

CRITERIA AND GUIDELINES
FOR PILOT PROJECTS TO EVALUATE ALTERNATIVE METHODS OF LOWERING THE WATER
TABLE IN AREAS ALONG THE SOUTH PLATTE RIVER

Colorado Water Conservation Board and Colorado Division of Water Resources
Approved by CWCB: September 15, 2015

A. Purpose of the Criteria and Guidelines Document

House Bill (HB) 15-1013, signed into law by the Governor on Friday, May 29, 2015, authorizes the Colorado Water Conservation Board (the “CWCB” or the “Board”) to select and administer two pilot projects for the purpose of providing the Board and the State Engineer with sufficient data to evaluate two alternative methods of lowering the water table in areas along the South Platte River that are experiencing damaging high groundwater levels. The duration of this pilot project program is from July 1, 2015 until September 1, 2020. Individual projects under this program will be four years in duration.

HB15-1013 charges the Board, in consultation with the State Engineer, to establish criteria and guidelines for the pilot project program and accompanying real-time data collection, including selection criteria and guidelines for the operation and administration of the pilot projects to assure that the pilot projects will not cause injury to other water rights, decreed conditional water rights, contract rights to water, or impair compliance with any interstate compact. This criteria and guidelines document provides information regarding the application, selection, and approval process for pilot projects. This document, hereinafter referred to as the “Criteria and Guidelines,” was developed through the collaboration of the CWCB, the State Engineer’s Office (SEO), and the public in accordance with that legislative directive.

HB15-1013 concerns the implementation of Recommendation Number One set forth in the study of the South Platte River alluvial aquifer prepared by the Colorado Water Institute (CWI) for HB12-1278. Recommendation Number One states that two pilot projects should be authorized to allow the State Engineer’s Office (SEO) to track and administer high groundwater zones for a specified period of time to lower the water table at Sterling and Gilcrest/LaSalle while testing alternative management approaches. HB15-1013 calls for the approved pilot project to obtain a Substitute Water Supply Plan (SWSP) from the SEO. However, the Board recognizes the possibility that some dewatering projects may fit the criteria of Recommendation Number One without beneficial use of the diverted water that would result in the need for an SWSP, and the Board does not wish to disqualify those pilot projects that do not need an SWSP.

Diversions from pilot projects that return the diverted water to the stream system with no beneficial use do not constitute an appropriation of groundwater, are not subject to priority administration and may operate without a plan to replace delayed depletions to the stream. Therefore, pilot projects that do not beneficially use the water may be approved under this process without an SWSP so long as they are operated in accordance with the Board and SEO’s conditions of approval.

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 in the South Platte watershed, increased recharge for augmentation purposes, and decreased groundwater pumping, high groundwater within and near the towns of Gilcrest and LaSalle and the city of Sterling is causing damage to private and public property and agricultural land. In 2012 the Colorado Legislature passed HB12-1278 authorizing a study of the groundwater conditions along the South Platte, specifically in response to reports by residents that groundwater was flooding basements and agricultural fields. The CWI at Colorado State University submitted their analysis of the situation on December 31, 2013. One of

the recommendations made in the CWI report was to conduct pilot projects in the areas of high groundwater as a means of lowering the water table. In 2015 the Colorado Legislature passed HB15-1013 calling for the CWCB and the SEO to select two pilot projects for the purpose of providing the CWCB and the SEO with sufficient data to evaluate two alternative methods of lowering the water table in areas along the South Platte River that are experiencing damaging high groundwater levels.

C. Definitions

“Applicant” means the individual or entity applying for this pilot project program for the purpose of lowering the groundwater table as part of HB15-1013, 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 pilot project 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.

“Real-time” means at least one measurement every 24 hours the pilot project is operational.

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

“Within or near the town of Gilcrest, Colorado or the town of LaSalle, Colorado” means that area inside the Study Area Boundary around Gilcrest and LaSalle as defined in the 2014 Gilcrest/LaSalle Pilot Project Hydrogeologic Characterization Report by the Colorado Geological Survey (detailed boundary map included as Attachment 1).

“Within or near the city of Sterling, Colorado” means that area inside the Study Area Boundary around Sterling as defined in Attachment 2.

