SENATE NATURAL RESOURCES
Exhibit No. 4
Date 3/30/15
Bill No. HB 519

Senator Sales and Members of the Natural Resources Committee –

I am writing this letter due to the fact that pre-existing obligations will prevent me from attending Monday's hearing on HB 519. I wanted to share my family's story as I strongly believe our example will shed some light on the potential consequences the bill stands to impose on future homeowners throughout the state with its proposed re-establishment of the rule that allows for exempt well development in planned subdivisions.

On September 22, 2014 my daughter was born. The night before her birth, the night that my partner needed to shower with the antiseptic soap provided by the surgeon for her c-section, we ran out of water. We spent that special night we had plans to finish preparing our house for the newest member of our family in a hotel. Our water well had officially dried out this past summer and my family of four (now 5) was entirely reliant on water deliveries to sustain our household with what we needed to bathe and cook. At times, things got so bad that had to resort to not showering or flushing the toilet for days because we were waiting on a delivery, which we needed several times a month for $150 a visit.

In 2008, my partner purchased our home for over $300,000. Every home in our subdivision had its own private residential water well. For the first couple of years, the well worked fine. In 2010, the well started to go, we'd get water in the house but if we watered our grass, we'd run out and have to wait hours for recharge to be sufficient to wash dishes, take showers or flush the toilet. It was kind of like watching a slow moving train collision as we observed new wells get dug in existing lots for years before we were forced to purchase one ourselves. When we went to go finance the $20,000 we needed for a well, we discovered that our home had depreciated by about 15% or almost $50,000 with comparables in our area and neighborhood averaging similar drops, a value that doesn't even include the added $20,000 expense of the well. The end result was we couldn't get the loan due to poor margin between the value of our home and the loan amount. It wasn't until this March that we were able to borrow money from family and get a new well dug. If not for Providence and the generosity of my extended family, we would still be without water or, worse, have been forced to sell our home.

The cause of our problems began when the developer was not required to undergo the permitting process through DNRC because of the standing well exemption rule at the time. There was no way we, the homeowner, could know how much water was below ground and at the time the numbers on the well log meant nothing to my partner. However, looking back, all the evidence was there to show that the aquifer had issues. The builder of our home had to install a 1,000 cistern because the 300 foot well did not meet the required gallon per minute yield to qualify the home for FHA financing, something we did not pick up on until it was too late. In my neighborhood, 57 homes have had to invest in new wells at a cost averaging $15,000 and the experts are still saying that the water levels in the deeper wells will eventually decline and deplete.

Purchasing a home in a planned subdivision, should not place the entire risk of water availability on homeowners without first requiring an exhaustive review of the water supply. The system HB519 stands to create is a return to the status quo before the well exemption rule was overturned in October 2014. All that stands to be gained is a quick buck for developers who have no liability after the homes they have constructed have sold and more housing bubbles, like my neighborhood, that are doomed to pop when the faucets start to run dry. I beg that this Committee vote responsibly and protect the public by encouraging smart growth and requiring the current level or greater oversight on subdivision development by DNRC. Please vote "no" on HB519.

Sincerely,

Sam Alpert

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Independent Record

A thirst for development: Water availability a key issue for new subdivisions

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"Water is the driving force of all nature"

— Leonardo da Vinci

People don't generally think of living where there is no water, yet homes have sprung up across the Helena Valley in places where groundwater is both plentiful and scarce.

A Key Issues Report for the Lewis and Clark County growth plan update, which is currently in progress, focuses on five issues that face most new subdivisions. Wastewater disposal, roads, fire protection and flooding are among these issues. So is availability of water.

Water and roads are the two most limiting factors for development, said George Thebarge, the county's community development and planning department director.

"There are parts of the valley where there is simply not enough water to sustain development," Thebarge told the county commission when presenting the key finding report.

Public comment will be sought on the Key Issues Report before a companion document with specific recommendations is prepared. Based on these documents, the draft version of the Helena Valley Area Plan will be presented to the City-County Planning Board and the county commission in late May or early June.

County planners are using a middle-of-the-road projection for growth in the next 20 years that calls for 10,000 new residents and 4,000 new households and basing this update of the growth policy on those numbers.

The Key Issues Report speaks to how the number of homes in a small area can have consequences on an aquifer that might not otherwise show signs of depletion where there are far fewer homes. In other of the document's chapters, subdivision density is also linked to roads, wastewater disposal and fire protection.

"The density of development in various portions of the Helena Valley must reflect groundwater conditions and limitations," the report said.

