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EAST BAY PLAIN SUBBASIN GROUNDWATER SUSTAINABILITY PLAN CHAPTER 1 – INTRODUCTION

PREPARED FOR

East Bay Municipal Utility District GSA and
City of Hayward GSA



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TABLE OF CONTENTS

1. INTRODUCTION	1-1
1.1. Purpose of the Groundwater Sustainability Plan	1-1
1.2. Sustainability Goal	1-1
1.3. Agency Information (California Code of Regulations [CCR] Title 23, Section 354.6) ..	1-3 <u>1-2</u>
1.3.1. Organization and Management Structure of the Groundwater Sustainability Agencies.....	1-5
1.3.2. Legal Authority of the Groundwater Sustainability Agencies	1-9
1.3.3. Estimated Cost of Groundwater Sustainability Plan Implementation	1-9
1.4. Organization of This Document.....	1-10
1.5. References	1-15

LIST OF TABLES

Table 1-1. Sustainability Goal Development and Associated Groundwater Sustainability Plan Sections.....	1-2
Table 1-2. Summary of East Bay Plain Subbasin Groundwater Sustainability Agencies	1-6 <u>1-5</u>
Table 1-3. Contact Information for East Bay Plain Subbasin Groundwater Sustainability Agencies.....	1-5
Table 1-4. Summary of East Bay Plain Subbasin GSP Implementation Costs for 2027 Through 2031	1-10
Table 1-5. Groundwater Sustainability Plan Requirements in the California Code of Regulations and Associated Plan Sections	1-11

LIST OF FIGURES

Figure 1-1. Map of East Bay Plain Subbasin GSAs and Disadvantaged Communities.....	1-5 <u>1-4</u>
Figure 1-2. Pardee Reservoir	1-6
Figure 1-3. Hayward Shoreline—City of Hayward Groundwater Sustainability Agency	1-7

APPENDICES

APPENDIX 1. INTRODUCTION

- 1.A. East Bay Municipal Utility District’s Groundwater Sustainability Agency Formation Notice
- 1.B. City of Hayward’s Groundwater Sustainability Agency Formation Notice
- 1.C. EBMUD and Hayward Cooperating Agreement
- 1.D. GSP Adoption Resolutions, Meeting Minutes, and Notices
- 1.E. Glossary: SGMA Definitions

LIST OF ACRONYMS AND ABBREVIATIONS

AFY	acre-feet per year	GSP	groundwater sustainability plan
CCR	California Code of Regulations	Hayward	City of Hayward
CWC	California Water Code	LSCE	Luhdorff & Scalmanini Consulting Engineers
DAC	Disadvantaged Communities	SDACs	Severely Disadvantaged Communities
DWR	California Department of Water Resources	SGMA	Sustainable Groundwater Management Act of 2014
EBMUD	East Bay Municipal Utility District	TAC	Technical Advisory Committee
EBP	East Bay Plain		
ft	foot, feet		
GSA	groundwater sustainability agency		

1. INTRODUCTION

In September 2014, Governor Brown signed three bills (AB 1739 [Dickinson], SB 1168 [Pavley], and SB 1319 [Pavley]) into law, collectively known as the Sustainable Groundwater Management Act (SGMA), that created a statewide framework for sustainable, local groundwater management in California. As part of SGMA, local agencies are required to form groundwater sustainability agencies (GSAs) with the authority to develop, adopt, and implement a groundwater sustainability plan (GSP).

East Bay Municipal Utility District (EBMUD) became an exclusive GSA for the portion of the East Bay Plain (EBP) Subbasin (California Department of Water Resources (DWR) groundwater basin number 2-009.04) underlying EBMUD's service area in 2016 (**Appendix 1.A**) and the City of Hayward (Hayward) became an exclusive GSA for the portion of the EBP Subbasin underlying Hayward's jurisdictional area in 2017 (**Appendix 1.B**). EBMUD and Hayward prepared ~~this~~ the 2022 GSP under a cooperating agreement dated June 25, 2018, and amended on October 27, 2020 (**Appendix 1.C**). After completing the 2022 GSP, EBMUD and Hayward executed an implementation agreement on November 17, 2022, and the 2027 GSP Amendment was prepared under Amendment No. 1 to the implementation agreement dated September 9, 2025 (**Appendix 1.C**).

1.1. Purpose of the Groundwater Sustainability Plan

The purpose of this GSP is to comply with DWR's requirement that the EBP Subbasin's GSAs (EBMUD and Hayward) prepare, adopt, and implement a GSP "consistent with the objective that a basin be sustainably managed within 20 years of Plan implementation without adversely affecting the ability of an adjacent basin to implement its Plan or achieve and maintain its sustainability goal over the planning and implementation horizon" (California Code of Regulations [CCR] Title 23, Section 350.4[f]).

