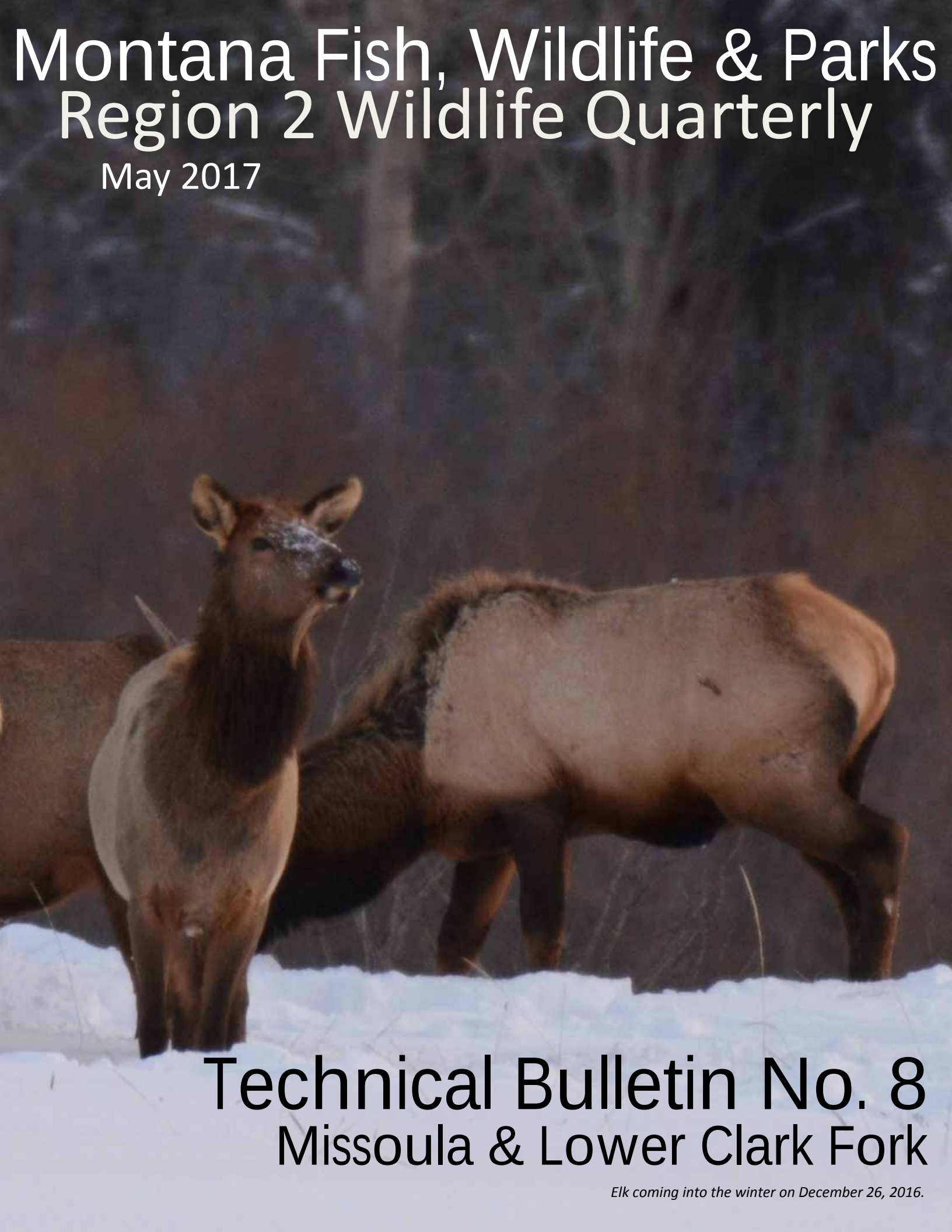
Montana Fish, Wildlife & Parks
Region 2 Wildlife Quarterly

May 2017



Technical Bulletin No. 8

Missoula & Lower Clark Fork

Elk coming into the winter on December 26, 2016.

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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.

Mt. Jumbo

The least likely place to successfully conserve winter range for a wild, migratory elk herd in western Montana may well be this place—Mt. Jumbo. Situated within the Missoula City Limits, visible from the busiest traffic intersections in one of Montana's largest cities, these elk literally live on the edge. On the right side of the narrow line between wild and habituated, so far. On the quiet side of habitat security and human disturbance. On the fringe of noxious weed infestations and relatively pristine native rangeland. These elk, in this place, represent success in the eyes of people down below who might be better served to keep their eyes on the road.

