

# STATE OF COLORADO

## OFFICE OF THE STATE ENGINEER

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## POLICY 2003-2

### IMPLEMENTATION OF SECTION 37-92-308, C.R.S. (2003) REGARDING SUBSTITUTE WATER SUPPLY PLANS

The following general statement of policy is adopted to explain the State Engineer's implementation of HB 02-1414, HB 03-1001 and SB 03-73 regarding substitute water supply plans.

#### Considerations and Background for Policy

Subsequent to the Supreme Court ruling in Empire Lodge Homeowners v. Moyer, the 2002 and 2003 General Assemblies granted additional authority to the State Engineer that allows limited approval of substitute water supply plans involving out-of-priority diversions. According to section 37-92-308(1)(a), C.R.S. (2003), "There are certain circumstances under which the time required to go through the water court adjudication process can be problematic for some water users. Prior to January 1, 2002, substitute water supply plans had come into common usage for a number of water users, and based on this precedent, it appears desirable to establish additional authority for the State Engineer to approve substitute water supply plans." Substitute water supply plans provide water users a mechanism to replace out-of-priority depletions on an interim basis. This allows temporary changes of use and in the case of permanent changes, the protection of other water rights during litigation involving water change cases and augmentation plans. Approved substitute water supply plans include stringent terms and conditions to ensure that operation of the plans will not injure other water rights.

This statement of policy generally explains the State Engineer's interpretation and implementation of HB 02-1414, HB 03-1001 and SB 03-73 with respect to the State Engineer's review and approval of substitute water supply plans; however, the State Engineer will make the final decision regarding approval of any plan.

#### Policy

- 1) Implementation of this policy hereby revokes Policy 2002-2.

- 2) Requests for substitute water supply plans for providing domestic water within new or proposed residential subdivisions will not be granted because of the potential of the substitute water supply plan not being renewed and a permanent plan for augmentation not being approved by the water court. Under these circumstances, persons purchasing lots and constructing homes could potentially be faced with mandatory curtailment of their water source.
- 3) Requests for substitute water supply plans involving not-nontributary ground water will not be granted because statutes specifically require a judicially approved plan for augmentation prior to the pumping of not-nontributary wells. See section 37-90-137(9)(c)(I), C.R.S. (2003).
- 4) The Proof of Notice required by section 37-92-308(4)(a)(II), C.R.S. (2003) shall be a copy of a certificate of mailing or equivalent by first-class mail from the applicant.
- 5) The notification required by sections 37-92-308(3)(b)(IV), 37-92-308(4)(II), 37-92-308(5)(a)(II) and 37-92-308(6), C.R.S. (2003) shall include a statement that a response to the notice is required to be considered a "party to the application". This response indicating party status must be sent to the State Engineer or his designated agent by first-class mail or by electronic mail. The applicant should state in the notice that a response to the State Engineer must be received within 30 days of notice. All responses to the notice and SWSP must be sent to the State Engineer's Office and the Applicant.
- 6) The Division of Water Resources may act on a request for approval of a substitute water supply plan prior to the expiration of the 30-day comment period, if comments have been received from all opposers or noticed parties. See sections 37-92-308(4)(a)(III) and (5)(a)(III), C.R.S. (2003).
- 7) Section 37-92-308(6), C.R.S. (2003) directs the State Engineer to establish a notification list for each water division to notify interested parties of requests for approval of substitute water supply plans (including emergency approval for augmentation wells):

To be placed on the notification list, parties shall pay a fee of twelve dollars per calendar year, per water division. The notification lists may be posted on the Division of Water Resources' website.

The requestor shall provide copies of the proposed substitute water supply plan to all parties on the list and shall contact the Division of Water Resources for the current notification list at the time of mailing.

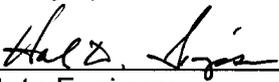
- 8) A hearing shall be held pursuant to 37-92-308(3)(b)(IV), C.R.S. (2003) (aka, SB 03-73), regardless of whether comments are received from any party.
- 9) Only one emergency request pursuant to section 37-92-308(7), C.R.S. (2003) will be allowed per applicant in any twelve-month period, unless the State Engineer specifically allows a subsequent request. Emergency requests are limited to

situations affecting the public health and safety and are not intended to be used for situations including, but not limited to, crop relief, piscatorial or recreational purposes.

