

Technical Guidance

Using SGMA Regulatory Documents to Support Temporary Permits for Underground Storage

This technical guidance document is intended to explain how to use Groundwater Sustainability Plans (GSPs or Plans), Annual Reports, and Periodic Evaluations when preparing to submit a temporary permit application to the State Water Resources Control Board (Board) to divert surface water to underground storage. This guidance focuses on applications submitted by Groundwater Sustainability Agencies (GSAs) in support of the Sustainable Groundwater Management Act (SGMA). This guidance is intended to aid applicants, but it is not legal guidance and may be updated periodically.

Application Requirements for Temporary Permits for Underground Storage

Temporary permits for underground storage are short-term permits that allow parties to divert available surface water within 180 days or five years for reasonable beneficial uses. Parties may apply for a temporary permit to divert surface water to underground storage for beneficial use that advances the sustainability goal of a groundwater basin. Before issuing a temporary permit, the Board needs to make a series of findings required by [Water Code Section 1425\(b\)](#) (for 180-day permits) and [Water Code Section 1433.1\(b\)](#) (for 5-year permits). Applicants should consider how they can support these findings prior to submitting an application.

The application form used to request a temporary permit collects information on the proposed project that allows Division of Water Rights (Division) staff to process and notice applications. It is important for the applicant to provide detailed information so Division staff can clearly understand the proposed project and accurately develop permit terms that are representative of the project. One important application requirement is a description of the place of use.

Division staff observed that applications can lack sufficient detail when describing the place of use of diverted water. Temporary permits for underground storage often aim to benefit the entire groundwater basin, which means that the intended place of use can be extensive and involve multiple users of stored surface water. However, overly generalized maps and vague descriptions of intended users can lead to disputes and uncertainty about where and how the water will be used. For example, if an applicant designates the entire groundwater basin boundary as the place of use for irrigation, it fails to accurately reflect which areas actually contain agricultural land and which lands have access to the stored surface water. To determine whether stored surface water will be put to reasonable and beneficial use, applications should include precise information about the place of use and the users of the water. One effective way to improve this description is by relying upon maps and data from a GSP, or its associated Annual Reports and Periodic Evaluations.

For more information about water right application requirements, please visit the [Division's Temporary Permits for Groundwater Recharge website](#).



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1001 I Street, Sacramento, CA 95814 • Mailing Address: P.O. Box 100, Sacramento, CA 95812-0100 • www.waterboards.ca.gov



How to Use Groundwater Sustainability Plans, Annual Reports, and Periodic Evaluations When Preparing an Application

Many GSAs are tasked with developing GSPs, submitting Annual Reports, and submitting Periodic Evaluations to the Department of Water Resources (DWR)¹. These GSAs, or other parties within the basin, may also seek temporary permits to divert surface water for groundwater recharge to support groundwater sustainability efforts to comply with SGMA. Because processing times associated with temporary permits are relatively short, applicants face tight deadlines to produce information requested by the Division during processing. Applicants can often reduce the burden of processing the Division's requests by using tools available in the basin's GSP, Annual Reports, and Periodic Evaluations to help define the proposed project. In addition to reviewing the GSP, Annual Reports, and Periodic Evaluations, applicants may find it helpful to review data within [DWR's SGMA Data Viewer](#) and [Annual Report Data in the California Natural Resources Agency's Open Data Portal](#).

Tools Within Groundwater Sustainability Plans

The first resource an applicant should review when preparing an application is the relevant GSP(s). GSPs describe how groundwater will be managed in the basin to achieve long-term sustainability. These plans must contain administrative information, a description of the basin setting, sustainable management criteria, description of the monitoring network, and projects and management actions as required per [California Code of Regulations, title 23, section 354](#). Applicants can find their basin's GSP in [DWR's SGMA Portal GSP List](#).

Applicants should become familiar with the GSP and know where to find relevant information that could assist with defining the proposed project. Specifically, applicants should review components listed in Table 1 below, as required per California Code of Regulations Section 354.8(a)-(b). These components can be used to justify the requested diversion volume, approximate locations of where stored surface water will be extracted, approximate the places of use and the associated acreages, and show how the applicant intends to make water available to the basin's existing users as identified in the GSP.

¹ SGMA only requires GSAs in [high-and-medium priority basins](#) to develop a GSP or an alternative to a GSP. GSAs in low-and-very-low priority basins are not required to develop a GSP or an alternative to a GSP, but some GSAs still chose to develop a GSP voluntarily.



Table 1. How applicants can use information from a GSP to support a temporary permit application for underground storage.

GSP Component	Relevance to Temporary Water Right Applications
Map of GSP area	Defines the geographical area that would benefit from the proposed project. This helps Division staff understand the spatial scope of the project.
Map of adjudicated areas, other GSAs, and areas covered by an Alternative.	Distinguishes areas managed by different GSAs within the same groundwater basin. This is especially useful for joint applications submitted by multiple GSAs to clarify jurisdictional boundaries.
Map of jurisdictional boundaries	Identifies cities, counties, and agencies with water management responsibilities. This information can support an applicant's description of a municipal service area that proposes to use stored surface water.
Map of land use, water use sectors, and water source types	Helps justify beneficial uses by showing where and how water is used. These maps can demonstrate that agricultural users have access to stored surface water for irrigation.
Map of well density	Shows the density of agricultural, industrial, and domestic wells per square mile. This helps define extraction locations for different beneficial uses.
Written description of the Plan area	Provides descriptive context that complements the maps by offering hydrologic, geographic, and other information.

