901121

## AGENDA TOPICS

1. **Call to Order**  
Introductions
2. **Stakeholder Outreach Presentation**
  - A. Management Actions & Projects Chapter Review  
*Background:* GSP Development consultant, Geoscience, will review the Management Actions & Projects Chapter of the Groundwater Sustainability Plan
  - B. Question & Answer
3. **Draft Groundwater Sustainability Plan Public Review and Comment Period**
4. **Adjournment**



# UPPER SAN LUIS REY VALLEY GROUNDWATER SUSTAINABILITY PLAN

## Section 5—Projects and Management Actions

**DRAFT**

November 5, 2021

Prepared For:  
**Pauma Valley  
Groundwater Sustainability Agency**

GEOSCIENCE  
PO Box 220  
Claremont, CA 91711  
P. 909.451.6650  
F. 909.451.6638  
[www.gssiwater.com](http://www.gssiwater.com)

***GEOSCIENCE***

The First Name in Groundwater

**THIS REPORT IS RENDERED TO PAUMA VALLEY GROUNDWATER SUSTAINABILITY AGENCY AS OF THE DATE HEREOF, SOLELY FOR THEIR BENEFIT IN CONNECTION WITH ITS STATED PURPOSE AND MAY NOT BE RELIED ON BY ANY OTHER PERSON OR ENTITY OR BY THEM IN ANY OTHER CONTEXT. ALL CALCULATIONS WERE PERFORMED USING ACCEPTED PROFESSIONAL STANDARDS.**

**AS DATA IS UPDATED FROM TIME TO TIME, ANY RELIANCE ON THIS REPORT AT A FUTURE DATE SHOULD TAKE INTO ACCOUNT UPDATED DATA.**

---

Brian Villalobos, PG, CHG, CEG  
Principal Geohydrologist

---

Lauren Wicks, PG  
Project Geohydrologist

Copyright © 2021 Geoscience Support Services, Inc.

Geoscience retains its copyrights, and the client for which this document was produced may not use such products of consulting services for purposes unrelated to the subject matter of this project.

No portion of this report may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, mechanical, electronic, photocopying, recording or otherwise EXCEPT for purposes of the project for which this document was produced.

## UPPER SAN LUIS REY VALLEY GROUNDWATER SUSTAINABILITY PLAN SECTION 5 – PROJECTS AND MANAGEMENT ACTIONS

### Table of Contents

<b>5.0</b>	<b>Projects and Management Actions .....</b>	<b>1</b>
5.1	Introduction .....	1
5.2	Management of Groundwater Extractions and Recharge (Water Balance).....	1
5.2.1	Current Management Actions .....	1
5.2.1.1	Agricultural Management Plan and Best Management Practices .....	1
5.2.1.2	Drought Response Conservation Program.....	2
5.2.1.3	Groundwater Level and Water Quality Monitoring.....	3
5.2.2	Additional Data Collection .....	3
5.3	Potential Future Management Actions/Projects.....	4
5.3.1	Tier 1 Projects/Management Actions .....	5
5.3.2	Tier 2 Projects/Management Actions .....	6
5.3.3	Tier 3 Projects/Management Actions .....	7
5.3.4	Tier 4 Projects/Management Actions .....	8
5.4	Project/Management Action Implementation and Schedule .....	8
5.5	Measurable Objective and Expected Benefits.....	9
5.6	Permitting and Regulatory Process .....	9
5.7	Public Notice and Outreach .....	9
5.8	Legal Authority.....	10
5.9	Estimated Costs and Funding Plan.....	10
5.10	Relationship to Additional GSP Elements .....	10
5.11	References .....	11

### Table and Appendices

## Table

No.	Description
<i>(Attached)</i>	
1	Summary of Sustainability Indicator Management by Proposed Projects and Management Actions

## Appendices

Ltr.	Description
A	Ordinance No. 100-08: An Ordinance of the Yuima Municipal Water District Adopting a Drought Response Conservation Program
B	Yuima Municipal Water District Imported Water Contract

## Acronyms, Abbreviations, and Initialisms

<b>Abbrev.</b>	<b>Description</b>
ASR	Aquifer Storage and Recovery
CIMIS	California Irrigation Management Information System
DWR	California Department of Water Resources
ET	Evapotranspiration
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
Metropolitan	Metropolitan Water District of Southern California
RAWMP	Regional Agricultural Water Management Plan
SGMA	Sustainable Groundwater Management Act
USLR	Upper San Luis Rey
USLRGM	Upper San Luis Rey Groundwater Model
Water Authority	San Diego County Water Authority
WQIP	Water Quality Improvement Plan
YMWD	Yuima Municipal Water District

## UPPER SAN LUIS REY VALLEY GROUNDWATER SUSTAINABILITY PLAN SECTION 5 – PROJECTS AND MANAGEMENT ACTIONS

### 5.0 Projects and Management Actions

#### 5.1 Introduction

The projects and management actions described in this section provide a framework to achieve the sustainability goal for the Upper San Luis Rey (USLR) Valley Groundwater Subbasin, in accordance with §354.42 and §354.44 of Sustainable Groundwater Management Act (SGMA) regulations. Within the USLR GSP, management actions are considered programs or policies that support groundwater sustainability and do not require infrastructure while projects are groundwater sustainability supporting activities that do require infrastructure. Current water use efficiency practices and potential additional management actions and/or projects will be utilized to ensure that the USLR Groundwater Subbasin is operated in such a way to ensure long-term sustainability. Future undesirable results will be mitigated through active monitoring and adaptive basin management. In addition, the implementation of future projects may allow for the increase of sustainable yield in the basin through additional or supplemental recharge.

#### 5.2 Management of Groundwater Extractions and Recharge (Water Balance)

A groundwater basin is generally regarded as being in overdraft when pumping exceeds natural and artificial groundwater recharge. Sustainability is considered to be achieved when the seasonal range of groundwater changes, driven by the availability of rainfall and aquifer recharge, remains within the range of elevations that will have no long-term negative impacts on basin pumpers. Under these conditions, sustainable yield is maintained through balanced recharge and groundwater extraction.

As discussed in Section 3.0 Basin Setting, the USLR Groundwater Subbasin is generally operating sustainably under current water demand and water supply conditions. While groundwater levels show a period of decline from the 1990s through the early 2000s, increased imported water usage in conjunction with average to wet hydrological conditions have contributed to the stabilization or increase in groundwater levels within the last five to ten years. However, future unanticipated increases in water demand and/or reduced imported water supplies could result in the subbasin falling out of sustainable management. Projects and management actions that support the efficient use of groundwater resources and increase basin recharge will help the USLR Groundwater Subbasin remain sustainable through normal and drought hydrologic conditions. Key management approaches to avoid undesirable results are discussed in the following sections.

##### 5.2.1 Current Management Actions

###### 5.2.1.1 Agricultural Management Plan and Best Management Practices

In 2016, the San Diego Regional Agricultural Water Management Plan (RAWMP) was prepared by the San Diego County Farm Bureau (SDCFB) and fourteen participating retail water agencies that serve commercial

agricultural customers in the northern half of San Diego County, including Yuima Municipal Water District (YMWD) (Weinberg and Jacoby, 2016). The RAWMP describes and documents the San Diego Region’s existing and proposed water management programs and activities that affect water use efficiency. As noted in the RAWMP, San Diego County agricultural users are some of the most efficient water users in the state. During development of the GSP, input from representative agricultural users indicated that growers have already enacted water conservation techniques such as using micro sprinklers/drip for irrigation, adjusting watering timing/schedules, regulating irrigation system pressure, and the removal or canopy reduction of low-producing areas.

Typical management practices for agricultural growers in the area include:

- Identify crop type and root zone depths.
- Identify soil and its ability to hold moisture.
- Install moisture sensing devices (i.e., tensiometers) in root zones to monitor moisture levels and use probes or shovels to verify actual moisture content.
- Use micro or drip irrigation and adjust duration of watering so that irrigation does not extend significantly deeper than root zone, except during periods of necessary leaching to remove salts buildup.
- Monitor evapotranspiration (ET) through California Irrigation Management Information System (CIMIS) and periodically adjust watering to meet water needs of crop.
- Continually inspect irrigation system for leaks, etc., and test distribution uniformity at least once a year to ensure proper irrigation coverage.

