Water and Energy in Wyoming:
Using Wyoming's "Temporary Use" Statute W.S. § 41-3-110

Association of Western State Engineers
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Why is this statute getting so much attention these days?

- The recent Niobrara oil play needs water for drilling and completion. To the extent it is occurring in areas with limited water resources, temporary water use agreements make the water available.
- Temporary water use agreements allow oil and gas drilling operation to acquire needed water from other sources, like irrigation wells or from reservoirs, on a willing-buyer, willing-seller basis.
- W.S. § 41-3-110 contains the only language under which a temporary "change in use" can occur.
- Wyoming has no pure water leasing statute.
- Existing laws allowing "exchanges" (W.S. § 41-3-106) or "rotation" of water uses (W.S. § 41-3-612) are mainly just changes in place of use.

The Operable Language of W.S. § 41-3-110:

- (a) Any person shall have the right to acquire by purchase, gift or lease the right to the use of water which may be embraced in any adjudicated or valid unadjudicated water right, or any portion thereof, for a period of not to exceed two (2) years, for highway construction or repair, railroad roadbed construction or repair, drilling and producing operations, or other temporary purposes, ... and further provided, that any temporary transfer shall be allowed only if no other appropriator is injured thereby. (emphasis added)

More Language in W.S. § 41-3-110:

- (b) Before any right to such use shall become operative, an application must be made in writing on a form provided or designated by the state engineer, with a copy of any conveyance or agreement attached, and it shall be filed in the office of the state engineer for his ratification and approval. Upon approval by the state engineer, an order authorizing such use and designating the method, place, and period of use may be entered. No loss, abandonment or impairment of such water rights shall occur or attach as a result of such change or use, except as provided by said conveyance or agreement and order of the state engineer, and upon termination of the temporary diversion and use, as stated in the order, any affected right to the use of water shall automatically be reinvested with all the rights, privileges and uses, and purposes theretofore held and enjoyed.

And Still More in W.S. § 41-3-110...

- (c) *Only that portion of a water right so acquired which has been consumptively used under the historical use made of the water right, may be diverted by a temporary user*. In determining the consumptive use of water rights for the direct use of the natural unstored flow of any stream for irrigation purposes, the return flow from those rights shall be presumed to be fifty percent (50%). In those situations where an assumption of fifty percent (50%) return flow would be significantly in error, the state engineer shall have the prerogative of making a determination of the actual amount of return flow, and the amount of water which can be diverted for the temporary use provided herein shall be adjusted accordingly. *The actual historic return flow, or the assumed return flow of fifty percent (50%) will be left in the stream for the use of downstream appropriators*. The foregoing formula and procedure for the determination of consumptive use and return flow shall be limited to this section and shall have no application to any other statute of the state of Wyoming. Nothing herein contained shall be treated or construed as changing the prior use of water held by said owner or owners and as provided by the laws of the state of Wyoming. (emphasis added)

So, what types of uses have we seen?

- From January 1, 1997 through July 31, 2011 statewide:

Agricultural	**13**
Domestic	**22**
Dust Control	**35**
Flow-through	**4**
Ground Water Recharge	**5**
Industrial	**204**
Irrigation	**292**
Municipal	**95**
***Oil and Gas**	***350***
Pipeline Construction	**99**
***Railroad**	**14**
***Road Construction**	**149**
Snow making	**1**
Stock	**38**
***Highway Construction**	***650***
TOTAL	**1,971**

* - Uses specifically listed in statute make up 59% of temporaries issued

Why are we concerned about groundwater in SE Wyoming?

- Historically, ground water has been important, but a difficult resource to manage. See, *Lawrence J. Wolfe and Jennifer Hager, Wyoming's Groundwater Laws: Quantity and Quality Regulation*, 24 Land & Water L. Rev. 39 (1989)
- Recent Niobrara shale-related development is occurring in areas already impacted by high agricultural use – including the state's three ground water control areas
- We know the drilling will occur, so a goal is to allow it to move forward without added stress on the ground water resource.

