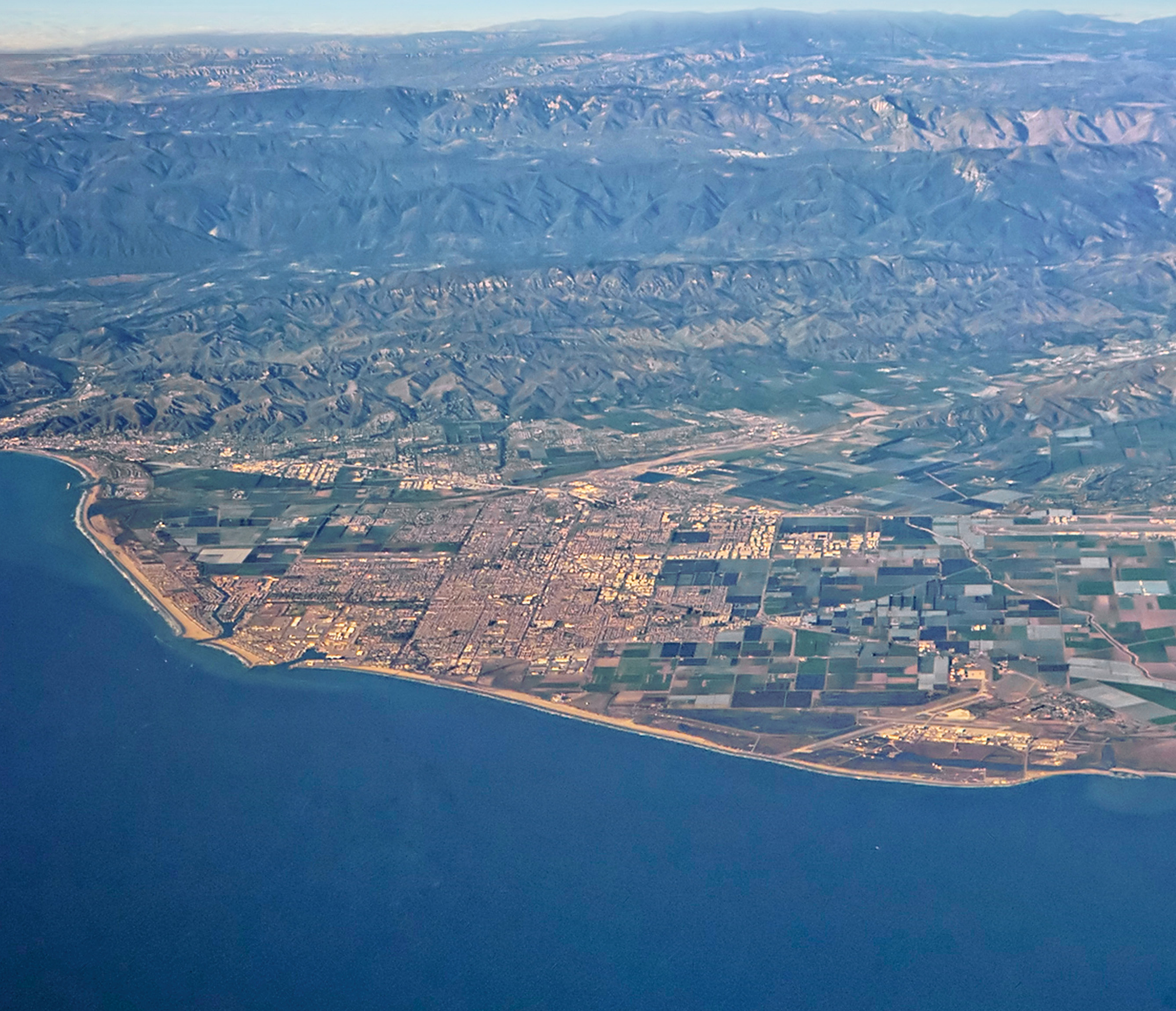
Groundwater Sustainability Plan for the Oxnard Subbasin

Fox Canyon Groundwater Management Agency
800 South Victoria Avenue
Ventura, California 93009-1610
December 2019



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Board of Directors
Fox Canyon Groundwater Management Agency
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Subject: Groundwater Sustainability Plan for the Oxnard Subbasin

Dear Board of Directors:

Dudek is pleased to submit this Groundwater Sustainability Plan (GSP) for the Oxnard Subbasin to the Fox Canyon Groundwater Management Agency. This GSP was prepared this in accordance with California Code of Regulations, Title 23. Water, Division 2. Department of Water Resources, Chapter 1.5. Groundwater Management, Subchapter 2. Groundwater Sustainability Plans.