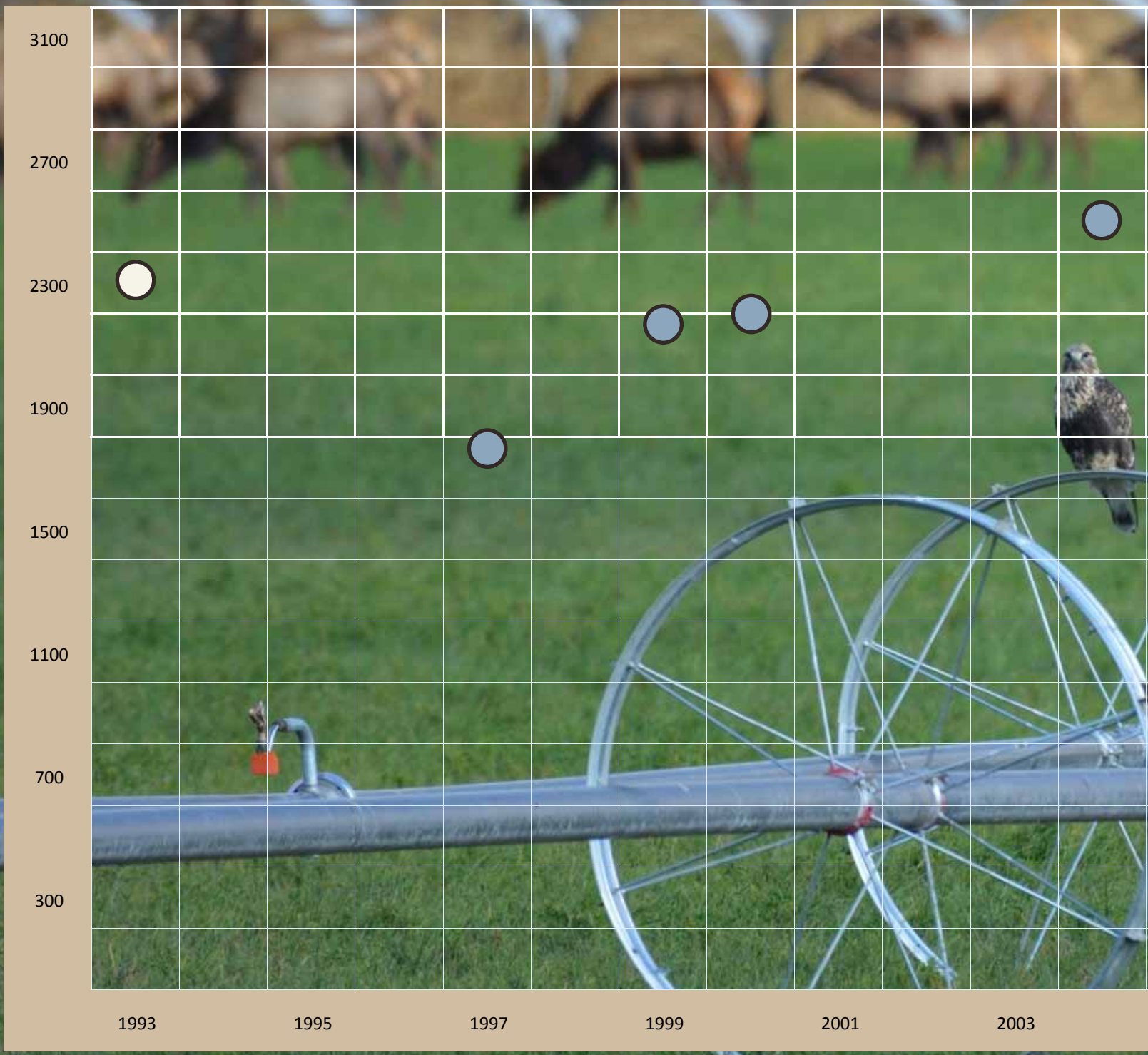
Things could have looked very differently here, were it not for the farsighted and continuing efforts of the Missoula Community. Type "Mount Jumbo Conservation Land, Missoula, MT" in your Internet browser to access more information on the story of the Mount Jumbo elk winter range.