This GSP also represents the coordinated plan for two GSAs (EBMUD and Hayward) that together represent the entirety of the EBP Subbasin. EBMUD and Hayward will satisfy SGMA requirements for the EBP Subbasin with this single GSP that covers the entire Subbasin.

1.2. Sustainability Goal

The sustainability goal for the EBP Subbasin is to manage and protect the Subbasin in a manner that avoids the six undesirable results listed below, while continuing to collect and analyze data to support science-based decision making to evaluate new opportunities for sustainable groundwater beneficial uses:

- Chronic lowering of groundwater levels, indicating a significant and unreasonable depletion of supply.
- Significant and unreasonable reduction of groundwater storage.
- Significant and unreasonable seawater intrusion.
- Significant and unreasonable degraded water quality.
- Significant and unreasonable land subsidence.
- Depletions of interconnected surface water and groundwater that have significant and unreasonable reductions in beneficial uses of surface water, including beneficial use by ecosystems that depend on groundwater.

As mandated under 23 CCR Section 354.24, the GSP must include information used to establish this goal and identify the measures and actions that will be implemented to achieve this goal. Detailed descriptions of information used, measures identified, and actions selected are in **Chapters 2, 3, and 4**. **Table 1-1** lists the regulations with the corresponding sections of this GSP to facilitate review.

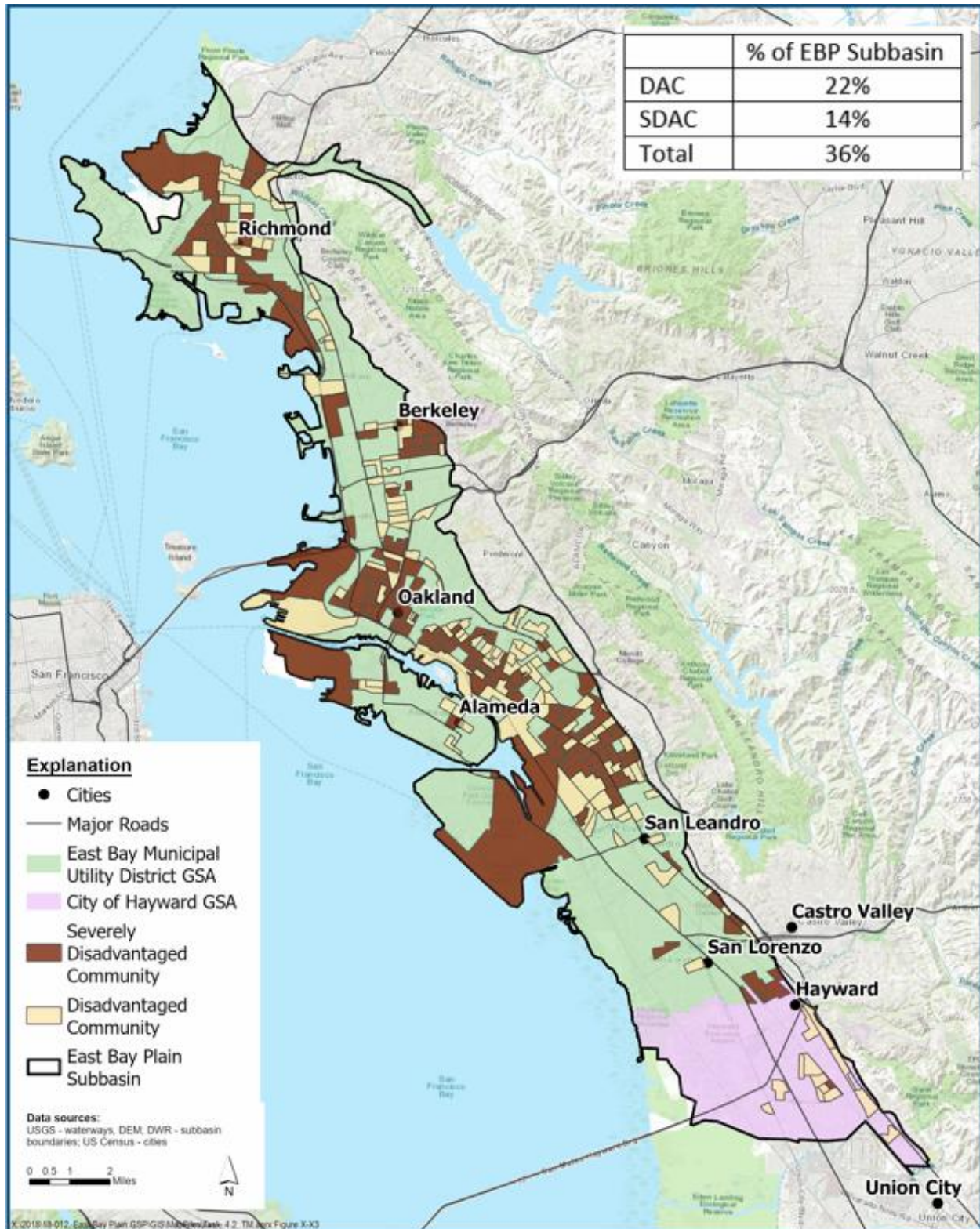
Table 1-1. Sustainability Goal Development and Associated Groundwater Sustainability Plan Sections			
Sustainability Goal Development	23 CCR Section	Requirement	GSP Section(s)
Context, basis for goal	354.12	Basin Setting	2.2
	354.14	Hydrogeologic Conceptual Model	2.2.1
	354.16	Groundwater Conditions	2.2.2
	354.18	Water Budget	2.2.3
	354.20	Management Areas	2.2.4
Establishment of goal	354.24	Sustainability Goal	3.1
	354.26	Undesirable Results	3.2
	354.28	Minimum Thresholds	3.3
	354.30	Measurable Objectives	3.4
Measures and actions to achieve goal	354.32	Introduction to Monitoring Networks	3.5
	354.34	Monitoring Network	3.5.1, 3.5.2
	354.36	Representative Monitoring	3.5.3
	354.38	Review and Evaluation of Monitoring Network	3.5.4
	354.44	Projects and Management Actions	4

