Montana Fish, Wildlife & Parks
Region 2 Wildlife Quarterly

May 2017

Technical Bulletin No. 8
Upper Clark Fork Edition

Elk coming out of the winter on April 1, 2017.

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The Region 2 Wildlife Quarterly is a product of Montana Fish, Wildlife & Parks; 3201 Spurgin Road; Missoula 59804. Its intent is to provide an outlet for a depth of technical information that normally cannot be accommodated by commercial media, yet we hope to retain a readable product for a wide audience. While we strive for accuracy and integrity, this is not a peer-refereed outlet for original scientific research, and results are preliminary. October 2015 was the inaugural issue.

No Bulls

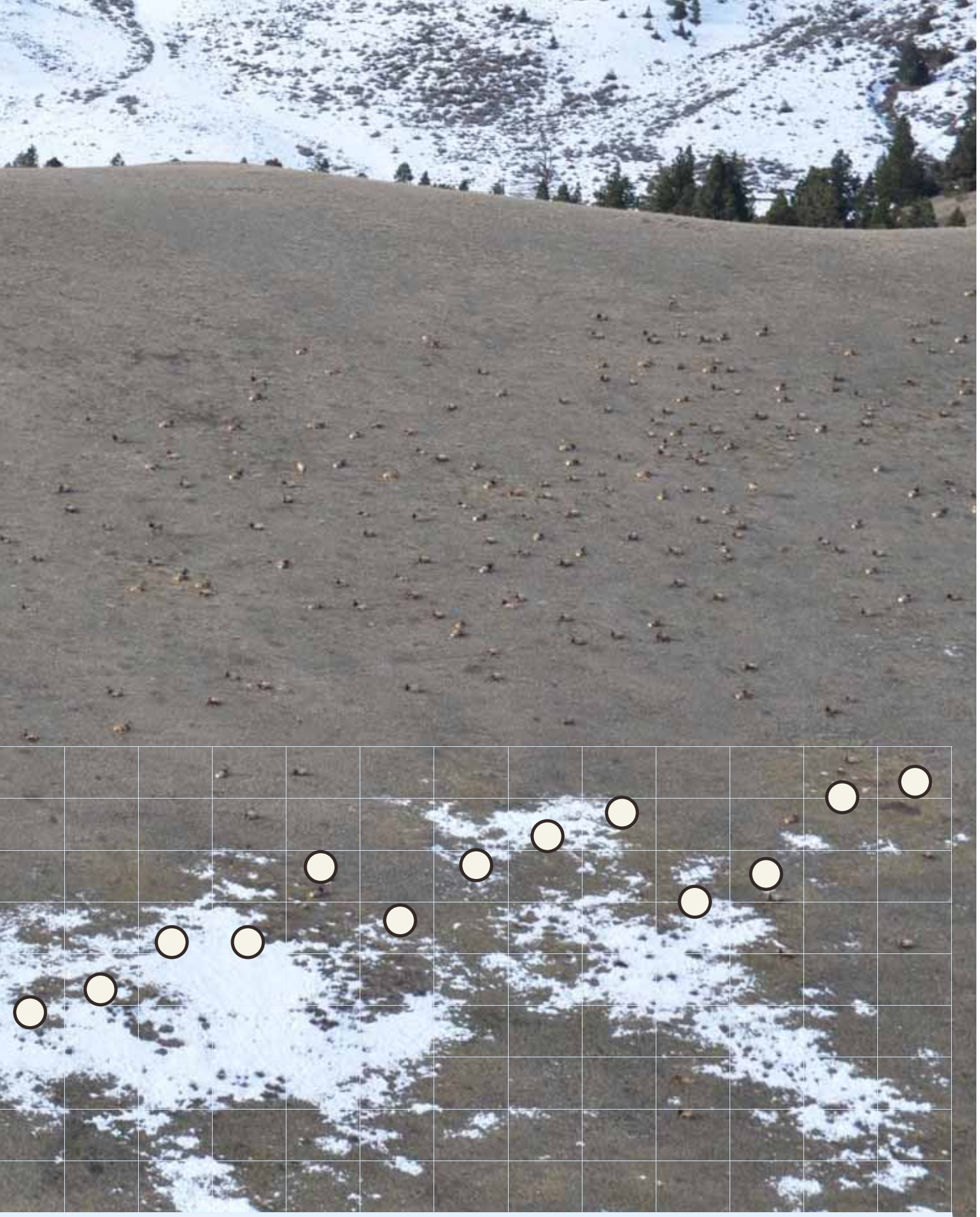
If no bulls are left in .western Montana, as we sometimes hear from hunters after a tough hunting season like last year's, then this must be what "no bulls" look like. Not to be trite; there could be more bulls. But, it's also true that with the advantage of the right aircraft, an expert pilot, a qualified observer, and the money to put them in the air in the right season, bull elk are a lot easier to find. Even at that, bulls are statistically less likely to be observed than cows and calves because they generally winter in smaller groups and are more likely to stay back in the timber. So, ratios of bulls per hundred cows are usually conservative indications of the adult sex ratio. We see quite a bit of year-to-year variation in the observability of bulls as well.

This issue of the Quarterly reports the results of FWP's elk counts in the Upper Clark Fork this winter and early spring. It was biologist Julie Golla's first survey season with FWP, who could not have been luckier than to have the skill and mentorship of her pilot, Trever Throop, to lean on. From January to April, every evening and every morning goes pretty much the same: check the weather, compare notes, get up in the dark, look for stars, and test the wind. In a winter like this one, the weather foils your plans more often than not.

So, you prepare every night and arise early every morning, because there might be a precious few hours of clear skies and calm air to let you do your job. You dare not miss it. As the days turn into weeks, then months, the first few dozen elk in the count grow to several hundred, and then into the thousands, as you approach the crown jewel, the Spotted Dog Wildlife Management Area, to cap off the season. This year, it was April before Julie and Trever could complete their rounds, from Rock Creek to Rock Creek (there are at least two Rock Creeks in the Upper Clark Fork), and from the Pintler to the Hoodoos. Here is what they found.