Respectfully Submitted,

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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
AEA	Annual Efficiency Allocation
AFY	acre-feet per year
AMI	advanced metering infrastructure
ASR	Aquifer Storage and Recovery
AWMP	Agricultural Water Management Plan
AWPF	Advanced Water Purification Facility
bgs	below ground surface
BM	benchmark
BMO	Basin Management Objective
BMP	best management practice
BTEX	benzene, toluene, ethyl benzene, and xylenes
cfs	cubic feet per second
CIMIS	California Irrigation Management Information System
CMWD	Calleguas Municipal Water District
COCs	constituents of concern
DAC	Disadvantaged Community
DBS&A	Daniel B. Stephens & Associates Inc.
DPWM	Distributed Parameter Watershed Model
DWR	California Department of Water Resources
EOPMA	East Oxnard Plain Management Area
Evap	evaporation
FCA	Fox Canyon Aquifer
FCGMA	Fox Canyon Groundwater Management Agency
GDE	groundwater-dependent ecosystem
gpm	gallons per minute
GREAT	Groundwater Recovery Enhancement and Treatment
GRRP	Recycled Water/Groundwater Replenishment Reuse Project
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
IE	irrigation efficiency
IRWM	Integrated Regional Water Management
LAS	Lower Aquifer System
M&I	municipal and industrial
MCL	maximum contaminant level
mgd	million gallons per day
mg/L	milligrams per liter
msl	above mean sea level
MTBE	methyl tertiary butyl ether
MWD	Metropolitan Water District of Southern California
OHWS	Oxnard–Hueneme Water System
OPV	Oxnard Subbasin–Pleasant Valley Basin

Acronym/Abbreviation	Definition
PCB	polychlorinated biphenyl
PHWA	Port Hueneme Water Agency
RMSE	root-mean-squared error
SCAG	Southern California Association of Governments
SGMA	Sustainable Groundwater Management Act
SMP	Salinity Management Pipeline
SNMP	Salt and Nutrient Management Plan
SWP	State Water Project
SWRCB	State Water Resources Control Board
TAG	Technical Advisory Group
TBA	tert-butyl alcohol
TDS	total dissolved solids
UAS	Upper Aquifer System
USGS	U.S. Geological Survey
UWCD	United Water Conservation District
UWMP	urban water management plan
UWMPA	Urban Water Management Planning Act
VCGP	Ventura County General Plan
VCWPD	Ventura County Watershed Protection District
VOC	volatile organic compound
VWD	City of Ventura Water Department
VWRF	Ventura Water Reclamation Facility
WOPMA	West Oxnard Plain Management Area
WQO	Water Quality Objective

EXECUTIVE SUMMARY

The Fox Canyon Groundwater Management Agency (FCGMA, or the Agency) has developed this Groundwater Sustainability Plan (GSP) for the Oxnard Subbasin (Subbasin; DWR Basin 4-004.02) of the Santa Clara River Valley Groundwater Basin (DWR Basin 4-004), in compliance with the 2014 Sustainable Groundwater Management Act (SGMA; California Water Code, Section 10720 et seq.). The purpose of this GSP is to define the conditions under which the groundwater resources of the entire Oxnard Subbasin, which support agricultural, municipal and industrial, and environmental uses, will be managed sustainably in the future.

Historical groundwater production has resulted in seawater intrusion in the five primary aquifers of the Subbasin. These aquifers have been divided into an Upper Aquifer System, which comprises the Oxnard and Mugu Aquifers, and a Lower Aquifer System, which comprises the Hueneme, Fox Canyon, and Grimes Canyon Aquifers. The average rate of groundwater production from the Upper Aquifer System between 2015 and 2017 was approximately 40,000 acre-feet per year (AFY). The average production from the Lower Aquifer System between 2015 and 2017 was approximately 29,000 AFY. Numerical groundwater simulations indicate that if these production rates were carried into the future, seawater intrusion would continue in the Subbasin and the area currently impacted by concentrations of chloride greater than 500 milligrams per liter would grow. The landward extent of this area is referred to as the *saline water impact front*.[1]

Combinations of projects and management actions were explored to estimate the rate of groundwater production that would prevent future expansion of the area of the Subbasin currently impacted by concentrations of chloride greater than 500 milligrams per liter. This rate of groundwater production is referred to as the sustainable yield. With the currently available projects and management actions, the sustainable yield of the Upper Aquifer System, was calculated to be approximately 32,000 AFY, with an uncertainty of ± 4,100 to 6,000 AFY. The sustainable yield of the Lower Aquifer System was calculated to be approximately 7,000 AFY, with an uncertainty of ± 2,300 to 3,600 AFY.