1.3. Agency Information

(California Code of Regulations [CCR] Title 23, Section 354.6)

As per SGMA, EBMUD and Hayward have formed GSAs covering the full extent of the EBP Subbasin. **Figure 1-1** delineates the areas managed exclusively by each GSA, along with the location of disadvantaged and severely disadvantaged communities (DACs and SDACs) identified with DWR’s DAC Mapping Tool and United States census data.

Information on each GSA’s organization and management structure, jurisdictional area, land use, and water supplies is provided below and summarized in **Table 1-2**. Information provided by each GSA to DWR pursuant to Water Code Section 10723.8 is included in **Appendix 1**. **Table 1-3** provides contact information for each GSA.



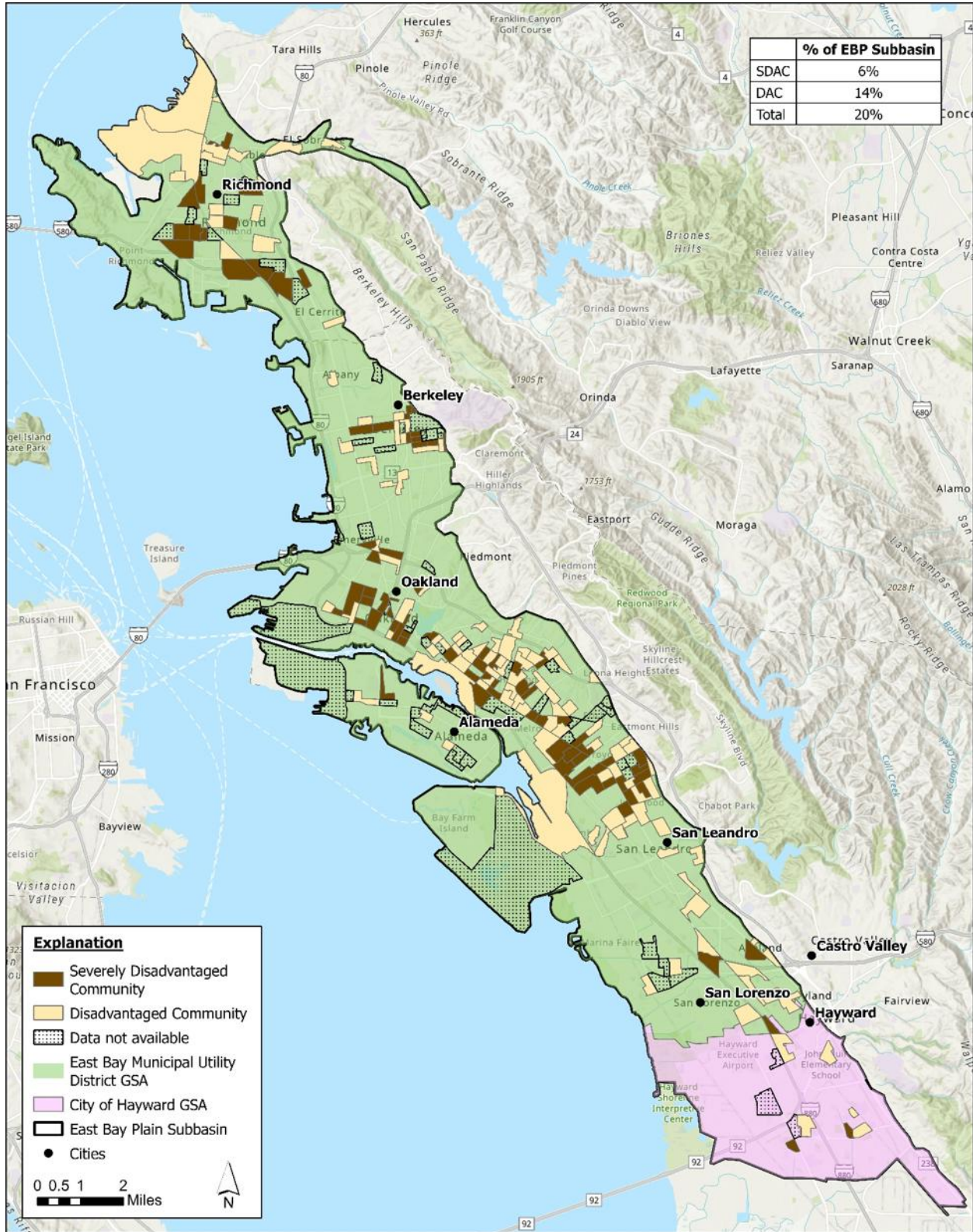


Figure 1-1. Map of East Bay Plain Subbasin GSAs and Disadvantaged Communities

**Table 1-2. Summary of East Bay Plain Subbasin
Groundwater Sustainability Agencies**

GSA Name	Agency Abbreviation	GSA Area (acres)	Primary Sources of Water Supply
East Bay Municipal Utility District GSA	EBMUD GSA	61,000	Mokelumne River Reservoirs, East Bay Hills Reservoirs
City of Hayward GSA	Hayward GSA	10,300	SFPUC Hetch Hetchy Reservoir

**Table 1-3. Contact Information for East Bay Plain Subbasin
Groundwater Sustainability Agencies**

Groundwater Sustainability Agency	Contact Person	Contact Title	Mailing Address	Phone Number	Email Address
East Bay Municipal Utility District	Brad Ledesma <u>Grace Su</u>	Senior Engineer, East Bay Municipal Utility District	375 Eleventh Street, Oakland, CA 94607	(510) 287- 0668 <u>7013</u>	grace.su@ebmud.com
City of Hayward	Cheryl Muñoz	Water Resources Manager, City of Hayward Public Works & Utilities Department	777 B Street, Hayward, CA 94541	(510) 583-4700	cheryl.munoz@hayward-ca.gov

1.3.1. Organization and Management Structure of the Groundwater Sustainability Agencies