Upper Clark Fork 1968-1992

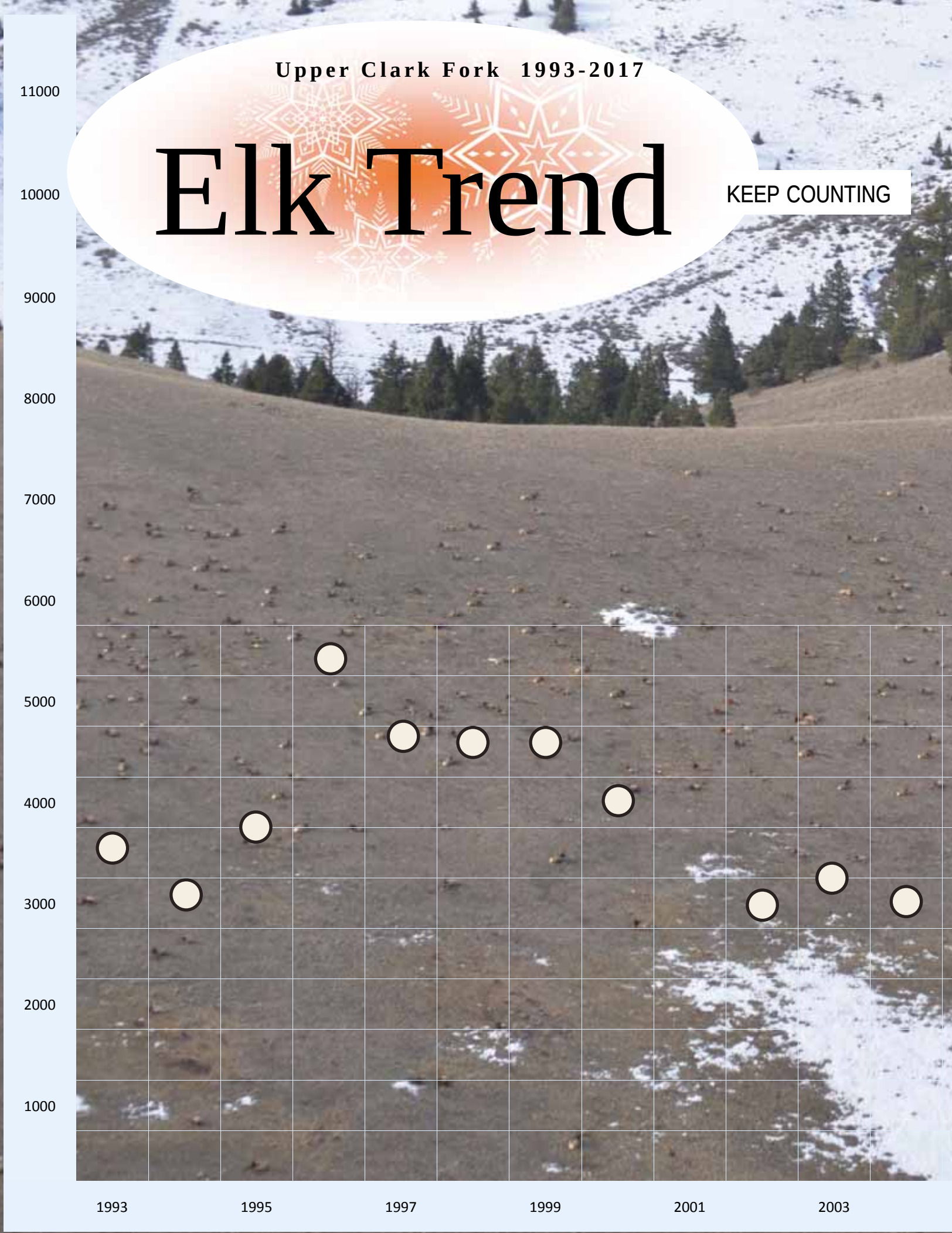
Elk Trend

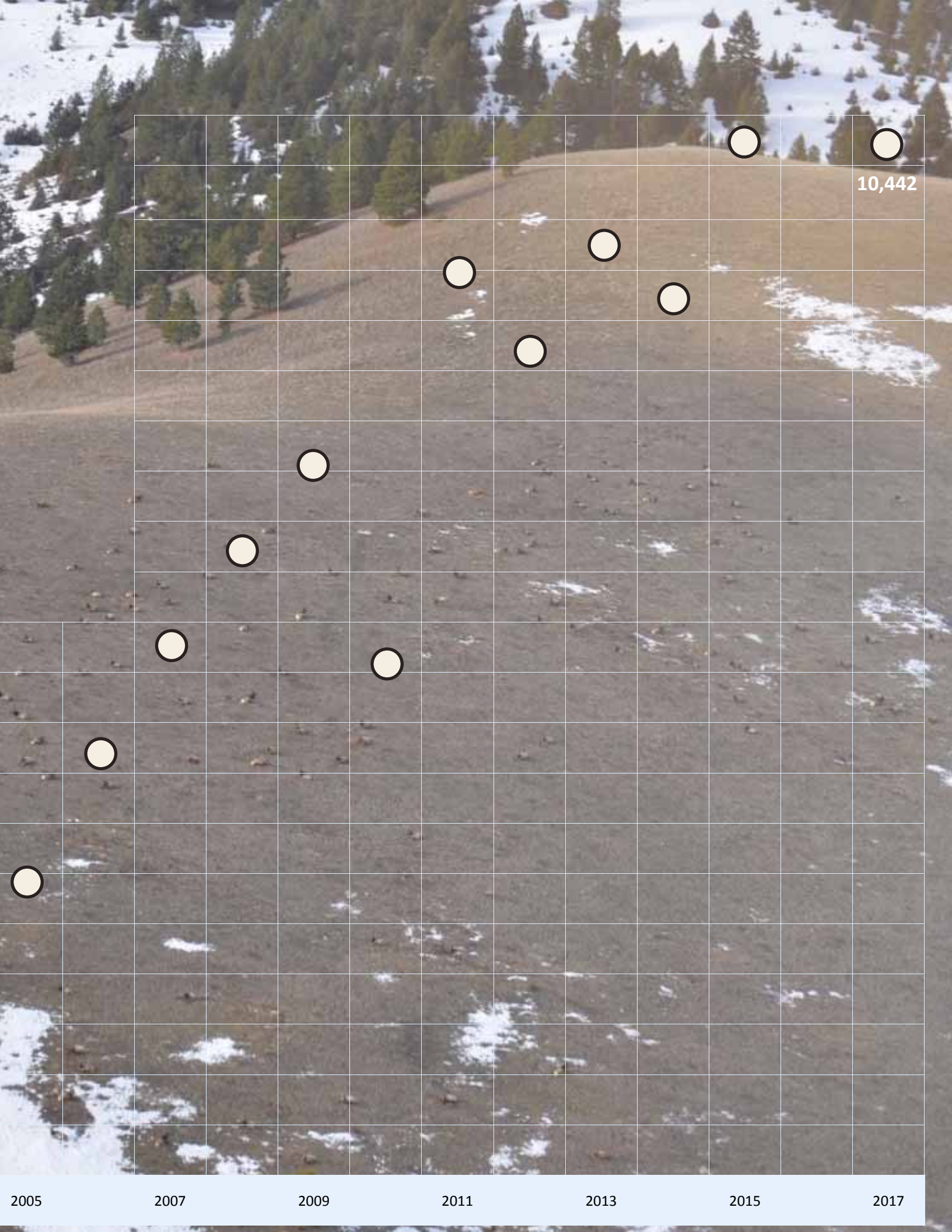

1980
1982
1984
1986
1988
1990
1992

Upper Clark Fork 1993-2017

Elk Trend

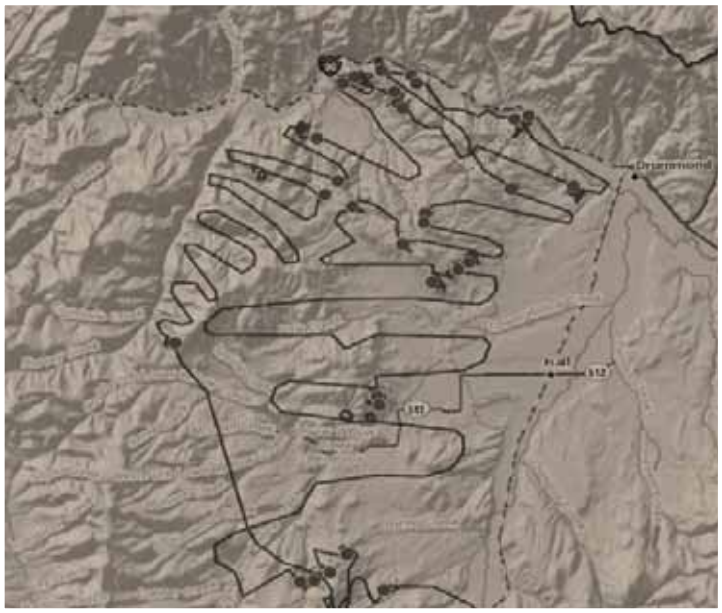
KEEP COUNTING

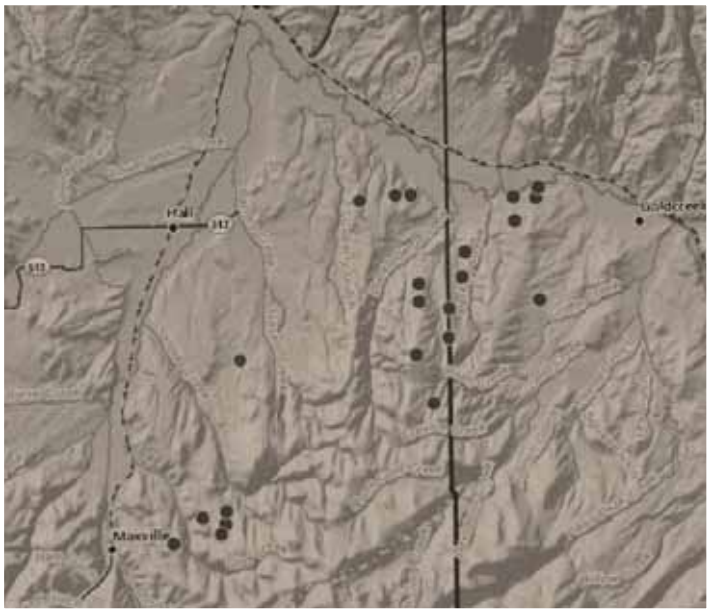


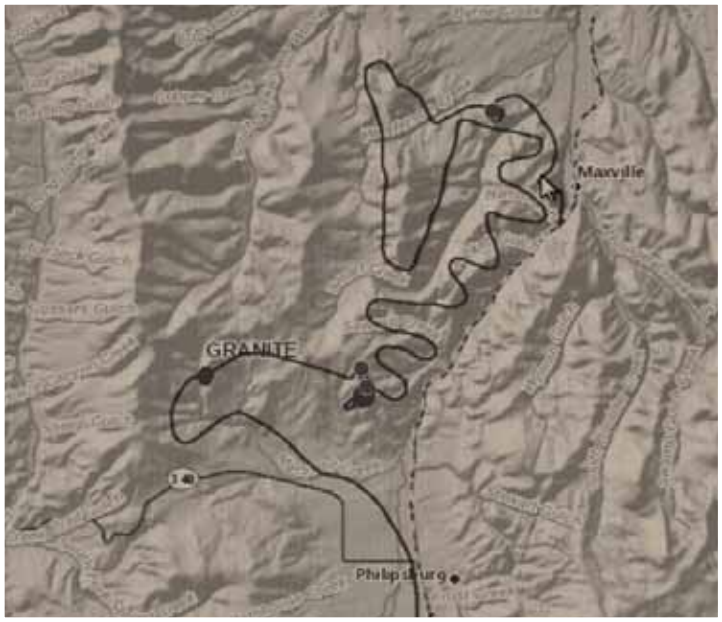

10,442
2005
2007
2009
2011
2013
2015
2017

Upper Clark Fork 2017

Flight Tracks



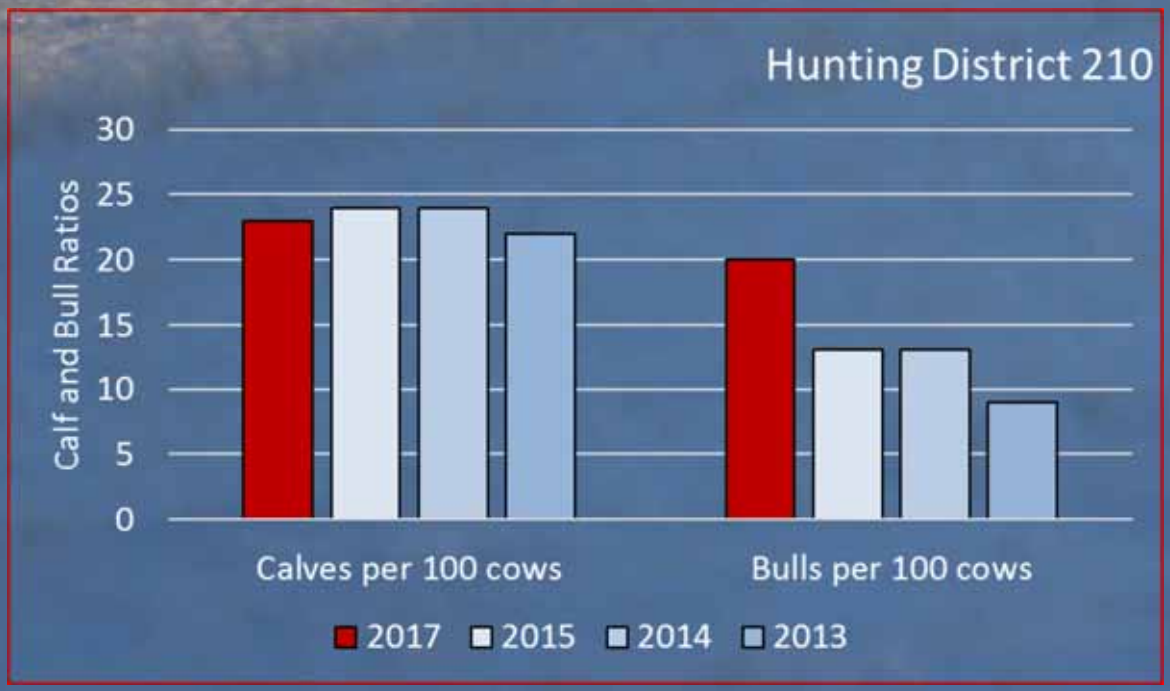




Biologists keep track of their flight patterns and the GPS waypoints for each group of elk that they observe, as these examples of tracks and waypoints for the 2017 surveys illustrate. Each dot represents the location of a group of elk observed on a survey, whether a single individual or the single group of 755 elk that Scott Eggeman recorded in Hunting District 291. As group sizes have increased with elk population growth, biologists have taken to photographing the larger groups to double-check the counts and classifications (cow, calf, yearling bull, brow-tined bull) that they make in the field. "Too many elk to count" is not a problem that our predecessors suffered when they began aerial surveys in 1968.