Adoption of this GSP represents the first step in achieving groundwater sustainability within the Oxnard Subbasin by 2040, as required by SGMA. Evaluation of this GSP is required at a minimum of every 5 years following submittal to the California Department of Water Resources (DWR). As part of the 5-year evaluation process, the sustainable yield for each aquifer system will be refined and adjusted. These refinements will be based on new data, additional studies undertaken to fill data gaps, and groundwater modeling. Refinements and adjustments will also be made to the minimum threshold water levels developed to avoid

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[1] Sources of water high in chloride in the Oxnard Subbasin include modern-day seawater as well as non-marine brines and connate water in fine-grained sediments. Therefore, the area of the Subbasin impacted by concentrations of chloride greater than 500 milligrams per liter is referred to as the *saline water impact area*, rather than the *seawater intrusion impact area*, to reflect all the potential sources of chloride to the aquifers in this area.

undesirable results, the measurable objective water levels that account for the need to continue groundwater production during drought cycles and the associated interim milestones to help gauge progress toward sustainability over the next 20 years.

In order to minimize the pumping reductions required to achieve sustainable management of the Subbasin, investment in large-scale projects to increase water supply, provide the infrastructure to redistribute pumping, and/or directly control seawater intrusion should be investigated. Basin optimization studies, groundwater modeling, and project feasibility studies will be conducted over the next 5 years to explore practicable processes and approaches to increasing the sustainable yield of the Oxnard Subbasin.

ES.1 INTRODUCTION

The Oxnard Subbasin is a coastal alluvial groundwater subbasin, located in Ventura County, California, that is in hydrologic communication, to varying degrees, with adjoining groundwater basins to the north and east, and with the Pacific Ocean to the west and southwest. The climate is typical of coastal Southern California, with average daily temperatures ranging generally from 50°F to 78°F in summer and from 40°F to 75°F in winter. Land use on the Oxnard Plain is roughly equally divided between agricultural and urban uses. DWR has designated the 90-square-mile Subbasin as high priority and subject to critical conditions of overdraft.

Historical groundwater production in the Subbasin was first found to have induced seawater intrusion into the aquifers of the Oxnard Subbasin in the 1930s. In 1982, the California Legislature formed the FCGMA, an independent special district, to manage and protect the aquifers within its jurisdiction for the common benefit of the public and all groundwater users. Extractors within FCGMA jurisdiction are subject to the Agency's GSPs, ordinances, and policies created for the sustainable management of groundwater management actions.

Three groundwater sustainability agencies (GSAs) have jurisdiction over portions of the Subbasin. FCGMA is the GSA for the area of the Subbasin that falls within its jurisdiction. The Camrosa Water District–Oxnard Subbasin GSA has jurisdictional control over the portion of the Camrosa Water District service area in the Subbasin that is south and east of the Bailey Fault, and the Oxnard Outlying Areas GSA has jurisdictional control over portions of the Subbasin not within FCGMA or Camrosa Water District–Oxnard Subbasin GSA jurisdiction. This FCGMA GSP is the sole GSP prepared for the Subbasin, and covers the entire Subbasin, including all areas of the Subbasin outside of FCGMA's jurisdiction.

Public participation and stakeholder feedback have played a critical role in the development of this GSP. The FCGMA maintains a list of stakeholders interested in the GSP process, known as the *List of Interested Parties*. A monthly newsletter, meeting notices, and notices of GSP documents available for review were sent electronically to the List of Interested Parties. Public workshops were held to inform stakeholders and the general public on the contents of the GSPs and to solicit feedback on that content. To further facilitate stakeholder understanding, the FCGMA Board of Directors (Board) approved release of a preliminary draft GSP for public comment in November 2017. Additionally, the FCGMA Board formed a Technical Advisory Group, which held monthly public meetings throughout the GSP development process beginning in July 2015. Updates on the development of the GSP were given at meetings of the FCGMA Board beginning in April 2015. All FCGMA Board meetings, Technical Advisory Group meetings, Board-appointed committee meetings, and Board special workshops were noticed in accordance with the Brown Act, and opportunities for public comment were provided at all FCGMA Board meetings, Technical Advisory Group meetings, Board-appointed committee meetings, and workshops.