This section discusses each GSA's formation date, management structure, typical land use, and water supply availability. This GSP has been developed through joint coordination between the two GSAs, as described below.

1.3.1.1. East Bay Municipal Utility District Groundwater Sustainability Agency

The EBMUD GSA, formed on November 28, 2016, manages approximately 61,000 acres of the EBP Subbasin, which represents only a portion of EBMUD's service area. The EBMUD GSA represents the largest jurisdictional area in the Subbasin (**Figure 1-1**). The EBMUD GSA incorporates several cities that fall within the EBMUD service area, including San Pablo, Richmond, El Cerrito, Albany, Berkeley, Emeryville, Oakland, San Leandro, and San Lorenzo. As of 2015, most of the area within this GSA is designated as urban land use (94%). The remaining area is primarily native vegetation (4%), with some water surface and barren land (1% each).

As of ~~2020~~ Water Year 2025, municipal water use in the EBMUD GSA area was estimated to be approximately 92,400,82,120 acre-feet per year (AFY) using information available from EBMUD's ~~2050 Demand Study (Hazen, 2020)~~ metered data. The primary source of water for the EBMUD GSA is surface water from Pardee Reservoir (**Figure 1-2**), and the secondary source is local runoff from the East Bay area watersheds within EBMUD's service area. Private groundwater wells are used for a portion of the irrigation of large parcels, domestic irrigation, and industrial water uses to meet the remaining water demands in the EBMUD GSA.

The board of directors for the EBMUD GSA is the EBMUD Board of Directors (Board). Meetings of the EBMUD GSA Board of Directors are held concurrently with regular EBMUD Board meetings, which are typically scheduled on the second and fourth Tuesdays of each month at 1:15 p.m. These meetings are open to the public and are held at the EBMUD offices (375 Eleventh Street, Oakland, CA 94607) or via Zoom ~~during the COVID-19 pandemic~~. Meeting agendas and materials are available for public viewing on the EBMUD website (www.ebmud.com).