Upper Clark Fork 2017

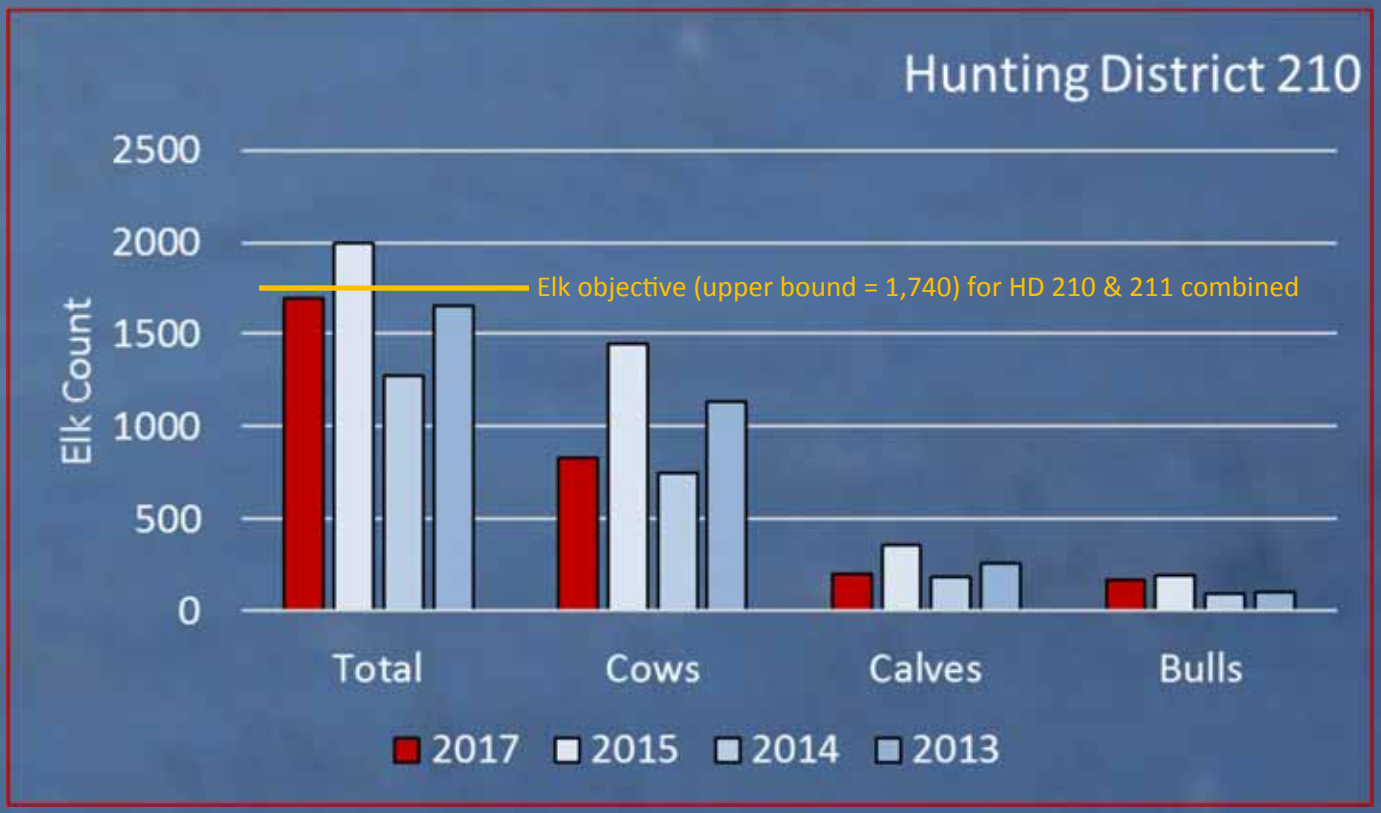
HD 210



The count of 1,690 elk for Hunting District 210 in 2017 was on par with the counts we've seen over the past few years. From 2015-2017, elk counts in HDs 210 & 211 combined have been above the management objective in the Statewide Elk Management Plan (as amended). Elk objectives are set with public involvement to balance people's interests in having elk with the economic impacts that elk can have on crops and fences.

Also, the ratios of calves and bulls per hundred cows were good for this area this year. You may notice that the cows, calves and bulls don't add up to the total in 2017 because there were some elk in big groups and in the trees that could not be classified.

The calf survival is of interest, given the relatively cold and protracted winter that we experienced, as on this day (pictured) in mid-January on the Mullan Road. Elk counts in Hunting District 210 have a history of fluctuating from year to year. Elk in this area move among several hunting districts and may be counted in one district one year, and another district the next.