D. What to Include in the Application

HB15-1013 authorizes the CWCB to administer two, four-year-long pilot projects that meet the following requirements:

1. One project located within or near the towns of Gilcrest and LaSalle, Colorado, and one project located within or near the city of Sterling, Colorado.
2. Projects demonstrate alternative methods for effectively lowering the water table.

3. Projects are accurately monitored in real time to determine the immediate impacts that the pilot projects have on the water table.
4. During the term of the pilot projects, demonstrate a method of dewatering with no beneficial use of the water, or if there is beneficial use of the water, operate under an SWSP.

The Applicant should include the following information in his or her application:

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.

2. Overview of the Pilot Project

Describe the area being damaged by 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 pilot project and how the pilot project is expected to lower the water table. Describe whether the pilot project will operate under an SWSP or if the Applicant intends to demonstrate that there is no beneficial use of water associated with the project and therefore the pilot project will not require an SWSP. Note that any project that requires an SWSP will require that the Applicant obtain approval of an SWSP from the SEO separate from this application; any project that diverts water through a dewatering system will require a well permit(s) from the SEO prior to operation of the dewatering system.

3. Figure

Following the Introduction and Overview of the Pilot Project, attach a figure showing the location of the proposed pilot project, dewatering system (if applicable), monitoring system, and any associated infrastructure. 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 in relation to other major landmarks, e.g., the South Platte River, highways, main streets, etc.

4. Permissions and Permitting

Include a paragraph describing the ownership of the proposed pilot project, dewatering system (if applicable), monitoring system, any associated infrastructure, and property on which these systems are located. If any part of the system 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 the 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.

Include a description of the permits under which the pilot project will operate, who the regulatory agency is (e.g., the SEO), and the status of any pending permit applications.

5. Real-time Monitoring and Administration

As a requirement of HB15-1013, approved pilot projects must be monitored in real time in order to determine the impacts that the pilot project has on the water table. In this section, describe how any water diversions associated with the pilot project, through a surface structure or dewatering system will be monitored and recorded. Also, describe how groundwater levels in the vicinity of the pilot project will be monitored and reported through the proposed monitoring system. If the Applicant has worked closely with the Technical Committee and the Division Engineer to address all feasibility and administration concerns, the real-time monitoring and administration requirements will be known. The approval of monitoring system designs will be case-specific.

If a well is used for monitoring, the monitoring well must not be actively pumping 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.

6. Measurable Outcome of Pilot Project

Describe the anticipated outcome of the pilot project at the end of year one, year two, year three, and year four. How will the pilot project mitigate local high groundwater? If applicable, describe any benchmarks that will signal the pilot project is a success.

Indicate the desired date for the pilot project to begin. Will the pilot project operate continuously or will it only divert water during certain times? The proposed operating scheme can be flexible.

7. Public Notice

The Applicant must provide written notice of the pilot project application to all parties that have subscribed to the SWSP notification list. Applicant must file proof of the written notice with the CWCB.

E. Summary of the Application Review and Approval Process

The duration of the application process is largely governed by the 75-day public comment period required by the legislation. As a general guideline, Applicants can anticipate a final decision three months from the date the applications are submitted. Applicants are strongly encouraged to reach out to the South Platte Basin Roundtable's Groundwater Technical Committee with concept ideas prior to submitting a formal application under these Criteria and Guidelines.

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

- Written determination from SEO that the pilot project is capable of lowering the groundwater table with no beneficial use of water or has an approved SWSP,
- Demonstrated need for lowering groundwater table,
- Project location within the boundaries of areas eligible for the pilot program,
- Compliance with permission requirements,
- Compliance with permitting requirements,
- Compliance with monitoring requirements,
- Effectiveness of proposal at lowering groundwater table, and
- Completeness of application (*see* Section D).

At a regularly scheduled Board meeting, CWCB staff will present applications to the Board. Upon the Board's review and consideration, the Board may approve the proposed project, request that the Applicant provide more information for reconsideration by the Board at its next regularly scheduled meeting, or deny an application.