- 10) No substitute water supply plan shall be granted pursuant to 37-92-308(5) if stream depletions from out of priority diversions are projected to occur more than five years after diversions begin or if the applicant has sought water court approval of a plan for augmentation or a change of water right for some or all of the same structures or water rights.
- 11) The conversion of a substitute water supply plan applied for under section 37-92-308(5), C.R.S. (2003) to a substitute water supply plan applied for under section 37-92-308(4), C.R.S. (2003) shall not occur without prior approval from the State Engineer.
- 12) The time periods allowed for approvals and renewals of requests submitted under section 37-92-308(4), C.R.S. (2003) shall not be dependent upon the time the water court application has been pending with the water court prior to the request. If the conversion is allowed, the State Engineer will count any years operating under 37-92-308(5) approval towards the annual renewal limits contained in 37-92-308(4).
- 13) Emergency requests for substitute water supply plans under section 37-92-308(7), C.R.S. (2003) shall have the highest priority for evaluation. Every attempt will be made to process emergency requests as soon as possible. Requests submitted under sections 37-92-308(4) and (5), C.R.S. (2003) shall be evaluated chronologically based on the date of submittal to the State Engineer unless directed otherwise by the State Engineer. Evaluations for requests submitted under section 37-92-308(3) shall be pursuant to timeframes established in this section.
- 14) Water from wells decreed in Larimer County District Court Civil Action 11217 shall not be used as a source of replacement supply or substituted water supply in a substitute water supply plan.
- 15) The State Engineer's Office does not have the authority or resources to provide consulting engineering services. Thus, a substitute water supply plan request must be complete upon submittal to the State Engineer. Often, consultation with a professional engineer may be necessary to address the technical and engineering issues involved and to assure that a complete request is prepared. The following items must be addressed when submitting a request for approval of a substitute water supply plan.
  - a) Provide a statement regarding the justification and need. Please cite the subsection of section 37-92-308, C.R.S. (2003) under which the request is being made.
  - b) Show Proof of Notice as required in sections 37-92-308(3)(b)(IV), 37-92-308(4)(a)(II), 37-92-308(5)(a)(II), and 37-92-308(7), C.R.S., (2003), by providing a copy of a certificate of mailing or equivalent by first-class mail from the applicant.

- c) Submit a narrative description summarizing the water resource aspects of the proposed or existing operation including water usage and consumption and a proposed plan for replacing out-of-priority depletions or for change of water right.
- d) Provide an affidavit of ownership or a consent agreement to utilize an existing water right. If leased water is being used, a copy of the agreement between the applicant and the lessor must be submitted.
- e) Provide an engineering report for the substitute water supply plan. The report should include, but is not limited to, all pertinent information regarding the replacement water and its water quality, historical and proposed consumptive uses, return flows, diversion records, aerial photographs to document historical use, well permit numbers, location maps, transit losses and the time, location and amount of stream depletions. The engineering report must be prepared consistent with the "GENERAL GUIDELINES FOR SUBSTITUTE WATER SUPPLY PLANS SUBMITTED TO THE STATE ENGINEER PURSUANT TO SECTION 37-92-308, CRS (2003)" attached to this policy. The guidelines may be updated and amended from time-to-time. To assure that you have the most current version, contact the DWR website at [www.water.state.co.us](http://www.water.state.co.us).
- f) Submit a proposed monthly accounting form for the substitute water supply plan that includes all diversions, stream depletions, and replacement water deliveries. The accounting must be provided to the water commissioner and division engineer on forms and a reporting schedule that is acceptable to them. The accounting form should contain all information necessary for the administration of the plan. The name, mailing address, and phone number of the contact person who is responsible for operation and accounting of this plan must be provided on the accounting form.
- g) All water diverted or used for augmentation in the proposed substitute water supply plan shall be adequately measured to the satisfaction of the division engineer or a designee.
- h) The approval of a substitute water supply plan may require the issuance of a well permit, if applicable. The well permit application process, timelines and fees are not waived under this policy. Consent of adjacent well owners or a hearing may be required prior to issuance of a well permit if another well is located within 600 feet. See section 37-90-137(2)(b)(I), C.R.S. (2003).
- i) An approved substitute water supply plan may be revoked or modified at any time should it be determined that injury to other water rights has or will occur as a result of the approved plan, or if the applicant has violated any term and condition contained in this or any prior plan.