Additional information on best management practices is available from the University of California Cooperative Extension and University of California Agriculture and Natural Resources (Bender, 2015; Faber, 2015). Agricultural users in the USLR Subbasin plan to continue to implement water use best management practices (BMPs) described above and explore additional water efficiency opportunities, such as investigating the feasibility of installing a local CIMIS station.

#### 5.2.1.2 Drought Response Conservation Program

Currently, efforts to reduce water demand in the subbasin through conservation are increased during times of drought. For example, YMWD institutes a drought response conservation program (Ordinance No. 100-08) to delay or avoid implementing measures such as water rationing or more restrictive water use regulations pursuant to a declared water shortage emergency as authorized by the California Water Code. This plan supports requirements outlined in San Diego County Water Authority’s Urban Water Management Plan and Drought Management Plan. Under this program, regulations are implemented in several phases under drought conditions, ranging from voluntary actions (Level 1) to mandatory actions with violations subject to penalty (Level 2 and above). This program, and conservation activities outlined within it, are provided here as Appendix A.

Recent water consumption data have indicated that YMWD customers have reduced water usage from 7 to 16% over the last year alone (2021 versus 2020). Water demand reduction and efficient water practices, like the ones enacted through the drought response program, provide opportunities to reduced



groundwater pumping and surface water depletions. These reductions support maintaining and possibly raising groundwater levels.

### 5.2.1.3 Groundwater Level and Water Quality Monitoring

Groundwater level and water quality monitoring programs are essential for effective management of groundwater resources and evaluating sustainability. A clear and continuous understanding of the subbasin groundwater conditions is required for adaptive sustainable management of the subbasin water supply. The collection of water level and water quality data provides important information to evaluate the effects of other projects and management actions, or to determine if additional management actions are necessary to maintain sustainability. On-going collection of data will also provide a tangible measurement of the benefit of each project or action and ongoing operational effects on groundwater conditions. Since many of the sustainability indicators of the USLR Groundwater Subbasin are measured directly by, or tied to, groundwater elevation data, evaluation of these data will be particularly important. A discussion of the current monitoring network and recommended modifications will be provided in Section 7.0 Monitoring Network.

After implementation of the GSP, the GSA will continue monitoring at least twice a year (spring and fall, as described in Section 7.0), but additional monitoring events may take place at the discretion of the GSA. Supplemental groundwater level and water quality monitoring would provide data, as needed, to track conditions in areas of concern, effects of other management actions and/or programs, and allow for effective subbasin management to promote groundwater sustainability. Monitoring results will be presented in the 5-year update report.

Changes to the monitoring network regarding the addition and/or modification of any monitoring location will also be described in the 5-year update report. In particular, the inclusion of monitoring at de minimis domestic users' wells would be beneficial to evaluating undesirable results to domestic beneficial use, as well as helping track sustainable management of the subbasin. At present, no de minimis users have come forward in response to requests for information or following discussion at GSP workshops. Part of the ongoing groundwater level and water quality monitoring action will be for the GSA to take a more proactive approach in engaging de minimis pumpers.

While local districts have generally maintained records within their individual service areas, this unified monitoring effort will provide a holistic view of the subbasin and allow the GSA to identify and adapt to changing conditions before undesirable results are encountered. In addition, it is hoped that future involvement of local tribal entities may allow for even greater understanding of groundwater conditions through the incorporation of additional monitoring locations – to the benefit of all users.

### 5.2.2 Additional Data Collection

Since understanding the amount of groundwater pumping in the basin is a crucial aspect in establishing long-term sustainability, the GSA plans to initiate pumping record collection efforts upon implementation of the GSP. This would include registration of each groundwater extraction facility within the management area of the GSA (as allowed under §10725.6), and annual reporting of groundwater extractions (with the exception of de minimis users §10725.8I and §10725.8(e)).

Following implementation of the GSP, the GSA intends to encourage voluntary registration and pumping record collection. However, recognizing the importance of understanding pumping amounts for managing long-term sustainability, a metering program will likely be evaluated. Requiring all groundwater producers to provide pumping records as well as requiring the registration of all groundwater extraction facilities (including non-municipal private wells) would allow the GSA to refine the understanding of basin conditions and assist with the sustainable management of the subbasin.

Currently, as discussed in Section 3.3.5, the characterization of groundwater budgets and determination of sustainable yield relies heavily on the calibrated surface water/groundwater models and assumptions associated with them in place of recorded pumping records. The collection of additional information will lead to greater understanding and allow previous estimates of groundwater extraction to be refined. This in turn will affect the estimate of sustainable yield presented in this GSP. Therefore, sustainable yield estimates may need to be refined during the 5-year reporting periods as pumping data become available.

Updated pumping records could also be used to update and recalibrate the integrated surface water and groundwater model of the subbasin, which can be used to evaluate effects of proposed projects and management actions through feasibility studies. This will help the GSA perform a cost/benefit analysis, understand what projects and/or actions are likely to provide satisfactory results, identify areas that may require focused actions to reach and maintain MOs, and project future groundwater conditions with greater certainty.

### 5.3 Potential Future Management Actions/Projects

The GSA intends to take an adaptive management approach in the USLR Groundwater Subbasin. Frequent assessment of progress towards maintaining sustainability would allow the GSA to proactively enact management actions and/or projects as needed to curb any potential issues before they lead to undesirable results. This proactive approach may allow corrections to be made with smaller adjustments instead of requiring larger and potentially costlier projects at a later date. The adaptive management approach would also help basin users achieve and maintain groundwater levels and other sustainability indicators above MOs to ensure drought resilience.

If basin monitoring indicates that additional action is necessary, the GSA will research the feasibility of implementing supplementary management actions and/or projects. Proposed projects will be prioritized by considering potential cost, available funding, and anticipated benefits to groundwater levels, storage, water quality, and/or interconnected surface water. For planning purposes, proposed projects and management actions have been grouped into four tiers, generally corresponding to the order of potential implementation (i.e., projects and management actions in Tier 1 are anticipated to be considered before those in Tier 2, etc.). Potential projects are listed below.

Although not all of the projects and management actions presented here will be needed for the USLR to reach its sustainability goal, each may be considered during GSP implementation. Attached Table 1 summarizes how the applicable sustainability indicators for the USLR Groundwater Subbasin will be affected by the proposed projects and management actions. Land subsidence and seawater intrusion are not considered applicable for the Subbasin and are therefore not included in Table 1 (refer to Sections 4.7 and 4.8).

### 5.3.1 Tier 1 Projects/Management Actions

- **Convening an Interactive Tribal Work Group:** This working group would encourage tribal participation, promote basin balancing maintenance activities, and ensure that federal reserve water rights are protected.
- **Convening a Drought Resilience Work Group:** This working group will help identify avenues to obtain resiliency, minimize impacts of drought conditions on sustainability criteria, and develop long-term plans to facilitate groundwater conservation in the subbasin. The group would review the current understanding of drought in the USLR Groundwater Subbasin, identify any data gaps, and develop a reliable recovery plan.
- **Adaptive groundwater management:** Adaptive management refers to the ongoing review and reaction to groundwater conditions in the subbasin. Frequent evaluation will allow the GSA to react to changing conditions, enact projects and/or management actions as necessary before undesirable conditions occur, and assess the success or failure of enacted projects and management actions implemented in the USLR Groundwater Subbasin. Annual monitoring and 5-year reporting on the subbasin’s progress towards sustainability will provide consistent updates to the GSA, but additional monitoring and evaluation may be pursued as necessary. Investigations into any water quality or unexpected pumping issues would be investigated and addressed promptly by the GSA.
- **Ongoing groundwater level and water quality monitoring:** The collection of water level and water quality data provides important information to evaluate the effects of other projects and management actions, or to determine if additional management actions are necessary to maintain sustainability. On-gong collection of data will also provide a tangible measurement of the benefit of each project or action and ongoing operational effects on groundwater conditions (currently being performed – see Section 5.2.1.2). In addition, data gaps identified in Section 7.0 Monitoring Network will be evaluated and addressed.
- **Agricultural management plan and best management practices:** Establishing best management practices and conservation techniques for efficient agricultural water use, such as using micro sprinklers/drip for irrigation, adjusting watering timing/schedules, regulating irrigation system pressure, and the removal or canopy reduction of low-producing areas (as described in the draft San Diego Regional Agricultural Water Management Plan (RAWMP) and currently being implemented by many agricultural users in the area – see Section 5.2.1.1).
- **Install local CIMIS station:** A local CIMIS station would provide more accurate evapotranspiration (ET) estimates and other climatic data for the USLR Subbasin microclimate. This would allow agricultural users in the subbasin to adjust their irrigation system timing – leading to increased efficiency and reduced water demand, as encompassed within the agricultural management plan and best management practices (above).
- **Water conservation activities:** Water conservation implements policies and programs promoting and incentivizing conservation and the efficient use of water. Water demand reduction and efficient water practices reduce stresses on groundwater aquifers as well as on surface water

sources, and water conservation actions would assist with achievement of the USLR Groundwater Subbasin sustainability goal.

