



**COLORADO**

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Conservation Board**

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**TO:** Colorado Water Conservation Board Members

**FROM:** Erik Skeie, Program Associate  
Interstate, Federal & Water Information Section

**DATE:** July 19-20, 2017

**AGENDA ITEM:** 27. Proposed Criteria and Guidelines for Damaging High Groundwater Response Grants in the South Platte Basin

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**Background:** Due to a combination of natural geology and hydrology, average to above-average precipitation, increased recharge for augmentation purposes, and decreased groundwater pumping, high groundwater is causing damage to private and public property and agricultural land in certain areas of the South Platte River Basin.

Section 10 of the CWCB Projects Bill (HB17-1248) provides \$325,000 for several types of efforts related to high groundwater issues in the South Platte Basin. One of the specified uses of this funding is for grants for projects in response to damaging high groundwater levels in areas of the South Platte River Basin for the construction, maintenance, and monitoring of dewatering infrastructure. The Section 10 language is given below, with the portion relevant to this grant program in bold.

The proposed criteria and guidelines for this grant program are attached to this memo. They were adapted from the HB15-1178 criteria and guidelines, which the Board approved in July 2015. Significant changes include allowing staff discretion for approval of grants less than \$100,000 and requiring a minimum match (in cash or in-kind) of ten percent from the applicant. These Criteria and Guidelines are intended for any individuals or entities seeking grants for such projects in the South Platte Basin.

**Staff recommendation:** Staff recommends the approval of the proposed Criteria and Guidelines for Damaging High Groundwater Response Grants in the South Platte Basin.

**HB 17-1248 Section 10:**

*South Platte river basin groundwater level data collection, analysis, and remediation - appropriation. (1) For the 2017-18 state fiscal year, \$325,000 is appropriated to the department of natural resources for use by the Colorado water conservation board. This appropriation is from the Colorado water conservation board construction fund created in*



*section 37-60-121, C.R.S. To implement this section, the Colorado water conservation board may use this appropriation as follows: To award grants for projects in response to damaging high groundwater levels in areas of the South Platte river basin for the construction, maintenance, and monitoring of dewatering infrastructure; to cover dewatering well pumping costs; to continue the evaluation of both the cause of the high groundwater levels and exigent remediation efforts implemented in response to the high groundwater levels; to collect and analyze groundwater data; to install instrumentation and monitoring devices; and to perform groundwater modeling.*

*(2) The money appropriated in subsection (1) of this section remains available for the designated purposes until it is fully expended.*



CRITERIA AND GUIDELINES  
FOR DAMAGING HIGH GROUNDWATER RESPONSE GRANTS IN THE SOUTH PLATTE BASIN

**Approved by CWCB: xxxxx**

**A. Purpose of the Criteria and Guidelines Document**

Section 10 of House Bill (HB) 17-1248, signed into law by the Governor on May 23<sup>rd</sup>, 2017, authorizes the Colorado Water Conservation to award grants for projects in response to damaging high groundwater levels in the South Platte River Basin.

These Criteria and Guidelines are effective upon Board approval.

**B. Background**

Due to a combination of natural geology and hydrology, average to above-average precipitation, increased recharge for augmentation purposes, and decreased groundwater pumping, high groundwater is causing damage to private and public property and agricultural land in the South Platte River Basin. Section 10 of HB17-1248 provides funds for grants for projects in response to damaging high groundwater levels in areas of the South Platte River Basin for the construction, maintenance, and monitoring of dewatering infrastructure.

Grants will be awarded by CWCB based on the requirements outlined in Section F.

**C. Definitions**

**“Applicant”** means the entity applying for grant money to lower the groundwater table as part of this program, either on behalf of themselves or on behalf of a private company or public entity.

**“Damaging high groundwater”** means the water table in the South Platte alluvial aquifer that has risen in recent years to the point of causing damage to private and public property, such as agricultural fields or infrastructure, and is present for more than three months. Duration may be considered on a case-by-case basis provided the Applicant can show the problem is due to regional groundwater rise.