Upper Clark Fork 2017

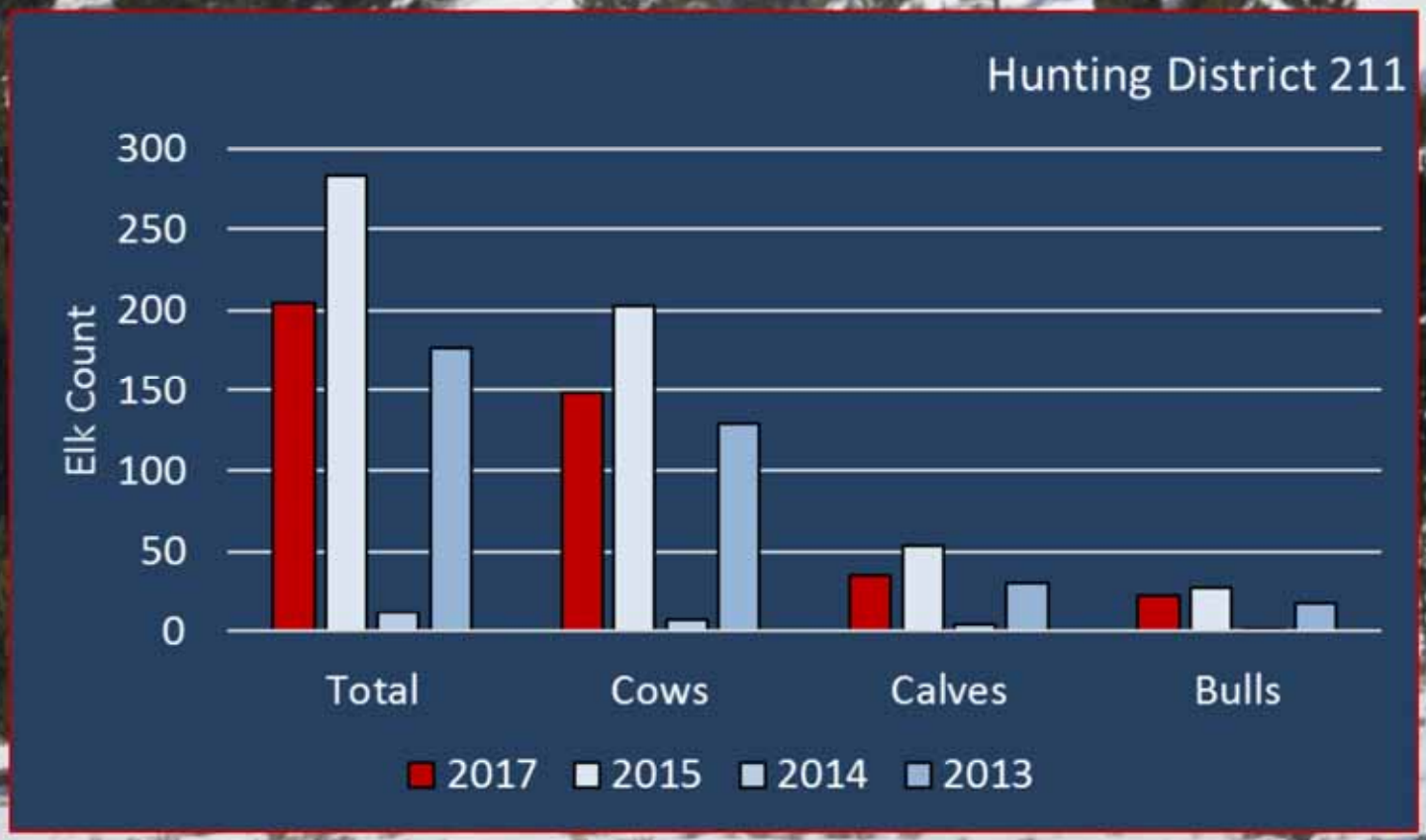
HD 211

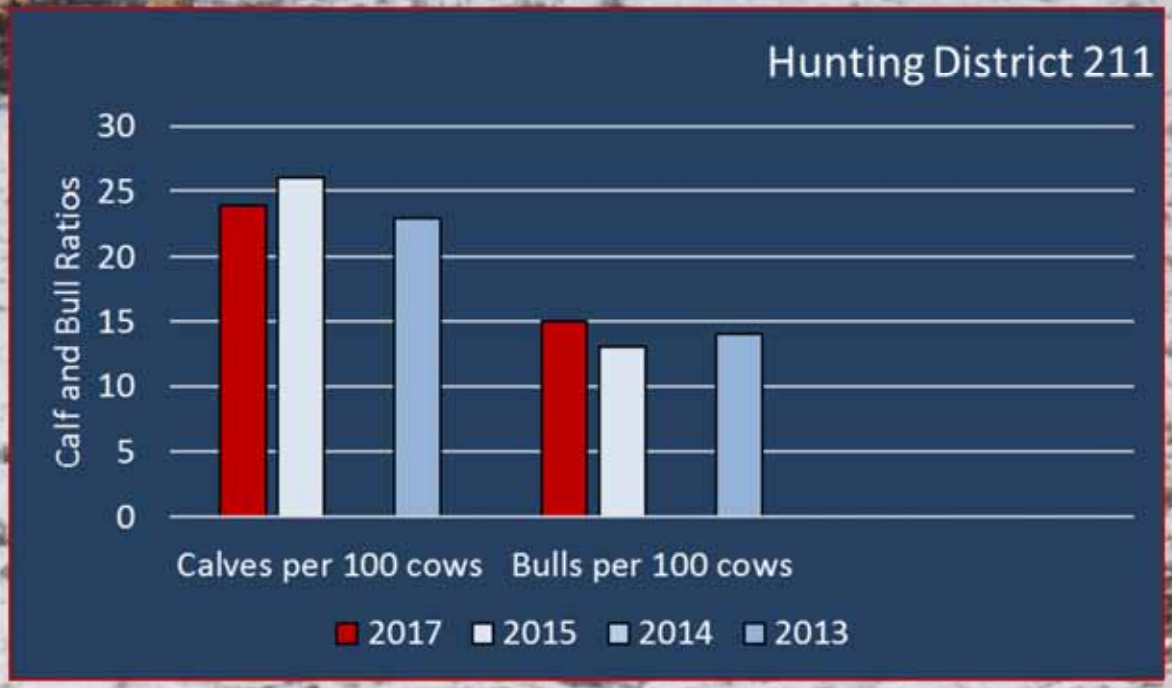
The count of 205 elk in 2017 was within the bounds of historic counts for Hunting District 211.

Like HD 210, the proportions of calves and bulls held up well compared with recent history. (There were too many unclassified elk in 2014 to obtain valid calf and bull ratios for that year.)

Again, the calf survival is of interest, given the relatively cold and protracted winter that we experienced this year.

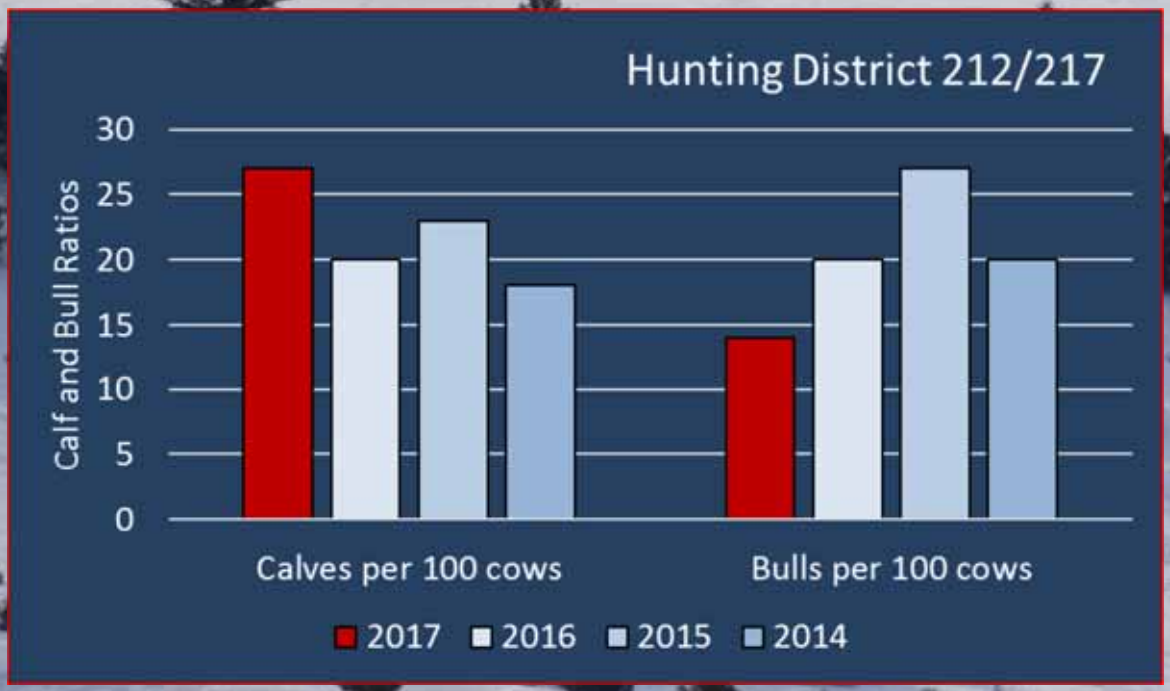
Elk counts in Hunting District 211 have a history of fluctuating from year to year. Elk in this area move among several hunting districts and may be counted in one district one year, and another district the next. In fact, HD 211 is combined with HD 210 for the purposes of assessing the elk population relative to its objective in the Statewide Elk Management Plan. When elk counts in HDs 210 and 211 are combined, they are above the objective—the upper bound—of 1,740 for those two districts.


Hunting District 211
Elk Count
300
250
200
150
100
50
0
Total
Cows
Calves
Bulls
2017
2015
2014
2013


Hunting District 211
Calf and Bull Ratios
30
25
20
15
10
5
0
Calves per 100 cows
Bulls per 100 cows
2017
2015
2014
2013

Upper Clark Fork 2017

HD 212/217



The count of 2,859 elk for Hunting District 212 and 217 (combined) in 2017 was slightly lower than the last complete count made in 2015. (The count in 2016 was from a survey that covered only part of the combined HDs.) This count is far above the upper bound of the objective set for HDs 212 and 217 combined, following the process outlined in the Statewide Elk Management Plan.

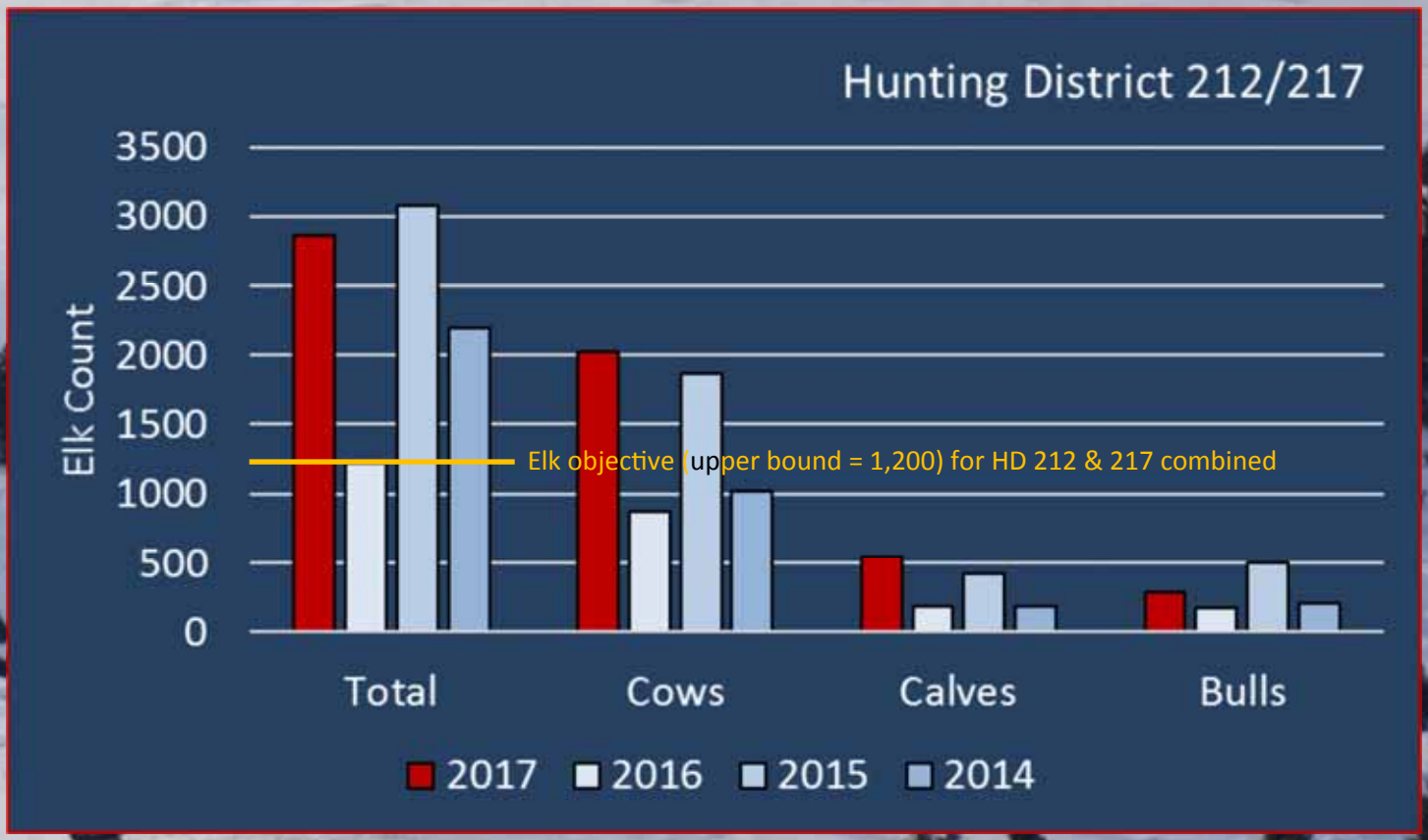
HD 217 was carved out from old HD 212 in 2016, due to its special regulations, including shoulder seasons. While higher elk harvests occurred in the 2016-17 season, the decline in the elk count may also reflect shifts in elk distribution, due to hunting and winter weather.