- **Community outreach:** Outreach would cover a wide range of actions, including making the public more aware of water use and the importance of conservation, providing water saving tips and recommendations, informing the public of opportunities for conservation savings and/or funding (i.e., rebate programs, grant funding opportunities, etc.), and other opportunities for the public to become involved in basin sustainability efforts.
- **Irrigation efficiency and best management practices:** Assessments of irrigation efficiency can be made to identify area of potential water savings, leading to decreased demand.
- **Outreach to San Diego County to layout a framework for GSA collaboration:** GSA collaboration with County procedures involving groundwater management (e.g., developing a well permit notification communication system, updating the San Luis Rey River Watershed Water Quality Improvement Plan (WQIP), etc.) will allow the Pauma Valley GSA (and potential other San Diego GSAs) to more effectively manage groundwater conditions in the USLR Subbasin.
- **Pumping record collection:** Since understanding the amount of groundwater pumping in the basin is a crucial aspect in establishing long-term sustainability, the GSA plans to initiate pumping record collection efforts upon implementation of the GSP. This would include registration of each groundwater extraction facility within the management area of the GSA and annual reporting of groundwater extractions (with the exception of de minimis users – see Section 5.2.2). Initial efforts are anticipated to be voluntary but may transition to the installation of meters (see below).
- **Well registration and meter installation:** Mandatory metering of all pumping entities and pumping, as allowable under SGMA (excepting de minimis domestic users), would allow the GSA to definitively understand the amount of groundwater pumping occurring in the subbasin, refine estimates of sustainable yield, and assist with sustainable management.

### 5.3.2 Tier 2 Projects/Management Actions

- **Water conservation activities:**
  - **Rebate programs:** Rebate programs typically consist of incentives to encourage water users to upgrade to water saving devices such as high-efficiency toilets, washers, and sprinkler systems, replace plants/yards with high water needs to water wise gardens and landscapes, etc.
  - **Rainwater capture:** Rainwater catchment systems can be used to offset irrigation demands, especially in domestic settings.
  - **Crop swap programs:** Crop swap programs generally provide financial assistance to agricultural water users for crop conversion projects that save water through replacement of higher water use crops with lower water use varieties.
  - **Low impact development standards for new or retrofitted construction:** Low impact development refers to systems and practices that use or mimic natural processes to reduce surface runoff and increase infiltration – leading to increased natural recharge.

- **Leak detection assessment:** A leak detection assessment traces the flow of water from its source, through a water distribution system, to customers and other uses with the review of records and data collected. Creation of a leak detection program would help ensure supplied water reaches its destination, supporting water conservation in the subbasin.
- **Voluntary fallowing:** Where appropriate and based on water supply and associated costs, landowners may choose to fallow land during drought conditions, leading to decreased demand.
- **Identify new sources of funding for all potential management actions:** An investigation of available sources of funding (e.g., grants) may facilitate implementation of proposed projects/management actions and/or provide insight on additional water conservation and management options.
- **Indirect recharge through decreased evapotranspiration:** The Upper San Luis Rey Resource Conservation District (USLRCD) already has agreements in place to remove Arundo – an invasive, non-native species of reed found in riparian areas – in the subbasin. It is estimated that approximately 40 acres of Arundo are present in Pauma Valley alone. Removal of this vegetation could save upwards of 200 acre-ft/yr of water<sup>1</sup> that would otherwise be consumed by this high water use plant. Additional invasive plant species with high water use requirements (e.g., castor bean, tamarisk, etc.) could also be considered at later phases of this project.

### 5.3.3 Tier 3 Projects/Management Actions

- **In-lieu groundwater recharge:** In-lieu groundwater recharge refers to the “storing” of local groundwater by utilizing surface water “in-lieu” of groundwater pumping. This is already being implemented to an extent in the USLR Groundwater Subbasin through the supplementation of groundwater pumping with imported water. YMWD contracts through the San Diego County Water Authority (Water Authority) to sell Colorado River and State Water Project (SWP) water within the subbasin (see Section 2.1.2.3). This contract, included here as Appendix B, allows YMWD to draw up to 16 cubic feet per second (cfs) from the imported water distribution system, which corresponds to approximately 11,583 acre-ft/yr. Recent imported water use in the basin over the last 5 years (Fiscal Year 2017 through 2021) is 5,127 acre-ft/yr, which is approximately only 44% of the allocated amount. Increasing imported water usage in the basin, as needed, will allow any exceedances to be addressed using an already established infrastructure and water supply system. In-lieu use of other supplemental water supplies (such as surface water from VID/City of Escondido) may also be explored.
- **Outreach to VID/City of Escondido/Rincon to explore potential supplemental water supplies for in-lieu use or managed recharge:** The GSA is interested in exploring the feasibility of obtaining

---

<sup>1</sup> Assumes an ET for “giant reed” of 63.4 inches (Aspen, 2020). Estimate includes consumption of surface water, soil moisture, and groundwater.

local surface water from VID/City of Escondido/Rincon to supplement water supply in the USLR Subbasin (through either in-lieu use or managed groundwater recharge).

- **Stormwater and/or dry weather capture:** Stormwater and local runoff could be captured using in-channel or off-channel recharge basins to enhance infiltration and increase groundwater recharge in the USLR Groundwater Subbasin.
- **Aquifer Storage and Recovery (ASR)/managed aquifer recharge:** Surplus imported water could be recharged to increase groundwater storage when surplus water is available. This additional storage would help maintain groundwater levels above MOs and provide resiliency during drought periods. The additional recharge would also serve to increase sustainable yield, thereby increasing the volume of groundwater that can be pumped sustainably. Future agreements with VID/City of Escondido/Rincon could be explored for the possibility of allowing increased surface flow in the San Luis Rey River through the USLR Subbasin.

#### 5.3.4 Tier 4 Projects/Management Actions

- **Groundwater pumping curtailment/allocation:** Groundwater pumping curtailment or restrictions halts or lessens the decline of groundwater levels, allowing water levels to recover and groundwater storage to increase. Although recognized as an effective tool for achieving groundwater sustainability, pumping restrictions represent a last resort effort and would only be considered by the GSA in the event that other projects and management actions are unable to allow the subbasin to be managed within sustainability goals. At this time, the basin is thought to be in general sustainability – as indicated by stable or increasing observed groundwater elevations and balance between estimated groundwater inflow and outflow. Any deficit resulting in declining groundwater levels and storage is expected to be able to be addressed through in-lieu recharge and/or the enactment of one or several management actions and/or programs listed above.

### 5.4 Project/Management Action Implementation and Schedule

In order to meet MOs or address exceedances of MTs, the GSA intends to implement potential projects and management actions on an as-needed basis. In general, projects and actions will be considered in according to the tiered structure presented in the previous section. If a particular project or management action is selected for implementation, a feasibility study will be conducted to determine associated costs and potential effects/benefits.

