




State Engineer's Office

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REVISED INTERIM POLICY MEMO

TO: State Engineer's Office
FROM: Patrick T. Tyrrell, State Engineer 
DATE: April 26, 2004
SUBJECT: State Engineer's Office permitting requirements for water produced during the recovery of coal bed methane (CBNG)

THIS POLICY SUPERSEDES THE INTERIM POLICY MEMO DATED AUGUST 2, 2002.

THIS POLICY APPLIES TO BY-PRODUCT WATER DEVELOPED BY CBNG WELLS ONLY!! THE 1978 POLICY REGARDING 10 ACRE-FEET RESERVOIRS ASSOCIATED WITH GROUNDWATER ONLY DOES NOT APPLY TO CBNG WELLS!!

Prior to drilling a water well for the purpose of extracting methane gas from coal beds, a ground water (well) permit, using form U.W.5, must be obtained from the State Engineer. The beneficial use of this water, as stated on the application form, is water produced in production of coal bed methane gas. Unless specified in the well permit, there is no other beneficial use of this produced water authorized by the issuance of the well permit.

In accordance with § 41-3-301, W.S., 1977, as amended, a reservoir permit is required from the State Engineer for any impoundment that stores, for beneficial purposes, the un-appropriated waters of the state of Wyoming. Unless specified in the ground water permit, water produced in the production of coal bed methane gas has no other implied use and is considered to be un-appropriated waters of the state of Wyoming.

GROUND WATER

If the CBNG-produced water will be discharged and not used for any other beneficial purposes, no further ground water permitting is required.

If the CBNG-produced water will be used for any purposes other than coal bed methane production, these uses must be specified in the well application at the time of filing. If the CBNG-produced water will be stored in some type of impoundment, Surface Water reservoir filing procedures must be followed unless there will be no other beneficial use of the water and the impoundment is located off the channel of a

natural water course. Under these specific conditions, the Wyoming Oil and Gas Conservation Commission rules will apply.

SURFACE WATER

If an impoundment will be used to store CBNG-produced water for additional beneficial uses, a reservoir permit must be obtained from the State Engineer prior to commencement of construction of the impoundment.

The reservoir permitting process for on channel, CBNG-produced water impoundments falls into two general categories:

1. Impoundments with a capacity of twenty (20) acre-feet or less and with a dam height of twenty (20) feet or less.
2. Impoundments with a capacity in excess of twenty (20) acre-feet or with a dam height exceeding twenty (20) feet.

The storage of CBNG produced water is recognized as a beneficial use.

FILING METHODS

METHOD A: For use when CBNG water storage is the sole use and the operator/producer is the applicant.

Reservoir applications filed under these procedures will be limited to a life of fifteen (15) years or until the facility ceases to receive CBNG water discharges, whichever is sooner, and will carry a mandatory breach limitation to occur upon cancellation of the permit.

For impoundments that fall into category (1), Form SW-CBNG should be used and it need not be accompanied by a USGS Quadrangle map.

For impoundments that fall into category (2), the SW-3 application form must be used with a beneficial use of CBNG water storage and the application must be accompanied by a certified, blackline, mylar or linen map. The map may be certified by either a Wyoming -licensed professional engineer or land surveyor unless the impoundment falls under the auspices of the Safety of Dams Law (dam height greater than 20 feet or storage capacity of 50 acres-feet or more, in which case, the map must be certified by a Wyoming-licensed professional engineer. This certified map must be prepared in accordance with the policies established by the State Engineer's Office.

METHOD B: When the reservoir is intended to remain after storage of CBNG water ceases and the where the underlying landowner is the permit applicant or co-applicant.

For impoundments that fall into category (1), the Special Application filing procedures may be used which allow for the use of a USGS

Quadrangle map to serve as the permit map to accompany the SW-3 and SW-3A application forms. If a stock reservoir will be constructed, the SW-4 application form should be used. A stock reservoir filing using the SW-4 application form need not be accompanied by a USGS Quadrangle map.