In 2017, 1,384 elk were counted in HD 217 and 1,475 elk were counted in HD 212.

As in other districts in the Upper Clark Fork this winter, calf ratios were good, and somewhat surprisingly so. Bull ratios were down, however.

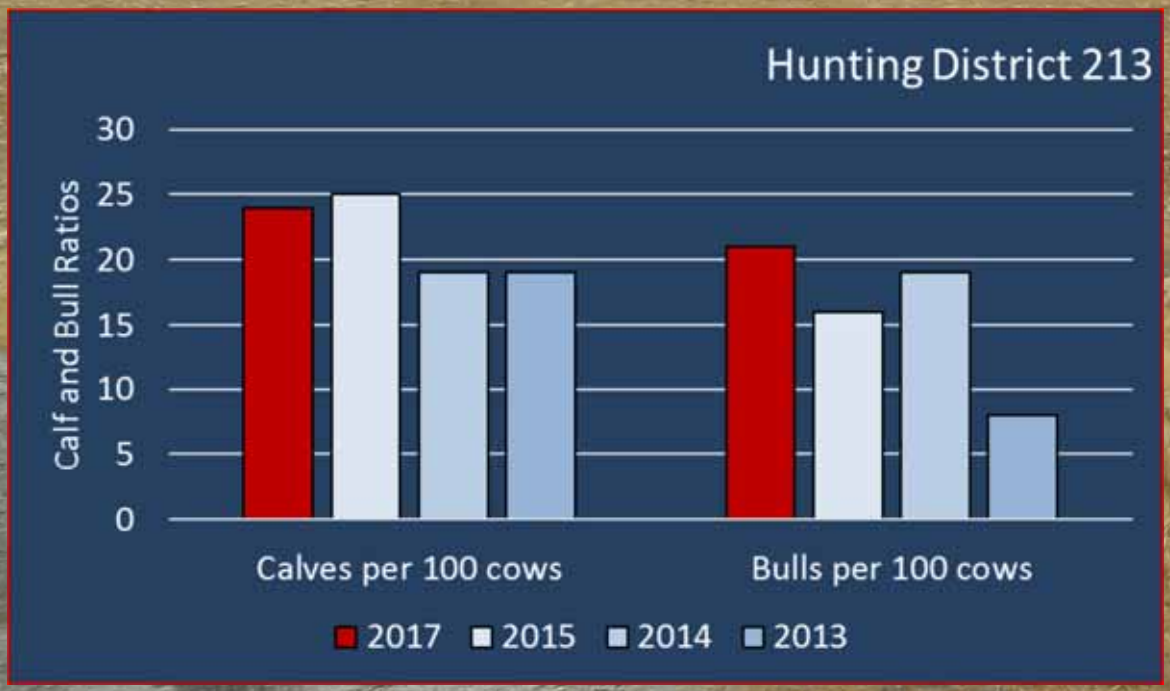
It was a cold day in January when these elk were visible from I-90, near Garrison.

Elk counts in Hunting District 212 and 217 have a history of fluctuating from year to year. Elk in HD 217 cross the Interstate into HD 291, and back again, and elk from HD 212 may be counted in HD 213 in some years.



Upper Clark Fork 2017

HD 213

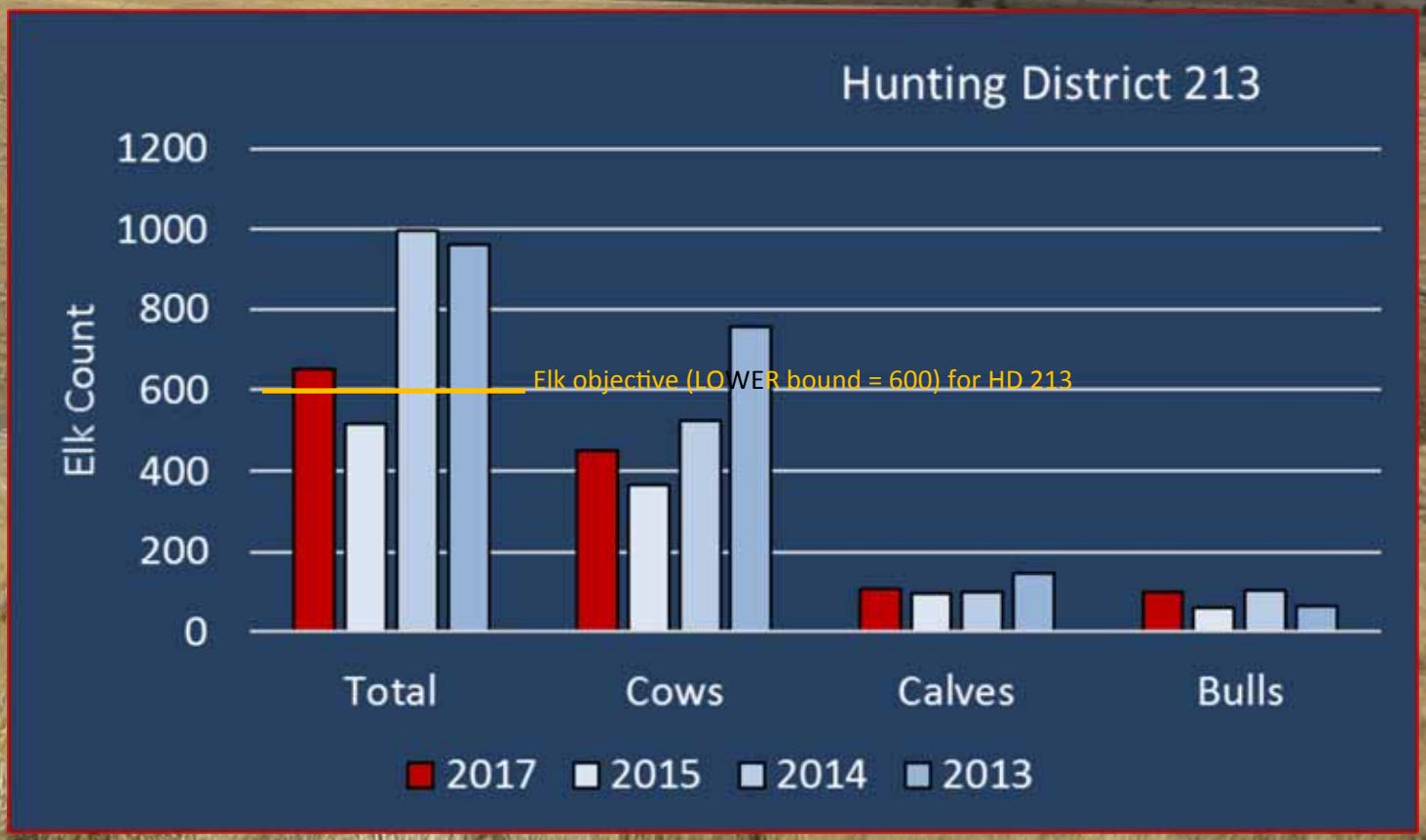


The count of 651 elk in Hunting District 213 in 2017 was higher than in 2015, inching above the lower bound of the elk population objective that is set for HD 213 in accordance with the Statewide Elk Management Plan.

As in other districts in the Upper Clark Fork this winter, calf and bull ratios were relatively high for what we would expect in this area—especially the bulls.