ES.2 SUMMARY OF BASIN SETTING AND CONDITIONS

There are five commonly recognized aquifers in the Subbasin: the Oxnard, Mugu, Hueneme, Fox Canyon, and Grimes Canyon Aquifers. These aquifers are grouped into the Upper Aquifer System and the Lower Aquifer System, with the Oxnard and Mugu Aquifers composing the Upper Aquifer System and the Hueneme, Fox Canyon, and Grimes Canyon Aquifers composing the Lower Aquifer System. The majority of recharge that replenishes the Subbasin comes from surface water diversions of the Santa Clara River, which are directed to spreading basins in the Oxnard Forebay operated by the United Water Conservation District (UWCD). In the Forebay, the Upper Aquifer System rests directly on the folded and eroded upper surface of the Hueneme Aquifer and the Fox Canyon Aquifer. Elsewhere in the Subbasin, the aquifers of the Lower Aquifer System are separated from those of the Upper Aquifer System by low-permeability clay beds. A low-permeability clay cap also overlies the aquifers of the Upper Aquifer System throughout the Subbasin, except in the Forebay. Water that recharges in the Forebay is able to migrate throughout the Subbasin.

Groundwater elevations and flow directions have varied historically in the Subbasin. During periods of above average precipitation, when UWCD has been able to operate its recharge basins from the diversion of Santa Clara River water, groundwater elevations have been higher than sea level, generating a seaward-directed gradient that prevents seawater intrusion. At other times in the past, and since the onset of the drought period beginning in 2011, groundwater elevations have been below sea level, creating a landward gradient that allows for inland migration of seawater. Absolute changes in groundwater levels over cycles of drought and recovery vary both geographically and vertically within the aquifers of the Subbasin, although the general patterns of decline and recovery are similar throughout the Subbasin.

Seawater intrusion tends to occur preferentially in the vicinity of Port Hueneme and Point Mugu, where submarine canyons are close to the coast, and the onshore freshwater aquifer units are exposed in the canyon walls. The current extent of seawater intrusion varies by aquifer, but in general the impacted area of the Subbasin lies to the south of Hueneme Road and west of Highway 1. Groundwater quality not related to seawater intrusion is also a concern in the Forebay of the Subbasin, where nitrate concentrations exceeding the water quality objectives for the Subbasin are present in the groundwater. These concentrations are likely a legacy of historical septic discharges and historical agricultural fertilizer application practices, and may also be influenced by current agricultural return flows.

The water budget for the Subbasin provides an accounting and assessment of the average annual volume of groundwater and surface water entering (i.e., inflow) and leaving (i.e., outflow) the Subbasin and enables an accounting of the cumulative change in groundwater in storage over time. UWCD developed the Ventura Regional Groundwater Flow Model, a MODFLOW numerical groundwater flow model, for the Oxnard Subbasin, the Mound Basin, the western part of the Las Posas Valley Basin, and the Pleasant Valley Basin. A peer review study of the UWCD model was conducted for this GSP. The historical groundwater budget for the Subbasin is based on the UWCD model, which had a historical base period from 1985 to 2015. During average conditions (1988, 1991, 1992, 1994, 1996, 1997, 2000, 2001, 2003, 2006, 2008, 2010, and 2011), which are defined as water years in which the precipitation in the Oxnard Subbasin was between 75% and 150% of the average annual precipitation, the net change in groundwater storage for the Upper Aquifer System without seawater intrusion was an increase in 1,856 AFY and the net change in storage without seawater intrusion in the Lower Aquifer System was a decrease of 4,196 AFY. The net seawater intrusion during these years was 4,189 AFY in the Upper Aquifer System, and 5,225 AFY in the Lower Aquifer System. Groundwater pumping during these average condition years averaged 47,080 AFY in the Upper Aquifer System and 28,893 AFY in the Lower Aquifer System.