Craig Charlton, the planning board's vice chairman, said the growth policy, unlike zoning, doesn't implement specific restrictions.

"The idea with the growth plan isn't to drive development farther out, it is to drive smart development," Charlton said.

Smart development, he explained, places high density subdivisions closer to existing infrastructure such as is available through the city of Helena.

Lesson in geology

Within the planning area of the Helena Valley are three distinct yet connected aquifers. The growth policy update Key Issues Report defines aquifers as the water beneath the ground in cracks and in porous holes of bedrock. It's also in fine silts and gravels. Aquifers can be shallow or deep, plentiful and recharge quickly or contain only a limited amount of water and recharge slowly if at all from groundwater created by rain and melting snow.

Homes built above an aquifer with ample water and quick recharge are found at the bottom of the Helena Valley floor. Groundwater from higher elevations feeds this aquifer. Streamflow, irrigation and leakage from the Helena Valley Irrigation District Canal also deliver water to it. But those who built here might not have basements because groundwater can be just a few feet below the surface of the land.

The other two types of aquifers in the valley are less productive, the Key Issues Report continued.

Moving higher in elevation above the valley floor to the gentle slopes, where bedrock is overlain by sediments, are the tertiary aquifers. Groundwater is in the sands and gravels here, but the water isn't evenly distributed.

The analogy used is if the valley floor aquifer was an underground lake, these tertiary aquifers would be akin to underground ponds. Water will be ample in some areas, limited in others, and there's no cost-effective way to determine long-term availability of water.

The third part of this geology lesson, so critical for those who want a country home, are the bedrock aquifers above the foothills. These have been compared to underground creeks that exist in cracks in the bedrock. Wells may have to be drilled hundreds of feet before encountering water.

"Water availability in a bedrock aquifer is hit and miss. One well might have plenty of water; the next well down the road might barely produce any water," the Key Issues Report warned before noting that these aquifers around the valley are susceptible to overuse and depletion.

Demand for water

Emerald Ridge Subdivision illustrates what happens when demand exceeds water's availability. A spokesperson for the homeowners association declined to participate in this story.

Fifty of the 67 lots have been developed in Emerald Ridge, Thebarge said.

Planning for the subdivision began in 2003, according to a groundwater resource assessment prepared in 2014 by James Swierc, a hydrologist with the county's water quality protection district.

An aquifer assessment was completed in early 2004 and water was found 100 feet below ground. Wells were recommended to depths greater than 320 feet, which would allow the water to drop with use and still provide homeowners with some 200 feet of water in their wells.

But depletion of the aquifer resulted in homeowners installing deeper wells on 28 lots, according to Swierc's assessment from a year ago with two homeowners installing third replacement wells. Several of the replacement wells exceed 700 feet in depth.

"It turns out annual recharge is not occurring fast enough and the aquifer depth assumption was wrong, but there was no way for anyone to know this based on the studies required at the time," the Key Issues Report stated.

"As a result, continued withdrawal of groundwater from this aquifer represents a non-sustainable source which is unlikely to continue to provide sufficient yields for even domestic wells for the long-term future," Swierc's assessment noted.

Need to change policies

"There's the potential for dozens of Emerald Ridges to happen if we continue with our current policies," Thebarge said.

"Two other subdivisions in the East Valley (Pimley and Lake Hauser Estates) have experienced similar water problems," the Key Issues Report continued. "As new subdivisions are proposed in areas with tertiary aquifers, there is no way to know for sure that the aquifers serving the subdivisions will have adequate water for the long term."

The current rules for subdivision approval have shown to not adequately address the limitations of bedrock and tertiary aquifers -- susceptible to cumulative impacts of use as well as limited recharge, the Key Issues Report stated.

The county relies on state departments in concluding there is "substantial and credible evidence" of adequate water availability, the key issues document noted.

The county has identified problems with current regulation, Thebarge said of the state review process for water availability.

If the county is to adopt regulations exceeding those of the state, it must support them with peer-reviewed, scientific studies, Thebarge continued.

Studies by the Montana Bureau of Mines and Geology for areas of the county meet these criteria, he added.

New regulation for certain parts of the county could be considered, as could zoning that matches density of development -- the number of homes in a subdivision -- to the availability of water, Thebarge said.

Educating people on the issue of water availability is also a part of the key issues' strategy he cited for guiding future growth.

"These issues were hardly discussed in the 2004 Growth Policy," the Key Issues Report stated. "Today they are one of the planning area's most pressing development constraints."

Editor's note

This is the second installment in a six-part series on the Lewis and Clark County growth policy.