

## A Rangeland Ecological Assessment of Herd and Habitat Condition

Range Specialist for Osborn Industries conducted a routine tour in the East Piceance HMA on July 14, 2022 to assess the conditions across the HMA. While a one-day tour is hardly enough time to thoroughly document in detail the issues we came across, the previous four years of data collection on the HMA in conjunction with the 2022 spring data collected is. The intent of this document is to address some of the concerns and statements made by concerned citizens as to why proper management of the wild horses is so important throughout the HMA. We have based our information on science and extensive data collection with the support of photos we have taken.

It is impossible to view a photo of a wild horse in it's environment and properly assess the condition of the land, soil and animal itself. Many photos taken within the HMA are of the truly beautiful animals in their habitat. These photos include ample water in a small pit tank on Wolf ridge and a group of horses standing chest deep in lush grass, which is Basin wildrye. These photos do not represent the HMA in a fair and balanced way and the science of Range Management is completely ignored. These only represent a photographers very small perspective of what two locations look like. Combined these two locations depict two acres out of a total 150,000+ acres, or 0.00013% of the landscape.

### Overview:

Table 1: Horse and Cattle AUMs\* vs Available Forage

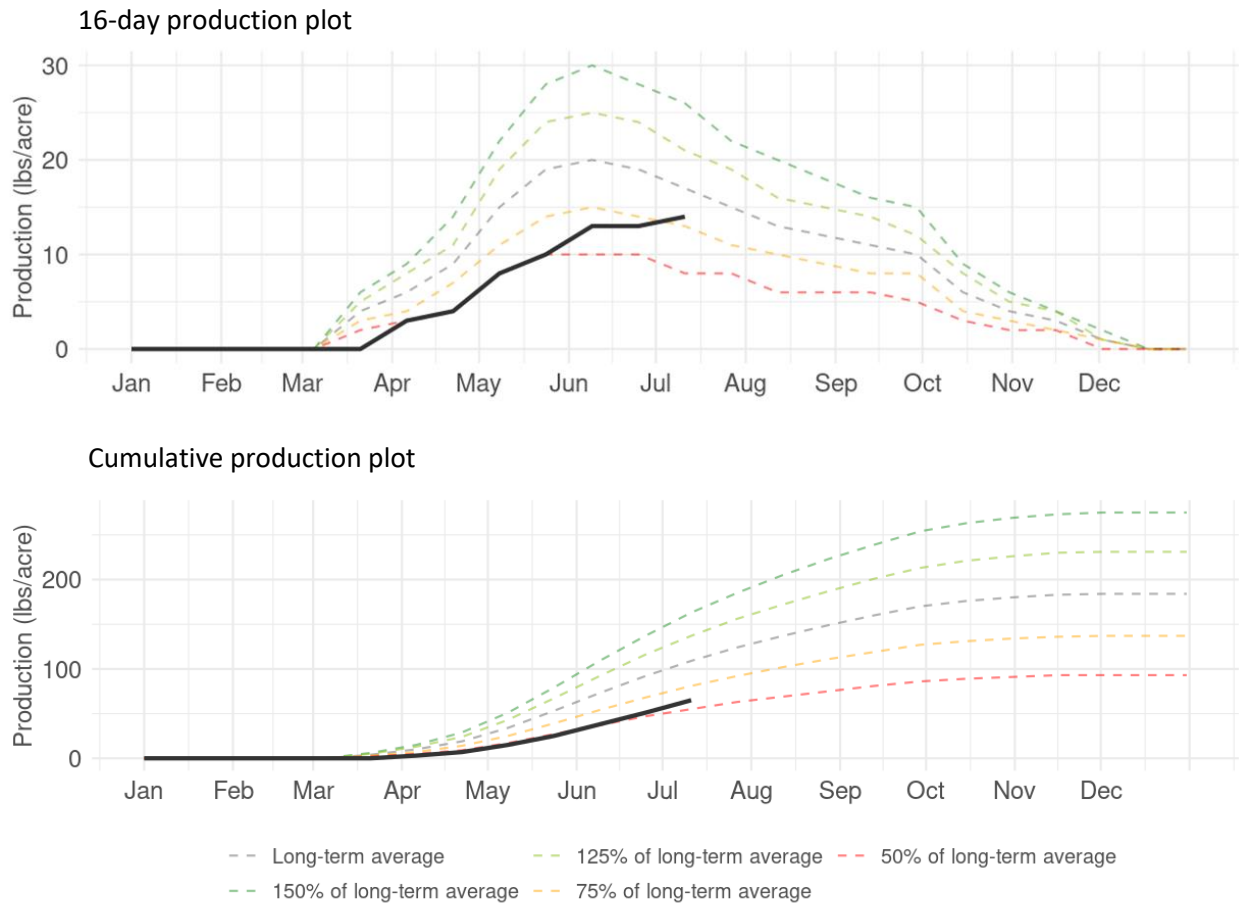
	Fully Stocked (cattle) & Max AML (horses)	Actual Reported Animal AUMs and Forage Production			
		2018	2019	2020	2021
Horse Herd AUMS	3,525	7,365	9,206	11,508	14,385
Cattle Herd AUMS	6,486	4,970.93	4,122.13	4,078.90	2,878.34
RAP Forage lbs/acre	160.00	148.50	216.00	152.00	123.50
Total Available Forage (lbs)	19,789,952 **	18,367,549	26,716,435	18,800,454	15,275,369
Cattle Herd Consumption (lbs of forage)	5,188,800	3,976,740	3,297,700	3,263,120	2,302,668
Horse Herd Consumption (lbs of forage)	2,820,000	5,824,582	7,280,728	9,100,910	11,376,138
% Forage Used		53.36%	39.60%	65.76%	89.55%
% use IF fully stocked and max AML vs actual forage production in 2018-2021	40.47%	43.60%	29.98%	42.60%	52.43%