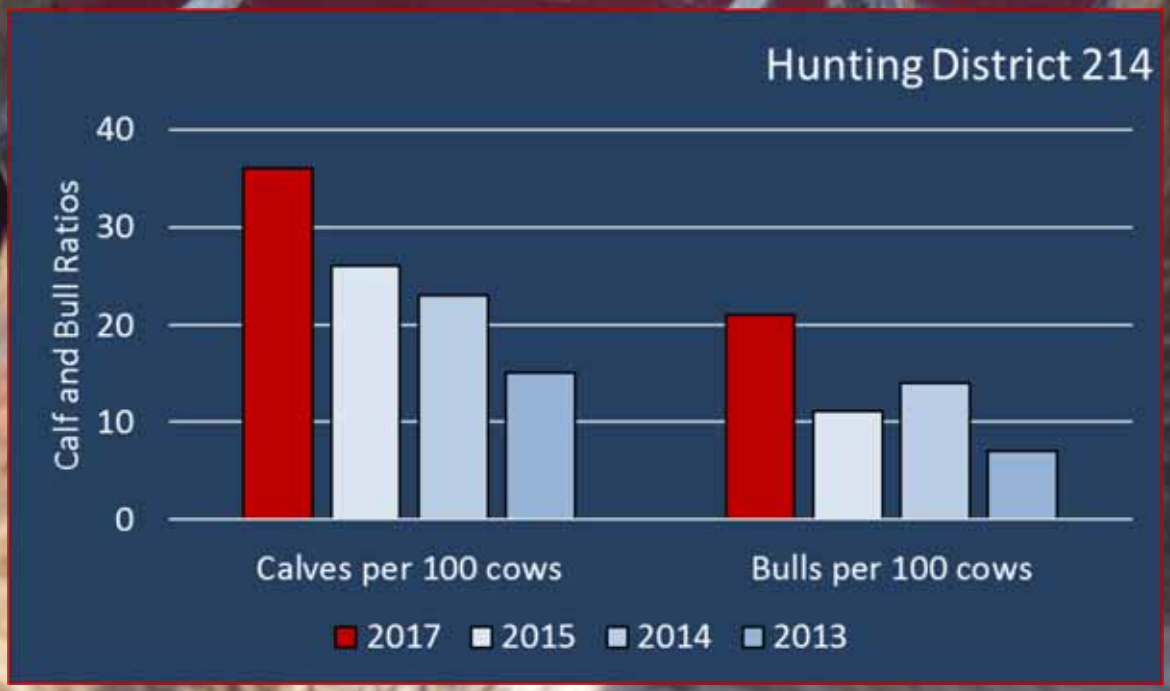
This picture was taken during a routine day in the life of the Regional Access Coordinator during hunting season. Access staff patrol Block Management Areas each season, talking with landowners and hundreds of hunters in the field, like this day in Hunting District 213.

Like many hunting districts in the Upper Clark Fork, elk counts in Hunting District 213 have a history of fluctuating from year to year. Elk from HD 213 may be counted in HD 212 in some years.



Upper Clark Fork 2017

HD 214

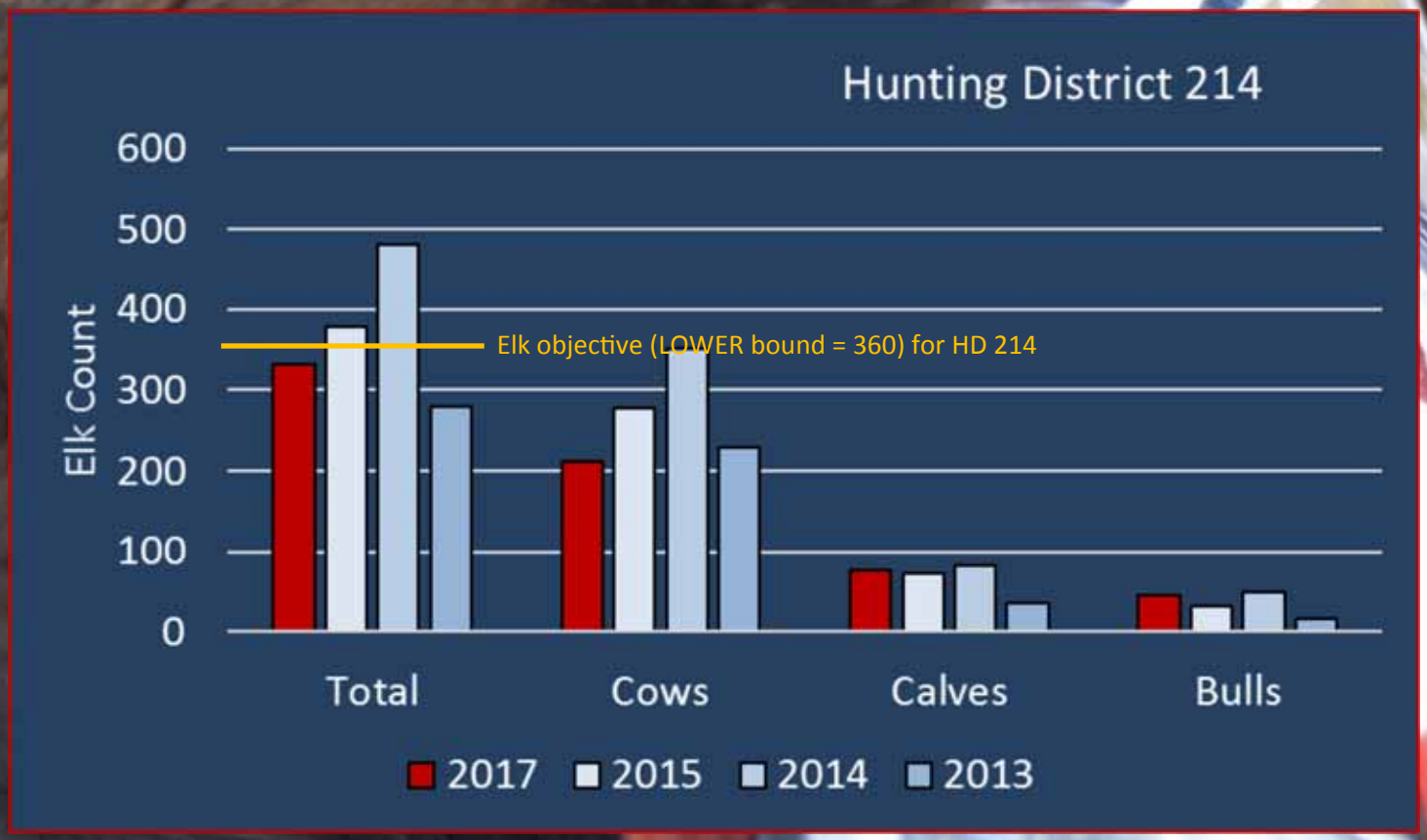


The count of 331 elk in Hunting District 214 in 2017 was the lowest since 2013. This was below the lower bound of the elk population objective that is set for HD 214 in accordance with the Statewide Elk Management Plan. In HD 214, we're used to the elk count fluctuating around the objective, so this year's count is not alarming, on its face.

As in other districts in the Upper Clark Fork this winter, calf and bull ratios were good for this particular survey unit.

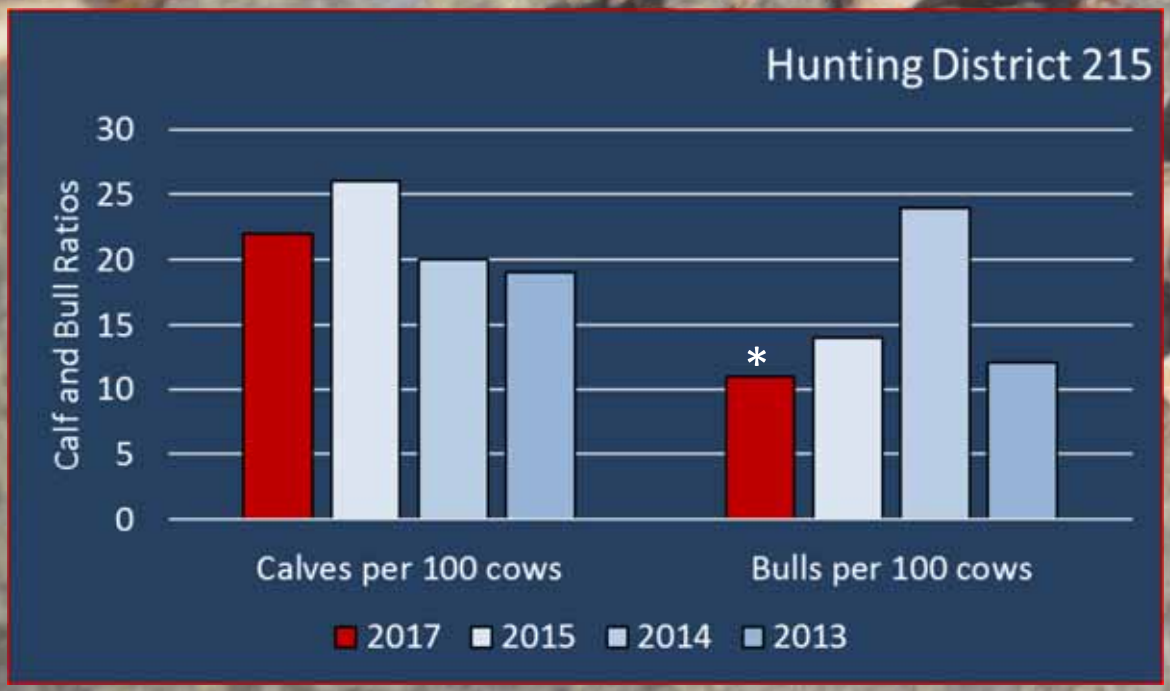
This matched set of bulls was checked through the Anaconda Check Station on opening day last fall. Maybe they were taken in HD 214, or maybe not, but HD 214 was where we stood when this picture was taken.