For impoundments that fall into category (2), the SW-3 application form must be used and the application must be accompanied by a certified, blackline, mylar or linen map. The map may be certified by either a Wyoming-licensed professional engineer or land surveyor unless the impoundment falls under the auspices of the Safety of Dams Law (dam height greater than 20 feet or storage capacity of 50 acre-feet or more), in which case, the map must be certified by a Wyoming-licensed professional engineer. This certified map must be prepared in accordance with the policies established by the State Engineer's Office.

ON-CHANNEL IMPOUNDMENTS

All on-channel impoundments must have a storage permit from the State Engineer prior to commencement of any construction (or modification/improvement of an existing reservoir) of the reservoir. An existing reservoir to be used to store CBNG-produced water, without a State Engineer permit, has no standing and, as such, will be treated as if it doesn't exist and will be subject to all requirements of a new, properly-authorized CBNG reservoir constructed within the law. Any unpermitted, on-channel impoundment is subject to breach at all times.

Any new on-channel impoundment that will be built to store CBNG-produced water must be equipped with a controllable, low-level outlet pipe to allow for proper regulation. The minimum size of the low-level outlet pipe is 12 inches in diameter. A larger outlet may be required if conditions warrant. Larger drainages may require larger outlets. The potential for a call for priority regulation by downstream senior appropriators may also require the installation of a larger outlet pipe. The operator should contact the State Engineer's Office in this regard.

Any new on-channel impoundment that will be built to store CBNG-produced water may not capture natural runoff from the drainage on which it is located unless said runoff exceeds the average annual peak runoff event. To accomplish this, the on-channel facility must be equipped with a self-regulating runoff by-pass facility that will prevent flows up to and including the average annual peak runoff event from being stored. If a runoff event exceeds that of the average annual peak runoff event, that portion of the runoff in excess of the average annual peak runoff event may be stored in the impoundment but must be released to satisfy downstream, senior appropriators should it be required under priority regulation.

In lieu of the requirement for a self-regulating runoff by-pass facility, an application for a permit for an on-channel impoundment must be accompanied by a water administration plan that can demonstrate that the proposed reservoir will not negatively impact the drainage upon which the reservoir is proposed to be built. The water administration plan must either show how runoff (either the average annual peak or some lesser amount if approved by the SEO) will be made available to the drainage downstream of the reservoir irrespective of existing, downstream development (reservoirs) or channel conditions, or how in some other fashion senior, downstream water rights will be satisfied.

Any existing, permitted on-channel reservoir will not be subject to the above stipulations.

If an existing, permitted on-channel reservoir is to be enlarged to provide additional storage of coal bed methane water, a self-regulating runoff by-pass facility must be installed or a water administration plan filed. The by-pass facility and water administration plan must meet the same requirements listed above.

If the height of the dam on an existing, permitted on-channel reservoir is to be increased to provide additional freeboard, an uncontrolled primary spillway must be installed with its invert elevation at the historic high water level such as to allow inflow above the historic volume to pass through the reservoir. This primary spillway shall not be less than 12-inches in diameter and must meet the same requirements listed above for a self-regulating runoff bypass facility.

OFF-CHANNEL IMPOUNDMENTS

An off-channel impoundment may be built to store CBNG-produced water. The off-channel impoundment should be positioned so the potential to store surface runoff is minimal. By-pass facilities or berms may be used to preclude surface runoff from entering the pond. Off-channel impoundments that store no surface runoff (direct precipitation is considered to be negligible) need not be designed with an outlet. The operator must be aware that any runoff that is impounded in the reservoir may have to be passed to downstream, senior appropriators in the event of a call for priority regulation.

BENEFICIAL USE OF CBNG-PRODUCED WATER

The beneficial use of CBNG-produced water may be classified into two (2) categories:

1. Inactive use of CBNG-produced water due to evaporation and/or infiltration.
2. Active use of CBNG-produced water by discharging from the

reservoir such as land application or in a leach field.