Obtaining a reliable water supply

- How can we provide water for temporary uses - such as oil and gas-related activities - but not increase overall withdrawals from the groundwater resource (that is, how can we minimize impact to the groundwater resource, protect other appropriators, and meet the needs of the oil and gas play)?

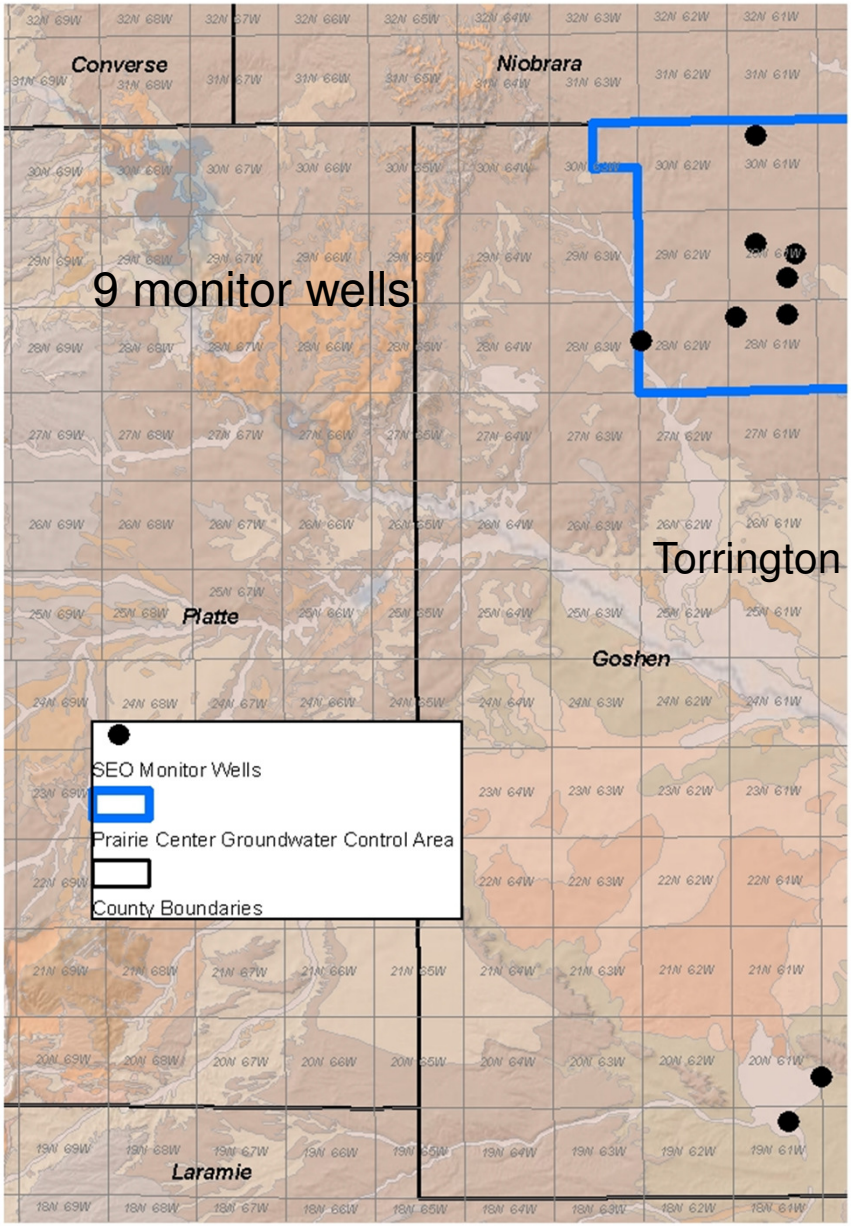
Hydrogeologic Setting

- The hydrogeologic setting is similar in Laramie, Goshen and Platte Counties.
  - Quaternary Alluvium and Terrace deposits
  - High Plains Aquifer system
    - Ogallala Formation
    - Arikaree Formation
    - White River (Brule and Chadron) Formation
  - Lance Formation