The Board may approve the pilot project application only if the State Engineer has made a written determination that the pilot project will operate under one of two conditions:

- (I) Pilot project is capable of lowering the groundwater table without a beneficial use of groundwater and satisfies the SEO's administrative requirements, or
- (II) Pilot project has an approved SWSP.

Implicit in the State Engineer's written determination is the pilot project can operate without causing injury and without impairing compliance with any interstate compact. The written determination will provide terms and conditions necessary for pilot project operation and administration. Any project that diverts water through a dewatering system will require a well permit(s) from the SEO prior to operation of the dewatering system. The form to permit a dewatering system 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.

F. Funding

The Applicant may choose to approach the South Platte Basin Roundtable for possible grant funding or investigate whether their project qualifies for funding from the emergency dewatering grant program established by HB15-1178.

G. Reporting Requirements

The Applicant shall provide the CWCB with an annual report on the status of the pilot project for each fiscal year (July 1 to June 30) the project is operating; the report will be due by July 31st 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 data collected during the previous fiscal year. These reports will inform the Board's 2016, 2017, 2018, and 2019 annual reports and 2020 final report to the Water Resources Review Committee, as per HB15-1013's requirements. An annual review fee of \$100 is to be submitted to the CWCB at the time the annual report is provided.

H. How to Apply

The application fee for the pilot project program is \$100, to be submitted to the CWCB at the time an application is submitted for consideration.

Applicants should submit the application and application fee to the CWCB, either by emailing the application as a *single* PDF file to the **South Platte Groundwater Pilot Project** at emily.lodolce@state.co.us and mailing the application fee or by mailing a hard copy of the application and the application fee to the address given below:

Attn: South Platte Groundwater Pilot Project c/o Emily LoDolce
CWCB
1313 Sherman St., Room 718
Denver, CO 80203

The pilot project program will end on the date of the Board's final report to the Water Resources Review Committee, or on September 1, 2020, whichever comes first. The last date to submit an application for the pilot project program is June 19, 2016, which allows for the 75-day public notice period followed by four years of operation, ending September 1, 2020, as called for in HB15-1013.

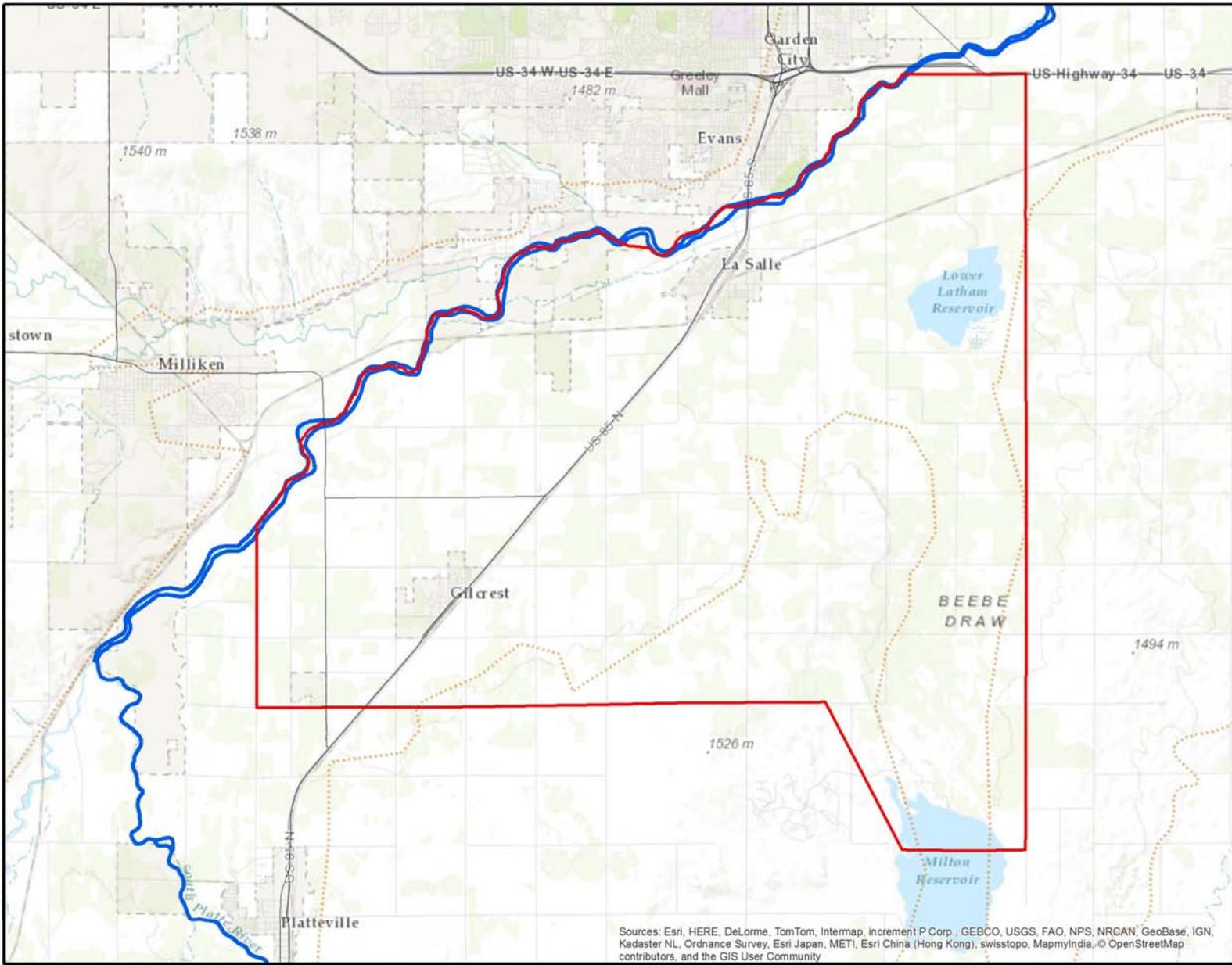
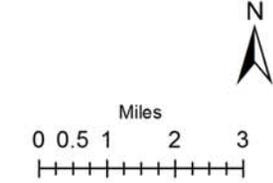
Attachment 1 Gilcrest Study Area Boundary

