

Frequent Asked Questions for the East Bay Plain Subbasin Groundwater Sustainability Plan (GSP)

1. Why do you need to install monitoring wells?

Per GSP regulations (CCR § 352.4), monitoring wells are necessary to collect groundwater levels and water quality samples to assess groundwater conditions and trends while providing aquifer-specific data to inform groundwater model development. Monitoring wells can also be used as observation wells during aquifer testing to help characterize the aquifer system.

2. Will a storm water management plan be part of the GSP?

A storm water management plan will not be included in the GSP; however, as per DWR's annotated outline, the GSP can include a summary of general plans such as storm water management master plans and other land use plans. Existing and planned storm water management practices (e.g., holding ponds) can be discussed in the GSP as sources of existing and future recharge, as long as potential pollutants in storm water can be mitigated to avoid adverse impacts.

3. How about groundwater contaminants? Will the GSP address contaminants?

Degraded groundwater quality is one of the six sustainability indicators defined under the Sustainable Groundwater Management Act (SGMA). Significant and unreasonable degradation of groundwater quality caused by Groundwater Sustainability Agency (GSA) actions, including the migration of contaminant plumes that impair water supplies, can be considered an undesirable result. The GSP will document existing contaminant sites using publicly available information (e.g., *GeoTracker*) and will include management actions to avoid the impairment of groundwater supply sources caused by GSA actions. After completion of the GSP, the groundwater model developed for the GSP may be modified to analyze how contaminant movements can affect existing and future groundwater wells. However, remediation of groundwater contaminants is being addressed in programs implemented by other agencies, such as the Regional Water Quality Control Board.

4. Will the GSP take care of seawater intrusion along the bay?

Seawater intrusion is one of the six sustainability indicators defined under SGMA. When seawater intrusion is significant and unreasonable, this can cause undesirable results. The GSP will identify management actions to help reduce and/or prevent sea water intrusion from degrading groundwater supply sources.

5. Will the GSP require that groundwater pumping be metered?

SGMA provides GSAs with an array of regulatory and non-regulatory tools that can be used to achieve and monitor groundwater sustainability. The local GSAs will have to decide which tools they will use, and well metering could be one such tool. The GSAs need to collect sufficient data on groundwater conditions to demonstrate ongoing sustainable conditions, but this doesn't necessarily mean that all wells must be metered. SGMA requires that public stakeholders be engaged in the development and implementation of the GSP, which will allow additional opportunity for interested stakeholders to provide input on this issue. Municipal groundwater use is typically metered, and other data sources and/or measurement methods may be sufficient to provide adequate information to estimate other groundwater uses.

6. Will there be a pumping tax or fee?

SGMA gives GSAs numerous new tools, authorities, and responsibilities to manage the groundwater and implement the objectives of the GSP. These include the authority to conduct investigations, determine the sustainable yield of a groundwater basin, measure and limit extraction, impose fees for groundwater management, and enforce the terms of a GSP.

When the GSP is complete, GSAs will be able to determine annual costs to sustainably manage the East Bay Plain Subbasin and how to fund sustainable management actions. Consequently, pumping taxes or fees, if required, will be evaluated at that time.

7. Will groundwater pumping cause subsidence in the East Bay Plain Subbasin at levels similar to the Central Valley?

While it is unlikely that subsidence in the East Bay Plain Subbasin would ever reach the high levels that have occurred in the Central Valley, the GSP is required to address subsidence and avoid undesirable results. The GSP will include criteria for defining subsidence levels that are significant and unreasonable, and will include management actions to avoid over pumping that could contribute to such results.

8. How about sea level rise? Do you consider global warming/climate change in the GSP?

The GSP followed the climate change data and guidance provided by the Department of Water Resources, including guidance related to sea level rise. The GSP is required to develop a water budget that projects future hydrologic conditions for a 50-year period. The projected hydrology information is also used to evaluate

future scenarios of hydrologic uncertainty associated with projections of climate change and sea level rise.

