DRAFT WORK PRODUCT

Borrego Valley Groundwater Basin
Borrego Springs Subbasin
Groundwater Sustainability Plan

Advisory Committee Meeting

November 29, 2018

Geosyntec consultants

DUDEK

GSP Organization

The Groundwater Sustainability Plan is organized as follows:

ES Executive Summary

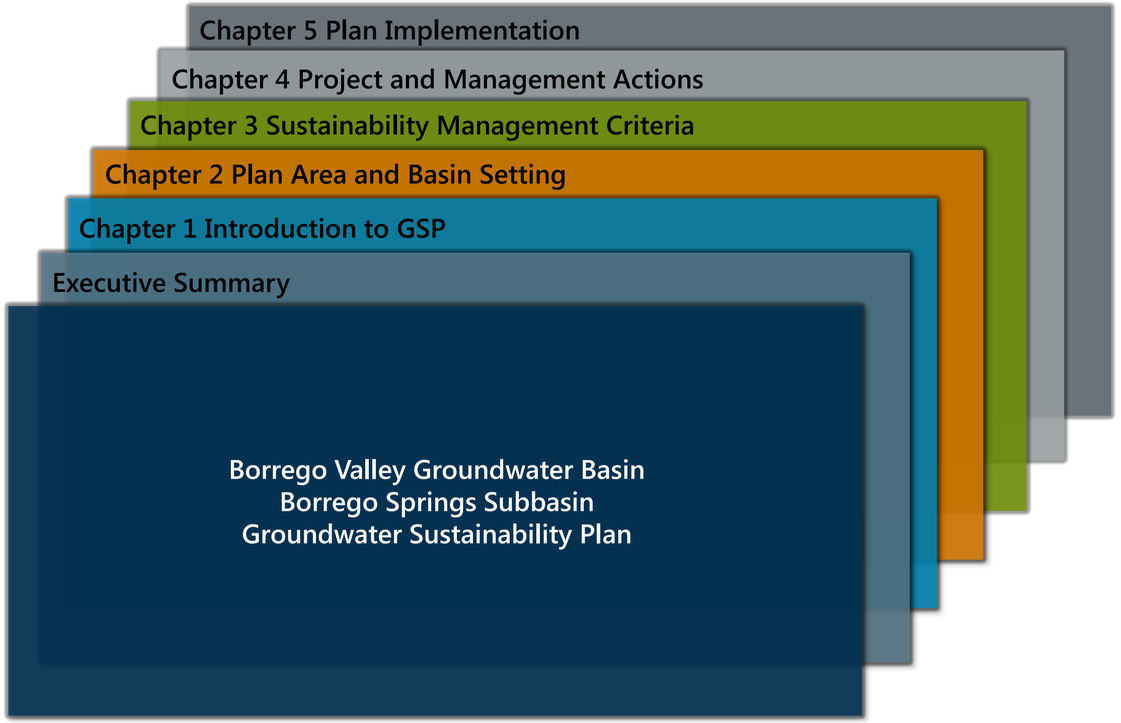
01 Chapter 1
Introduction to GSP

02 Chapter 2
Plan Area and Basin Setting

03 Chapter 3
Sustainable Management Criteria

04 Chapter 4
Projects and Management Actions

05 Chapter 5
Plan Implementation



CHAPTER 4

PROJECTS AND MANAGEMENT ACTIONS

CHAPTER 4 PROJECTS AND MANAGEMENT ACTIONS

SGMA REQUIREMENTS

- ❑ Description of Projects and Management Actions (PMAs) to achieve the sustainability goal(s) for the Subbasin including PMAs to respond to changing conditions in the Subbasin
- ❑ Measurable objective that is expected to benefit from the PMAs
- ❑ Implementation of PMAs
- ❑ Notice and actions to be taken

SGMA REQUIREMENTS (continued)

- ❑ Quantification of demand reduction for mitigation of overdraft
- ❑ Permitting and regulatory process
- ❑ Time-table for initiation and completion
- ❑ Benefits expected to be realized
- ❑ How PMAs will be accomplished
- ❑ Legal authority
- ❑ Cost
- ❑ Long-term sustainability

Projects and Management Actions to Achieve Sustainability Goal:

List of PMAs:

- ❑ Project and Management Action #1 – Water Trading Program
- ❑ Project and Management Action #2 – Water Conservation
- ❑ Project and Management Action #3 – Pumping Reduction Program
- ❑ Project and Management Action #4 – Voluntary Fallowing of Agricultural Land
- ❑ Project and Management Action #5 – Water Quality Optimization
- ❑ Project and Management Action #6 – Intra-Subbasin Water Transfers

Projects and Management Actions to Achieve Sustainability Goal:

List of PMAs:

❑ Project and Management Action #1 – Water Trading Program

- The Program will enable permanent transfer and potentially long-term or short-term lease of Baseline Pumping Allocations
- The Program would replace the existing Water Credits Program.