Several model scenarios were developed to assess the future sustainable yield of the Subbasin. Each future scenario covered a 50-year timeframe, from 2020 to 2069. In two scenarios, the 2015–2017 average groundwater extraction rate was continued throughout the 50-year modeled period. The results of each of these scenarios indicated that continuing the 2015–2017 extraction rate would contribute to net seawater intrusion in both the Upper Aquifer System and Lower Aquifer System. In three additional scenarios, the groundwater production rate was decreased gradually over the first 20 years. These model scenarios indicated that reduced groundwater production from the Subbasin can eliminate net seawater intrusion in the Subbasin over periods of drought and recovery. Based on the suite of model scenarios, the sustainable yield of the Upper Aquifer System was calculated to be approximately 32,000 AFY, with an uncertainty of ± 4,100 to 6,000 AFY. The sustainable yield of the Lower Aquifer System was calculated to be approximately 7,000 AFY, with an uncertainty of ± 2,300 to 3,600 AFY.

It is anticipated that the analysis for the 5-year update to the GSP will focus on developing new water supply projects, as well as examining the potential impacts of differential extractions on the coast and inland, particularly in the Lower Aquifer System. Additional modeling is recommended for the

5-year update process to understand how changes in pumping patterns and the addition of new water supply projects can increase the overall sustainable yield of the Subbasin. As this understanding improves, projects to support increases in the overall sustainable yield can be developed.

To reflect the current understanding of the hydrogeologic characteristics of the Subbasin, and in anticipation of future management strategies the Subbasin has been divided into five management areas. These areas are the Forebay Management Area, the West Oxnard Plain Management Area, the Oxnard Pumping Depression Management Area, the Saline Intrusion Management Area, and the East Oxnard Plain Management Area. These areas are separated by hydrogeologic and water quality characteristics.

ES.3 OVERVIEW OF SUSTAINABILITY CRITERIA

The sustainability goal in the Subbasin is to increase groundwater elevations inland of the Pacific coast in the aquifers that compose the Upper Aquifer System and the Lower Aquifer System to elevations that will prevent the long-term, or climatic cycle net (net), landward migration of the area currently impacted by seawater intrusion; prevent net seawater intrusion in the Upper Aquifer System; and prevent net seawater intrusion in the Lower Aquifer System.

Under SGMA, undesirable results occur when the effects caused by groundwater conditions occurring throughout the Subbasin cause significant and unreasonable impacts to any of the six sustainability indicators:

- Chronic lowering of groundwater levels
- Reduction of groundwater storage
- Seawater intrusion
- Degraded water quality
- Land subsidence
- Depletions of interconnected surface water

All six sustainability indicators are applicable to the Subbasin. Minimum thresholds and measurable objectives, which are quantitative metrics of groundwater conditions in the Subbasin, were established for the sustainability indicators determined to be a current and/or potential future undesirable result. Groundwater elevations that achieve the sustainability goal for seawater intrusion were used as a proxy for other sustainability indicators in establishing the minimum thresholds and measurable objectives. This is because if the minimum thresholds and measurable objectives for seawater intrusion are achieved, then undesirable results for the other sustainability indicators are avoided.

The measurable objective water levels for the Subbasin are the groundwater levels throughout the Subbasin, at which there is neither seawater flow into nor freshwater flow out of the Upper Aquifer System or Lower Aquifer System. If groundwater levels in the Subbasin remained at the measurable objective in perpetuity, no groundwater would flow from the aquifer systems into the Pacific Ocean, and no ocean water would flow into the aquifer systems. To allow for operational flexibility during drought periods, water levels in the Subbasin are allowed to fall below the measurable objective. In order to prevent net seawater intrusion over periods of drought and recovery, the periods during which groundwater elevations are below the measurable objective must be offset by periods when the groundwater elevations are higher than the measurable objective.

The minimum thresholds for all six sustainability indicators are groundwater levels that were selected to limit seawater intrusion and allow declines in groundwater elevations during periods of future drought to be offset by recoveries during future periods of above-average rainfall. These thresholds were tested with future groundwater model simulations. The model simulations suggest that if groundwater levels fall below the minimum threshold elevations, the Subbasin is likely to experience net landward migration of the 2015 saline water impact front after 2040. These minimum thresholds are anticipated to improve the beneficial uses of the Subbasin by limiting seawater intrusion. This allows for long-term use of groundwater supplies in the Subbasin.