This policy becomes effective immediately and can only be modified or revoked in writing by the State Engineer.

  
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 State Engineer

8/12/03  
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 Date

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## *ATTACHMENT TO POLICY 2003-2*

### **GENERAL GUIDELINES FOR SUBSTITUTE WATER SUPPLY PLANS SUBMITTED TO THE STATE ENGINEER PURSUANT TO SECTION 37-92-308, CRS (2003)**

The Colorado Legislature passed House Bill 02-1414 in 2002 House Bill 03-1001 and Senate Bill 03-073 in 2003 authorizing the State Engineer to approve limited substitute water supply plans. The provisions of this bill are found in Section 37-92-308, C.R.S. (2003). This statute affects all substitute water supply plans submitted to the State Engineer after January 1, 2002, sets fees associated for review (HB 02-1414), provides specific requirements on those wells operating within the South Platter River Basin (SB 03-073), and allows for temporary approval of change of water rights within substitute water supply plans (HB 03-1001). To maintain consistency and to streamline the review process, the State Engineer's Office (SEO) is requesting substitute water supply plan applications submitted pursuant to Section 37-92-308, C.R.S. follow the format presented below, where applicable or as more specifically provided for in 37-92-308 (e.g. 37-92-308(3)). These general evaluation guidelines are provided to assist the applicant in preparing the substitute water supply plan request and are not to be construed as formal policy. Even though most of these guidelines address engineering related issues, there are some that address policy concerns of the State Engineer as well as statutory requirements (Also see revised Policy 2003-?).

#### **PROJECT DESCRIPTION**

1. Provide a statement regarding the need and justification. Please cite the subsection of Section 37-92-308, C.R.S. (2003) under which the request is being made. The statutory fee for a substitute water supply plan request (new or renewal) to be evaluated under 37-92-308, C.R.S. is \$300. South Platter River basin wells that have been operating pursuant to substitute water supply plans approved before 2003, or for augmentation wells, using the procedures and standards set forth in 37-92-308(3), C.R.S., may apply for renewal each year through the calendar year 2005, after which all diversions must cease unless the applicant submits a plan under 37-92-308(4), or must be included in a plan for augmentation approved by a water judge, or must operate under their own priority. A request submitted under 37-92-308(4) must be accompanied by a copy of the water court application with case number. A plan that is submitted pursuant to 37-92-308(5) cannot have depletions exceeding five years. A plan that is to be evaluated pursuant to 37-92-308(7) must address emergency situations only. An

explanation of how the plan addresses a situation that affects “public health or safety” must be included.

2. Show Proof of Notice as required in Section 37-92-308(3)(b)(II) or 37-92-308(5)(a)(II), C.R.S., by providing a copy of a certificate of mailing or equivalent by first-class mail from the applicant or electronic mail from the applicant. Those plans submitted under Section 37-92-308(4)(a)(II) must show Proof of Notice to all parties who have filed a statement of opposition to the plan in water court, or, if the deadline for filing a statement of opposition has not passed, the applicant may provide written notice of the request for approval of the substitute water supply plan to all parties who have subscribed to the substitute water supply plan notification list.
3. A narrative description shall be submitted summarizing the water resource aspects of the proposed or existing operation including water usage and consumption and a proposed plan for replacing out-of-priority depletions or for change of water right.

#### **DEPLETION**

4. **Evaporation:** Gross evaporation (free water surface) shall be calculated based upon evaporation atlases in NOAA Technical Report NWS 33 or more site-specific information if available. Any other estimate should be within 10% of the NOAA estimate. Any credits to offset gross evaporation must be pursuant to state statutes and state engineering policy. The total gross evaporation estimate from NOAA 33 shall be distributed to all months. The monthly distribution for elevations below 6500 feet msl is: Jan-3.0%, Feb-3.5%, Mar-5.5%, Apr-9.0%, May-12.0%, Jun-14.5%, Jul-15.0%, Aug-13.5%, Sep-10.0%, Oct-7.0%, Nov-4.0%, and Dec-3.0%. The monthly distribution for elevations above 6500 feet msl is: Jan-1.0%, Feb-3.0%, Mar-6.0%, Apr-9.0%, May-12.5%, Jun-15.5%, Jul-16.0%, Aug-13.0%, Sep-11.0%, Oct-7.5%, Nov-4.0%, and Dec-1.5%.
5. **Irrigation:** Provide a map showing the proposed lands to be irrigated. Provide information on the types of crops to be irrigated and the method of irrigation. Analysis of monthly consumptive use shall be based upon the modified Blaney-Criddle method or other acceptable methods or determination from previous court decrees for shares in same ditch. Estimates of irrigation efficiencies and ditch conveyance efficiencies shall be based on acceptable engineering references and standards. Need detail of water balance (i.e., historical diversions versus crop irrigation requirement) to determine net stream depletion. Analysis shall show depletions on a monthly basis.
6. **Drinking & Sanitary:** Estimate the number of full time employees, part time employees, and visitors that are expected and the expected demand in gallons per day per person. Describe the expected method of water treatment. Septic/leach fields are assumed to have a consumption of 10% of diversions and municipal systems are assumed to have a consumption of 5% of diversion. Other consumption rates must be supported with engineering documentation. If animals are to be watered, detail the type of animals and the