- **The Program is intended to allow groundwater users to:**
  - Purchase needed groundwater resources to maintain economic activities in the Subbasin
  - Encourage and incentivize water conservation
  - Facilitate adjustment of pumping allocations as water demands and basin conditions fluctuate during the 20-year GSP implementation period.

Projects and Management Actions to Achieve Sustainability Goal:

List of PMAs:

❑ Project and Management Action #2 – Water Conservation

The GSP Water Conservation Program would consist of separate components for the three primary sectors: agricultural, municipal, and recreation.

Programs for each sector would follow a similar approach consisting of:

- Reviewing historical programs and projects
- Identifying areas and methods for greatest potential water savings
- Outreach and coordination with potential participants
- Developing project cost estimates
- Competitively evaluating project alternatives implementing projects
- Acquiring follow-up metrics

Projects and Management Actions to Achieve Sustainability Goal:

List of PMAs:

❑ Project and Management Action #3 – Pumping Reduction Program

Goal is to reduce Subbasin pumping to the estimated sustainable yield.

It is anticipated that the Pumping Reduction Program will consist of the following general components:

1) Subbasin sustainable yield
2) Baseline pumping allocations for each non de-minimis pumper (> 2 acre-feet/year)
3) Develop pumping allocation reductions over the implementation period.

Projects and Management Actions to Achieve Sustainability Goal:

List of PMAs:

❑ Project and Management Action #4 – Voluntary Fallowing of Agricultural Land

The voluntary Fallowing Program will develop the method to convert existing irrigated agriculture to low water use open space, public land, or other development.

Factors that will be considered for the fallowing program include:

- Current agriculture land and water use
- Intended land and water use after fallowing
- Potential environmental impacts associated with fallowing

Projects and Management Actions to Achieve Sustainability Goal:

List of PMAs:

❑ Project and Management Action #5 – Water Quality Optimization

Both direct treatment and indirect options have been considered to optimize groundwater quality and its use.

Direct Treatment

Indirect Treatment

- Blending
- New Well and Pipeline
- Reallocation of Pumping from Existing Wells

Projects and Management Actions to Achieve Sustainability Goal:

List of PMAs:

❑ Project and Management Action #6 – Intra-Subbasin Water Transfers

The purpose of Intra-Subbasin Transfer Program is to mitigate existing and future reductions in groundwater storage and groundwater quality impairment by establishing conveyance of water from higher to lower production alternative areas in the Subbasin.

Description of Measurable Objective Expected to Benefit from PMAs:

PMAs		Benefits	Measurable Objective	Interim Milestones	Exceedance of Minimum Thresholds
#1	Water Trading Program	Reallocation of available water supplies		Limited	Limited
#2	Water Conservation	Reduction of water use		Yes	Yes
#3	Pumping Reduction Program	Reduction of water use		Yes	Yes
#4	Voluntary Fallowing of Agricultural Land	Reduction of water use		Yes	Yes
#5	Water Quality Optimization	Maintain/improve water quality for beneficial use		Yes	Yes
#6	Intra-Subbasin Transfers	Water quality/level and storage benefits		Yes	Yes

Description of the Circumstances Under Which PMAs Shall be Implemented:

PMAs		Circumstances Under which PMAs are Implemented	Criteria that Trigger Implementation	Criteria that Trigger Termination	Process by which GSA determined that conditions requiring the implementation of particular PMAs have occurred
#1	Water Trading Program	Upon adoption of GSP, Water Trading Policy, and CEQA review	• Available Pumping Allocation • Metering of Extraction • Water Trading Policy	To be implemented throughout the planning period and beyond	Quantification of estimated magnitude of overdraft. Development of sustainability goal(s), measurable objectives, interim milestones, and minimum thresholds
#2	Water Conservation	Ongoing and based on future study and funding availability	• Projects ongoing in the Subbasin • Existing critically overdraft conditions • Future State regulations	Upon implementing all effective and economic measures and achieving sustainability goal(s)	Quantification of estimated magnitude of overdraft. Development of sustainability goal(s), measurable objectives, interim milestones, and minimum thresholds
#3	Pumping Reduction Program	Upon adoption of GSP and CEQA review	• Existing critically overdraft conditions • Quantification of magnitude of overdraft • Metering of Extraction	To be implemented throughout the planning period	Quantification of estimated magnitude of overdraft. Development of sustainability goal(s), measurable objectives, interim milestones, and minimum thresholds
#4	Voluntary Fallowing of Agriculture	Upon adoption of GSP, Fallowing Standards, and CEQA review	• Existing critically overdraft conditions • Quantification of magnitude of overdraft	Upon achieving sustainability goal(s)	Quantification of estimated magnitude of overdraft. Development of sustainability goal(s), measurable objectives, interim milestones, and minimum thresholds
#5	Water Quality Optimization	Ongoing and based on future study and funding availability	• Existing critically overdraft conditions	To be implemented throughout the planning period	Ongoing evaluation of monitoring network and available water quality data
#6	Intra-Subbasin Water Transfers	Requires additional study and identification of funding	• Existing critically overdraft conditions	To be implemented throughout the planning period	Ongoing evaluation of monitoring network and available water data