Although exceedance of a minimum threshold at any given well in the Subbasin may indicate an undesirable result is occurring in the Subbasin, a single exceedance is not necessarily sufficient to indicate that Subbasin-wide conditions are causing undesirable results. Additionally, conditions in the Upper Aquifer System may differ from those in the Lower Aquifer System. Therefore, to define the conditions under which undesirable results will occur in the Subbasin, criteria were developed for each aquifer system. The Upper Aquifer System would be determined to be experiencing an undesirable result if:

- In any single monitoring event, groundwater levels in 6 of 15 identified key wells are below their respective minimum thresholds.
- The groundwater elevation at any individual key well is below the historical low water level for that well.
- The groundwater level in any individual key well is below the minimum threshold for either three consecutive monitoring events or three of five consecutive monitoring events, which occur in the spring and fall of each year.

The Lower Aquifer System would be determined to be experiencing an undesirable result if:

- In any single monitoring event, groundwater levels in 8 of 19 identified key wells are below their respective minimum thresholds.

- The groundwater elevation at any individual key well is below the historical low water level for that well.
- The groundwater level in any individual key well is below the minimum threshold for either three consecutive monitoring events or three of five consecutive monitoring events, which occur in the spring and fall of each year.

ES.4 OVERVIEW OF THE SUBBASIN MONITORING NETWORK

The overall objective of the monitoring network in the Subbasin is to track and monitor parameters that demonstrate progress toward meeting the sustainability goals. In order to accomplish this objective, the monitoring network in the Subbasin must be capable of the following:

- Monitoring changes in groundwater conditions (in six sustainability indicator categories)
- Monitoring progress toward minimum thresholds and measurable objectives
- Quantifying annual changes in water budget components

The existing network of groundwater wells includes both monitoring wells and production wells. This network is capable of delineating the groundwater conditions in the Subbasin and has been used for this purpose in the past. The current groundwater well network will be used to monitor groundwater conditions moving forward, in order to continue to assess long-term trends in groundwater elevation and groundwater quality in the Subbasin.

Although the current monitoring network is adequate to monitor groundwater conditions in the Subbasin, it can be improved as funding becomes available An additional well, or wells, in the Oxnard Pumping Depression Management Area would provide aquifer-specific groundwater elevations in an area that does not have local wells screened solely in the Mugu Aquifer or the Hueneme Aquifer, and does not have a dedicated monitoring well screened in any of the primary aquifers.

Additionally, the monitoring network in the West Oxnard Plain Management Area could be improved by adding a monitoring well to the area north of Highway 101 and south of the Oxnard Forebay, and adding a monitoring well to the area north of 6th Street and west of Ventura Road. A monitoring well north of Highway 101 and south of the Oxnard Forebay would provide for aquifer-specific water levels adjacent to the West Las Posas Management Area boundary. These groundwater levels could be used to constrain the gradient between the West Las Posas Management Area and the Subbasin. A monitoring well north of 6th Street and west of Ventura Road would help constrain groundwater gradients in the northwestern Subbasin.

There are currently no monitoring wells in the East Oxnard Plain Management Area, which has minimal known groundwater production. Addition of a monitoring well in the vicinity of Calleguas

Creek in this management area would help constrain the relationship between groundwater elevations in the East Oxnard Plain Management Area and groundwater conditions in the adjacent Oxnard Pumping Depression and Saline Intrusion Management Areas.

In addition to supplementing the existing monitoring network with new wells, monitoring can also be improved in the future by coordination of monitoring schedules to ensure that groundwater monitoring activities occur over a 2-week window during the key reporting periods and mid-March and mid-October. As funding becomes available, pressure transducers should be added to wells in the groundwater monitoring network. Pressure transducer records provide the high-temporal-resolution data that allows for a better understanding of water level dynamics in the wells related to groundwater production, groundwater management activities, and climatic influence.

In the future, to the extent possible, additional dedicated monitoring wells will be incorporated into the existing monitoring network. These wells will provide information on groundwater conditions in geographic locations where data gaps have been identified, or where a dedicated monitoring well would better represent conditions in the aquifers than a production well currently used for monitoring.

