



# State Engineer's Office

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## **Open Letter to Appropriators and Interested Parties in the Vicinity of the LaGrange Aquifer Subject Area as Defined in the State Engineer's Order of July 19, 2013**

This letter is intended to supplement the First Amended Order of the State Engineer Horse Creek Basin, issued today, amending the original Horse Creek Order issued July 19, 2013. The original 2013 Order contemplated review of its operation after the first three years, and contained the following provisions:

16. Beginning November 16, 2016 the State Engineer will review the effects of the first three years of operation under this Order and determine, following a public hearing and comment period, whether or not the terms of this Order shall continue to apply or whether a new order should be issued. *[Note: the public hearing referenced here was held February 15, 2017, in LaGrange]*
17. If no new order is issued by April 1, 2017, the terms of this Order will continue in force, for consecutive three-year periods, until a new order is issued.
18. This Order shall remain in place until and unless rescinded, superseded or augmented by another order of the State Engineer, or replaced by an operating agreement entered into by all parties subject to this Order and approved by the State Engineer. At any time, the State Engineer may issue clarifying guidance or interpretations related to this Order without the need for an additional public hearing or comment period.

It is important to note that since the 2013 Order was issued, southeast Wyoming has been blessed with moisture. Hawk Springs Reservoir filled in 2014, 2015, 2016, and 2017. The recent improvement in hydrology has had important impacts, including the availability of significant streamflow for surface diversions, and in some cases a marked decrease in groundwater pumpage as compared to prior years. That is all good news.

Indeed, the first three years of operation under the 2013 Order (2014-2016) saw use of only about 48% of the overall groundwater allotted to groundwater irrigation uses in the subject area (46% in 2014, 43% in 2015, and 54% in 2016). Several appropriators even carried some amount of groundwater use into the next Order period. This, it appears, was largely due not only to a reliable surface water supply, but also to modifications made by some operators' "plumbing" that made better use of surface water when it was available.

Still, there were some appropriators who had groundwater supplies only, and comments were received that the nominal 12 inches per year, even with some carryover, might be insufficient for their crop water needs. Without surface water sources to augment their water supplies, some groundwater users were therefore forced to operate as though the drought of the 2000s continued.

One of the primary goals of the 2013 Order was to strike a balance that respected senior surface water rights (including the right to fill Hawk Springs Reservoir) while allowing those who depended on groundwater to continue to use that interconnected resource without fear of facing curtailment under a call for regulation every year. In other words, it was an effort to protect all the various interests involved, while at the end of the day still recognizing that prior appropriations for beneficial uses have the better right.

To accomplish that goal, there was really only one solution – if groundwater rights (generally junior in priority to surface water rights in the Basin, including Hawk Springs Reservoir) were to continue to be used, they had to be managed, or restricted, in a way that mitigated impacts to senior surface water rights. Contemporaneous curtailment (regulation) of well pumping was less desirable because of the time lag between cessation of groundwater pumping and the increased benefits of streamflow increases. Given these considerations, a groundwater cap (nominal 12 inches per year, with some flexibility and carryover allowed) was selected as the most appropriate solution for the first three years. The amount of that cap, as described in the 2013 Order, was informed by recent historic amounts of groundwater use. The terms of 2013 Order were not appealed.

The change in operations necessitated by the 2013 Order was not without controversy. The State Engineer's Office fielded several questions about measuring devices, possible ways of pooling groundwater supplies, and sensed what could be termed a general tension associated with change represented by the 2013 Order. But well production reports were filed, adjudications were undertaken, and after three years the 2013 Order had become, if not loved, at least recognized.

Now, with the time to revisit its terms at hand, the information gleaned from those first three years is notable. In particular, the amount of overall groundwater used was significantly below what had been determined, at that time, to be a reasonable level of use that would not result in injury to senior water rights. Had we seen the full 12 inches applied overall, additional information would be in hand to assess how the interconnected groundwater/surface water system had fared. Instead, with the equivalent of only about half of the total allotment produced, we are able to conclude only that the groundwater reservoir appeared underutilized compared to what modeling indicated it could withstand.

In total, about 21,000 acre feet (AF) was reserved for groundwater use under the 12 inch cap. In the first three years under the 2013 Order, only 10,179 AF was reported as actually pumped. In essence, roughly 11,000 AF remains in the groundwater system, over and above what would be there had the cap been fully utilized. But it was unavailable to those who needed it (and who did

use near their cap) and possibly unneeded by those who benefitted from the improved surface water hydrology over those years.

It is clear to me that a more liberal cap should be implemented, at least in the short term (the next three years of operation). Looking at the data, it appears a cap increase could be used to benefit appropriators with access only to groundwater, and it could be done in a way that respects the amount originally embraced by the 2013 Order's cap. The First Amended Order raises the cap to 15 inches per year (about 26,250 AF over three years, with a maximum use in any one year limited to 20 inches. It also allows the carryover of up to 10 inches (if unused) into the next three-year period). To put the new cap in perspective, and to ease any concerns with a threat of over-pumping it could be seen to create, I offer the following comparison:

- If the full 21,000 AF allotted under the 2013 Order had been pumped in 2014-2016, with another 12 inches allotted for 2017-2019, a total of 42,000 AF could be produced.
- With only 10,179 AF actually pumped in 2014-2016, and a maximum of 26,250 AF available to be produced under the 15 inch cap for 2017-2019, a maximum of about 36,429 AF can be produced for the six year period.
- *Thus, even by raising the cap, area groundwater users still will produce at least 5,500 AF less than had the groundwater been fully utilized at a 12 inch cap for all six years.*

The limits under the First Amended Order are intended to allow use of the groundwater source at a level it can sustain under current knowledge. If the coming period is dry causing groundwater pumpage to maximize, and learned information reveals injury realized to senior water rights, the Order can be readjusted again in 2020. This adaptive management approach is intended to allow the groundwater portion of the interconnected resource do the most good for the most people, while still respecting its use must be limited in some way for the protection of senior rights.

During preparation of the First Amended Order, I also considered all other comments received following the February 15, 2017 public hearing. The comments varied widely in their recommendations, from raising the cap, to leaving the Order unchanged, to rescinding it completely. Various types of alternative corrective controls were also suggested. The First Amended Order reflects that consideration, and its contents are the most appropriate at this time given the current amount of information available. In that regard, I note that groundwater data could be greatly improved if more area groundwater users would consent to provide access to their properties for the collection of that data.

I also considered comments regarding the addition of a gaging station on Horse Creek below the subject area encompassed by the First Amended Order, with the intention of gathering data on how much water flows into the North Platte River. It is currently within the authority of Superintendent Pugsley and this Office to explore additional streamflow measuring locations, but the installation of a new stream gage and associated equipment is not likely at this time given the State's, and this agency's, current fiscal situation. If they so choose, however, local water users could contribute to the construction, operation, and maintenance of a gage.

I hope this letter helps explain the First Amended Horse Creek Order, and why the 2013 Order was modified as it was. Once again, the First Amended Order will be reviewed after three years of operation thereunder, and new information will be available with which to analyze its effects.

Thank you for your continued interest in our collective work involving the LaGrange Aquifer and Horse Creek, and for all your help providing needed information.

Regards:



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