Figure 1-2. Pardee Reservoir

1.3.1.2. City of Hayward Groundwater Sustainability Agency

The Hayward GSA, formed on June 6, 2017, manages approximately 10,300 acres of the EBP Subbasin (**Figures 1-1 and 1-3**). As of 2015, most of this area consists of urban land (97%). The remaining area is primarily native vegetation (2%), with some water surface (1%).

In 2017²⁵, municipal water use in the Hayward GSA area was estimated to be approximately ~~11,450~~^{7,800} AFY based on the portion of the City of Hayward that occurs within the Hayward GSA. The Hayward GSA receives surface water supplies from outside the EBP Subbasin to support municipal water uses. The source of surface water imported by Hayward is the San Francisco Public Utilities Commission's Regional Water System. Hayward also maintains ~~five~~^{four} active emergency water supply wells (three within EBP Subbasin and ~~two~~^{one} within Niles Cone Subbasin) for emergency use purposes (currently permitted to pump up to 15 days per year with not more than five consecutive days of pumping). Some Hayward residents also use private groundwater wells ~~are used for a portion of irrigation water uses to meet the remaining water demands~~^{purposes} in the Hayward GSA area.

~~The Hayward's City Council represents the~~ board of directors for the Hayward GSA ~~is the~~ Hayward City Council. ~~Meetings of the meetings serve as concurrent~~ Hayward GSA Board of Directors ~~are held concurrently with regular Hayward City Council~~ meetings, which are typically scheduled on the first, third, and fourth Tuesdays of each month at 7:00 p.m. These meetings are open to the public and are held at Hayward City Hall (777 B Street, Hayward, CA 94541 ~~777~~) or via Zoom ~~during the COVID-19 pandemic~~. Meeting agendas and materials are available for public viewing on the City of Hayward website (www.hayward-ca.gov).



**Figure 1-3. Hayward Shoreline—City of Hayward
Groundwater Sustainability Agency**

(Source: <https://www.hayward-ca.gov/shoreline-master-plan>)

1.3.1.3. East Bay Plain Subbasin GSP Technical Advisory Committee (TAC)

The GSAs for the EBP Subbasin ~~have~~ jointly formed the EBP Subbasin GSP Technical Advisory Committee (TAC) in accordance with the Stakeholder Communication and Engagement Plan. The opportunity to join the TAC was advertised at a communication and engagement meeting held on February 27, 2018; each member was required to complete an application. The TAC was finalized in October 2019 and includes one or more representatives from each of the following entities: California State University East Bay, the Cities of Richmond, Berkeley, San Pablo, and Alameda; Lawrence Berkeley National Laboratory; the Alameda County Department of Public Works; the San Francisco Bay Regional Water Quality Control Board; Contra Costa County; Sierra Club; United States Geological Survey; and Grolutions Horticultural Landscaping.

The TAC operates under a charter and serves as an advisory body for guiding the EBP Subbasin GSAs ~~through~~ throughout the development of the 2022 GSP. In this role, the TAC analyzed GSP components, including modeling studies, and made recommendations to the Technical Team.

comprised of GSA staff members. The TAC provided data and information for the GSP; reviewed and provided comments on draft deliverables during GSP development; and provided input on sustainable management criteria, the monitoring network, ~~projects and management~~ water supply development and implementation actions, and implementation of the GSP. The Technical Team addressed these comments and considered TAC recommendations in its decision-making process involving the GSA Steering Committee (comprised of senior GSA staff members). TAC meetings were held periodically during the GSP planning stages and following the development of draft deliverables.

The GSAs determined that it was not necessary to reactivate the TAC for the 2027 GSP Amendment. Because the TAC membership overlaps with the GSP General Stakeholders group, the GSAs used the broader stakeholder network to obtain the necessary technical input.

1.3.1.4. East Bay Plain Subbasin GSP Interbasin Working Group (IWG)

The GSAs for the EBP Subbasin participate in an Interbasin Working Group with representatives from neighboring subbasins. The Interbasin Working Group, which was formed in April 2019, served as a forum for discussing issues outlined in the GSP regulations related to potential impacts on neighboring subbasins from the development of GSPs (and alternatives to GSPs). The aim of the Interbasin Working Group was to allow for:

- Exchange and discuss information and data for each subbasin;
- Provide updates for each subbasin regarding SGMA compliance;
- Develop an understanding of potential concerns among IWG members related to the development of GSPs/alternatives in neighboring subbasins; and
- Discuss technical aspects of hydrogeology at the subbasin boundaries.

The Interbasin Working Group's members include one or more representatives from the following entities: EBMUD, Hayward, and Alameda County Water District. Meetings were held quarterly during the development of this GSP for the EBP Subbasin.