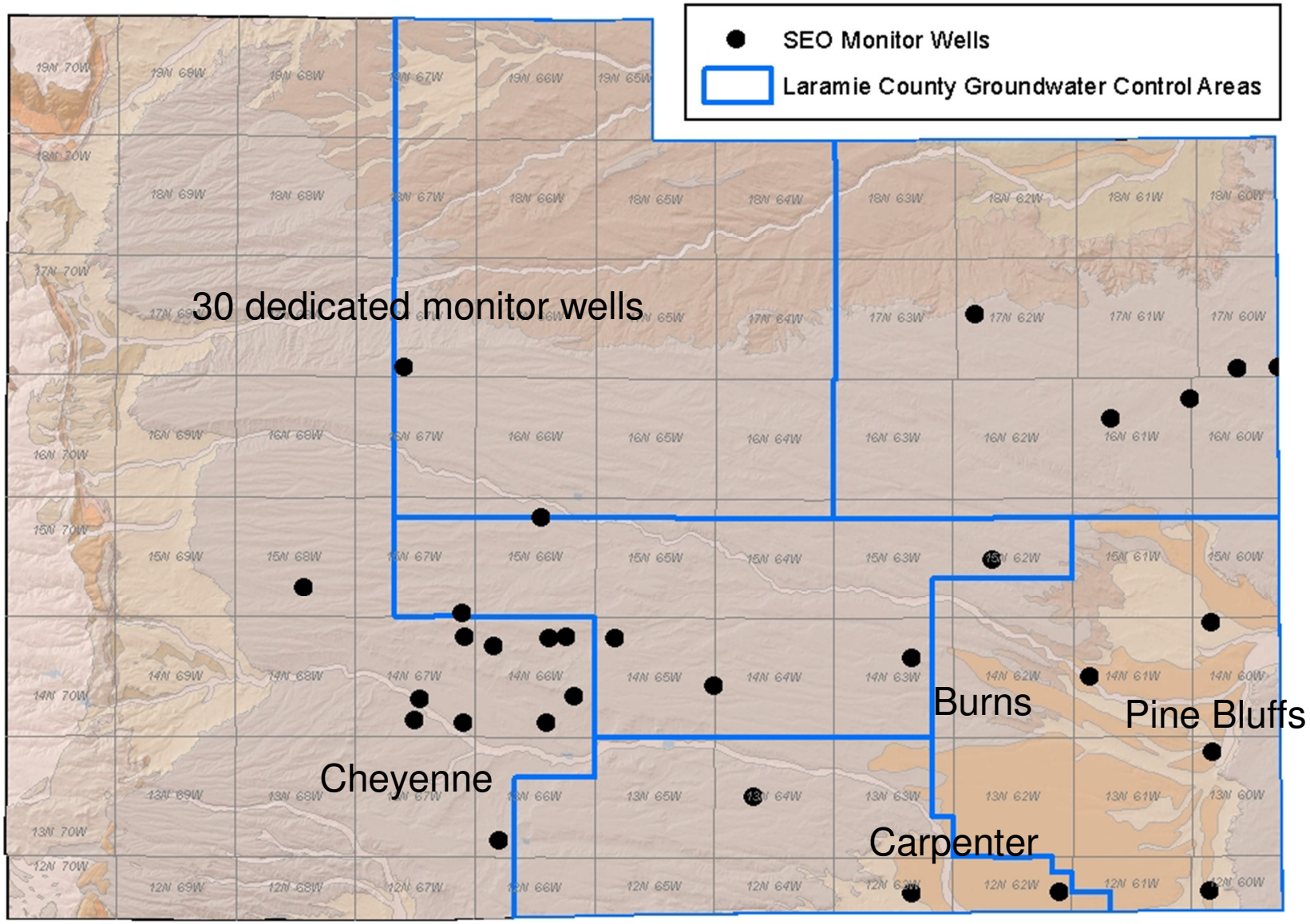
Groundwater Control Areas

- Niobrara Shale play is located in an area that includes WY's only three groundwater control areas.
  1. **Prairie Center Control Area** (~northeast 1/8 of Goshen County; established December 2, 1977)
  2. **Laramie County Control Area** (~ eastern 2/3's of Laramie County; established September 2, 1981)
  3. **Platte County Control Area** (~mid ½ of Platte County; established February 1, 1982)