number of animals. Animal watering is assumed to be 100% consumptive. Analysis should show depletions on a monthly basis.

7. **Remediation:** Describe the method of water treatment. Determine the rate of pumping in gallons/minute and how many minutes per month the wells will be pumped. Determine the percent of depletion using energy balance methods or empirical methods, i.e., manufacturer's estimates, and provide the supporting documentation. Calculate the total monthly consumption. Provide information on how the treated water is disposed.
8. **Industrial/Commercial/Other:** Provide a detailed analysis of all water uses, pumping rates, and estimated depletions for each use on a monthly basis. Provide information on the methods of water disposal for the different uses. Consumption rates must be supported with engineering documentation.
9. **Depletions – Lagged:** The effect of stream depletions from the operation shall be evaluated. It will not be assumed that depletions occur instantaneously unless the well is located within 100 feet from the river or site-specific geologic and hydrologic information warrants this assumption. Generally, timing of depletions may be calculated using Glover techniques [parallel drain theory, stream depletion factor (SDF)], or numeric modeling. Special procedures may be necessary to analyze depletions and injury on intermittent streams. Analysis shall show stream depletions on a monthly basis. Please see 37-92-308(3)(b)(I), C.R.S. for specific requirements (e.g., must use SDF where available to determine lagged depletions) within the South Platte River basin for duration of lagged depletion period. Also, see 37-92-308(3)(c)(II).

### **REPLACEMENT SOURCES**

10. Replacement water to compensate for out-of-priority depletions must be available in the proper quantity, quality, place and time as necessary to prevent injury to vested water rights. All plans submitted must meet this requirement in order to obtain approval from the State Engineer.
11. Plans for replacement generally utilize four primary sources of water to compensate the stream system for depletions. These sources include direct flow water rights, reservoir storage, nontributary water, transbasin water, augmentation wells and recharge wells and basins. The water from these sources may be owned or leased. Water right decrees and other pertinent information regarding the replacement sources shall be included. The applicant shall also provide signed lease agreements including without limitations deeds, share certificates, etc., authorizing use of the proposed replacement sources. Although the substitute water supply plan may be approved for temporary use of leased or nontributary water for the replacement water, the SEO may object to the use of these sources in a proposed decreed plan for augmentation.
12. Nontributary, transbasin, or other consumptive use sources may be used for replacement purposes in a substitute water supply plan provided adequate engineering and supporting

documentation are supplied. Use of nontributary water must also comply with the Statewide Nontributary Ground Water Rules or Denver Basin Rules as applicable. Water from wells decreed in Larimer County District Court Civil Action 11217 shall not be used as a source of replacement supply or substituted water supply in a substitute water supply plan. Lawn irrigation return flow credits may not be acceptable unless established by the water court. Irrigation return flows from the Colorado-Big Thompson Project water cannot be used for replacement purposes. Replacement water must be adequate in amount in duration to cover all post-pumping depletions.