9. Will the GSP override overlying rights for surface water or groundwater?

SGMA does not allow the determination or alteration of surface water rights or groundwater rights under common law or any provision of law that determines or grants water rights. The GSP will not override or replace existing groundwater rights; however, sustainable management actions will be applicable to all beneficial users such as well owners within the East Bay Plain Subbasin.

10. How will decisions be made? What if someone doesn't agree with the decisions?

As outlined in the East Bay Plain Subbasin Stakeholder Communication and Engagement Plan, governing bodies of GSAs (Hayward's city council and EBMUD's board of directors) have the authority to make final decisions on SGMA compliance. These decisions will be made during public meetings where members of the public have the opportunity to ask questions and provide feedback.

11. What is a Data Management System (DMS)? Why do you need it?

SGMA regulations require GSAs to develop and maintain a DMS that is capable of storing, querying, and reporting data relevant to the development or implementation of the GSP and monitoring of the East Bay Plain Subbasin. The DMS will help GSAs implement and enforce management actions identified in the GSP while allowing stakeholders and the public to access available data.

12. How will the groundwater modeling address the numerous data gaps in the northern portion of the East Bay Plain Subbasin?

Models can be used to help identify and prioritize data gaps and monitoring needs.

Data gap areas will be modeled by using approximations from available nearby data and literature review. When new data become available to fill data gaps, the groundwater model will be updated to improve the representation of the physical aquifer system and groundwater conditions and better simulate these areas. The new groundwater model will also be used to help define interim sustainable management criteria in areas with little to no data.

13. What's the point of developing management actions using a groundwater model that has little to no underlying data in the area being analyzed?

Management actions will account for uncertainties of the model. Models can also help identify and prioritize data gaps and monitoring needs. The GSP groundwater model will be improved over time as additional data are collected.

14. Will there be any State or Federal funding to help offset pumping taxes or fees?

Subject to funding availability, the California Department of Water Resources has offered grants to develop GSPs and, in the future, plans to offer grant funding for GSP implementation. No Federal funding is available at this time.

15. Does EBMUD plan to increase the volume of groundwater pumped from the East Bay Plain Subbasin?

EBMUD constructed the Bayside Groundwater facility for drought supply in 2009 with the ability to pump 1 million gallons per day. This facility has not been operated for drought supply yet, and EBMUD is still evaluating expansion of the facility as a drought supply. As part of developing the GSP and maintaining sustainability East Bay Plain Subbasin, EBMUD will let science-based decision making inform opportunities for future beneficial uses of groundwater.

16. Does the City of Hayward plan to significantly increase its groundwater pumping?

The City of Hayward has a total of five wells that are designated as emergency/standby source of supply and has not used these wells yet. As part of developing the GSP and maintaining sustainability in the East Bay Plain Subbasin, Hayward will let science-based decision making inform opportunities for future beneficial uses of groundwater.

17. How will the GSP protect the Niles Cone Groundwater basin?

The GSP will consider inter-subbasin hydraulic communication between the East Bay Plain Subbasin and the Niles Cone Groundwater Subbasin based on the hydrogeologic conceptual model, regional aquifer testing, and use of the groundwater model. As necessary, these tools will be used to identify management actions that are in compliance with DWR's guidance documents concerning water budgets to ensure that future conditions in the East Bay Plain Subbasin do not adversely affect adjacent subbasins' ability to comply with SGMA.

18. Are EBMUD and the City of Hayward working with ACWD and other GSAs in the area?

As required by GSP regulations, EBMUD and Hayward are working with stakeholders and neighboring GSAs, including ACWD.

19. Can the GSA require local land use agencies to incorporate management actions (e.g., storm water recharge) identified in the GSP into their land use planning documents (e.g., specific plans or general plans)?

GSAAs are required to coordinate with land use planning agencies to assess activities that could potentially cause undesirable results related to groundwater quality, quantity, or any of the other sustainability indicators and, therefore, could lead to unsustainable groundwater conditions. However, only the local land use agencies have the authority to incorporate management actions into their land use planning documents.