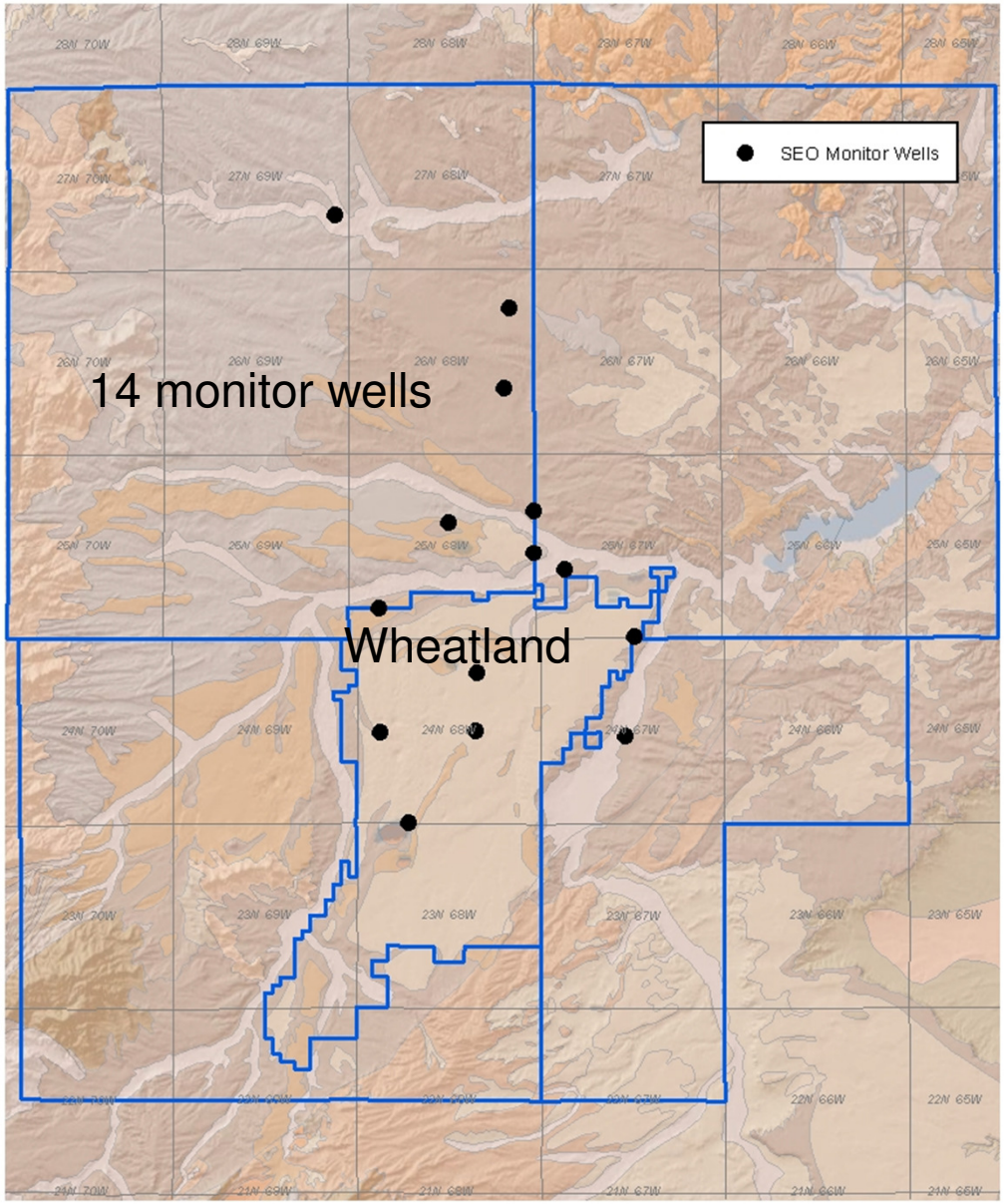
Prairie Center Groundwater Control Area



Laramie County



Platte County Groundwater Control Area



Control Areas (Continued)

- Under W.S. § 41-3-912, the Board of Control may designate a control area for the following reasons:
  - Use of groundwater is approaching a use equal to the current recharge rate;
  - Groundwater levels are declining or have declined excessively;
  - Conflicts are occurring or are foreseeable between water users;
  - The waste of water is occurring or may occur;
  - Other conditions exist or may arise that require regulation for the protection of the public interest.