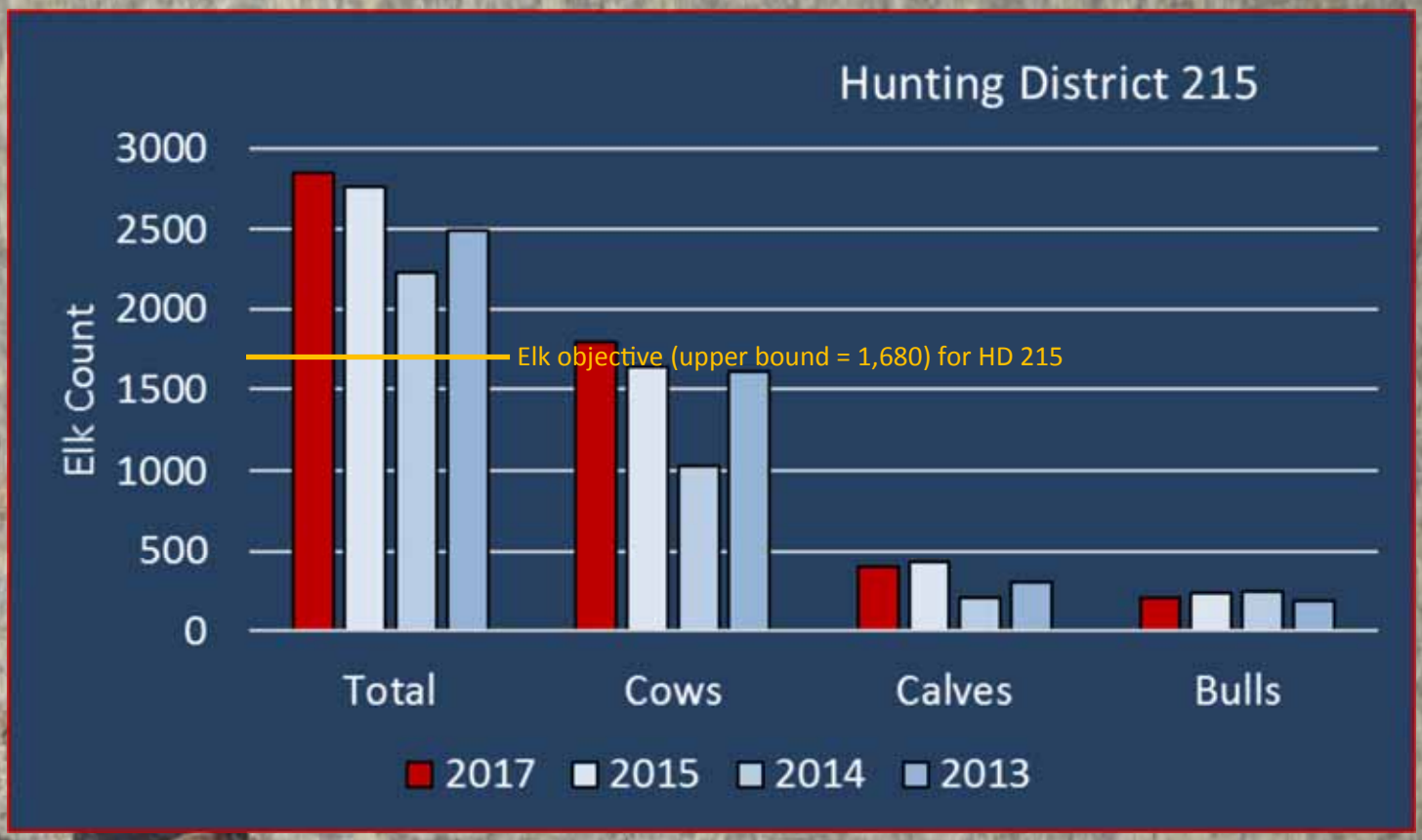
We didn't get to meet the "Montana Tech Mom," but the men were obviously proud of her and her Montana Tech student(s).



Upper Clark Fork 2017

HD 215





The count of 2,850 elk in Hunting District 215 in 2017 was the highest yet recorded, well above the upper bound of the elk objective (1,680) for HD 215, as per the Statewide Elk Management Plan.

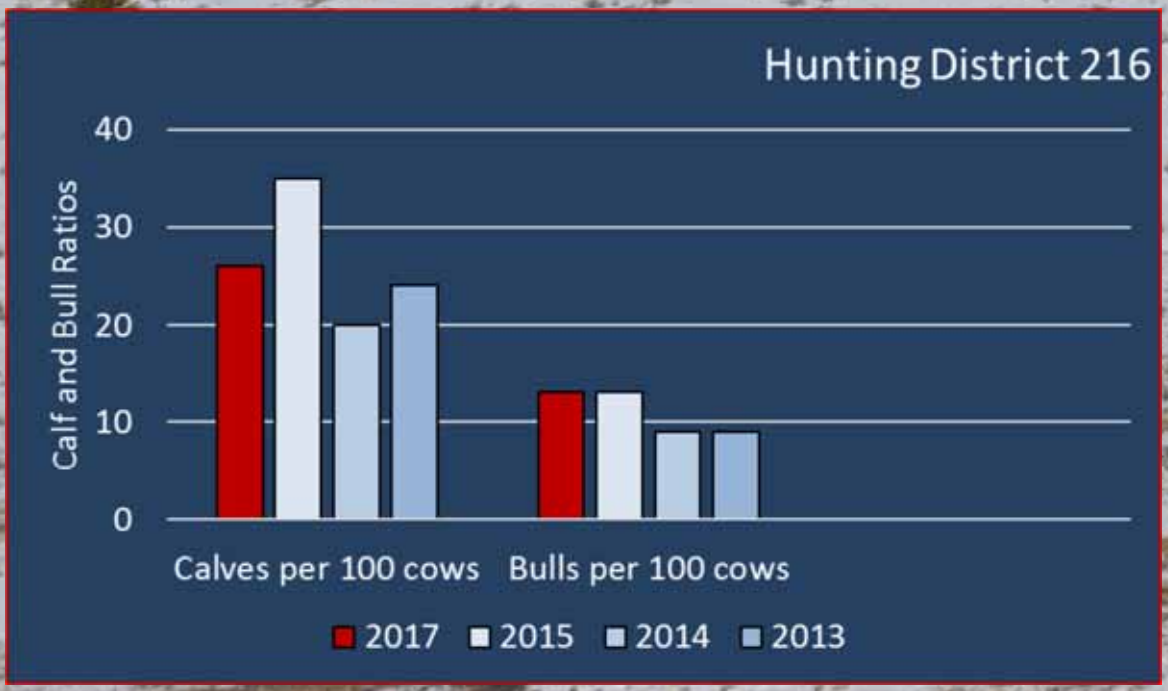
As in other districts in the Upper Clark Fork this winter, calf ratios fell within the expected range. The bull ratio was low, possibly due to the relatively late date of the surveys (March 28-April 2). By that time, some of the older bulls would have shed their antlers. Bulls without antlers can be distinguished from cows by body shape and coloration, but not as reliably as when they have antlers, and especially not in large groups of elk. As can be seen in this photo, some spikes are shaped and colored differently from the cows, and some are not so obvious. Also, another large group of elk in other photographs remained unclassified at this writing, which might affect the final bull ratio.

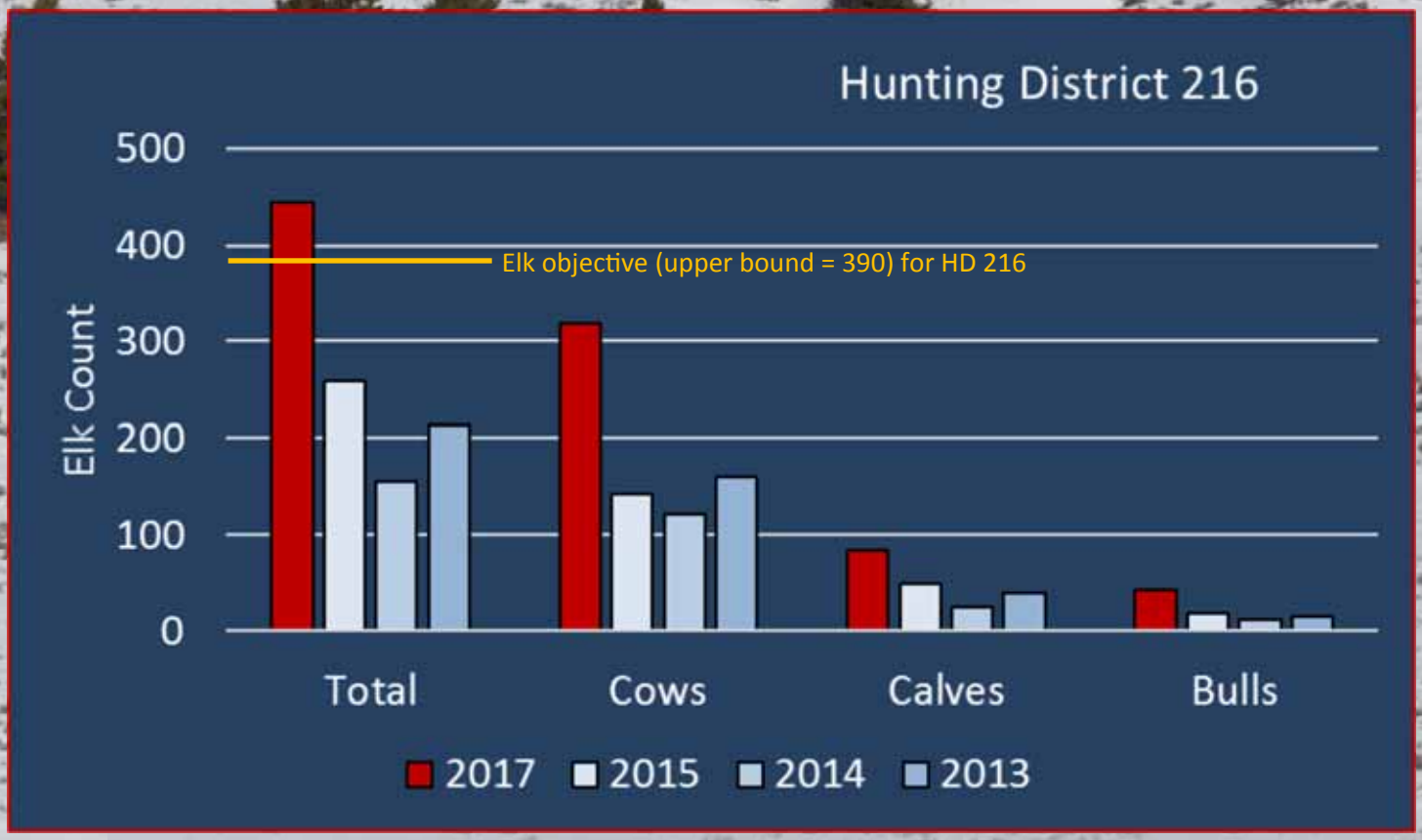
FWP biologist Julie Golla snapped this picture from the Super Cub while counting elk in HD 215, and used this picture and others to double-check her counts and classifications.

