Additional Information and Concerns over
Coalbed Methane Development in the Powder River Basin

What Are The Facts?

- **Who will coal bed methane gas development affect?** In some way everyone in the Powder River Basin, including the citizens in Sheridan, Johnson and Campbell Counties. Methane gas developers do not care if you live in the cities of Sheridan, Buffalo or Gillette or the surrounding urban and rural areas. If there is methane gas underneath your surface they may develop on you.

- Wyoming coal bed methane gas development from shallow wells requires removal of large quantities of water from Wyoming's ground water.

- **80% of this state's residents** are dependent on groundwater for drinking water, and your state officials are allowing it to be pumped on to the surface.

- **What is the discharged water's quality?** Initially the water quality WAS NOT meeting the Wyoming DEQ's water quality standards. It was tested and contained higher levels of pollutants like Arsenic, Iron, Barium and Manganese than previously expected. At the initiative of industry and the state, the Environmental Quality Council removed the human health criteria for these metals from selected waterways flowing through CBM development areas. Essentially, with former Governor Geringer's approval, Wyoming's water was down graded to accommodate Industry profit and your state officials are allowing it to be pumped and dumped into huge waste water impoundments that often leak into springs, and riparian areas, and eventually into our waterways. |While coalbed methane produced water is suitable for domestic and stock use, it is toxic to plants and crops. Methane produced water can come from as deep as 700 feet below the surface, and generally contains high concentrations of dissolved salts, making it unsuitable for irrigation. The ratio of dissolved salts (referred to as the sodium absorption ratio, or SAR) of methane water is 10 to 20 times the level at which soil and plant productivity declines and **3 to 4 times the level native plants and most crops can tolerate.** Soil irrigated with this water will accumulate these salts, which destroy soil structure and inhibit water absorption by plants.

- To View Dr. Jim Bauder's Analysis and Advice on CBM Water Impacts to Soil and Vegetation go to **http://waterquality.montana.edu/docs/methane/cbmfaq.shtml**

- Much of the discharge water is classified by ****Jim Bauder, Montana State University Soil and Water Quality Specialist Bozeman, MT. As **HIGHLY UNSUITABLE FOR LAWN WATERING AND IRRIGATION.**

- How much water? The average production of one CBM well is 12 gallons per minute (gpm).* How much water is that? That is 17,280 gallons per day for ONE well or 412 barrels of water. How much water is that per year? 6,307,200 gallons per year from ONE well or 15,017,142 barrels of water per year. Proposed number of wells to be drilled? 50,000 over the next decade and up to 120,000 over the next 20 years.

82 methane gas wells flowing 12 gallons of water per minute = **984 gallons per minute**.

984 gallons per minute X 60 minutes = **59,040 gallons per hour**.

59,040 gallons per hour X 24 hours = **1,416,960 gallons of water per day.**

These 82 wells would fill the dimensions of a football field 10 feet deep in just 57 hours.

- With an estimated 30,000 wells expected to go online you can do some multiplication and see that it is a huge amount of water to put on the SURFACE of the Wyoming landscape. This discharge is being put into 'dry draws' which causes soil erosion and eventually much of this water ends up in our creeks and streams.

- **Where will these wells be located and how many will there be?** The State expects development to be somewhere around 100,000 wells. Current spacing has wells on every 80 acres, with multiple wells per site. There can be as many as 1 to 3 wells or more per site*** and don't forget each well will be pumping water to the tune of 12gpm to 100gpm per minute. **That is 17,280 to 144,000 gallons per day.**

- **The short term, boom bust methane gas development will affect and most likely permanently change the Wyoming's open space landscapes, economy, lifestyles, quality of living, water resources, and wildlife resources.** Need proof? Take a short drive on State Highway 14/16 between Sheridan, Buffalo and Gillette, WY. Just before Spotted Horse drive S.A. Creek Road. You can't miss the wells/development and metering stations/compressors. Want to see development in Johnson County drive Schoonover Road. In Sheridan drive Lower Prairie Dog Road or Beatty Gulch. What you see is what you will get in your area soon.