1.3.1.5. Disadvantaged Communities

Disadvantaged communities comprise a large percentage of the total land area within the EBP Subbasin. Disadvantaged communities (DAC) occur over a land area equal to 14%~~%,~~ and severely disadvantaged communities (SDAC) cover a total land area ~~total~~ of 22.36%, together comprising 36.220% of the overall land area within the EBP Subbasin. The distribution of DAC and SDAC areas within the EBP Subbasin shows these areas are relatively well distributed between Richmond in the north and the northern portion of San Leandro in the south, with more limited DAC and SDAC areas south of central San Leandro (**Figure 1-1**). The DAC and SDAC

areas are located within EBMUD and Hayward service areas with access to an imported surface water supply. EBMUD also offers a Customer Assistance Program to help pay a portion of the water bill for qualified low-income residential customers and eligible homeless shelters. The EBP Subbasin GSAs are not aware of any DAC or SDAC who are solely or primarily dependent on groundwater from the EBP Subbasin for a drinking water supply.

1.3.2. Legal Authority of the Groundwater Sustainability Agencies

The GSAs involved in the development of this GSP have the legal authority to prepare a GSP and are pursuing the financial resources necessary to implement the Plan. EBMUD and Hayward are local agencies overlying the EBP Subbasin as defined in SGMA and are therefore eligible to serve as separate GSAs within the EBP Subbasin (Water Code Section 10723[a]). Pursuant to Water Code Section 10724(a), neither Alameda County nor Contra Costa County serves as a GSA, because all areas within the EBP Subbasin are covered by either EBMUD or Hayward.

EBMUD and Hayward each held public hearings regarding the establishment of a GSA in accordance with Water Code Section 10723(b). Public notice for these hearings was provided in accordance with Government Code Section 6066. After holding these hearings, the governing body of each agency adopted a resolution to establish the associated GSA. On November 6, 2017, EBMUD and Hayward filed a notification letter with DWR of their intent to jointly develop a single GSP for the EBP Subbasin.

1.3.3. Estimated Cost of Groundwater Sustainability Plan Implementation

While no projects and management actions are needed to achieve or maintain sustainability, the GSAs are considering potential future water supply development opportunities (WSDO). In addition, certain implementation actions (IA) are proposed to help monitor and maintain sustainability. The estimated ~~annual costs~~ of GSP implementation for ~~project management and management actions~~ WSDO and IA for the two GSAs included under this GSP are approximately ~~\$3.23.85~~ million dollars over the ~~initial-next~~ five years of the GSP Implementation Period (**Table 1-4**). The breakdown between GSAs is approximately ~~\$2,650,000~~ \$3,150,000 for EBMUD and ~~\$550,000~~ \$700,000 for Hayward and includes s both annual operating costs and capital costs. Operating costs of approximately ~~\$2.62.9~~ million dollars over five years include the costs of GSA project management, groundwater monitoring, surface water monitoring, and reporting. The total capital costs of new facilities (e.g., monitoring wells, stream gauges) to help fill data gaps related to various ~~management~~ implementation actions are estimated to be approximately ~~\$600,000~~ \$950,000.

**Table 1-4. Summary of East Bay Plain Subbasin GSP
Implementation Costs for 2022~~27~~ Through 2026~~31~~**

Groundwater Sustainability Agency	Management Implementation Actions (Chapter 4)	GSA Project Management (Chapter 5)	Combined GSA Project Management at WSDO and Actions	Projects WSDO (Chapter 4)	Comments
East Bay Municipal Utility District	\$2,313,500 \$2,036,750	\$606,840,000	\$2,313,500 \$2,642,750	\$303,500 \$200,232,000/year	EBMUD Management Actions costs include \$1.46 million in operating costs and \$0.58 million in capital costs. Hayward has no capital costs.
City of Hayward	\$468,000 \$375,250	\$171,000 \$235,500	\$468,000 \$546,250	\$60,700 \$580,000/year	
Total	\$2,781,500 \$2,429,000	\$777,000 \$1,075,500	\$2,781,500 \$3,206,000	\$90,105 \$700,812,000/year	

Notes: Costs listed are totals for five years, except as noted.

While there are no new capital costs for planned GSA projects, project costs for operation and maintenance are expected to range between ~~\$30,000~~
\$35,000 to ~~\$200,000~~
\$232,000 per year for EBMUD and ~~\$60,000~~
\$70,000 to ~~\$500,000~~
\$580,000 per year for Hayward. These annual project costs are a function of whether or not the project wells are operating in a given year. Individually, the GSAs manage their own financing, staffing, contracting, and daily operations related to GSP implementation, and the approach to meeting the GSP implementation costs will vary between GSAs. Additional details on costs are provided in Chapters 4 and 5 of this GSP.

