

5 Plan Implementation

5.1 Implementation of the GSP

The primary activities associated with implementing the GSP are anticipated to be connected with management and administration associated with managing the Plan Area. Included with these activities are data collection, validation and analysis of the data collected. Annual reporting of the data and analysis to DWR will be required. Finally, the GSP will need to be evaluated every five (5) years and the GSA must provide a written assessment of this evaluation to DWR.

Data Collection, Validation, and Analysis

The City of Santa Monica has historically collected groundwater elevation and quality samples to monitor groundwater conditions in the Subbasin. LACDPW maintains both stream and precipitation gauges in the Subbasin, and NOAA maintains additional precipitation gauges in the Subbasin. Both are public agencies that provide the data to the general public and other agencies via a web interface, free of charge. The existing monitoring locations, which are discussed in Section 3.5, Monitoring Network, are anticipated to continue to be used for monitoring associated with this GSP. As discussed in Section 3.5, the monitoring schedule may change in order to ensure that groundwater quality samples are collected within a 12 month period at each monitoring well, and that groundwater elevation data are collected within the month of March, for spring groundwater elevations, and the month of October, for fall groundwater elevations.

During the initial 5-year period after the GSP is adopted, GSA will explore options for filling data gaps identified in this GSP. The primary data gaps identified were temporal gaps in groundwater elevation measurements, which cannot currently be collected within a one-month time period, extraction data gaps for wells in which extractions are estimated rather than measured, and a spatial gap in the monitoring network for seawater intrusion. As discussed in Section 3.5.7, Monitoring Network Improvements, pressure transducers could be installed in some of the wells in the monitoring network to reduce the time-window over which groundwater elevations are collected. However, the cost effectiveness of purchasing, installing, and maintaining pressure transducers has not yet been assessed. The cost of this assessment and eventual purchase, installation, and maintenance of the pressure transducers would be associated with GSP implementation.

Additionally, in order to reduce the uncertainty in groundwater extractions from the Subbasin, GSA may install extraction meters on wells from which extractions are currently estimated. Neither the logistics nor the cost-effectiveness of purchasing, installing, and maintaining extraction meters on private wells has been assessed. The cost of assessing these factors, and the potential cost of purchasing, installing, and maintaining extraction meters is associated with GSP implementation.

Annual Report Preparation

Details of the information that will be included in the annual reports are presented in Section 5.3, Annual Reporting. It is currently anticipated that the annual reports will be produced by the City of Santa Monica with the assistance of consultants and the costs associated with these reports will be incorporated in the City's annual operating budget.

Preparation of the 5-Year Evaluation

Every fifth year of GSP implementation and whenever the GSP is amended, the GSA is required to prepare and submit an Agency Evaluation and Assessment Report to DWR together with the annual report for that year. The tasks associated with preparing this report include evaluating any new information that has been made available since the GSP adoption and assessing whether changes to assumptions or descriptions in the GSP are required (See Section 5.5 Periodic Reporting). Additionally, the evaluation will provide an assessment of the pumping and groundwater conditions in the Subbasin. It is currently anticipated that the 5-year evaluation reports will be produced by the City of Santa Monica staff with the assistance of consultants and that the costs associated with these reports will be incorporated in the City’s annual operating budget .

5.2 GSP Implementation Schedule

The GSA has developed a schedule that outlines the approximate times at which the various monitoring and reporting components of the GSP will be implemented over the next five years (Figure 5-1). This schedule includes projects that have been incorporated into the future baseline model scenario. The actual start dates may vary from those shown in the schedule.

5.3 Estimated GSP Implementation costs

The primary costs associated with implementing the GSP are anticipated to be connected with the following activities:

- Data collection, validation, and analysis
- Annual report preparation
- Management, administration, and other associated activities
- Preparation of the 5-year GSP evaluation

The estimated costs for implanting the GSP over the first five-year review cycle are presented in Table 5-1.

Table 5-1. GSP Implementation Planning-Level Cost Estimate

Activity	Estimated Cost	Frequency	Anticipated Cost: 2022-2027
Ongoing GSP Administration, Public Engagement, Maintenance	\$40,000.00	Annually	\$200,000.00
<i>Subtotal</i>			\$200,000.00
Technical Studies	\$50,000.00	Periodically	\$200,000.00
<i>Subtotal</i>			\$400,000.00
<i>Ongoing Groundwater Monitoring Program</i>			
Groundwater Extraction Monitoring	\$40,000.00	Quarterly	\$800,000.00
Groundwater Quality Monitoring	\$125,000.00	Quarterly	\$2,500,000.00
Groundwater Level Monitoring	\$20,000.00	Quarterly	\$400,000.00
Inactive Well Capping and Sealing Program	\$250,000.00	Single	\$250,000.00
<i>Subtotal</i>			\$3,950,000.00
GSP Annual Report	\$85,000.00	Annually	\$425,000.00
<i>Subtotal</i>			\$425,000.00