As usual, most of these elk were found on or around the Spotted Dog Wildlife Management Area (WMA). In 2017, Julie counted 2,173 elk north of Cottonwood Creek, most of which were on the WMA.

Upper Clark Fork 2017

HD 216





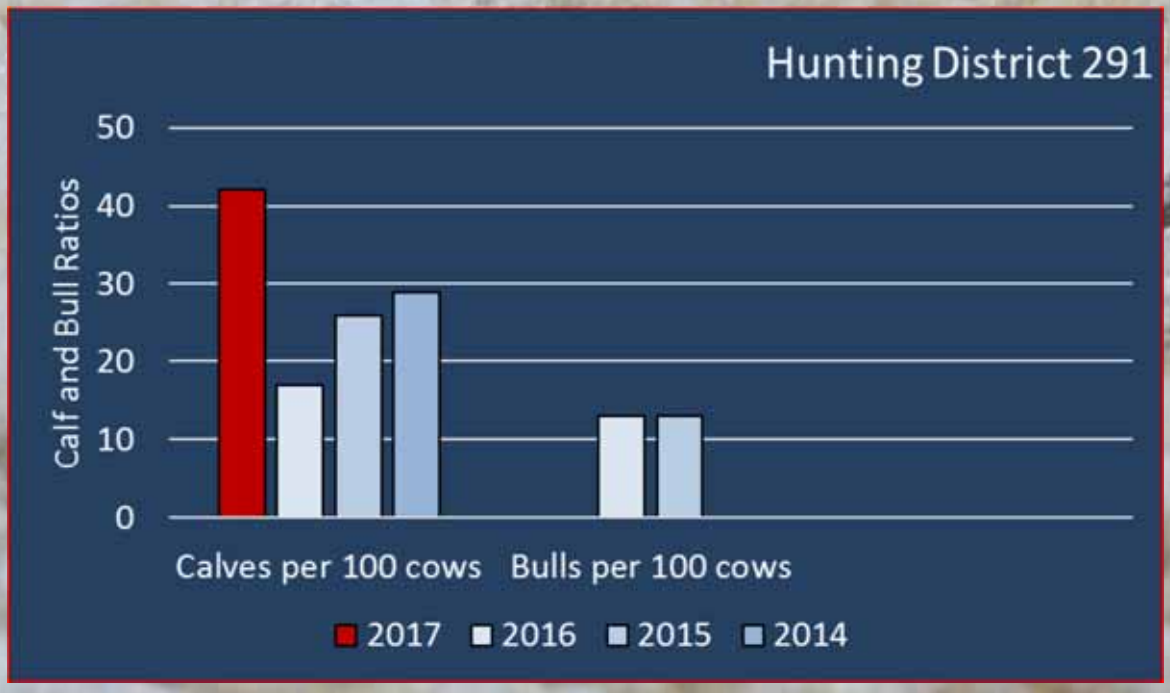
The count of 445 elk in Hunting District 216 in 2017 was higher than any in recent history, and exceeded the upper limit of the objective range for this population, as outlined in the Statewide Elk Management Plan.

As in other districts in the Upper Clark Fork this winter, calf and bull ratios were toward the high end of what we've seen recently in this area.

FWP biologist Julie Golla snapped this picture from the Super Cub while counting elk in HD 216 on March 11, and used this picture and others to double-check her counts and elk classifications.

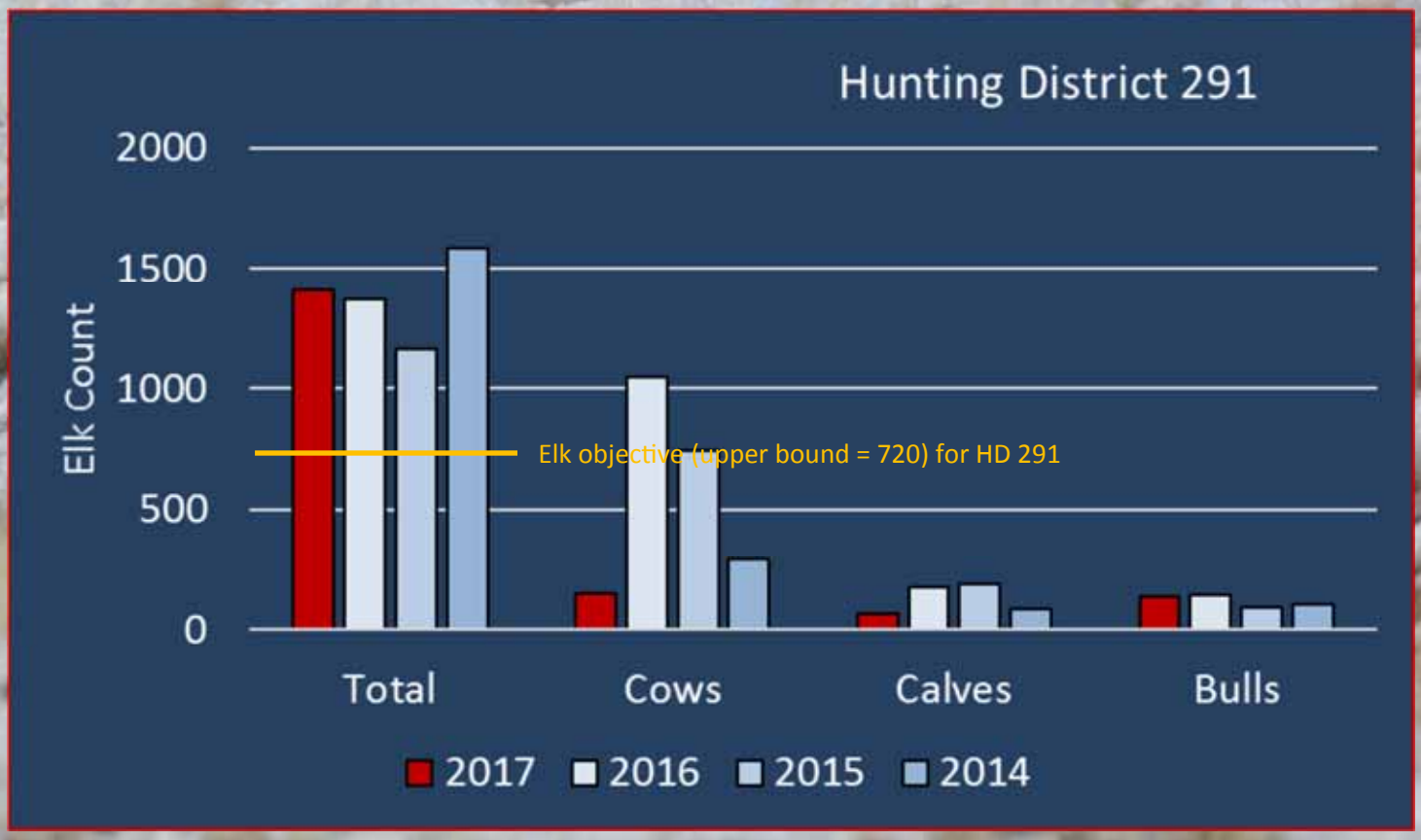
Upper Clark Fork 2017

HD 291



The count of 1,411 elk in Hunting District 291 in 2017 continued an upward trend since 2015. Elk counts in this district continue to climb above the objective (upper bound) set per the Statewide Elk Management Plan, and are affected by elk and land management in adjacent districts.

As in other districts in the Upper Clark Fork this winter, calf ratios were good, although it should be noted that relatively few elk were classified and may not be representative of the larger population. As in 2014, we had too many unclassified elk in the count to calculate a valid bull: cow ratio at all. This problem arises when we're able to classify bulls because of their antlers, but can't distinguish a lot of the cows from the calves. (See graph below.)

We snapped this photo in February, as the late shoulder season in HD 291 was winding down. Golden eagles don't need a special license, and they only pose a threat to the occasional and unfortunate mule deer fawn, among other, smaller prey.

As is so often the case, the elk count in HD 291 varies, depending on whether these elk happen to be here or in HD 217 or HD 298 at the time of the survey.