Immediately following GSP submittal and approval, the GSA intends to begin the process of implementing Tier 1 management actions. Priority for the GSA include the outreach activities (to tribal entities, the County, VID/City of Escondido, and the public) as well as additional data collection (water levels, water quality, pumping, evaluating data gaps and monitoring recommendations outlined in Section 7.0, etc.). These collaborative and information gathering efforts are deemed to be of utmost importance for establishing cooperative sustainable management of the basin and refining understanding of groundwater conditions.

In general, tiered projects and management actions are anticipated to be implemented according to the following schedule:

- **Tier 1 Projects and Management Actions:** Begin process of implementing or conducting feasibility study within the first 5 years of GSP adoption.
- **Tier 2 Projects and Management Actions:** Begin process of implementing or conducting feasibility study as needed in response to change in current basin status to avoid potential undesirable results.
- **Tier 3 Projects and Management Actions:** To be implemented only if undesirable results occur and can not be mitigated with other Tier 1 and/or Tier 2 projects and management actions.
- **Tier 4 Projects and Management Actions:** To be implemented as a last resort effort in the event that other projects and management actions are unable to address undesirable results and allow the subbasin to be managed within sustainability goals.

However, while Tier 1 and Tier 2 actions are being pursued, the GSA has the option of bumping up the implementation of additional in-lieu recharge if immediate action is necessary. Based on initial model estimates of future water budgets (Section 3.3.5.7), anticipated operation of the subbasin may result in an average annual groundwater storage decline of 143 acre-ft/yr. This volume of water, along with a margin of safety for any effects of climate change, can be replaced with the in-lieu use of excess imported water available through YMWD's contract with the Water Authority. As mentioned previously (Section 5.3.3), infrastructure and water contracts are already in place to allow supplemental imported water to be purchased and brought into the subbasin to offset groundwater pumping. Therefore, this existing system can be relied upon to address any unanticipated exceedances or undesirable results that might arise during the development of priority Tier 1 and Tier 2 activities. Tier classification of other projects and/or management actions may also be adjusted according to funding opportunities, need, and potential benefit.

## 5.5 Measurable Objective and Expected Benefits

As noted previously, the increased use of imported water has helped create the stable and recovering groundwater elevations observed within the last five to ten years. Current and ongoing best management practices and conservation activities, as well as the evaluation of and implementation of proposed projects or management actions, will help support the continued operation within the current sustainable yield of the groundwater basin. Benefits of each proposed project and management action as they relate to measurable objectives are listed in Table 1.

## 5.6 Permitting and Regulatory Process

Permitting and regulatory processes associated with proposed projects will be evaluated and identified during the feasibility study conducted prior to implementation. All applicable groundwater laws and rights will be respected during the development of proposed projects.

## 5.7 Public Notice and Outreach

Prior to initiating a feasibility study for any of the proposed management actions or projects, the GSA set up a public meeting to present details about the proposed action/project and feasibility study and receive feedback from basin stakeholders. Invitations to participate will be extended using the public outreach and professional communication lines and noticing techniques used during development of the GSP.

Public notice would also occur in accordance with all pertinent laws and permits. GSA management operations will be documented and discussed in the 5-year update report.

## 5.8 Legal Authority

SGMA gives the GSA certain authority to implement the GSP to provide local control and flexibility consistent with the sustainability goal (§10725). This includes:

- Adopting rules, regulations, ordinances, and resolutions in compliance with any procedural requirements
- Conducting investigations to determine the need for groundwater management, prepare and adopt a GSP and implementing rules/regulations, propose and update fees, and monitoring compliance and enforcement
- Requiring registration of groundwater extraction facilities and installation of water-measuring devices (except for de minimis extractors)
- Requiring reports of diversion of surface water
- Purchasing and providing water in exchange for a groundwater extractor’s agreement to reduce or cease groundwater extractions

## 5.9 Estimated Costs and Funding Plan

The feasibility study conducted prior to initiating any of the proposed management actions or projects will include a cost estimate and funding plan. This process should include identification of any available funding (i.e., grants) for each proposed project/activity.

## 5.10 Relationship to Additional GSP Elements

The collection of additional data (included in a couple Tier 1 activities) will allow the GSA to refine estimates of sustainable yield in the basin and better define groundwater conditions. In addition, implementation of certain projects (e.g., in-lieu recharge) may increase sustainable yield in the subbasin through increased or supplemental recharge. Updates to the hydrologic conceptual model and sustainable yield estimates will be discussed in the 5-year report.



## 5.11 References

Aspen (Aspen Environmental Group), 2020. Technical Memorandum: Upper Santa Ana River Integrated Model Evapotranspiration Estimates. Prepared for Geoscience Support Services, dated September 4, 2020.

Bender, G.S., ed., 2015. Avocado Production in California: A Cultural Handbook for Growers, Second Edition. Joint publication of the University of California Cooperative Extension, San Diego County, and the California Avocado Society. Supported by the California Avocado Commission. Available at: <https://ucanr.edu/sites/alternativefruits/files/228975.pdf>.

Faber, B., 2015. Drought Tip: Irrigating Citrus with Limited Water. University of California Agriculture and Natural Resources, ANR Publication 8549, October 2015. Available at: <https://anrcatalog.ucanr.edu/pdf/8549.pdf>.

UCCE (University of California Cooperative Extension). Best Management Practices (BMP's). Available at: <https://ucanr.edu/sites/agwaterquality/files/125550.pdf>.

**TABLE**

***GEOSCIENCE***

A decorative flourish consisting of a horizontal line with a downward-pointing curve at its center, positioned below the word "GEOSCIENCE".

Summary of Sustainability Indicator Management by Proposed Projects and Management Actions

Tier / Implementation Schedule	Activity / Project	Sustainability Indicator			
		Reduction of Groundwater in Storage	Chronic Lowering of Groundwater Levels	Degraded Water Quality	Depletion of Interconnected Surface Water
1	Convening an Interactive Tribal Work Group	This working group would encourage tribal participation, promote basin balancing maintenance activities, and ensure that federal reserve water rights are protected. Groundwater management working groups will also encourage the active, on-going involvement of basin stakeholders – providing diverse input and raising awareness and providing rationale for the need of existing or new management activities and projects enacted to ensure groundwater sustainability in the subbasin. This level of involvement will help increase the effectiveness of any management action or project implemented under the GSP, encourage community investment in preserving and managing the shared groundwater resource, and ensure water rights and beneficial use of all subbasin users are protected.			
1	Convening a Drought Resilience Work Group	This working group will help identify avenues to obtain resiliency, minimize impacts of drought conditions on sustainability criteria, and develop long-term plans to facilitate groundwater conservation in the subbasin. The group would review the current understanding of drought in the USLR Groundwater Subbasin, identify any data gaps, and develop a reliable recovery plan. Groundwater management working groups will also encourage the active, on-going involvement of basin stakeholders – providing diverse input and raising awareness providing rationale for the need of existing or new management activities and projects enacted to ensure groundwater sustainability in the subbasin. This level of involvement will help increase the effectiveness of any management action or project implemented under the GSP, encourage community investment in preserving and managing the shared groundwater resource, and ensure water rights and beneficial use of all subbasin users are protected.			
1	Adaptive Groundwater Management	Adaptive management allows the GSA to react to changing groundwater conditions, evaluate the success or failure of projects and management actions, and make management decisions to redirect efforts to achieve sustainability goals more effectively			
1	Ongoing Groundwater Level and Water Quality Monitoring	Ongoing monitoring will allow the GSA to identify areas trending towards undesirable effects and proactively enact projects and/or management actions as needed to improve management of groundwater resources above management thresholds and help reach management objectives			
1	Agricultural Management Plan and Best Management Practices	Conservation techniques and best management practices currently being enacted in the basin reduce pumping demand - thereby lessening potential declines in groundwater storage	Conservation techniques and best management practices currently being enacted in the basin reduce pumping demand - thereby lessening potential declines in groundwater levels	-	Reduced water demand leads to reduced groundwater pumping. This can lessen declines in groundwater levels, potentially leading to greater surface flow or maintaining flow in areas of interconnected surface and groundwater
1	Install Local CIMIS Station	Local evapotranspiration information will allow agricultural users to adjust their irrigation system timing - leading to increased efficiency, reduction of groundwater pumping, and lessening potential declines in groundwater storage	Local evapotranspiration information will allow agricultural users to adjust their irrigation system timing - leading to increased efficiency, reduction of groundwater pumping, and lessening potential declines in groundwater levels	-	The management of groundwater levels through reduced pumping may prevent reductions in interconnected surface flow
1	Water Conservation Activities: - Community Outreach - Irrigation efficiency and BMPs	Water demand reduction and efficient water practices provide opportunities to reduce groundwater pumping, support the ability to maintain and even raise groundwater levels, and allow more groundwater to remain in storage	Water demand reduction and efficient water practices provide opportunities to reduce groundwater pumping, support the ability to maintain and even raise groundwater levels, and allow more groundwater to remain in storage	Water conservation activities could cause slight decreases in water quality. This is a trend being observed by many treatment facilities in Southern California: the population generates the same amount of salts but less water is being used in the home to dilute influent to treatment facilities (or entering the subsurface through septic systems). Water quality in the basin will need to continue to be monitored	The management of groundwater levels through reduced pumping may prevent reductions in interconnected surface flow
1	Outreach to San Diego County to Layout a Framework for GSA Collaboration	GSA involvement with County to develop a well permit notification communication system can help maintain subbasin groundwater pumping within sustainable limits. Operating within the sustainable yield will prevent declines in groundwater storage	GSA involvement with County to develop a well permit notification communication system can help maintain subbasin groundwater pumping within sustainable limits. Operating within the sustainable yield will prevent declines in groundwater levels	GSA involvement with County to develop a well permit notification communication system may help avoid cross-contamination of the aquifer in localized areas of elevated TDS or nitrate	The management of the locations of new wells and thus groundwater levels through managed pumping by location may prevent reductions in interconnected surface flow