Table 5-1. GSP Implementation Planning-Level Cost Estimate

Activity	Estimated Cost	Frequency	Anticipated Cost: 2022-2027
<i>GSP 5-Year Periodic Evaluation</i>			
Report Preparation	\$250,000.00	Single	\$250,000.00
Refine, update, and recalibrate groundwater model	\$250,000.00	Single	\$250,000.00
		<i>Subtotal</i>	<i>\$500,000.00</i>
		Total	\$4,425,000.00

The City of Santa Monica, as the sole producer of drinking water in the Subbasin, performs all activities related to groundwater sampling and groundwater monitoring. Funding for these activities is provided through a settlement fund established to allow the City to remediate the MTBE contamination of the drinking water aquifer that occurred in the 1990's (see Sections 2.1.2.3 Water Quality, and 2.4.4 Groundwater Quality). Funding for direct reporting to DWR on GSP related activities, including annual reports and five-year evaluations, will be provided by the City of Santa Monica Water Resources Division and LADWP.

5.4 Annual Reporting

The City of Santa Monica has prepared monitoring reports for the Olympic and Charnock wellfields since 2011 and 2007, respectively, and has participated in the CASGEM water level monitoring program since 2012 (City of Santa Monica 2007; City of Santa Monica 2011). The City of Santa Monica, as a member agency of the GSA, will prepare an annual report for the Subbasin and submit it to DWR by April 1 of each year.

The annual report for the Subbasin will include the following components for the preceding water year (23 CCR §356.2):

- General information, including an executive summary and a location map depicting the basin, jurisdictional boundaries, and Subbasin covered by the report.
- A detailed description and graphical representation of:
 - Groundwater elevation data from wells identified in the monitoring network,
 - Groundwater extractions for the preceding water year,
 - Change in groundwater in storage,
 - Surface water supply used or available for use, and
 - Total water use.
- A description of progress toward implementing the GSP, including implementation of projects or management actions since the previous annual report.

The description and graphical representation of groundwater elevations will include groundwater elevation contour maps for the Subbasin illustrating, at a minimum, the seasonal high and seasonal low groundwater conditions. Additionally, hydrographs of groundwater elevations and water year type using historical data to the extent available, including from January 1, 2015, to current reporting year, will be included in the annual report. As described in Section 3.5, Monitoring Network, relevant data collected by LACDPW, NOAA, the City of Santa Monica, and other groundwater producers in the Subbasin will be used to prepare the GSP annual reports.

The description and graphical representation of change in groundwater storage will include a graph depicting water year type, based on the precipitation in the Subbasin (see Section 2.5.3.1 Water Year Type Characterization), groundwater use, the annual change in groundwater in storage, and the cumulative change in groundwater in storage for the Subbasin based on historical data to the greatest extent available, including from January 1, 2015, to the current reporting year.

5.5 Periodic Reporting

GSA will evaluate the GSP every five (5) years. This 5-year evaluation will be provided as a written assessment to DWR that will describe whether the Plan implementation, including implementation of projects and management actions, are suitable to maintain sustainable groundwater use in the Subbasin. The evaluation will include the following:

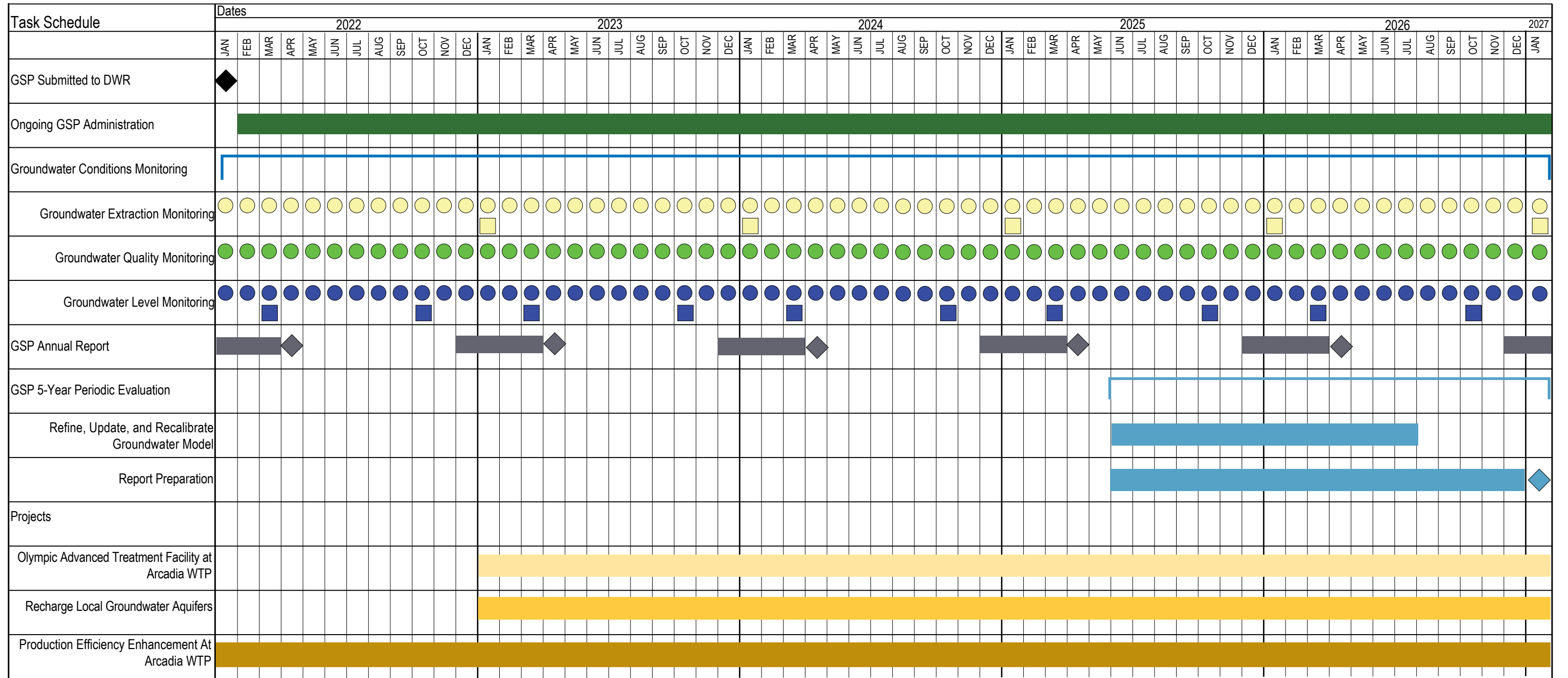
- A description of current groundwater conditions for each applicable sustainability indicator relative to measurable objectives and minimum thresholds.
- A description of the implementation of any projects or management actions, and the effect on groundwater conditions resulting from those projects or management actions.
- Revisions, if any, to the basin setting, the identification of undesirable results, the minimum thresholds, or the measurable objectives.
- An evaluation of the basin setting in light of significant new information or changes in water use, and an explanation of any significant changes.
- A description of the monitoring network within the Subbasin, including whether data gaps exist.
- A description of significant new information that has been made available since GSP adoption, amendment, or the last 5-year assessment.
- A description of relevant actions taken by the GSA, including a summary of regulations or ordinances related to management of the Plan Area or the GSP.
- Information describing any enforcement or legal actions taken by the GSA in furtherance of the sustainability goal for the Plan Area.
- A description of completed or proposed GSP amendments.

5.6 References Cited

23 CCR (California Code of Regulations) 356.2 Annual Reports. In Subchapter 2: Groundwater Sustainability Plans.

City of Santa Monica. 2007. Charnock Annual Groundwater Monitoring Report (January 1 to June 30, 2007). Charnock Sub-Basin; Los Angeles, California. Prepared by: ENVIRON International Corporation. July 2007.

City of Santa Monica. 2011. Olympic Wellfield Groundwater Monitoring Report. Third Quarter 2011. Prepared by: ICF International. October 2011.



- GSP Submitted to DWR
- Monthly Extraction Recording
- Monthly Groundwater Level Monitoring
- Monthly Groundwater Quality Sampling
- Submit Annual Report to DWR
- Submit 5-year GSP Evaluation to DWR
- Recharge Local Groundwater Aquifers
- GSP Annual Report Submitted to DWR
- Private Groundwater Extraction Forms Submitted to SMBGSA
- Seasonal Groundwater Level Monitoring (March and October)
- Prepare Annual Reports
- Preparation of 5-year GSP Evaluation
- Olympic Advanced Treatment Facility at Arcadia WTP
- Production Efficiency Enhancement at Arcadia WTP

FIGURE 5-1

GSP Implementation Schedule

Groundwater Sustainability Plan for the Santa Monica Subbasin

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