Legend

-  Study Area Boundary
-  South Platte River
-  Alluvial Aquifer Extent (SPDSS)*

*Data Source Reference:
Regional Alluvial Aquifer
Mapping From SPDSS
(2012)

Adapted from the
Gilcrest/LaSalle Pilot Project
Hydrogeologic Characterization
Report



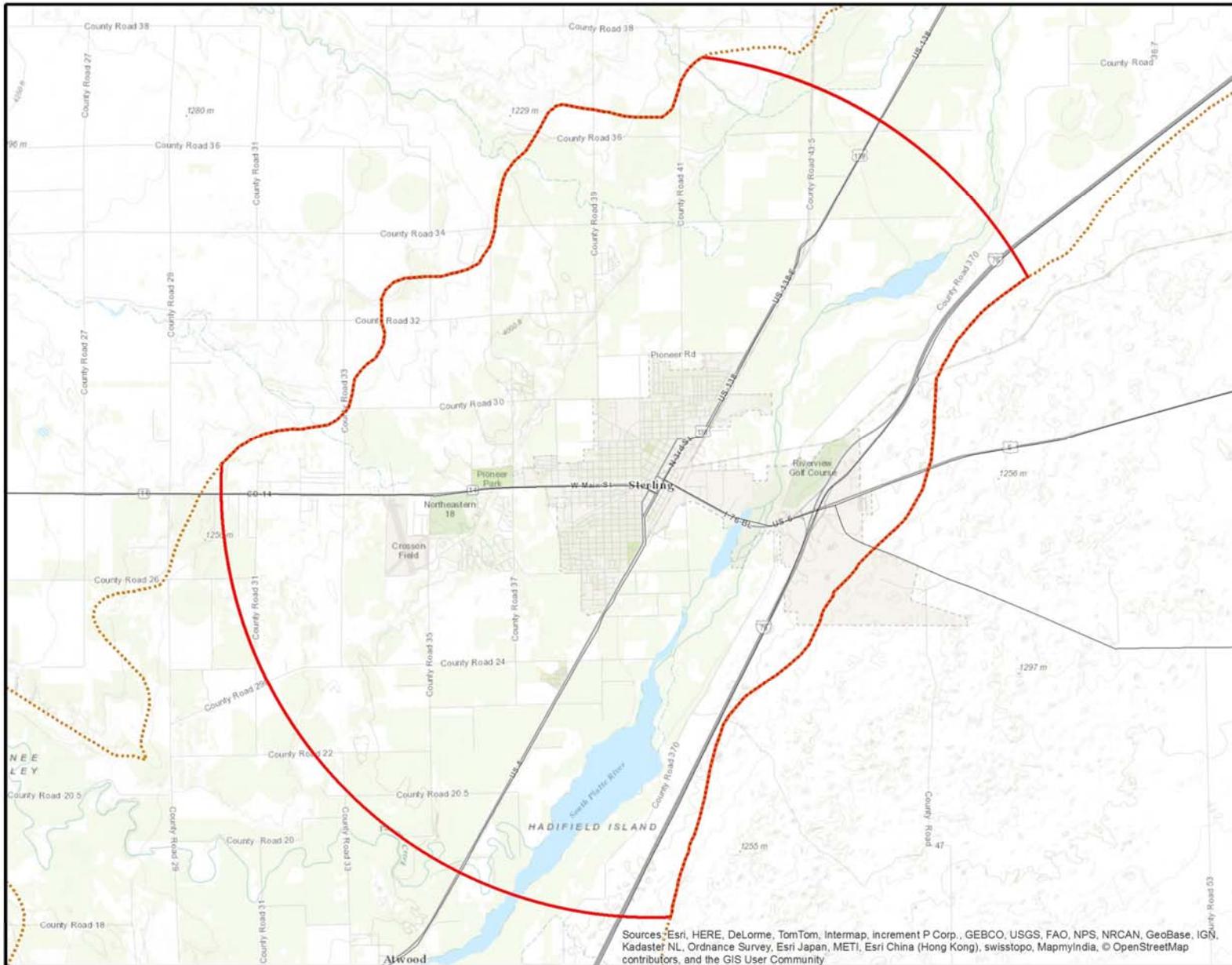
Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Attachment 2 Sterling Study Area Boundary

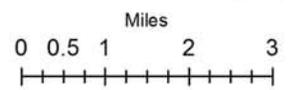
Legend

-  Study Area Boundary
-  Alluvial Aquifer Extent (SPDSS)*

*Data Source Reference:
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Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