Summary of Sustainability Indicator Management by Proposed Projects and Management Actions

Tier / Implementation Schedule	Activity / Project	Sustainability Indicator			
		Reduction of Groundwater in Storage	Chronic Lowering of Groundwater Levels	Degraded Water Quality	Depletion of Interconnected Surface Water
1	Pumping Record Collection	Support the refinement of sustainable yield estimate for the subbasin, assisting with sustainable management of groundwater pumping to ensure adequate groundwater in storage	Support the refinement of sustainable yield estimate for the subbasin, assisting with sustainable management of groundwater pumping to ensure groundwater levels are maintained in such a way to avoid undesirable results	-	The management of groundwater levels may prevent reductions in interconnected surface flow
1	Well Registration and Meter Installation	Support the refinement of sustainable yield estimate for the subbasin, assisting with sustainable management of groundwater pumping to ensure adequate groundwater in storage	Support the refinement of sustainable yield estimate for the subbasin, assisting with sustainable management of groundwater pumping to ensure groundwater levels are maintained in such a way to avoid undesirable results	-	The management of groundwater levels may prevent reductions in interconnected surface flow
2	Water Conservation Activities: - Rebate programs - Rainwater capture - Low impact development - Crop swap programs - Leak detection assessment - Voluntary fallowing - Identify new sources of funding for all potential Management Actions	Water demand reduction and efficient water practices provide opportunities to reduce groundwater pumping, support the ability to maintain and even raise groundwater levels, and allow more groundwater to remain in storage	Water demand reduction and efficient water practices provide opportunities to reduce groundwater pumping, support the ability to maintain and even raise groundwater levels, and allow more groundwater to remain in storage	Water conservation activities could cause slight decreases in water quality. This is a trend being observed by many treatment facilities in Southern California: the population generates the same amount of salts but less water is being used in the home to dilute influent to treatment facilities (or entering the subsurface through septic systems). Water quality in the basin will need to continue to be monitored	The management of groundwater levels through reduced pumping may prevent reductions in interconnected surface flow
2	Indirect Recharge through Reduced Evapotranspiration	Removal of high water use, invasive vegetation will reduce evapotranspiration - lessening potential declines of groundwater storage	Removal of high water use, invasive vegetation will reduce evapotranspiration - lessening potential declines of groundwater levels	Removal of high water use vegetation may result in a benefit to water quality. Typically, plants take the water and leave the salts behind. Therefore removal of high water use can beneficially impact water quality.	Removal of high water use, invasive vegetation will reduce evapotranspiration - lessening potential declines of groundwater levels and surface flow
3	In-Lieu Groundwater Recharge	Create supplemental groundwater in storage or increase groundwater in storage by replacing a portion of groundwater pumping with additional imported water or potential supplemental supply from VID	Increase groundwater levels by replacing a portion of groundwater pumping with imported water supply or potential supplemental supply from VID	Effects would depend on water source: imported or local surface supply. Recharge of imported water may improve water quality in areas with high TDS, but imported water is typically higher in TDS than natural recharge. Recharging local surface supplies would likely provide water quality benefits, especially in areas with increased TDS levels	In-lieu use of imported water should not affect surface water flow in areas of potentially groundwater dependent vegetation will be distributed through YMWD's supply lines
3	Outreach to VID/City of Escondido/Rincon to Explore Potential Supplemental Water Supplies for In-Lieu Use or Managed Recharge	If able to be obtained, in-lieu use of supplemental water from VID would reduce groundwater pumping. Alternatively, recharging supplemental surface flows from VID would increase groundwater recharge. Both options would lessen potential declines in groundwater storage	If able to be obtained, in-lieu use of supplemental water from VID would reduce groundwater pumping. Alternatively, recharging supplemental surface flows from VID would increase groundwater recharge. Both options would lessen potential declines in groundwater level	Recharge of supplemental surface water (through either in-lieu use or managed recharge) would likely provide water quality benefits, especially in areas with increased TDS levels	Depends on delivery method and use of the water: In-lieu use through a distribution system should not affect surface flow while transfer of surface supplies would increase flow in certain areas of the basin. This would need to be considered in a feasibility study and areas of potentially groundwater dependent vegetation will need to be monitored for potential impacts

Summary of Sustainability Indicator Management by Proposed Projects and Management Actions

Tier / Implementation Schedule	Activity / Project	Sustainability Indicator			
		Reduction of Groundwater in Storage	Chronic Lowering of Groundwater Levels	Degraded Water Quality	Depletion of Interconnected Surface Water
3	Stormwater and/or Dry Weather Capture	Groundwater in storage would be increased by enhancing groundwater recharge	Enhanced groundwater recharge and increased groundwater storage are typically associated with increases in groundwater levels	Stormwater runoff is typically very good quality water. Capture and infiltration of this water source could provide water quality benefits, especially in areas with increased TDS levels	Depending on location of stormwater capture activities, diverting stormwater may reduce available surface water and cause reductions in surface flow. This would need to be considered in a feasibility study and areas of potentially groundwater dependent vegetation will need to be monitored for potential adverse impacts
3	Aquifer Storage and Recovery (ASR) / Managed Aquifer Recharge	Groundwater recharge would be increased, leading to increases in groundwater storage	Groundwater recharge would be increased, leading to increases in groundwater levels	Effects would depend on water source: imported or local surface supply. Recharge of imported water may improve water quality in areas with high TDS, but imported water is typically higher in TDS than natural recharge. Recharging local surface supplies would likely provide water quality benefits, especially in areas with increased TDS levels	The management of groundwater levels through additional groundwater recharge may prevent reductions in interconnected surface flow
4	Groundwater Pumping Curtailment	Groundwater pumping curtailment or restrictions halts or lessens the decline of groundwater levels, allowing water levels to recovery and groundwater storage to increase	Groundwater pumping curtailment or restrictions halts or lessens the decline of groundwater levels, allowing water levels to recovery and groundwater storage to increase	Groundwater pumping curtailment may lead to increased imported water use, which is typically higher in TDS than natural recharge	The management of groundwater levels through reduced groundwater pumping may prevent reductions in interconnected surface flow

**APPENDIX A**

**Ordinance No. 100-08: An Ordinance of the Yuima Municipal Water District  
Adopting a Drought Response Conservation Program**