Communication/Notice of Proposed or Ongoing PMAs

Processes by which the Agency shall provide notice to the public and other agencies that the implementation of Projects and Management Actions is being considered or has been implemented, including description of actions to be taken:

Processes:

- **Advisory Committee and GSP Development Process/ Adoption of GSP**
- **CEQA Process/ Finding of less than significant impact**

Quantification of Demand Reduction for Mitigation of Overdraft

If overdraft conditions are identified through the analysis required by Section 354.18 [Water Budget], the Plan shall describe projects or management actions, including a quantification of demand reduction or other methods, for the mitigation of overdraft.

Three (3) primary means of reducing water demand:

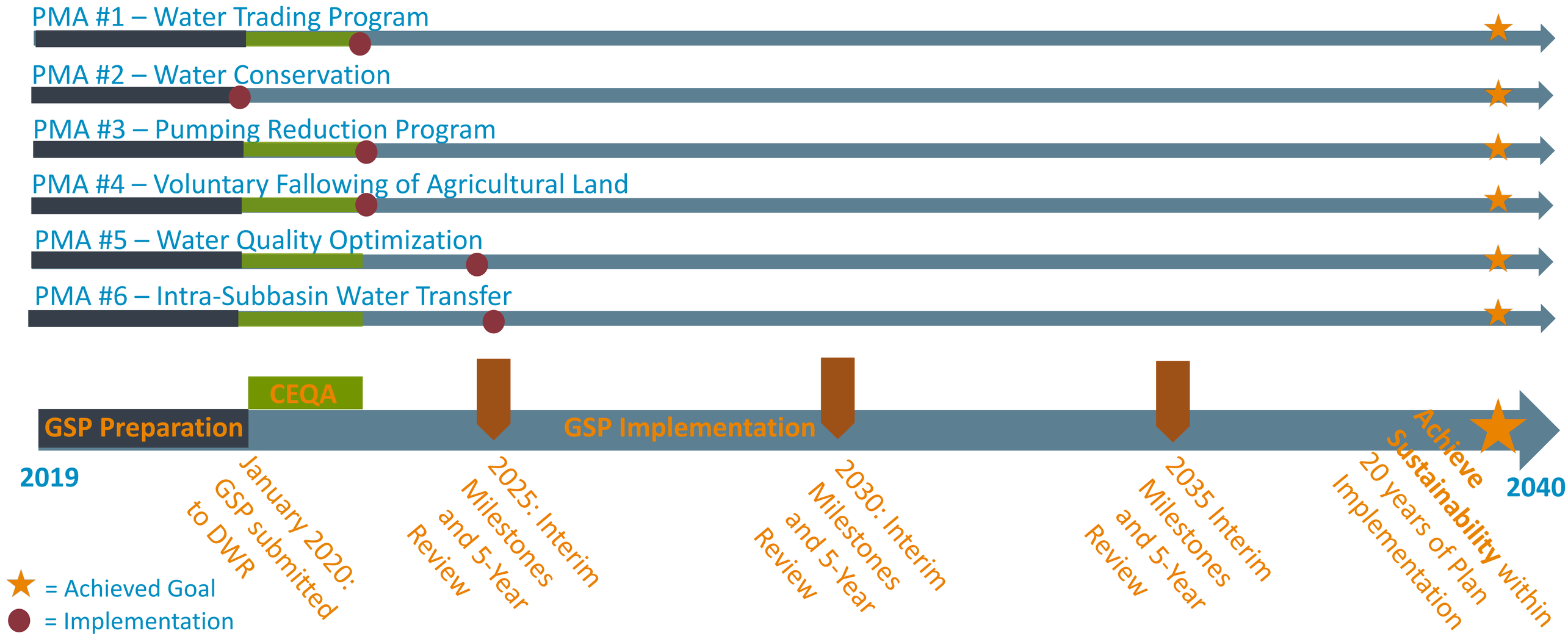
- **PMA #2 – Water Conservation**
- **PMA #3 – Pumping Reduction Program (includes Baseline Pumping Allocation)**
- **PMA #4 – Voluntary Fallowing of Agricultural Land**

Current estimate based on available data is that a demand reduction of 74% is required over the implementation period.