<p>COLORADO DIVISION OF WATER RESOURCES DEPARTMENT OF NATURAL RESOURCES 1313 SHERMAN ST, RM 821, DENVER, CO 80203 Main: (303) 866-3581 Fax: (303) 866-2223 dwrpermitsonline@state.co.us</p>	<p>Office Use Only Form GWS-45 (07/2013)</p>				
<p>GENERAL PURPOSE Water Well Permit Application Review instructions on reverse side prior to completing form. The form must be computer generated, typed or in black or blue ink.</p>					
<p>1. Applicant Information</p> <p>Name of applicant _____</p> <p>Mailing address _____</p> <p>City _____ State _____ Zip code _____</p> <p>Telephone # (area code & number) _____ E-mail (online filing required) _____</p>					
<p>2. Type Of Application (check applicable boxes)</p> <p><input type="checkbox"/> Construct new well <input type="checkbox"/> Use existing well <input type="checkbox"/> Replace existing well <input type="checkbox"/> Change or increase use <input type="checkbox"/> Change source (aquifer) <input type="checkbox"/> Reapplication (expired permit) <input type="checkbox"/> COGCC Well <input type="checkbox"/> Other: _____</p>					
<p>3. Refer To (if applicable)</p> <p>Well permit # _____ Water Court case # _____</p> <p>Designated Basin Determination # _____ Well name or # _____</p>					
<p>4. Location Of Proposed Well</p> <p>County _____</p> <p>Section _____ Township _____ N or S <input type="checkbox"/> <input type="checkbox"/> Range _____ E or W <input type="checkbox"/> <input type="checkbox"/> Principal Meridian _____</p> <p>Distance of well from section lines (section lines are typically not property lines) Ft. from <input type="checkbox"/> N <input type="checkbox"/> S Ft. from <input type="checkbox"/> E <input type="checkbox"/> W</p> <p>For replacement wells only – distance and direction from old well to new well _____ feet _____ direction</p> <p>Well location address (Include City, State, Zip) _____ <input type="checkbox"/> Check if well address is same as in Item 1.</p> <p>Optional: GPS well location information in UTM format You must check GPS unit for required settings as follows:</p> <p>Format must be UTM <input type="checkbox"/> Zone 12 or <input type="checkbox"/> Zone 13 Units must be Meters Easting _____ Datum must be NAD83 Northing _____ Unit must be set to true north Was GPS unit checked for above? <input type="checkbox"/> YES Remember to set Datum to NAD83</p>					
<p>5. Parcel On Which Well Will Be Located (PLEASE ATTACH A CURRENT DEED FOR THE SUBJECT PARCEL)</p> <p>A. Legal Description (may be provided as an attachment): _____ _____ _____</p> <p>B. # of acres in parcel _____ C. Owner _____</p> <p>D. Will this be the only well on this parcel? <input type="checkbox"/> YES <input type="checkbox"/> NO (if no list other wells)</p> <p>E. State Parcel ID# (optional): _____</p>					
<p>6. Use Of Well (check applicable boxes)</p> <p>Attach a detailed description of uses applied for.</p> <p><input type="checkbox"/> Industrial <input type="checkbox"/> Dewatering System <input type="checkbox"/> Municipal <input type="checkbox"/> Geothermal (production or reinjection) <input type="checkbox"/> Irrigation <input type="checkbox"/> Other (describe): _____ <input type="checkbox"/> Commercial</p>					
<p>7. Well Data (proposed)</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Maximum pumping rate _____ gpm</td> <td style="width:50%;">Annual amount to be withdrawn _____ acre-feet</td> </tr> <tr> <td>Total depth _____ feet</td> <td>Aquifer _____</td> </tr> </table>		Maximum pumping rate _____ gpm	Annual amount to be withdrawn _____ acre-feet	Total depth _____ feet	Aquifer _____
Maximum pumping rate _____ gpm	Annual amount to be withdrawn _____ acre-feet				
Total depth _____ feet	Aquifer _____				
<p>8. Land On Which Ground Water Will Be Used</p> <p>Legal Description of Land (may be provided as an attachment): _____ _____</p> <p>(If used for crop irrigation, attach a scaled map that shows irrigated area.)</p> <p>A. # Acres _____ B. Owner _____</p> <p>C. List any other wells or water rights used on this land: _____</p>					
<p>9. Proposed Well Driller License #(optional):</p> <p>10. Sign or Entered Name Of Applicant(s) Or Authorized Agent</p> <p>The making of false statements herein constitutes perjury in the second degree, which is punishable as a class 1 misdemeanor pursuant to C.R.S. 24-4-104 (13)(a). I have read the statements herein, know the contents thereof and state that they are true to my knowledge.</p> <p>Sign or enter name(s) of person(s) submitting application _____ Date (mm/dd/yyyy) _____</p> <p>If signing print name and title _____</p>					
<p>Office Use Only</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">USGS map name _____</td> <td style="width:25%;">DWR map no. _____</td> <td style="width:25%;">Surface elev. _____</td> </tr> </table> <p>Receipt area only _____ _____ _____</p> <p>AQUAMAP WE WR CWCB TOPO MYLAR SB5</p> <p style="text-align: right;">DIV _____ WD _____ BA _____ MD _____</p>		USGS map name _____	DWR map no. _____	Surface elev. _____	
USGS map name _____	DWR map no. _____	Surface elev. _____			

GENERAL PURPOSE WELL PERMIT APPLICATION INSTRUCTIONS

Applications must be computer generated on-line, typewritten or printed in BLACK or BLUE INK. ALL ITEMS in the application must be completed. Incomplete applications may be returned to the applicant for more information. Applications are evaluated in chronological order. Please allow approximately six weeks for processing. This form may be reproduced by photocopying or computer generation. Reproductions must retain margins and print quality of the original form. If filing online see online filing instructions! You may also save, print, scan and email the completed form to: dwrpermitsonline@state.co.us For further information please visit www.water.state.co.us