**“Dewatering system”** means a well, drain, sump, or other excavation used for the purpose of keeping the water table below a desired level or elevation where the water produced is returned back to the stream system and not put to beneficial use. Note: A dewatering system is not the same as a dewatering well, defined in Section 37-91-102(4.5), C.R.S.

**“Monitoring system”** means a well, series of wells, or other structures that will be used to monitor groundwater levels in the vicinity of the dewatering system and will be used to measure success of the project. Any structure used for monitoring must not divert water within 30 days of a groundwater level measurement.

**“the River”** means the South Platte River, its alluvium, or a tributary or drainage of the South Platte River.

**“Technical Committee”** means the South Platte Basin Roundtable’s groundwater technical committee.

#### **D. Application Process**

Applicants should submit their applications no later than the 15<sup>th</sup> of the month *prior* to the month in which the next regularly scheduled Board meeting is to be held, in order to guarantee the application will be considered for approval at that meeting, if necessary. Board meetings are held in the months of July, September, November, January, March, and May. For example, all applications submitted by August 15<sup>th</sup>, 2017 will be reviewed and presented at the Board meeting held in September 2017. The funds from this grant program cannot be used for reimbursing dewatering efforts completed prior to grant approval.

Applicants are encouraged to reach out to the Technical Committee with concept ideas prior to submitting a formal application under these Criteria and Guidelines.

A sample timeline for the application process is as follows:

- **Prior to application submittal:** Applicants approach the Technical Committee with a conceptual dewatering proposal. During this time, the Applicant should work closely with the Technical Committee and the Division Engineer to address all feasibility and administration concerns.
- **Day 0:** Applications for grant and dewatering permit (if applicable) are submitted to the CWCB and State Engineer’s Office (SEO), respectively.
- **Days 0-30:** SEO confirms with Division Engineer and Water Commissioner that the project is administrable from a water rights standpoint and develops terms and conditions to assist with administration.
- **Days 0-30:** CWCB staff takes application to Technical Committee for feedback on grant money amount.
- **Day 30:** SEO advises CWCB staff whether the dewatering permit will be approved.
- **Day 35:** At the next regularly scheduled Board meeting and with dewatering permit feedback from the SEO, CWCB staff makes recommendation to the Board to approve or deny the application grant request. The Board may conditionally approve applicants pending final dewatering permit decision from SEO.
- **Day 45:** SEO issues decision on dewatering permit. If permit is approved, and conditional approval was granted from the Board, dewatering may begin under the grant program.

#### **E. Dewatering Permit Requirements**

The Applicant must obtain a dewatering well permit or permits for any proposed dewatering wells from the SEO, or have reasonable assurance that a permit or permits will be issued, prior to distribution of grant funding by the CWCB. The form to permit a dewatering well is Form GWS-45, which is attached at the end of this document as Attachment 3. The form must be submitted with a non-refundable \$100 filing fee.

Applicant must show that their operation will return the pumped water to the River without beneficial use to qualify for a dewatering permit. The Applicant will be responsible for following the conditions on the dewatering well permit.

As a part of the permit evaluation process, the SEO must determine if the Applicant has met the 600-foot spacing criteria described in C.R.S. 37-90-137(2)(b). If there are production wells within 600 feet of the proposed well location, the Applicant may consider obtaining 600-foot spacing waivers from the well owners. If 600-foot spacing waivers are not submitted with the well permit application and the SEO has to send 600-foot spacing notices to well owners, the permit application process timeline may be extended. To qualify for a dewatering well permit, the Applicant must demonstrate the following:

### **1. Well Ownership**

The Applicant must either be the owner of the well or have an agreement with the well owner to pump the well. If an agreement is required, include a copy of the agreement with the application for a dewatering permit. Examples of an acceptable agreement include: a document signed by all parties giving permission to the Applicant to pump the well, or a letter from the well owner addressed to the Board stating that the owner approves of this use of his or her well. If there are any conditions to the granted permission, those must be clearly stated in the document or letter.