**ORDINANCE NO. 100 - 08**

**AN ORDINANCE OF THE YUIMA MUNICIPAL WATER DISTRICT ADOPTING  
A DROUGHT RESPONSE CONSERVATION PROGRAM**

WHEREAS, article 10, section 2 of the California Constitution declares that waters of the State are to be put to beneficial use, that waste, unreasonable use, or unreasonable methods of use of water be prevented, and that water be conserved for the public welfare; and

WHEREAS, conservation of current water supplies and minimization of the effects of water supply shortages that are the result of drought are essential to the public health, safety and welfare; and

WHEREAS, regulation of the time of certain water use, manner of certain water use, design of rates, method of application of water for certain uses, installation and use of water-saving devices, provide an effective and immediately available means of conserving water; and

WHEREAS, California Water Code sections 375 et seq. authorize water suppliers to adopt and enforce a comprehensive water conservation program; and

WHEREAS, adoption and enforcement of a comprehensive water conservation program will allow the Yuima Municipal Water District (hereinafter the "District") to delay or avoid implementing measures such as water rationing or more restrictive water use regulations pursuant to a declared water shortage emergency as authorized by California Water Code sections 350 et seq.; and

WHEREAS, San Diego County is a semi-arid region and local water resources are scarce. The region is dependent upon imported water supplies provided by the San Diego County Water Authority, which obtains a substantial portion of its supplies from the Metropolitan Water District of Southern California. Because the region is dependent upon imported water supplies, weather and other conditions in other portions of this State and of the Southwestern United States affect the availability of water for use in San Diego County; and

WHEREAS, the San Diego County Water Authority has adopted an Urban Water Management Plan that includes water conservation as a necessary and effective component of the Water Authority's programs to provide a reliable supply of water to meet the needs of the Water Authority's 24 member public agencies, including the District. The Water Authority's Urban Water Management Plan also includes a contingency analysis of actions to be taken in response to water supply shortages. This ordinance is consistent with the Water Authority's Urban Water Management Plan; and

WHEREAS, as anticipated by its Urban Water Management Plan, the San Diego County Water Authority, in cooperation and consultation with its member public agencies, has

adopted a Drought Management Plan, which establishes a progressive program for responding to water supply limitations resulting from drought conditions. This ordinance is intended to be consistent with and to implement the Water Authority's Drought Management Plan; and

WHEREAS, the Water Authority's Drought Management Plan contains three stages containing regional actions to be taken to lessen or avoid supply shortages. This ordinance contains drought response levels that correspond with the Drought Management Plan stages; and

WHEREAS, the District, due to the geographic and climatic conditions within its territory and its partial dependence upon water imported and provided by the San Diego County Water Authority, may experience shortages due to drought conditions, regulatory restrictions enacted upon imported supplies and other factors. The District has adopted an Urban Water Management Plan that includes water conservation as a necessary and effective component of its programs to provide a reliable supply of water to meet the needs of the public within its service territory. The District's Urban Water Management Plan also includes a contingency analysis of actions to be taken in response to water supply shortages. This ordinance is consistent with the Urban Water Management Plan adopted by the District; and

WHEREAS the water conservation measures and progressive restrictions on water use and method of use identified by this ordinance provide certainty to water users and enable District to control water use, provide water supplies, and plan and implement water management measures in a fair and orderly manner for the benefit of the public.

NOW, THEREFORE, the Board of Directors of the Yuima Municipal Water District does ordain as follows:

**SECTION 1.0            DECLARATION OF NECESSITY AND INTENT**

(a) This ordinance establishes water management requirements necessary to conserve water, enable effective water supply planning, assure reasonable and beneficial use of water, prevent waste of water, prevent unreasonable use of water, prevent unreasonable method of use of water within the District in order to assure adequate supplies of water to meet the needs of the public, and further the public health, safety, and welfare, recognizing that water is a scarce natural resource that requires careful management not only in times of drought, but at all times.

(b) This ordinance establishes regulations to be implemented during times of declared water shortages, or declared water shortage emergencies. It establishes four levels of drought response actions to be implemented in times of shortage, with increasing restrictions on water use in response to worsening drought conditions and decreasing available supplies.

(c) Level 1 condition drought response measures are voluntary and will be reinforced through local and regional public education and awareness measures that may be funded in part by District. During drought response condition Levels 2 through 4, all conservation measures and water-use restrictions are mandatory and become increasingly



restrictive in order to attain escalating conservation goals.

(d) During a Drought Response Level 2 condition or higher, the water conservation measures and water use restrictions established by this ordinance are mandatory and violations are subject to criminal, civil, and administrative penalties and remedies specified in this ordinance and as provided in the District's Rules and Regulations governing water service.

## **SECTION 2.0 DEFINITIONS**

(a) The following words and phrases whenever used in this chapter shall have the meaning defined in this section:

1. "Grower" refers to those engaged in the growing or raising, in conformity with recognized practices of husbandry, for the purpose of commerce, trade, or industry, or for use by public educational or correctional institutions, of agricultural, horticultural or floricultural products, and produced: (1) for human consumption or for the market, or (2) for the feeding of fowl or livestock produced for human consumption or for the market, or (3) for the feeding of fowl or livestock for the purpose of obtaining their products for human consumption or for the market. "Grower" does not refer to customers who purchase water subject to the Metropolitan Interim Agricultural Water Program or the Water Authority Special Agricultural Rate programs.

2. "Water Authority" means the San Diego County Water Authority.

3. "DMP" means the Water Authority's Drought Management Plan in existence on the effective date of this ordinance and as readopted or amended from time to time, or an equivalent plan of the Water Authority to manage or allocate supplies during shortages.

4. "Metropolitan" means the Metropolitan Water District of Southern California.

5. "Person" means any natural person, corporation, public or private entity, public or private association, public or private agency, government agency or institution, school district, college, university, or any other user of water provided by the District.

### **SECTION 3.0 APPLICATION**

(a) The provisions of this ordinance apply to any person in the use of any water provided by the District.

(b) This ordinance is intended solely to further the conservation of water. It is not intended to implement any provision of federal, State, or local statutes, ordinances, or regulations relating to protection of water quality or control of drainage or runoff. Refer to the local jurisdiction or Regional Water Quality Control Board for information on any stormwater ordinances and stormwater management plans.

(c) Nothing in this ordinance is intended to affect or limit the ability of the District to declare and respond to an emergency, including an emergency that affects the ability of the District to supply water.

(d) The provisions of this ordinance do not apply to use of water from private wells, water produced under Well Agreements between the District and private parties, or to recycled water.

(e) Nothing in this ordinance shall apply to use of water that is subject to a special supply program, such as the Metropolitan Interim Agricultural Water Program or the Water Authority Special Agricultural Rate programs. Violations of the conditions of special supply programs are subject to the penalties established under the applicable program. A person using water subject to a special supply program and other water provided by the District is subject to this ordinance in the use of the other water.

### **SECTION 4.0 DROUGHT RESPONSE LEVEL 1 - DROUGHT WATCH CONDITION**

(a) A Drought Response Level 1 condition is also referred to as a "Drought Watch" condition. A Level 1 condition applies when the Water Authority notifies its member agencies that due to drought or other supply reductions, there is a reasonable probability there will be supply shortages and that a consumer demand reduction of up to 10 percent is required in order to ensure that sufficient supplies will be available to meet anticipated demands. The General Manager shall declare the existence of a Drought Response Level 1 and take action to implement the Level 1 conservation practices identified in this ordinance.

(b) During a Level 1 Drought Watch condition, District will increase its public education and outreach efforts to emphasize increased public awareness of the need to implement the following water conservation practices. [The same water conservation practices become mandatory if District declares a Level 2 Drought Alert condition]:

1. Stop washing down paved surfaces, including but not limited to sidewalks, driveways, parking lots, tennis courts, or patios, except when it is necessary to alleviate safety or sanitation hazards.

2. Stop water waste resulting from inefficient landscape irrigation, such as runoff, low head drainage, or overspray, etc. Similarly, stop water flows onto non-targeted areas, such as adjacent property, non-irrigated areas, hardscapes, roadways, or structures.

3. Irrigate residential and commercial landscape before 10 a.m. and after 6 p.m. only.

4. Use a hand-held hose equipped with a positive shut-off nozzle or bucket to water landscaped areas, including trees and shrubs located on residential and commercial properties that are not irrigated by a landscape irrigation system.