CBNG-produced water use under category (1) needs no further discussion.

For use of CBNG-produced water under category (2) the operator must specify the points of land application on the map which accompanies the reservoir application. This is accomplished by the use of X's in the appropriate 40-acre subdivisions where water will be applied. The pipeline/nozzle system should be shown in sufficient detail so it is clear where the water will be applied. No water right will be established at the points of land application of CBNG-produced water.

Due to the fact that CBNG-produced water is not native to the drainage, a CBNG-produced water storage reservoir will be allowed multiple or continuous fills from CBNG sources only. The following limitations will be placed on any reservoir permit where water will be evacuated for CBNG-produced water use:

Nothing herein is intended to create a water right that attaches to the land application or leach field points of use. The points of land application/leach field are shown for informational purposes only.

For most of the year, this drainage has flow as a result of CBNG wells discharging in the area. Therefore, if there is not natural flow available, this water is not subject to a downstream priority call for regulation and, as such, the reservoir IS NOT subject to the one-fill rule.

BREACHING REQUIREMENTS

Dams designed to hold CBNG-produced water and natural runoff will be conditioned to allow breaching (or reduction in size) upon cessation of receiving CBNG-produced water. Contingent requirements are as follows:

1. If the structure is situated off-channel and captures no natural runoff, breaching may not be required.
2. On-channel structures may remain if down sized to stock pond capacity and dam height if the landowner's written consent is obtained.
3. All other structures are subject to a breaching requirement:
 - a. The "permissive" requirement, which would apply in most cases, is worded as follows: This reservoir stores only water that is produced as a by-product of coal bed methane production. When coal bed methane

production ceases, the State Engineer may require the owner to breach the dam or reclaim the pit to allow for proper water administration.

- b. The "mandatory" requirement will be used in drainages and locations where the Superintendent of the water division in which the reservoir is located has predicted administrative problems. That wording is as follows: This reservoir stores only water that is produced as a by-product of coal bed methane production. When coal bed methane production ceases, the owner of this reservoir shall breach the dam or reclaim the pit to allow for proper water administration.

The above requirements are for ponds holding only CBNG-produced water. If stock, fish and wildlife, fish propagation or other uses are included, some consideration will be given to maintaining those storage capacities post-CBNG. Landowner consent must be obtained to leave these reservoirs with the concurrence of the Superintendent. All landowner consents to leave CBNG reservoirs in place must include language committing the landowner to proper long-term maintenance of the structure.

RESERVOIR OWNERSHIP

LANDOWNER: It is acceptable to file an application for a CBNG reservoir in the name of the landowner. If no agent has been listed, the landowner will receive all correspondence regarding the application and the reservoir.

OPERATOR/PRODUCER: It is acceptable to file an application for a CBNG reservoir in the name of the operator/producer. The operator/producer must submit a certification supplying the name and address of the landowner on which the reservoir will be constructed. The certification must also certify that the operator/producer has contacted the landowner and made them aware that they intend to construct the reservoir on lands owned by the landowner. Applications filed in this manner will be issued with mandatory breach limitations to occur after CBNG water production ceases. Dam site reclamation may also be required. Once approved, a copy of the permit will be sent to the landowner as well as the operator/producer. The operator/producer will be responsible for all actions regarding the application, permit, and reservoir.

JOINT APPLICANTS: The operator/producer and the landowner may file jointly. Both parties will then be contacted about the application unless one party is designated as the agent to receive and respond to inquiries about the application during processing or the reservoir after construction. Both parties will then be responsible for inquiries about the application, permit, or reservoir. Mandatory

breach limitations will be placed on the permit unless the landowner has indicated their desire to retain the reservoir after CBNG water production is complete.

These guidelines are the State Engineer's Office requirements for dealing with CBNG-produced water. The CBNG operators should be advised that they must contact the Wyoming Oil and Gas Conservation Commission and the Department of Environmental Quality/Water Quality Division for their requirements concerning water produced from the development of coal bed methane.