FAQ: General Groundwater Recharge Permitting

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What is groundwater recharge?

Groundwater recharge is the augmentation of groundwater, by natural or artificial means, with surface water or recycled water. Some groundwater recharge projects may use short-term water surpluses that occur only infrequently.

Groundwater recharge is not a beneficial use of water. A diversion to underground storage is one method of diverting and storing water that takes advantage of the natural storage capacity of aquifers.

To obtain a water right for diversion to underground storage, the applicant must identify a subsequent beneficial use of the water. Groundwater storage projects have been successfully constructed and are operating in California with diversion to underground storage being the method of diversion. Those projects that divert water authorized by an appropriative water right require use of the stored water for beneficial use, just as with above-ground surface water storage projects. The beneficial use ordinarily involves extraction of the stored water before putting the water to use, but beneficial use may also occur in place, such as leaving the water underground to protect water quality by preventing saline water intrusion.

When do I need an appropriative water right?

You will need a water right if you intend to capture stream flows, including peak storm events, for groundwater recharge and later beneficial use. Except where the storage and beneficial use are authorized under an existing appropriative right, or a change in an existing right, this will require filing an application with the State Water Resources Control Board to obtain a water right permit. In the water right application, you will need to specify the beneficial uses of the water diverted to underground storage. This may include one or a combination of consumptive and in-situ beneficial uses. Examples of consumptive use that involve extraction of the stored water, by the diverter or other parties on the behalf of the diverter, include municipal, irrigation, and industrial. Examples of “in-situ” uses where the water is used in place and cannot be extracted by others include: Water Quality (such as repelling salinity/seawater intrusion); Fish and Wildlife Preservation & Enhancement (such as supporting nearby stream baseflow for fisheries or enhancing groundwater dependent ecosystems for the benefit of fish and wildlife); or Other uses (per Cal. Code Regs Title 23 §659 when sufficiently documented for an individual application) such as mitigating land subsidence; supporting groundwater dependent ecosystems not related to fish and wildlife, such as to wet the root zone; or protecting or enhancing groundwater levels so that basin residents using private domestic wells or small community water systems have access to water.

Water cannot be stored underground under a riparian water right. A riparian right is a right to use the natural flow of water on riparian land, but riparian rights do not authorize storage during a wet time for use during a drier time (e.g., from season to season), as occurs with groundwater recharge. More

information on riparian rights can be found on the Division of Water Rights' Frequently Asked Questions page.

In some cases, you may be able to use an existing, post-1914 appropriative right for groundwater storage. However, a change petition for the permit or license is required, and you must receive approval from the State Water Board before storing water underground.

When do I *not* need an appropriative water right?

Flood Control. Projects designed and used solely for flood protection and not for beneficial use; where capture of flood waters is necessary to protect health and safety, and there is no intent to store the water for later beneficial use by any party. The water may be held no longer than needed for flood control and no right may be asserted to any of the groundwater recharge that results from the flood control.

Recycled Water. Projects that propose to replenish groundwater with recycled water, where the recycled water comes directly from a water treatment plant and is not conveyed using a surface water stream system or a subterranean stream. In this situation, a wastewater change petition may be necessary if the wastewater was previously discharged to a stream.
For more information about using recycled water for groundwater recharge please visit our wastewater change petition page, the Division of Drinking Water's Recycled Water Information webpage and the Department of Water Resource's Water Recycling webpage.

Pre-1914 Rights. Projects diverting water under a valid pre-1914 appropriative right, as long as the change does not cause injury to other water users or result in waste or unreasonable use. Changes to pre-1914 rights do not require approval from the State Water Board.

Contract Water. Projects that use water delivered under a water supply contract or purchase agreement in which the water purveyor delivering the water has a right to divert water to underground storage at the proposed location.

Should I apply for a temporary or standard permit?

The type of application you submit will depend on how long you plan to operate your project and how urgently you need the water. Detailed descriptions of the two types of permit can be found on the Water Rights for Groundwater Recharge webpage.

Temporary permits may be appropriate for short-term or infrequent diversions where an urgent need exists. Temporary permits expire within 180 days after the date of issuance, unless an earlier date is specified or the temporary permit has been revoked. Temporary permits can usually be processed more quickly than standard permits and may be renewed by the State Water Board. A temporary permit is subject to change or revocation at any time.

Standard permits are appropriate for long-term projects or projects where no urgent need exists. Standard permits can take several years to issue, but they secure a priority date for the diversion.

Assuming there is an urgent need, an application for a temporary permit may be filed simultaneously with an application for a standard permit, to cover the period until a standard permit is issued. Both types of permits require detailed reporting of the amount of water diverted into underground storage, and the amount removed for beneficial use.

How do I apply for a temporary permit for underground storage?

You can apply for a temporary permit by submitting an Application Form, an Underground Storage Supplement Form, necessary fees, and other required information to the Division of Water Rights. The application will describe the proposed source of water, place of use, purposes of use, points of diversion and quantity to be diverted.

Visit our **temporary underground storage permit page to learn more about the application process and associated fees**.

Are the undesirable results identified by the Sustainable Groundwater Management Act (SGMA) considered purposes of use?

The undesirable results identified in SGMA may be identified as purposes of use in many, but not all cases. **The Purposes of Use for Underground Storage Fact Sheet** describes the undesirable results and provides additional clarification as to when and how each result may be identified as a purpose of use in an application. To provide additional information to prospective applicants, the Division will post examples of applications for these purposes of use upon acceptance.

The table below will include a selection of accepted standard applications for groundwater recharge (underground storage) with purposes of use that overlap with the SGMA undesirable results.

How can I demonstrate the beneficial use of water under a permit or license that allows underground storage (recharge) as a method of diversion?

To obtain and maintain a water rights permit or license, you must demonstrate beneficial use of the water diverted (e.g., household domestic use, irrigation of agricultural land, municipal use). The type of accounting necessary to quantify the beneficial use of water held in underground storage will depend on the size and complexity of the project, characteristics of the aquifer, and whether the groundwater storage and recharge occurs under a temporary or standard permit.

Groundwater pumping records within the designated place of use are often the most straightforward way to demonstrate beneficial use of water previously diverted to underground storage. Estimates of crop water use, groundwater modeling, or other approaches may be acceptable in some situations. In adjudicated basins or areas subject to a Groundwater Sustainability Plan under the Sustainable Groundwater Management Act, permittees may be able to rely on groundwater accounting systems developed by the basin's watermaster or Groundwater Sustainability Agency.