FEES: This application must be submitted with a \$100 filing fee. Acceptable forms of payment are check or money order, payable to the Colorado Division of Water Resources. Visa, MasterCard or Discover are accepted by phone through our Records Section at 303.866.3581. **Fees are nonrefundable.**

USES: This form (GWS-45) is to be used to apply for commercial, industrial, municipal, irrigation, feed lot, geothermal (see Geothermal Rules for fee requirements), recovery wells, and other uses not otherwise noted in the following list:

RESIDENTIAL use wells – Use of form GWS-44 is required
LIVESTOCK watering on a farm, ranch, range or pasture (not feedlots) – Use form GWS-44
MONITORING/OBSERVATION wells – Use form GWS-46
GRAVEL PITS – Use form GWS-27
REGISTRATION of an existing well – Use form GWS-12 (must have been in use prior to May 8, 1972)
GEOEXCHANGE SYSTEM LOOP FIELDS – Use form GWS-72
REPLACEMENTS OF WELLS FOR THE ABOVE USES

ITEM INSTRUCTIONS: (numbers correspond with those on the front of this form)

1. The applicant is the entity for whom the permit is to be issued. Provide the applicant name and the mailing address where all correspondence will be sent.
2. Check all boxes that apply.
3. Complete all boxes that apply. If the permit is to be issued pursuant to a water court decree or a Designated Basin determination of water right, the case number or determination number must be indicated. If applying to replace or change the use of an existing well, the permit number of the existing well must be indicated.
4. The county, ¼ of the ¼ section designation, section #, township, range, principal meridian, and distances from section lines for the proposed well must be provided. (An option to providing distances from section lines and the ¼ of the ¼ section designation is to provide an accurate GPS location in UTM format. The required GPS unit settings must be as indicated on this form.) Colorado contains two (2) UTM zones. Zone 13 covers most of Colorado. The boundary between Zone 12 and Zone 13 is the 108th Meridian (longitude). West of the 108th Meridian is UTM Zone 12 and east of the 108th Meridian is UTM Zone 13. The 108th Meridian is approximately 57 miles east of the Colorado-Utah state line. On most GPS units, the UTM zone is given as part of the Easting measurement, e.g. 12T0123456. Check the appropriate box for the zone. Provide the property address of the well location if one exists. If it is the same as the mailing address, check the box next to the well location address.
5. **Please attach a current deed for the subject parcel.** Complete all boxes and provide a complete legal description of the parcel of land on which the well will be located. **If filing online please see online filing instructions for how to submit deed and or legal description attachments.**
6. Check all boxes that apply and attach a detailed description of the uses applied for.
7. Complete all boxes.
8. Complete all boxes and provide a legal description of the land areas on which ground water from the proposed well will be used. If agricultural irrigation is a proposed use, provide a map of the land area with proposed irrigated areas accurately drawn, including section numbers and section lines. A list of all other wells or water rights used on the described land must be provided.
9. The well must be constructed by a Colorado licensed well driller, an authorized individual in accordance with the Water Well Construction Rules, 2 CCR 402-2, or under the "private driller" provision as defined in CRS 37-91-102(12). A listing of licensed well drillers/pump installers is available at: <http://water.state.co.us/groundwater/BOE/Pages/LicensedContractors.aspx>
10. The individual signing the application or entering their name and title must be the applicant or an officer of the corporation/company/agency identified as the applicant or their attorney. An authorized agent may also sign the application, if a letter signed by the applicant or their attorney is submitted with the application authorizing that agent to sign or enter their name on the applicant's behalf. If you filled the form out on-line you may save or print, sign, scan and email the form to the Division of Water Resources. Payment must be received via phone, fax or mail prior to processing the application.

IF YOU HAVE ANY QUESTIONS regarding any item on the application form, please call the Division of Water Resources Ground Water Information Desk (303-866-3587), or the nearest Division of Water Resources Field Office located in Greeley (970-352-8712), Pueblo (719-542-3368), Alamosa (719-589-6683), Montrose (970-249-6622), Glenwood Springs (970-945-5665), Steamboat Springs (970-879-0272), or Durango (970-247-1845), or refer to our web site at <http://www.water.state.co.us> for general information, additional forms, and access to state rules or statutes.