\*AUM-Animal Unit Month, amount of feed or forage required by one animal unit for one month. (Holechek et al., 2001). One 1,000lb cow with calf up to 6 months of age is equal to one AUM. One mature horse is equal to 1.25 AUMs. (National Range and Pasture Handbook-NRCS)

\*\*Available Forage (lbs) value for the Fully Stocked and Max AML is an average of RAP Available Forage (lbs) from 2018-2021

The 2022 season started out as dry as previously reported years, however, the total moisture did increase during the spring months. This moisture came slightly late for the plant community in the Piceance basin. The Range Analysis Platform (RAP) is currently reporting less than 50% of normal for total plant production for 2022. Total plant production per acre, when compiling this report on July 19<sup>th</sup>, was 39lbs per acre, very similar to last year's reported data (July, 2021).

Chart 1: Current Year (2022) 16-day and Cumulative Production Report using Rangeland Analysis Platform (RAP) data.



Range Analysis Platform (RAP) Data 1

## Basin Wildrye:

*“Basin wildrye is palatable to all classes of livestock and wildlife. It is a preferred feed for horses in spring and is considered a desirable feed for cattle, sheep, elk, deer, and antelope in the spring. It is considered a desirable feed for cattle and horses in early summer, late fall, and winter.”<sup>1</sup>*



Photo 1. Basin Wildrye heavily grazed in patches near 88 Cage Site. Photo taken 7/14/2022 by Osborn Industries.

While our professional opinion, backed up by years on this study and personal experiences with livestock, Basin wildrye is palatable but not desired by many animals. We have observed horses eating the racemes in the fall and some localized heavy grazing on the tufts throughout the study area. Horses, and cattle will graze it to the ground when nothing else is available. We documented this in the Greasewood drainage. In general, Basin wildrye will be the last plant consumed by grazing animals.

Basin Wildrye is not a widespread species in the HMA. It grows in some small, localized patches across the range. Total available pounds for any grazing animal is low and should not be considered a good species to judge the overall range condition on. Instead, look at the production across the landscape for species desirable to grazers.