### **2. How Water Will Be Returned to the River**

The Applicant must show how the pumped groundwater will return to the South Platte River. This could be a written description with accompanying map or diagram. The Applicant must have an agreement with the owner of the proposed conveyance to use their property to carry pumped groundwater to the South Platte River or other drainage. If an agreement is required, include a copy of the agreement with the application for a dewatering permit. Examples of an acceptable agreement include: a document signed by all parties giving permission to the Applicant to convey water across the owner's property, or a letter or email from the owner of the conveyance addressed to the Board stating that the owner approves of this use of his or her conveyance. If there are any conditions to the granted permission, those must be clearly stated in the document or letter.

### **3. Beneficial Use of Water**

The Applicant must demonstrate that there will be no beneficial use of the water.

### **4. Monitoring and Accounting**

At a minimum, the Applicant must install the items listed under F.6 depending on what type of dewatering system is proposed. If the dewatering system will also divert water for other purposes (under a different permit), the SEO requires two meters on the dewatering system; one to measure water diverted for dewatering and one to measure water diverted for beneficial use. The Division Engineer must approve of the metering configuration.

Data must be submitted to the Division One office on an accounting form approved by the SEO. Applicants may create an accounting form or use the sample accounting form included with these Criteria

and Guidelines as Attachment 4. The Division Engineer will identify final monitoring and accounting requirements, which will be incorporated into the approved well permit.

**F. Grant Requirements -- What to Include in the Application for the Grant Program**

This section provides an outline the Applicant may wish to follow in preparing material and applying for the grant program. Much of the detail necessary for the grant application, including information about the proposed operation that provides for its feasibility and ability to be administered, should occur during the process of preparing the dewatering permit application, but there are additional requirements specific to the grant that are included here, including the monitoring of groundwater levels around the affected area.

**1. Introduction**

In the introductory paragraph(s), include the Applicant's full name, business (if applicable), physical and mailing addresses, phone number, and email address. Briefly describe the area experiencing damaging high groundwater, how long the problem has been going on, and whether the area experiences continual high groundwater or if it is observed to be a seasonal problem. Describe the need for the emergency dewatering. Provide the location of the dewatering system component(s) that will be pumped for emergency dewatering. Briefly explain how the pumped groundwater will be conveyed to the River. Detailed explanations will come in later sections; the intent of the introduction is to describe the problem and proposed solution in general terms.

**2. Figure**

Following the introductory paragraph, attach a figure showing the dewatering system, monitoring system, and conveyance system to return the dewatering water to the River. This can be as simple as a hand-drawn diagram, but the figure should be clearly labeled and have enough detail to show where the infrastructure is with relation to other major landmarks, e.g., the South Platte River, highways, main streets, etc.

**3. Proposed and/or Existing Infrastructure**

Provide a detailed description of the infrastructure needed to successfully divert water for dewatering and how it will operate. Here are some sample questions to answer:

- Does the infrastructure exist, or does it need to be constructed?
- How will the water be conveyed to the River? List all conveyances that will carry the water, their location, their material, and the approximate length in which the groundwater will travel in them. Include in the attached figure, if appropriate.
- Describe the proposed monitoring system.

If groundwater will be pumped by multiple wells at any time during the dewatering project, describe how the water diverted under each well permit will be recorded separately from other water diverted for dewatering purposes.

**4. Permissions**

Include a paragraph describing the ownership of the dewatering system and monitoring system, the infrastructure that will convey the pumped water to the River, and any private property the infrastructure may need to cross. If any part of the system, conveyance infrastructure, and/or property is owned by

someone other than the Applicant, include written documentation of the owner's consent to use his or her property in the way proposed in this application. This can be a signed written agreement or a letter or email from the property owner to the Board authorizing use of and/or access to his or her property.

## **5. Permitting**

Attach a copy of necessary permits received from the SEO authorizing the well for dewatering, or if the dewatering permit has not yet been approved, attach a copy of the dewatering permit application that was submitted to the SEO. Attach a copy of any well permits related to the proposed monitoring system.

## **6. Monitoring for Data Collection**

As a requirement, regular ground water level data collection must accompany each project. Describe how the dewatering system will be monitored and reported and how the monitoring system will operate. The Applicant will need to work with the Division Engineer to determine what (if any) additional monitoring will be required. If applicable, the Applicant may need one or more of the following:

1. A flow meter (e.g. a totalizer) installed on any pumping wells to record the flow rate and volume of water that has been pumped,
2. Flume/staff gage to measure water discharged via tile and drain systems
3. A monitoring system to record depth-to-water measurements. The approval of monitoring system designs will be case-specific.