20. How will salt and nutrient monitoring (from recycled water source and other sources) be addressed in the GSP?

The GSP will include sections that sufficiently address components of salt and nutrient management plans, including monitoring as per Section 6.2.4 of the State Water Board Water Quality Control Policy for Recycled Water or the Recycled Water Policy.

21. Are there plans for potable reuse and how will that be addressed in the GSP?

As per DWR's annotated outline, the GSP will address conjunctive use and underground storage, which may include discussion of existing and planned potable reuse as an additional source of supply to use for beneficial purposes in the East Bay Plain Subbasin (e.g., groundwater augmentation). However, after extensive outreach, no potable reuse projects were identified within the next 5 to 10 years. The GSAs will continue to monitor future potable reuse, and as necessary, incorporate those projects into future updates of the GSP.

22. If the State Board implements the Bay Delta Plan, additional surface water cutbacks could occur which could potentially increase the amount of local groundwater use. Was this factored into the future demands?

EBMUD and the City of Hayward will let science and data guide the possibility of increasing local groundwater use. Additional data is needed to model future groundwater projects more accurately.

23. What was the process used and guidance followed for climate change analysis?

The future scenario used in the GSP relied on the most current climate change guidance from DWR published in 2018. In addition, sea level rise estimates for the East Bay Plain Subbasin area published by four other organizations were averaged with the DWR estimate to obtain the 2-foot sea level rise value that was used in the future scenario. Per DWR guidance, local precipitation in the East Bay Plain Subbasin is projected to increase but the future scenarios were modeled as having no change to precipitation and evapotranspiration since this resulted in a more conservative (i.e., less recharge) scenario.

24. Has EBMUD considered the option of indirect potable use for recharge water since the Oro Loma Sanitary District is nearby the Bayside Phase I well?

As discussed in EBMUD's Recycled Water Master Plan (EBMUD, 2019), the Oro Loma Sanitary District's (OLSD) Recycled Water Facility Study that was completed in 2016 extended the Bayside Groundwater Project concept to a series of injection and extraction wells that would use advanced treated ORSD effluent as the injection water source. The existing Bayside Phase I well was not evaluated in this study. More details on ORSD's study can be found [here](#). The future scenario used in the GSP does not include the OLSD indirect potable reuse project; however, pending additional data gathering and analysis, it could be added in future updates of the GSP.

25. Has the pumping usage changed in the EBP since 2000? And how much is being currently being pumped?

Annual historical pumping is estimated at about 3,600 acre-feet per year, and this amount of pumping has not changed much in the East Bay Plain Subbasin over the past 10 – 15 years. Moving forward, the planned data management system will assist in tracking groundwater usage totals.

26. How will the modeling efforts address the hydrogeological interconnection between the Niles Cone and East Bay Plain Subbasins?

The East Bay Plain Subbasin GSAs have obtained DWR grant funding that will be used, in part, to help characterize the potential interconnection between the two Subbasins. This will include a future pump test located in the southern portion of the East Bay Plain Subbasin where there is a transition to the Niles Cones Subbasin.

27. Are land use changes (e.g., green infrastructure) included in the model? Will green infrastructure programs that are currently being pursued be included when the GSP is updated in the future?

An extensive review of land use plans was performed and is discussed in the technical memo documenting the groundwater model and Chapter 2 of the GSP. Those land use plans did not include specifics of green infrastructure and urban land use changes. The GSAs will continue to monitor land use changes as part of GSP implementation and will incorporate those changes when the GSP is updated in the future.

28. Why is Wildcat Creek included in the future scenario analysis if it is so far north from where the pumping is occurring?

Wildcat Creek was included because it is one of the four major creeks within the East Bay Plain Subbasin along with San Pablo, San Leandro, and San Lorenzo Creeks. Also, although not identified yet, there could be projects in the northern portion of the Subbasin in the future, and including Wildcat Creek provides a baseline that can be used to evaluate those future projects.