13. Many plans utilize the historical consumptive use associated with irrigation water rights as part of their replacement sources. All or a portion of the land irrigated by the surface water right shall be dried up to provide historical consumptive use replacement credits. The land to be dried up shall be monumented to the satisfaction of the local water commissioner. Maintenance of historical return flows from the former irrigated lands will be required if necessary to prevent injury to other water rights. The timing of return flows may be calculated using Glover techniques [parallel drain theory, stream depletion factor (SDF)], or numeric modeling. Consumptive use replacement water from irrigation water rights will only be available to replace irrigation season depletions unless sufficient water is placed in an acceptable storage vessel for release during the non-irrigation season, or as provided by change of use decree.
14. Analysis of historical consumptive use shall be based upon the modified Blaney-Criddle method or other methods generally accepted in the engineering community for calculating crop evapotranspiration or determination from previous court decrees for the subject water right, if applicable. The historical consumptive use analysis shall be based on a representative study period and the projected yield for the plan year must be adequate to meet augmentation requirements. Any non-use of the water right during a study period shall be included in averaging historical use. All sources of water for irrigation must be considered when determining historical consumptive use. Any occurrence of subirrigation must be documented and considered in the historical use analysis. Documentation of historical irrigation may be based on aerial photographs, sworn affidavits, court decrees, well permit files and water commissioner diversion records. Estimates of irrigation efficiencies, ditch conveyance efficiency, and subirrigation shall be based on acceptable engineering references and standards.
15. Substitute water supply plans may use reservoir water released to the stream at the proper time and in the proper amount. Reservoir storage and releases are generally required to offset winter depletions. An analysis of the consumptive use of the reservoir water (if reservoir water is not decreed for augmentation purposes) shall be required. Dry-up of irrigated lands will be required if the only source of water available was the reservoir water used for irrigation.
16. An excavation that intercepts groundwater is considered a well; thus, the excavation may not be used for water storage unless it meets the standards outlined in the State Engineer's Guidelines for Lining Criteria for Gravel Pits.

17. It may be possible to introduce water into recharge sites located at desirable distances from the stream using the sources discussed previously or water diverted when there is a free river. Water introduced into the recharge site will migrate to the stream over time. The rate of movement is a function of the transmissivity and specific yield of the alluvial material. The accretions to the stream from this recharge may also be calculated using the Glover techniques described above or by any other method generally accepted in the engineering community. With properly located recharge sites, recharge water could reach the stream during all months of the year and would be creditable against stream depletions. The State Engineer must specifically approve the use of these recharge plans unless the water court has previously approved the site.
18. Transportation loss charges, if applicable, will be assigned for any replacement source of water determined by the water commissioner or the division engineer.

### **OPERATION OF PLAN**

19. Each plan shall include a detailed accounting sheet providing monthly estimates of the following items including, but not limited to, all consumptive uses, total lagged depletions impacting the river during the plan year including depletions (caused by plan-year pumping and prior-year pumping), reservoir or replacement source releases, physical flow available at the surface water right headgate, historical consumptive use credit estimate, and transportation loss charges. All items in this list may not be applicable to every proposal. Likewise, certain proposals may require additional accounting. A draft accounting form shall be submitted to the State Engineer for approval. The substitute water supply plan shall provide the name, address and telephone number of the contact person who will be responsible for the accounting and operation of this plan.
20. Accounting and reporting of depletions and replacements shall be made monthly to the division engineer and water commissioner. More frequent accounting may be required by the division engineer. Reservoir releases may also be aggregated at the division engineer's or water commissioner's discretion for maximum benefit of the stream system.
21. Adequate flow measuring devices and measurements may be required to implement the plan. Measurements may include, but shall not be limited to, all diversions from the well(s), water released from reservoirs or other sources for replacement water, and the diversion and turn back of ditch diversions.
22. If the subject plan requires a well permit, a plan will not be approved unless the applicant has also applied for the well permit. A well permit application, with the applicable filing fee, must be submitted with the substitute water supply plan proposal. Additionally, if another well is located within 600 feet of the proposed well, consent of the well owner(s) must be obtained or a hearing will be held before the State Engineer to determine if a well permit can be issued.

23. Evidence that water from the well has been put to beneficial use prior to the expiration date of the permit must be submitted prior to the expiration date of the permit on a form prescribed by the State Engineer. A field inspection may be required by the division engineer's office to assist the water court in determining the adequacy of any water right claimed for this structure regardless of the amount of water claimed on the Statement of Beneficial Use form. The Statement of Beneficial Use must be submitted prior to the expiration date of the permit in order for the permit to remain valid.
24. Substitute water supply plans may be revoked or modified at any time should it be determined that injury to other vested water rights has occurred or will occur as a result of the plan. A copy of the approved substitute water supply plan must be recorded with the county clerk and recorder.
25. These guidelines shall be reviewed, and updated as necessary.