Summary of Permitting and Regulatory Process Required

	PMAs	Permitting Process	Regulatory Process	Regulation/ Code
#1	Water Trading Program	Updates to Existing Policy and County Groundwater Ordinance. Water Trading Policy. Evaluation of any CEQA Review Requirements	Adoption of GSP, Baseline Pumping Allocation, and Water Trading Policy. Court Validation of GSP, Stipulated Judgement or other legal agreement of water rights in the Subbasin	Water Code, § 109(a) Water Code, § 475 Water Code, § 10726.4(a)(3) Water Code, § 10726.2(c)
#2	Water Conservation	Typically exempt from CEQA but requires evaluation of any CEQA review requirements (i.e. specific projects may require CEQA review)	California Constitution article X, section 2 and California Water Code section 100 Executive Order B-37-16 Voluntary Fallowing	California Constitution article X, section 2 Water Code section 100 Water Code, § 10727.4(h) Water Code, §§ 375-378; 1009 Water Code, § 10726.8(a) Executive Order B-37-16 Water Code, § 10609.40
#3	Pumping Reduction Program	Evaluation of any CEQA review requirements	GSP Adoption and implementing regulation such as though Ordinance	Water Code, § 10726.4(a) Water Code, § 10726.5 Water Code, §§ 10725(a), 10726.8(a) Water Code, § 10720.5(a)
#4	Voluntary Fallowing of Agriculture	CEQA review	Voluntary Fallowing	Water Code, § 10726.2(c).
#5	Water Quality Optimization	Evaluation of any CEQA review requirements	Project-specific	Project-specific
#6	Intra-Subbasin Water Transfers	Evaluation of any CEQA review requirements	GSP Adoption	Water Code, § 10726.2(e)

Time-Table of Proposed PMAs and Accrual of Expected Benefits



How PMAs will be Accomplished

PMA #1 – Water Trading Program:

Water Trading Policy; GSA-regulated register system

PMA #2 – Water Conservation:

Development of sector-specific water conservation plans with GSA assistance for implementation

PMA #3 – Pumping Reduction Program:

Baseline pumping allocation with annual pumping allowance including ramp down enforced by GSA

PMA #4 – Voluntary Fallowing of Agricultural Land:

Development of responsible fallowing plan enforced by GSA

PMA #5 – Water Quality Optimization:

Adaptive management of water demand by review of available data to target mitigation

PMA #6 – Intra-Subbasin Water Transfers:

Physical movement of extracted groundwater based on available data

Legal Authority by GSA for each PMA

PMA #1 – Water Trading Program:
Water code § 109(a), § 475, § 10726.4(a)(3), § 10726.2(c)

PMA #2 – Water Conservation:

California Constitution article X, section 2, Water code § 100, § 10727.4(h), §§ 375-378; 1009, § 10726.8(a), § 10609.40, Executive Order B-37-16

PMA #3 – Pumping Reduction Program:
Water code § 10726.4(a), § 10726.5, §§ 10725(a), 10726.8(a), § 10720.5(a)

PMA #4 – Voluntary Fallowing of Agricultural Land:

Water code § 10726.2(c)

PMA #5 – Water Quality Optimization:

Water code §… Project-specific

PMA #6 – Intra-Subbasin Water Transfers:
Water code § 10726.2(e)

Long Term Sustainability for Proposed PMAs

Description of the management of groundwater extractions and recharge to ensure that chronic lowering of groundwater levels or depletion of supply during periods of drought is offset by increases in groundwater levels or storage during other periods:

- **Data-driven measurable objectives integrate operational flexibility**
- **Measurable objectives based upon data-driven estimates of Subbasin sustainable yield and water balance, including consideration of historical and modelled future climate scenarios**

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QUESTIONS?

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Proposed Projects and Management Actions

Project Relationship to Sustainability Criteria

Metrics for evaluation of effectiveness

Economic Factors and Funding Sources

Elements of Uncertainty