Tools Within Annual Reports

The second resource an applicant should review when preparing an application is its most recent Annual Report. Annual Reports compile and analyze data in the basin from the previous water year and summarize GSP progress. GSAs need to submit an Annual Report every year by April 1st to track progress towards sustainability. These reports must include general information depicting the basin, a description and graphical representation of basin conditions, and a description of progress towards implementing the plan as required per [California Code of Regulations, title 23, section 356.2](#). Applicants can find their basin's annual reports in [DWR's SGMA Portal Annual Report List](#).

Because information in the GSP may be outdated, reviewing the Annual Report ensures that the most current information is used in the application. Applicants should focus on reviewing the Annual Report components listed in Table 2, below. These components can also be used to help justify the requested diversion volume, approximate locations of where stored surface water will be extracted, approximate the places of use and the associated acreages, and show the applicant intends to make water available to some or all of the basin's existing users as identified in the GSP.

Table 2. How applicants can use information from an Annual Report to support a temporary permit application for underground storage.

Annual Report Component	Relevance to Temporary Water Right Applications
General basin information	Provides descriptive context and a location map for the basin covered by the GSP, which may include revised background information or updated maps. This ensures applicants are relying upon the most current basin information available when describing their proposed project.
Groundwater extraction summary	Provides groundwater extraction data for the preceding water year, summarizes extractions by water use sector, and includes a map that illustrates the general location and volume of groundwater extractions. This helps applicants understand prior groundwater use and can be used to justify the requested surface water volume by demonstrating that similar volumes were used historically.
Surface water supply summary	Provides a description of existing surface water supplies including descriptions of annual volume and sources for the preceding water year. This can support the project description and identify sources of water the basin has access to.
Total water use summary	Summarizes total water use (surface water and groundwater) by sector and water source type. This helps applicants demonstrate that the volume of water requested is consistent with historical use and provides broader context for how water demand in the basin has been met in the past.
Change in groundwater storage	Provides maps for each principal aquifer in the basin and graphs showing water year type, groundwater use, annual changes in groundwater storage, and cumulative storage change based on the best available historical data. This helps with the accounting plan, which will track stored surface water from infiltration to underground storage to subsequent beneficial use withdrawal. Ultimately, this component of the report may be used to help demonstrate how groundwater and surface water stored underground are accounted for separately in the basin.

Annual Reports may also include additional helpful maps and data beyond the components listed above. Applicants are encouraged to review all maps and tables in the Annual Report to identify information relevant to the water right application.



Tools Within Periodic Evaluations

The third resource an applicant should review when preparing an application is its Periodic Evaluation. Periodic Evaluations describe whether the GSP is meeting the basin's sustainability goal and determine if the GSP continues to meet SGMA requirements. GSAs with an approved GSP are required to submit a Periodic Evaluation every five years after the initial GSP submittal and with each GSP amendment. These evaluations must include a description of current groundwater conditions, implementation of projects and management actions, an assessment of the basin's monitoring network, and a description of any significant new information or changes as required per [California Code of Regulations, title 23, section 356.4](#). Applicants can find their basin's Periodic Evaluation in [DWR's SGMA Portal Periodic Evaluation List](#).

Since Periodic Evaluations are subsequent reports required to be prepared after the initial GSP submittal, it should contain updated information about the groundwater basin. Applicants should focus on reviewing the Periodic Evaluation components listed in Table 3 below, as specified in California Code of Regulations Section 356.4. These components could provide important modifications to the representation of groundwater use volumes, extraction locations, and place of use locations and acreages.

Table 3. How applicants can use information from a Periodic Evaluation to support a temporary permit application for underground storage.

Periodic Evaluation Component	Relevance to Temporary Water Right Applications
Explanation of GSP elements that have been revised	Evaluates the basin setting in light of significant new information or changes in water use. This ensures that applicants rely on the most current basin information available when describing their proposed project.
Description of significant new information	Summarizes any new information available since the GSP was adopted or amended, or since the last periodic evaluation was submitted. This may include updates to projects and management actions, changes in GSAs managing the basin, and additions or removals of a GSP. Referring to this component ensures that the applicant's proposed project supports implementation of the GSP and advances basin sustainability objectives under SGMA.
Description of GSP amendments	Describes completed or proposed amendments to the GSP, which typically occur when significant changes in basin management are made. Reviewing this component helps applicants understand recent or proposed changes to the GSP and quickly identify elements that may affect their project description, accounting plan, or information relevant to the groundwater basin.



Examples of Using Groundwater Sustainability Plan Information in an Application

This section provides examples of how applicants can rely upon information contained in a GSP to accurately identify areas of use for irrigation, domestic, and municipal beneficial use.