Monitoring wells within the system must not be actively diverting water and must have a valid well permit. The Applicant may, with approval of the SEO, identify one or more monitoring wells within the State's existing monitoring well network to use to meet the monitoring requirement instead of installing a new well or new equipment in an existing well.

Usage and access to the monitoring system must be approved by the owner of the system and/or the property, if the owner is not the Applicant. As with the dewatering system and other property, the Applicant must have an agreement with the owner of the monitoring system and/or the property in place prior to applying for this grant. If an agreement is required, include written documentation of the owner's consent to use his or her property in the way proposed in this application. This can be a signed written agreement or a letter or email from the property owner to the Board authorizing use of and/or access to his or her property

In this section of the application, include the brand and model of any devices that will be used to track the volume of water diverted. Include the brand and model of data logger that will be used to record depth-to-groundwater. (Note: if the State's monitoring well network will be used for monitoring, the brand and model of data logger is not required.)

## **7. Measurable Outcome and Duration of Project**

Include a paragraph describing the anticipated outcome of the dewatering project. If possible, provide a specific, measurable outcome at which the project will be deemed "successful".

- a) If a dewatering well is being used, indicate the date when pumping will begin. Will pumping be continuous or will it only occur during certain times? The proposed pumping scheme can be flexible.

## **8. Itemized Grant Request**

Finally, provide a monetary value of the grant request. Support this request with an itemized table of anticipated costs associated with the proposed dewatering scheme. Include matching funds, both cash and in-kind. The availability of funding for the grant request is not guaranteed due to the possibility of other grant requests. A 10% match will be required for funding under this program.

## **G. Summary of Application Review and Approval Process**

CWCB staff, in consultation with the SEO, will review applications based on the following criteria:

- Existence of damaging high groundwater, and the demonstrated need for dewatering,
- Project location within the boundaries of areas eligible for the grant program,
- Compliance with permission requirements,
- Compliance with permitting requirements,
- Compliance with monitoring requirements,
- Effectiveness of proposal at lowering groundwater table,
- Reasonableness of the requested grant value,
- Completeness of application (*see* Section F), and
- Matching funding by provided by the Applicant or others.

During the application review process, CWCB staff may seek input from the Technical Committee on the general costs associated with dewatering and the infrastructure needed to implement the dewatering project. This will serve to verify that the requested value of the grant is appropriate for the proposed project.

Grant requests less than \$100,000 may be awarded at CWCB staff's discretion; requests above \$100,000 will be considered for approval at the Board's next regularly scheduled meeting. CWCB staff will present applications to the Board. Upon the Board's review and consideration, the Board may approve the proposed project for grant funding, request that the Applicant provide more information for reconsideration by the Board at its next regularly scheduled meeting, or deny an application. The Board, at its discretion, may also extend conditional approval to applicants who satisfy all requirements of the application and have submitted an application to the SEO for a dewatering permit but have not yet obtained the dewatering permit due to required processing time by the SEO. This conditional approval is intended to allow the Applicant to concurrently submit applications for the dewatering permit and this grant, in an effort to expedite the process. If the dewatering permit application is denied, conditional approval will be revoked.

## **H. Reporting Requirements**

The Applicant shall provide the CWCB with an annual report on the status of the dewatering project for each fiscal year (July 1 to June 30) the project is operating; the report will be due by July 31<sup>st</sup> following the end of the relevant fiscal year. The report will include a short narrative of the status of the project, successes to date, and any issues or concerns the Applicant has encountered, as well as an electronic file containing all monitoring system and pumping data collected during the previous fiscal year.



**I. How to Apply**

Applicants should submit the application to the CWCB, either by emailing the application as a *single* PDF file to the **Dewatering Grant Program, c/o Erik Skeie at [erik.skeie@state.co.us](mailto:erik.skeie@state.co.us)** or by mailing a hard copy of the application to the address given below:

Attn: Dewatering Grant Program c/o Erik Skeie  
CWCB  
1313 Sherman St., Room 718  
Denver, CO 80203