Considering Basin wildrye as a main summer food source for the horses only adds to the urgency for a gather. There was evidence of the horses eating the Basin Wildrye in early April (cows are not typically turned out until May 1<sup>st</sup>), lack of early spring moisture and no remaining forage from the 2021 season (see our more technical report). On our inspection on July 14<sup>th</sup> we documented more grazing of Basin

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<sup>1</sup> *Basin Wildrye* - USDA. (n.d.). Retrieved July 19, 2022, from [https://www.nrcs.usda.gov/Internet/FSE\\_PLANTMATERIALS/publications/idpmspg4848.pdf](https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/idpmspg4848.pdf)

Wildrye and the development of seed heads within the majority of the Basin Wildrye stands. It is important to note “regrowth does not occur following seed production”<sup>2</sup>. If all other grazable species have been diminished, Basin wildrye can offset the needs of the horses for the winter. If they eat it now, there will be nothing to eat during the winter, body condition will decline and be worse than we saw this spring. This cycle will continue to perpetuate in a downward spiral eventually leading to starvation.

### **Line Intercept:**

During our inspection on the 14<sup>th</sup>, we anticipated installing a line intercept transect through a patch of Basin wildrye to clearly show what is available between the bunches of Basin Wildrye. The site we chose to install this transect is in an area we call 88 Cages. We were very surprised when we got to this draw because a few days prior there had been a massive downpour which flooded our cages and the entire drainage we wanted to use as our example. The site had basin wildrye with other native species and would have served as a decent example, but the flooding created an excessive amount of bare ground between the various plant species. The data we would have gathered would have had a very elevated bare ground score. Because of how we started the inspection of the HMA, this area was at the end of our inspection and subsequently the end of the day. We did not have time to select a new location.

We did still read a line intercept transect outside of the flooded area. The site chosen was already marked by angle iron, denoting a permanent transect has already been established at this site. We do not have that information only the data we gathered.

The bare ground reading measured 40.6%, this may not be outside of the normal value within an arid environment. Typically, this means there is plenty of room for the establishment of new species. At this location, 29.2% is litter, also not outside of the normal value. The biggest issue with this location is 25.1% Russian Thistle, 4.5% Rabbit Brush, 1.7% Sage Brush and only 1% grass. With so few species represented and very low amount of grass, this site is very unhealthy. Of the 1% grass it was heavily grazed and unidentifiable.



Photo 2. Photo of Line Intercept transect. Transect read and photo collected near 88 Cage Site out of recent flood plain. Photo taken 7/14/2022 by Osborn Industries.

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<sup>2</sup> *Basin Wildrye* - USDA. (n.d.). Retrieved July 19, 2022, from [https://www.nrcs.usda.gov/Internet/FSE\\_PLANTMATERIALS/publications/idpmspg4848.pdf](https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/idpmspg4848.pdf)

Figure 3.