Options

- Enter into a **Temporary Water Use Agreement** with an existing appropriator
- Submit a **new application** (application will be subject to the Control Area processes outlined in W.S. § 41-3-932 if in a control area and will be reviewed by the Advisory Board who will then provide a recommendation to the State Engineer)
- **Buy an active existing water right** and petition the BOC or State Engineer for a change in use under W.S. § 41-3-104

TEMPORARY OIL & GAS WATER

-New permits - Primarily issued in areas where resource competition is less, and water is more available.

-Temporary Use Agreements – Primarily used where supplies are tighter, and water is less available.

Policy Memos & Guidance

- **February 12, 2010** Policy Memorandum: Issuance of Temporary Use Agreements (TUAs) in Ground Water Control Areas (revised November 1, 2010)
- **July 28, 2010** Policy Memorandum: Control Area Advisory Board Review for Miscellaneous Use Applications in Ground Water Control Areas
- **August 2, 2010** Guidance: OBTAINING TEMPORARY WATER SUPPLIES
- **September 23, 2010** Policy Memorandum: Issuance of Temporary Water Use Agreements (TWUAs) Outside the Ground Water Control Areas

http://seo.state.wy.us/

WATER AVAILABLE UNDER TWUAS IN LARAMIE COUNTY

As of July 1, 2011,

74 Temporary Water Use Agreements Totalling 3,978 Acre-feet available for sale

Lands removed from irrigation: ~3,000 Acres

Total sold under these agreements: 371 Acre-feet

(of which about 217 AF are reported as export)

So, only about one in ten gallons of water available under temporary use agreements has actually been sold

Industry sources indicate approximately 12 – 15 acre-feet (3.9-4.9 million gallons) of water are needed for drilling and completion of Niobrara oil wells.

Fun Math

- Assume One Truck = 5,000 gal (close)
- One AF = 325,800 gal = 65 Trucks
- A 130-acre pivot can sell 130 AF (assumed) in one water year (could be more, depending on use)
- 130 AF x 65 Trucks per AF = 8,450 Truckloads off your field that year!
- That's over 42 million gallons

Interesting Export Implications

W.S. 41-3-115 (b) None of the water of the state either surface or underground may be appropriated, stored or diverted for use outside of the state or for use as a medium of transportation of mineral, chemical or other products to another state without the specific prior approval of the legislature. Provided, however, neither approval by the legislature nor compliance with the application procedures under subsections (m) through (r) of this section shall be required for **appropriations** that will transfer or use outside the state less than one thousand (1,000) acre-feet of water per year.

So, is it 1,000 AF per well? Per reservoir? Per plan of development?

Challenges

- The SEO has been challenged for not issuing new permits for Oil and Gas drilling water on two applications in the Laramie County Control Area
- Two appeals of SE endorsements are ongoing – looks like a "public interest" test
- All but one of half a dozen new applications for O&G water have been recommended for denial by the local Control Area Advisory Board
- The State Engineer views such new uses as "temporary," given the nature of O&G drilling and exploration
- Laramie County is also now home to the "Ogallala Aquifer Initiative," and NRCS EQIP program intended to buy and retire ground water irrigation rights (their intent is to retire 3,000 acres from irrigation to reduce stress on the aquifer). Obviously, these groups are against issuance of new permits for O&G drilling.
- Some municipalities are also interested in selling water – even though they are under their own conservation restrictions.
- What happens if this new use is not managed wisely? Remember, these Control Areas exist because GW levels are already declining….
  - Will the O&G interests successfully argue they cannot be treated differently?
  - Will the Control Areas be compromised if additional water well drilling is allowed or cannot be stopped?

THANK YOU!

For additional information, please call the State Engineer's Office at (307)777-6150