

Experts -- fracking depletes water supply

Bobby Magill, Fort Collins Coloradoan, 2-24-12

When water is used for fracking, it's used to extinction.

"It's taken out of the hydrological cycle, never used again," Phillip Doe, a former environmental compliance officer for the U.S. Bureau of Reclamation, said Thursday. "When they say 5 million gallons for a frack, they're talking about 5 million gallons that will never see light again, and that's if they're lucky."

Speaking during a League of Women Voters Cross Currents forum on hydraulic fracturing, or "fracking," for oil and gas drilling, Doe said one of the biggest challenges facing the Front Range today is the amount of water used for drilling for oil and natural gas. That's because water used for agriculture and most other uses is returned into the hydrological cycle and used again.

But most water used for fracking is not.

Fracking is a technology used by the energy industry to fracture underground rock formations as a way to stimulate the flow of oil or natural gas during the well drilling process.

Between 1 million and 5 million gallons of water mixed with sand and toxic chemicals are injected thousands of feet into the ground, a process environmentalists and some residents of oil fields worry may contaminate ground water.

Fracking is a growing concern because oil and gas development is moving closer to homes on the Front Range. The number of wells in northeast Colorado that are fracked has increased in the past few years because of the rush to explore and drill the Niobrara shale.

"The Niobrara does underlie ... many states," said Tisha Schuller, CEO of the Colorado Oil and Gas Association. "It's not viable for production in many areas. The extent of it being viable for production has only been proven in Weld County."

But though Doe, representing an environmental group called Be the Change USA, said water availability for energy development in Northern Colorado is a growing concern, Schuller said the amount of water used for fracking is no greater than the water used for making snow at ski resorts.

Regardless how much water is used for oil drilling, water-consumptive oil and gas development is necessary to maintain the kind of society Americans demand to live in, she said.

"As a culture, energy use in all its forms is the cornerstone of our culture," Schuller said. "If we're going to be a society that consumes energy, we do need to contemplate, from where will I get my energy? How is water used to get it to me?"

Doe said getting water to the Front Range for oil development is destroying the Colorado River because any additional water for Front Range development has to come from either the Colorado River drainage west of the Continental Divide or from agricultural producers who would have to fallow their land to provide water for other uses.

"We use about 16 million acre-feet of water per year in this state, but we use it over and over again," Doe said.

"Our rivers are over-appropriated now. We don't have any more. When we're out of water, we're going to have to take it from agriculture. Is this the decision we want to make as a state?"

Schuller, asked about future oil development in Larimer County, said the oil development here remains in the exploratory phase and companies don't know yet if there is viable oil or natural gas to be drilled.

"This is an unfolding chapter," she said. "Nobody knows what the outcome's going to be. There have been a lot of dry holes."

Answers about Larimer County's oil and gas future are likely to come within about two years, she said.

When asked about the potential for earthquakes being caused by fracking or injecting oil and gas wastewater into underground disposal wells, Schuller said small quakes have occurred in Ohio, Arkansas and at the Rocky Mountain Arsenal in Denver. But the risk isn't much to worry about, she said.

"Even if we assume they are caused by a disposal well, we know there's the potential (for earthquakes), but we also know it's small," she said. "When you shut in the wells, the earthquakes stop."

She said fracking involves many tiny "microseismic" events, but it has little effect on the surface.

Fracking is a suspect in causing small earthquakes in southern Colorado and northern New Mexico because existing underground fissures there may be affected by oil and gas drilling, said Mike Chiropolos of Western Resource Advocates in Boulder.

"It's something we should be concerned about," he said.