5. Irrigate nursery and commercial grower's products in conformance with such irrigation schedules as the District's General Manager shall establish. Watering is permitted at any time with a hand-held hose equipped with a positive shut-off nozzle, or when a bucket is used. Irrigation of nursery propagation beds is permitted at any time. Watering of livestock is permitted at any time.

6. Use re-circulated water to operate ornamental fountains.

7. Wash vehicles using a bucket and a hand-held hose with positive shut-off nozzle, mobile high pressure/low volume wash system, or at a commercial site that re-circulates (reclaims) water on-site. Avoid washing during hot conditions when additional water is required due to evaporation.

8. Serve and refill water in restaurants and other food service establishments only upon request.

9. Offer guests in hotels, motels, and other commercial lodging establishments the option of not laundering towels and linens daily.

10. Repair all water leaks within five (5) days of notification by the District unless other arrangements are made with the General Manager.

11. Use recycled or non-potable water for construction purposes when available.

(c) During a Drought Response Level 2 condition or higher, all persons shall be required to implement the conservation practices established in a Drought Response Level 1 condition.

**SECTION 5.0            DROUGHT RESPONSE LEVEL 2 - DROUGHT ALERT  
CONDITION**

(a) A Drought Response Level 2 condition is also referred to as a "Drought Alert" condition. A Level 2 condition applies when the Water Authority notifies its member agencies that due to cutbacks caused by drought or other reduction in supplies, a consumer demand reduction of up to 20 percent is required in order to have sufficient supplies available to meet anticipated demands. The District Board of Directors shall declare the existence of a Drought Response Level 2 condition and implement the mandatory Level 2 conservation measures identified in this ordinance.

(b) All persons using District water shall comply with Level 1 Drought Watch water conservation practices during a Level 2 Drought Alert, and shall also comply with the following additional conservation measures:

1. Limit residential and commercial landscape irrigation to no more than three (3) assigned days per week on a schedule established by the General Manager and posted by the District. During the months of November through May, landscape irrigation is limited to no more than once per week on a schedule established by the General Manager and posted by the District. This section shall not apply to commercial growers or nurseries.
2. Limit lawn watering and landscape irrigation using sprinklers to no more than ten (10) minutes per watering station per assigned day. This provision does not apply to landscape irrigation systems using water efficient devices, including but not limited to: weather based controllers, drip/micro-irrigation systems and stream rotor sprinklers.
3. Water landscaped areas, including trees and shrubs located on residential and commercial properties, and not irrigated by a landscape irrigation system governed by section 5 (b) (1), on the same schedule set forth in section 5 (b) (1) by using a bucket, hand-held hose with positive shut-off nozzle, or low-volume non-spray irrigation.
4. Repair all leaks within seventy-two (72) hours of notification by the District unless other arrangements are made with the General Manager.
5. Stop operating ornamental fountains or similar decorative water features unless recycled water is used.

**SECTION 6.0            DROUGHT RESPONSE LEVEL 3 - DROUGHT CRITICAL  
CONDITION**

(a) A Drought Response Level 3 condition is also referred to as a "Drought Critical" condition. A Level 3 condition applies when the Water Authority notifies its member agencies

that due to increasing cutbacks caused by drought or other reduction of supplies, a consumer demand reduction of up to 40 percent is required in order to have sufficient supplies available to meet anticipated demands. The District Board of

Directors shall declare the existence of a Drought Response Level 3 condition and implement the Level 3 conservation measures identified in this ordinance.

(b) All persons using District water shall comply with Level 1 Drought Watch and Level 2 Drought Alert water conservation practices during a Level 3 Drought Critical condition and shall also comply with the following additional mandatory conservation measures:

1. Limit residential and commercial landscape irrigation to no more than two (2) assigned days per week on a schedule established by the General Manager and posted by the District. During the months of November through May, landscape irrigation is limited to no more than once per week on a schedule established by the General Manager and posted by the District. This section shall not apply to commercial growers or nurseries.

2. Water landscaped areas, including trees and shrubs located on residential and commercial properties, and not irrigated by a landscape irrigation system governed by section 6 (b) (1), on the same schedule set forth in section 6 (b) (1) by using a bucket, hand-held hose with a positive shut-off nozzle, or low-volume non-spray irrigation.

3. Stop filling or re-filling ornamental lakes or ponds, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to declaration of a drought response level under this ordinance.

4. Stop washing vehicles except at commercial carwashes that recirculate water, or by high pressure/low volume wash systems.

5. Repair all leaks within forty-eight (48) hours of notification by the District unless other arrangements are made with the General Manager.

(c) Upon the declaration of a Drought Response Level 3 condition, no new potable water service shall be provided, no new temporary meters or permanent meters shall be provided, and no statements of immediate ability to serve or provide potable water service (such as, will serve letters, certificates, or letters of availability) shall be issued, except under the following circumstances:

1. A valid, unexpired building permit has been issued for the project; or
2. The project is necessary to protect the public's health, safety, and welfare; or

3. The applicant provides substantial evidence of an enforceable commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of District.

This provision shall not be construed to preclude the resetting or turn-on of meters to provide continuation of water service or to restore service that has been interrupted for a period of one year or less.

(d) Upon the declaration of a Drought Response Level 3 condition, District will suspend consideration of annexations to its service area.

(e) The District may establish a water allocation for property served by the District using a method that does not penalize persons for the implementation of conservation methods or the installation of water saving devices. If the District establishes a water allocation it shall provide notice of the allocation by including it in the regular billing statement for the fee or charge or by any other mailing to the address to which the District customarily mails the billing statement for fees or charges for on-going water service. Following the effective date of the water allocation as established by the District, any person that uses water in excess of the allocation shall be subject to a penalty in such amount as shall be established from time to time in the District's Rules and Regulations Governing Water Service for each billing unit of water in excess of the allocation. The penalty for excess water usage shall be cumulative to any other remedy or penalty that may be imposed for violation of this ordinance.

## **SECTION 7.0 DROUGHT RESPONSE LEVEL 4 - DROUGHT EMERGENCY CONDITION**

(a) A Drought Response Level 4 condition is also referred to as a "Drought Emergency" condition. A Level 4 condition applies when the Water Authority Board of Directors declares a water shortage emergency pursuant to California Water Code section 350 and notifies its member agencies that Level 4 requires a demand reduction of more than 40 percent in order for the District to have maximum supplies available to meet anticipated demands. The District's Board of Directors shall declare a Drought Emergency in the manner and on the grounds provided in California Water Code section 350.

(b) All persons using District water shall comply with conservation measures required during Level 1 Drought Watch, Level 2 Drought Alert, and Level 3 Drought Critical conditions and shall also comply with the following additional mandatory conservation measures:

1. Stop all landscape irrigation, except crops and landscape products of commercial growers and nurseries. This restriction shall not apply to the following categories of use unless the District has determined that recycled water is available and may be lawfully applied to the use.

A. Maintenance of trees and shrubs that are watered on the same schedule set forth in section 6 (b) (1) by using a bucket, hand-held hose with a positive shut-off nozzle, or low-volume non-spray irrigation;

B. Maintenance of existing landscaping necessary for fire protection as specified by the Fire Marshal of the local fire protection agency having jurisdiction over the property to be irrigated;

C. Maintenance of existing landscaping for erosion control;

D. Maintenance of plant materials identified to be rare or essential to the well being of rare animals;

E. Maintenance of landscaping within active public parks and playing fields, day care centers, school grounds, cemeteries, and golf course greens, provided that such irrigation does not exceed two (2) days per week according to the schedule established under section 6 (b) (1);

F. Watering of livestock; and

G. Public works projects and actively irrigated environmental mitigation projects.

2. Repair all water leaks within twenty-four (24) hours of notification by the District unless other arrangements are made with the General Manager.