1.4. Organization of This Document

The two EBP Subbasin GSAs developed this GSP by retaining a team of consultants led by Luhdorff & Scalmanini Consulting Engineers (LSCE). The consulting team consists of Luhdorff & Scalmanini Consulting Engineers; Geosyntec; Brown and Caldwell; Environmental Science Associates; Dr. Jean Moran; and Farallon Geographics.

This GSP is organized in accordance with CCR Title 23 Section 354 as follows:

- **Chapter 1:** Introduces the EBP Subbasin GSAs and the development of this GSP.

- **Chapter 2:** Provides a detailed summary of the Plan area and the basin setting, including the hydrogeologic conceptual model, current and historical groundwater conditions, water budgets, and management areas (as applicable).
- **Chapter 3:** Establishes the EBP Subbasin’s sustainability goal, to be achieved through coordination among all GSAs in the Subbasin. This section also establishes measurable objectives, minimum thresholds, and undesirable results for each sustainability indicator, then describes the proposed monitoring network to track and verify progress toward the EBP Subbasin’s sustainability goal.
- **Chapter 4:** Describes planned projects and management actions for achieving the EBP Subbasin’s sustainability goal.
- **Chapter 5:** Describes the Plan’s implementation strategy, costs, and schedule.

To facilitate DWR review and assure compliance with all applicable GSP regulations, **Table 1-5** cross-references the GSP regulations to applicable GSP sections. In addition, the terminology in this GSP is aligned with SGMA definitions provided in Water Code Section 10721 and in CCR Title 23 Section 351. These definitions are provided as **Appendix 1.E.** of this GSP.

Table 1-5. Groundwater Sustainability Plan Requirements in the California Code of Regulations and Associated Plan Sections				
Regulations (CCR Title 23, Division 2, Chapter 1.5, Subchapter 2, Article 5—Groundwater Sustainability Plans, Plan Contents)			Requirement	Groundwater Sustainability Plan Section(s)
Subarticle	Section	Paragraph(s)		
1. Administrative Information	4. General Information	(a)	Executive summary	Executive Summary
		(b)	List of references and technical studies	1.5, 2.3, 3.6, 4.3, 5.8, Appendices 2 and 6
	6. Agency Information	—	Agency information pursuant to California Water Code Section 10723.8, along with:	Appendix 1
		(a)	Agency name and mailing address	1.3
		(b)	Agency organization and management structure, persons with management authority for plan implementation	1.3.1
		(c)	Plan manager name and contact information	1.3
		(d)	Legal authority of agency	1.3.2

Table 1-5. Groundwater Sustainability Plan Requirements in the California Code of Regulations and Associated Plan Sections				
Regulations (CCR Title 23, Division 2, Chapter 1.5, Subchapter 2, Article 5—Groundwater Sustainability Plans, Plan Contents)			Requirement	Groundwater Sustainability Plan Section(s)
Subarticle	Section	Paragraph(s)		
	8. Description of Plan Area	(e)	Estimate of plan implementation costs and description of how agency plans to meet costs	1.3.3, 5.2, 5.3
		(a)	Maps of plan area	2.1.1
		(b)	Written description of plan area	2.1.1
		(c)–(d)	Identification of existing water resource monitoring and management programs, and description of any such planned programs	2.1.2
		(e)	Description of conjunctive use programs	2.1.2
		(f)	Description of the land use elements or topic categories	2.1.3
		(g)	Description of additional plan elements (Water Code Section 10727.4)	2.1.4
	10. Notice and Communication	(a)	Description of the beneficial uses and users of groundwater in the subbasin	2.1.5
		(b)	List of public meetings	2.1.5
		(c)	Comments and responses regarding the plan	2.1.5
		(d)	Description of communication procedures	2.1.5
2. Basin Setting	12. Introduction to Basin Setting	–	Information about the basin setting (physical setting, characteristics, current conditions, data gaps, uncertainty)	2.2
	14. Hydrogeologic	(a)	Description of the subbasin's hydrogeologic conceptual model	2.2.1

Table 1-5. Groundwater Sustainability Plan Requirements in the California Code of Regulations and Associated Plan Sections				
Regulations (CCR Title 23, Division 2, Chapter 1.5, Subchapter 2, Article 5—Groundwater Sustainability Plans, Plan Contents)			Requirement	Groundwater Sustainability Plan Section(s)
Subarticle	Section	Paragraph(s)		
	Conceptual Model	(b)	Summary of regional geologic and structural setting, subbasin boundaries, geologic features, and principal aquifers and aquitards	2.2.1
		(c)	Cross sections depicting major stratigraphic and structural features	2.2.1
		(d)	Maps of the subbasin's physical characteristics	2.2.1
	16. Groundwater Conditions	(a)–(g)	Description of current and historical groundwater conditions: Groundwater elevation Change in storage Seawater intrusion Groundwater quality issues Land subsidence Interconnected surface water systems Groundwater dependent ecosystems	2.2.2
	17. Water Budget	(a)	Water budget, providing total annual volume of groundwater and surface water entering and leaving the subbasin, including historical, current, and projected water budget conditions, and change in storage	2.2.3
		(b)–(f)	Development of a numerical groundwater and surface water model to quantify current, historical, and projected:	2.2.3