An applicant should also review the latest Annual Report and Periodic Evaluation to verify that the most recent map(s) and data is being relied upon. If there is an updated version of an applicable map or data in the Annual Report or Periodic Evaluation, the applicant should submit that map or data as part of a temporary permit application for underground storage.

Irrigation Use: Relying Upon the Land Use Map

If a temporary permit applicant proposes to use stored surface water for irrigation and the proposed place of use matches a distinct area shown in the GSP maps (e.g., when the place of use covers the entire GSP area or the GSA's jurisdictional area), the applicant can describe the place of use in the application by including the land use map from the GSP. Alternatively, an applicant may prepare a map using the same approach as a standard water right application, in compliance with California Code of Regulations, title 23, section 715 and where allowed on a project specific basis, in compliance with California Code of Regulations, title 23, section 719.

SGMA requires each GSP to include a map showing existing land use designations. An applicant could use this map to identify agricultural areas that will extract and use the stored surface water. This provides a clear visual representation of where irrigation is occurring within the groundwater subbasin. These maps also show approximate locations of wells that could have access to irrigation water stored underground through a temporary permit.

In addition to uploading the land use map, the applicant should estimate the approximate acreage of agricultural land that will extract the stored surface water for irrigation. This estimate can be calculated by using the following formula:

$$\text{Approximate Agricultural Area} = \text{Percent of Agricultural Area} \times \text{Basin Area}$$

Many land use maps include the percentage of agricultural land within the basin in the legend of the map. If not, this information is often available in the Plan area description section of the GSP.

Domestic Use: Relying Upon the Well Density Map

If an applicant proposes to use stored surface water basin-wide for domestic purposes and allows third parties to extract it, the applicant can describe the place of use in the application by including the domestic well density map from the GSP.



SGMA requires each GSP to include a map showing the density of wells per square mile, including agricultural, industrial, and domestic water supply wells. Some GSPs have a separate map depicting the density of domestic water supply wells, while others combine all well types into one map. These maps provide approximate locations of existing domestic wells that could have access to water stored underground through a temporary permit.

If the GSP includes a map specifically for domestic wells, the applicant can use this information to estimate the total domestic area within the basin using the following formula:

$$\text{Approximate Domestic Area} = \left(\frac{\text{Number of Domestic Well Sections}}{\text{Total Sections}} \right) \times \text{Basin Area}$$

GSPs may include the number of domestic well sections and the total sections covering the basin in the Plan area description section of the GSP. If this information is not provided, the applicant can count the sections directly from the well density map. For this calculation, partial sections can be counted as whole sections. Although this approach may slightly overestimate the area covered by domestic wells, it is an acceptable approach for a temporary permit because it is more accurate than designating the entire basin area as the place of use. The applicant should upload the well density map and include the calculated acreage in the application to clearly describe the proposed place of use for domestic purposes.

As an alternative, a temporary permit applicant whose project involves coverage of a distinct area shown in the GSP maps (e.g., when the place of use covers the entire GSP area or the GSA's jurisdictional area) may prepare a map using the requirements for a standard permit application, in accordance with California Code of Regulations, title 23, section 715.

Municipal Use: Relying Upon the Jurisdictional Boundary Map

If an applicant proposes to use stored surface water for municipal purposes, the applicant can describe the place of use in the permit application by relying upon the jurisdictional boundary map included in the GSP. This map helps identify the public water system or public agency that will extract and distribute the stored surface water.

SGMA requires each GSP to include a map depicting jurisdictional boundaries, which may include:

- Federal and state land
- Tribal lands
- Cities and counties
- Agencies with water management responsibilities
- Areas covered by relevant general plans



An applicant can use this same map in a temporary permit application to clearly show the municipal service area where the stored surface water will be used. This ensures that the proposed place of use aligns with recognized jurisdictional boundaries as indicated in the GSP.

In addition to uploading the jurisdictional boundary map, the applicant should determine the approximate acreage of the municipal area that will put the stored surface water to use. This information is often available in the Plan area description section of the GSP. Since this section is required to include a written description detailing the features included in the maps required by California Code of Regulations Section 354.8(a), it should contain information about the Plan area covered by the different entities included in the jurisdictional boundary map. If this information is not included in the GSP, the applicant will need to obtain this information using another resource. The applicant should upload the jurisdictional boundary map and include the acreage of the public water system or public agency extracting the stored surface water for municipal purposes in the water right application.

As an alternative, an applicant whose project involves coverage of a distinct area shown in the GSP maps (e.g., when the place of use covers the entire GSP area or the GSA's jurisdictional area) may prepare a map using the requirements for a standard permit application, in accordance with California Code Regulations, title 23, section 715 and section 717 (in regard to municipal boundaries only).

Additional Resources

- [DWR's Guidance Document for the Sustainable Management of Groundwater - Preparation Checklist for GSP Submittal](#)
- [DWR's Groundwater Sustainability Plan Implementation: A Guide to Annual Reports, Periodic Evaluations, & Plan Amendments](#)
- [DWR's SGMA Portal](#)
- [DWR's SGMA Data Viewer](#)
- [Annual Report Data – CNRA's Open Data Platform](#)

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