(c) The District may establish a water allocation for property served by the District. If the District establishes a water allocation it shall provide notice of the allocation by including it in the regular billing statement for the fee or charge or by any other mailing to the address to which the District customarily mails the billing statement for fees or charges for on-going water service. Following the effective date of the water allocation as established by the District, any person that uses water in excess of the allocation shall be subject to a penalty in such amount as shall from time to time be established by the Board of Directors in the Rules and Regulations of the District Governing Water Service for each billing unit of water in excess of the allocation. The penalty for excess water usage shall be cumulative to any other remedy or penalty that may be imposed for violation of this ordinance.

## **SECTION 8.0 CORRELATION BETWEEN DROUGHT MANAGEMENT PLAN AND DROUGHT RESPONSE LEVELS**

(a) The correlation between the Water Authority's DMP stages and the District's drought response levels identified in this ordinance is described herein. Under DMP Stage 1, the District may implement Drought Response Level 1 actions. Under DMP Stage 2, the District may implement Drought Response Level 1 or Level 2 actions. Under

DMP Stage 3, the District may implement Drought Response Level 2, Level 3, or Level 4 actions.

<b>Drought Response Levels</b>	<b>Use Restrictions</b>	<b>Conservation Target</b>	<b>DMP Stage</b>
1 - Drought Watch	Voluntary	Up to 10%	Stage 1 or 2
2 - Drought Alert	Mandatory	Up to 20%	Stage 2 or 3
3 - Drought Critical	Mandatory	Up to 40%	Stage 3
4 - Drought Emergency	Mandatory	Above 40%	Stage 3

(b) The drought response levels identified in this ordinance correspond with the Water Authority DMP as identified in the following table:

The foregoing and any subsequent provisions notwithstanding, the Board of Directors reserves the right, in its sole discretion, to establish a particular Drought Response Level independently of Water Authority actions, if in the Board’s sole judgment such action is necessary to take appropriate account of particular local circumstances that may ameliorate or exacerbate conditions at the local level.

**SECTION 9.0 PROCEDURES FOR DETERMINATION AND NOTIFICATION OF DROUGHT RESPONSE LEVEL**

(a) The existence of a Drought Response Level 1 condition may be declared by the General Manager upon a written determination of the existence of the facts and circumstances supporting the determination. A copy of the written determination shall be submitted to the District Board of Directors. The General Manager may publish a notice of the determination of existence of Drought Response Level 1 condition in one or more newspapers, including a newspaper of general circulation within the District. The District may also post notice of the condition on its website.

(b) The existence of Drought Response Level 2 or Level 3 conditions may be declared by resolution of the District Board of Directors adopted at a regular or special public meeting held in accordance with State law. The mandatory conservation measures applicable to Drought Response Level 2 or Level 3 conditions shall take effect on the tenth (10th) day after the date the response level is declared. Within five (5) days following the declaration of the response level, the District shall publish a copy of the resolution in a newspaper used for publication of official notices.

(c) The existence of a Drought Response Level 4 condition may be declared in accordance with the procedures specified in California Water Code sections 351 and 352. The mandatory conservation measures applicable to Drought Response Level 4 conditions shall take effect on the tenth (10) day after the date the response level is declared. Within five (5) days following the declaration of the response level, the District shall publish a copy of the resolution in a newspaper used for publication of official notices. If the District establishes a water allocation, it shall provide notice of the



allocation by including it in the regular billing statement for the fee or charge or by any other mailing to the address to which the District customarily mails the billing statement for fees or charges for on-going water service. Water allocation shall be effective on the fifth (5) day following the date of mailing or at such later date as specified in the notice.

(d) The District Board of Directors may declare an end to a Drought Response Level by the adoption of a resolution at any regular or special meeting held in accordance with State law.

## **SECTION 10.0            HARSHIP VARIANCE**

(a) If, due to unique circumstances, a specific requirement of this ordinance would result in undue hardship to a person using agency water or to property upon which agency water is used, that is disproportionate to the impacts to District water users generally or to similar property or classes of water uses, then the person may apply for a variance to the requirements as provided in this section.

(b) The variance may be granted or conditionally granted, only upon a written finding of the existence of facts demonstrating an undue hardship to a person using agency water or to property upon with agency water is used, that is disproportionate to the impacts to District water users generally or to similar property or classes of water use due to specific and unique circumstances of the user or the user's property.

1.        Application. Application for a variance shall be a form prescribed by District and shall be accompanied by a non-refundable processing fee in an amount set by resolution of the District Board of Directors.

2.        Supporting Documentation. The application shall be accompanied by photographs, maps, drawings, and other information, including a written statement of the applicant.

3.        Required Findings for Variance. An application for a variance shall be denied unless the approving authority finds, based on the information provided in the application, supporting documents, or such additional information as may be requested, and on water use information for the property as shown by the records of the District, all of the following:

A.        That the variance does not constitute a grant of special privilege inconsistent with the limitations upon other District customers.

B.        That because of special circumstances applicable to the property or its use, the strict application of this ordinance would have a disproportionate impact on the property or use that exceeds the impacts to customers generally.

C.        That the authorizing of such variance will not be of

substantial detriment to adjacent properties, and will not materially affect the ability of the District to effectuate the purpose of this chapter and will not be detrimental to the public interest.

D. That the condition or situation of the subject property or the intended use of the property for which the variance is sought is not common, recurrent or general in nature.

4. Approval Authority. The General Manager shall exercise approval authority and act upon any completed application no later than 10 days after submittal and may approve, conditionally approve, or deny the variance. The applicant requesting the variance shall be promptly notified in writing of any action taken. Unless specified otherwise at the time a variance is approved, the variance applies to the subject property during the term of the mandatory drought response.

5. Appeals to District Board of Directors. An applicant may appeal a decision or condition of the General Manager on a variance application to the District Board of Directors within 10 days of the decision upon written request for a hearing. The request shall state the grounds for the appeal. At a public meeting, the District Board of Directors shall act as the approval authority and review the appeal de novo by following the regular variance procedure. The decision of the District Board of Directors is final.

## **SECTION 11.0 VIOLATIONS AND PENALTIES**

(a) Any person, who uses, causes to be used, or permits the use of water in violation of this ordinance is guilty of an offense punishable as provided herein.

(b) Each day that a violation of this ordinance occurs is a separate offense.

(c) Administrative fines may be levied for each violation of a provision of this ordinance as follows:

1. One hundred dollars for a first violation.
2. Two hundred dollars for a second violation of any provision of this ordinance within one year.
3. Five hundred dollars for each additional violation of this ordinance within one year.

(d) Violation of a provision of this ordinance is subject to enforcement through installation of a flow-restricting device in the meter.

(e) Each violation of this ordinance may be prosecuted as a misdemeanor punishable by imprisonment in the county jail for not more than thirty (30) days or by a fine not exceeding \$1,000, or by both as provided in Water Code section 377.

(f) Willful violations of the mandatory conservation measures and water use restrictions as set forth in Section 7.0 and applicable during a Level 4 Drought

Emergency condition may be enforced by discontinuing service to the property at which the violation occurs as provided by Water Code section 356.

(g) All remedies provided for herein shall be cumulative and not exclusive.

**SECTION 12.0 EFFECTIVE DATE**

This ordinance is effective immediately upon adoption or as otherwise established by State law for District.


**PASSED, APPROVED AND ADOPTED** this 28<sup>th</sup> day of July, 2008 by the following vote:

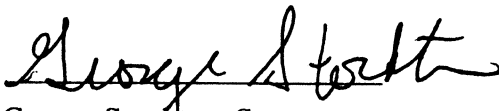
AYES: Knutson, Anderson, Fitzsimmons, Lyttle, Stockton

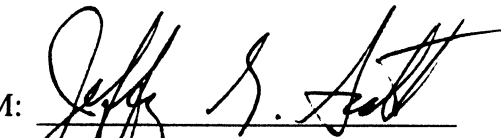
NOES: none

ABSTAIN: none

ABSENT: none

  
\_\_\_\_\_  
W. D. Knutson,  
President of the Board of Directors

ATTEST:   
\_\_\_\_\_  
George Stockton, Secretary

APPROVED AS TO FORM:   
\_\_\_\_\_  
Jeffrey Scott, General Counsel

**APPENDIX B**

**Yuima Municipal Water District Imported Water Contract**  
**[PLACEHOLDER]**





***GEOSCIENCE***

The First Name in Groundwater