Table 1-5. Groundwater Sustainability Plan Requirements in the California Code of Regulations and Associated Plan Sections				
Regulations (CCR Title 23, Division 2, Chapter 1.5, Subchapter 2, Article 5—Groundwater Sustainability Plans, Plan Contents)			Requirement	Groundwater Sustainability Plan Section(s)
Subarticle	Section	Paragraph(s)		
			Total surface water entering and leaving, by water source type Inflow to the groundwater system, by water source type Outflows from the groundwater system, by water use sector Change in groundwater storage Overdraft over <u>the</u> base period Annual supply, demand, and change in storage, by water year type Estimated sustainable yield	
	20. Management Areas	(a)	Description of management areas	2.2.4
		(b)	Description of purpose, minimum thresholds, measurable objectives, monitoring, and analysis	2.2.4
		(c)	Maps and supplemental information	2.2.4
3. Sustainable Management Criteria	22. Introduction to Sustainable Management Criteria	–	Criteria by which an agency defines conditions that constitute sustainable groundwater management for the subbasin	3
	24. Sustainability Goal	–	Description of the subbasin's sustainability goal, including basin setting information used to establish the goal, sustainability indicators, a discussion of measures to ensure that the subbasin will be operated within its sustainable yield, and an explanation of	3.1

Table 1-5. Groundwater Sustainability Plan Requirements in the California Code of Regulations and Associated Plan Sections				
Regulations (CCR Title 23, Division 2, Chapter 1.5, Subchapter 2, Article 5—Groundwater Sustainability Plans, Plan Contents)			Requirement	Groundwater Sustainability Plan Section(s)
Subarticle	Section	Paragraph(s)		
			how the sustainability goal is likely to be achieved and maintained	
	26. Undesirable Results	(a)	Processes and criteria used to define undesirable results applicable to the subbasin	3.2
		(b)-(c)	Description of undesirable results, including causes of groundwater conditions and potential effects on beneficial uses and groundwater users	3.2
	28. Minimum Thresholds	(a)	Establishment of minimum thresholds to quantify groundwater conditions for each applicable sustainability indicator	3.3
		(b)-(d)	Description of information and criteria to select, establish, justify, and quantitatively measure minimum thresholds	3.3
	30. Measurable Objectives	(a)-(g)	Establishment of measurable objectives, including interim milestones in increments of 5 years, to achieve and maintain the subbasin's sustainability goal	3.4
4. Monitoring Networks	32. Introduction to Monitoring Networks	—	Description of monitoring network, monitoring objectives, monitoring protocols, and data reporting	3.5
	34. Monitoring Network	(a), (e)-(g)	Development of monitoring network to yield representative information about groundwater conditions	3.5.1

Table 1-5. Groundwater Sustainability Plan Requirements in the California Code of Regulations and Associated Plan Sections				
Regulations (CCR Title 23, Division 2, Chapter 1.5, Subchapter 2, Article 5—Groundwater Sustainability Plans, Plan Contents)			Requirement	Groundwater Sustainability Plan Section(s)
Subarticle	Section	Paragraph(s)		
		(b)–(d)	Monitoring network objectives	3.5.1
		(h)	Maps and tables of monitoring sites	3.5.1
		(i)	Monitoring protocols	3.5.2
	36. Representative Monitoring	(a)–(c)	Designation of representative monitoring sites	3.5.3
	38. Assessment and Improvement of Monitoring Network	(a)–(d)	Evaluation of <u>the</u> monitoring network, including uncertainty, data gaps, and efforts to fill data gaps	3.5.4
		(e)	Adjustment of monitoring frequency and density to assess management action effectiveness	3.5.4
	40. Reporting Monitoring Data to the Department	(f)	Copy of monitoring data from <u>the</u> data management system	
5. Projects and Management Actions	44. Projects and Management Actions	(a)–(c)	Description of projects and management actions to achieve and maintain the subbasin’s sustainability goal	4

1.5. References

California Department of Water Resources (DWR). 2003. *California’s Groundwater*. Bulletin 118. Update 2003.

DWR. 2016. Bulletin 118: California’s Groundwater, Interim Update 2016.

Hazen. 2020. East Bay Municipal Utility District, 2050 Demand Study. Prepared for EBMUD.