29. Is it possible to use data on the monitored creek levels to evaluate the depletion of interconnected surface water?

This type of monitoring is an important part of how the data gaps for this sustainability indicator will be filled in the near future. The GSAs will be proposing management actions to help fill this data gap.

30. Have EBMUD and the City of Hayward considered segmenting the East Bay Plain Subbasin when developing the sustainable management criteria (SMC) for the six sustainability indicators?

The GSAs in the East Bay Plain Subbasin have specifically considered the North and South portions of the Subbasin in developing the SMC for sea water intrusion and land subsidence. For the four other sustainability indicators, segmenting the East Bay Plain Subbasin was determined to be unnecessary at this time, but this will be evaluated in the future as data gaps are filled.

31. Did the GSAs consider establishing Management Areas?

The GSA did not include Management Areas in the current GSP because there is hydraulic connection between North and South EBP Subbasin (groundwater pumping in the South can affect the North and vice versa) and there are data gaps in the North EBP Subbasin that would make developing separate Management Areas very difficult. Management Areas may be considered in future if new data indicates it is necessary.

32. Why are groundwater levels not being used as a proxy for the groundwater storage indicator?

The GSP regulations state that the minimum thresholds for the groundwater storage indicator are to be supported by the sustainable yield, calculated based on historical trends, water year type, and projected water use in the basin. Therefore, sustainable yield was used instead of groundwater levels; this approach has also been approved by DWR in their reviews of other GSPs.

33. Have the GSAs considered removing the bedrock outcrop located in Richmond near Chevron (east end of the Richmond Bridge) from the 5-foot groundwater level contour that is being used for the SMC for seawater intrusion?

The GSP is required to cover the area defined by the existing basin boundaries that have been approved by DWR; consequently, the GSAs have used the approved basin boundaries to develop the SMC for seawater intrusion. The approved boundary currently includes areas that may contain bedrock, but the GSAs may re-evaluate the subbasin boundaries in the future after more data has been collected.

34. Have contaminant plumes been mapped within the 5-foot contour used for the SMC for seawater intrusion? And what is the likelihood that contaminants in those areas could be mobilized by seawater intrusion?

Contaminants in the basin have been mapped and are included in the Appendix to Chapter 2 of the GSP. The known contaminant locations are primarily in the shallow aquifer zone and not in the intermediate and deeper zones where most of the groundwater pumping in the Subbasin is located. Seawater only interfaces with the shallow aquifer and aquitards exist between the shallow and intermediate zones that limit flow between the shallow and both the intermediate and deeper zones. Consequently, the influence on seawater intrusion from pumping in the intermediate and deeper zones is expected to be minimal, and thus it is unlikely that seawater intrusion could mobilize contaminants within the 5-foot contour area used for SMC delineation.

35. For the water quality degradation indicator, how do the proposed monitoring objectives and minimum thresholds relate to current water quality data?

Water quality is a major data gap for the EBP Subbasin. Only a few wells have good baseline data; most wells have no data or only one measurement. Collecting additional water quality data over multiple seasons and years is part of GSP implementation. The monitoring objectives are determined based on measured water quality data where baseline data exists, while the minimum thresholds are based on the maximum contaminant levels (MCLs).

36. If the minimum thresholds for water quality are set at the MCLs, does that mean that no buffer for the water quality indicator exists since MCL violations will occur at the same time as it becomes an undesirable result?

Two actions levels have been included to the SMC for constituents with a primary MCL (i.e., arsenic and nitrate):

- Action Level 1: If concentrations exceed 50% of the minimum threshold, conduct additional investigation of cause(s).

- Action Level 2: If concentrations exceed 75% of the minimum threshold, the GSAs act to avoid undesirable result (if caused by GSA activity) or report to appropriate agencies (if not caused by GSA activity).

37. Where will the shallow wells planned along the creeks in the EBP be located and when will they be constructed?

The shallow wells will likely be installed along San Pablo and San Leandro Creeks, two major streams in the EBP Subbasin that are mostly unlined. The exact locations of the wells have not yet been determined. The GSP implementation schedule includes constructing the shallow wells within the next 5 years.