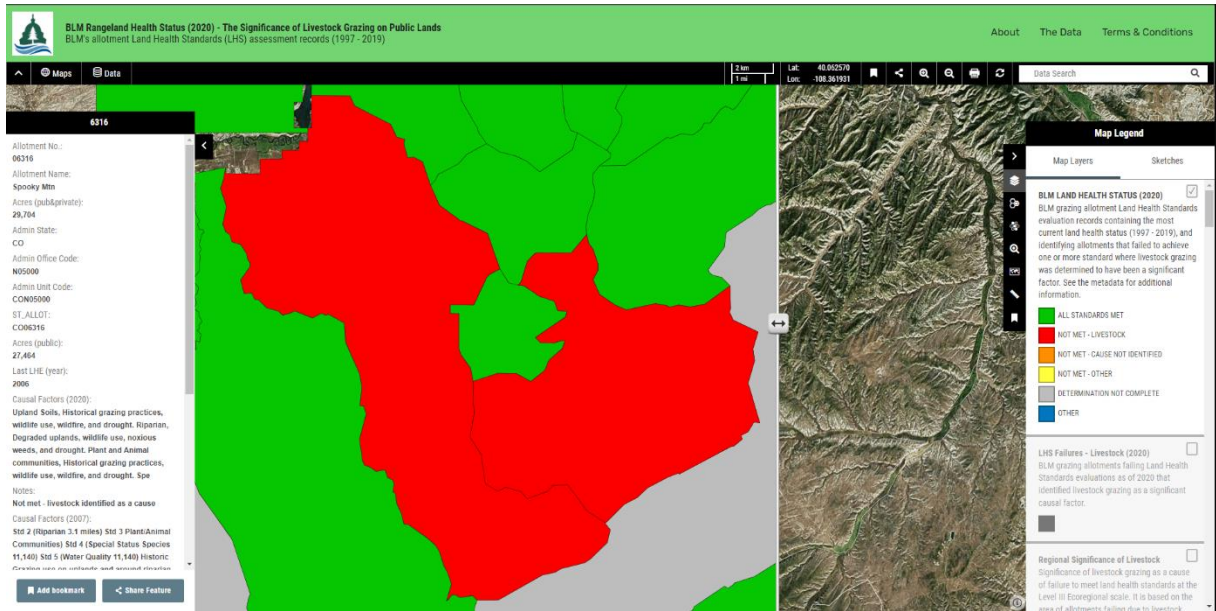


Figure 4.

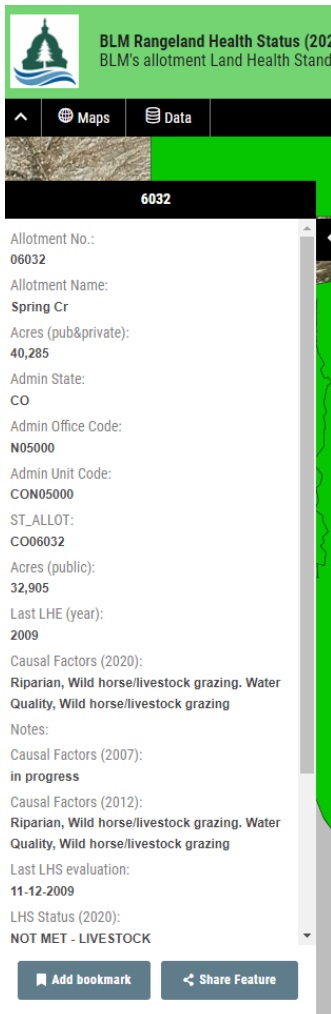


Figure 3., above shows areas of red, green, and gray was created by PEER (Public Employees for Environmental Responsibilities) and we have been directed to it in several instances. This map is quite misleading: under 'Map Legend' we see the red areas represent allotments siting livestock grazing as a significant factor. However, using the interactive map to zone in on the Piceance Basin HMA, Figure 3, in the metadata on the left side of the Figure 3 (with a closer look of the metadata in Figure 4) wild horse grazing is clearly noted as a factor for why the allotment has failed to achieve standards, not only in 2020 but in 2012. It is also interesting to note, many adjacent areas outside the HMA where only

Species	Percent Coverage
Bare Ground	40.6%
Litter	29.2%
Russian Thistle ( <i>Salsola iberica</i> )	25.1%
Grass (all varieties)	1%
Rabbit Brush ( <i>Chrysothamnus</i> species)	4.5%
Sage Brush ( <i>Artemisia tridentata</i> )	1.7%

domestic livestock (cows and sheep, no wild horses) graze are green and meeting standards.

(Figures 3 and 4) BLM Rangeland Health Status (2020)-The Significance of Livestock Grazing on

Public Lands. <https://mangomap.com/peer/maps/126421/blm-rangeland-health-status-2020-the-significance-of-livestock-grazing-on-public-lands?preview=true#>



Photo 4. This photo was taken 7/14/2022 by Osborn Industries near the confluence of Yellow and Barcus creeks. Dominant species is Russian Thistle. Little to no grazable plants are at this site.



Photo 5. This photo is at the same location as above but looking straight down.



Photo 6. of the State Land Board along Yellow Creek. This area has received rotational cattle grazing similar to the adjacent BLM. The only difference is the exclusion of horses.



Photo 7. This area was fenced in 2021 to prevent any further grazing by unpermitted livestock or horse. Forage available inside the fenced property has received one year rest from any grazing pressure. The ground on the right side of the photo has received heavy grazing year around. Cattle are in the area starting May 1 and are typically moved from the area June 15<sup>th</sup> annually. Horses can be found at this location daily. Photo taken 7/14/2022 by Osborn Industries