ES.5 PROJECTS AND MANAGEMENT ACTIONS

Projects and management actions have been identified to address potential impacts to beneficial uses and users of groundwater in the Subbasin resulting from groundwater production in excess of the current sustainable yield. The five projects included in this GSP were suggested by stakeholders and were reviewed by the Operations Committee of the FCGMA Board. The inclusion of these projects does not constitute a commitment by the FCGMA Board to construct or fund the projects, but rather signals that these projects were sufficiently detailed to be included in groundwater modeling efforts that examined the quantitative impacts of the projects on groundwater elevations and the sustainable yield of the Subbasin. Projects included in the GSP or any amendment thereof that increase the available supply of groundwater are necessary to meet the sustainability goal for the Subbasin in a manner that avoids adverse impacts to beneficial uses and users of groundwater within the Subbasin.

Project No. 1 – GREAT Program Advanced Water Purification Facility

Under this project, the City of Oxnard’s Groundwater Recovery Enhancement and Treatment (GREAT) Program’s Advanced Water Purification Facility (AWPF) could provide the Subbasin with a source of reclaimed water that can be used for landscape irrigation, agricultural, industrial process water, and groundwater recharge. The AWPF product water that will be put to use in the Subbasin is secondary wastewater effluent that is currently discharged to the Pacific Ocean. Therefore, this project provides a new source of water for use in the Subbasin.

Project No. 2 – GREAT Program Advanced Water Purification Facility Expansion Project

The purpose of the GREAT Program AWPF Expansion Project is to increase the production of high-quality recycled water within the City of Oxnard, the Subbasin, and the Pleasant Valley Basin. This project will provide additional reclaimed water for Subbasin recharge, in-lieu groundwater production, or indirect potable reuse. The AWPF Expansion Project product water that will be put to use in the Subbasin is secondary wastewater effluent that is currently discharged to the Pacific Ocean. Therefore, this project provides a new source of water for use in the Subbasin.

Project No. 3 – RiverPark–Saticoy GRRP Recycled Water Project

The RiverPark–Saticoy Groundwater Replenishment and Reuse Project (GRRP) Recycled Water Project will convey water produced by the GREAT Program AWPF Expansion Project to the Saticoy Groundwater Recharge Facility and El Rio Groundwater Recharge Facility operated by UWCD. The RiverPark–Saticoy Pipeline and the GRRP will help ensure that excess flows from the AWPF will be used for groundwater recharge and implementation of this project is expected to improve groundwater quality in the Forebay.

Project No. 4 – Freeman Expansion Project

The Freeman Expansion Project will expand the recharge facilities operated by UWCD adjacent to the Santa Clara River, to be able to accommodate diversions from the river at higher flow rates. The benefits of this project are multifold. It will provide additional recharge, improve water quality in the Forebay, and reduce pump lift, and therefore energy consumption, for municipal and agricultural pumpers.

Project No. 5 – Temporary Agricultural Land Fallowing

The Temporary Agricultural Land Fallowing Project will decrease groundwater production in the portions of the Subbasin that are susceptible to seawater intrusion. This project will benefit the Subbasin by mitigating seawater intrusion in the Subbasin and would complement a water market that is currently being developed for the Subbasin by providing an alternative method for landowners to monetize pumping allocations.

Management Action No. 1 – Reduction in Groundwater Production

The primary management action proposed under this GSP is a reduction in groundwater production from the Subbasin. FCGMA has had the authority to monitor and regulate groundwater production in the Subbasin since 1983. The primary benefit related to reduction in groundwater production is recovery of groundwater elevations that have historically allowed for seawater intrusion in the Subbasin. Reduction in groundwater production can be used to close any differential between groundwater elevations that can be obtained through implementation of projects and the groundwater elevations necessary to prevent future net seawater intrusion in the Upper Aquifer System and the Lower Aquifer System.

FCGMA approved an ordinance to establish an allocation system for the Oxnard Subbasin and the Pleasant Valley Basin on October 23, 2019. The purpose of this ordinance is to facilitate adoption and implementation of the GSP and to ensure that the Oxnard Subbasin and the Pleasant Valley Basin are operated within their sustainable yields. It is not the purpose of the ordinance to determine or alter water right entitlements, including those that may be asserted pursuant to California Water Code Sections 1005.1, 1005.2, or 1005.4.

Management Action No. 2 – Water Market Pilot Program

A water market pilot program is currently being conducted by FCGMA as a means of increasing operational management of groundwater in the Subbasin. Analysis of the water market pilot program will be conducted and its suitability for incorporation as a management action for the Subbasin will be determined after the pilot program is completed in July 2019.