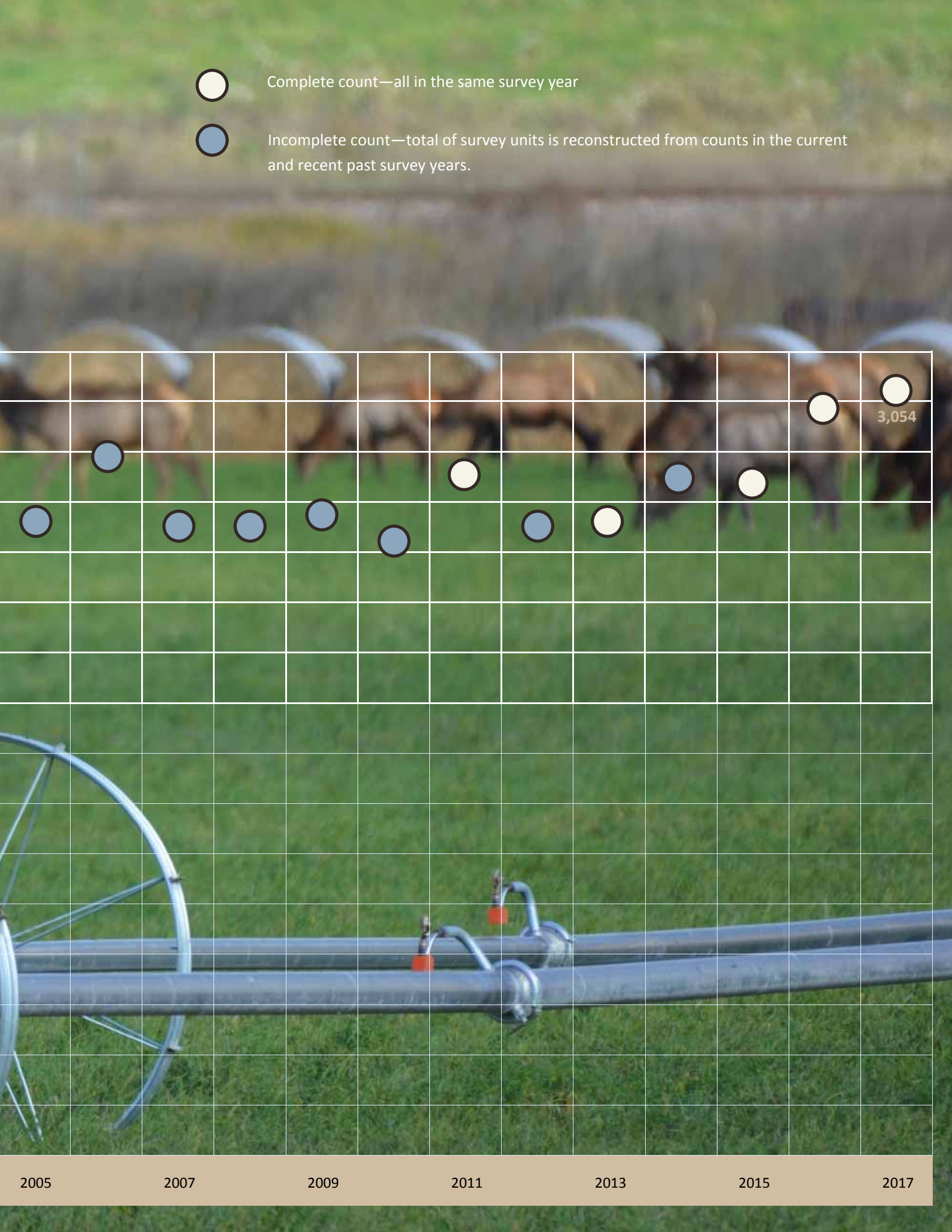
This issue of the Quarterly reports the results of FWP's elk counts in the Missoula Valley and Lower Clark Fork watershed this winter and early spring. It was biologist Liz Bradley's third annual survey season with FWP as our Missoula-based wildlife biologist, working with veteran mountain pilot, Mark Mamuzich, with Minuteman Aviation. Flights are conducted at the crack of dawn in March, April and May, beginning with the bloom of buttercups, as tradition prescribes.

Liz and Mark counted a record-high number of elk from Lookout Pass to the Marshall Canyon this year, breaking 3,000 for the first time ever—3,054, to be exact. Imbedded within this quilt of elk numbers are local patches of too few or too many elk. Literally, elk successes abutting continuing and emerging elk challenges. Elk management is dynamic all across FWP Region 2, and the western extent of the region is no exception. Following are the results and trends for each Hunting District.

Lower Clark Fork

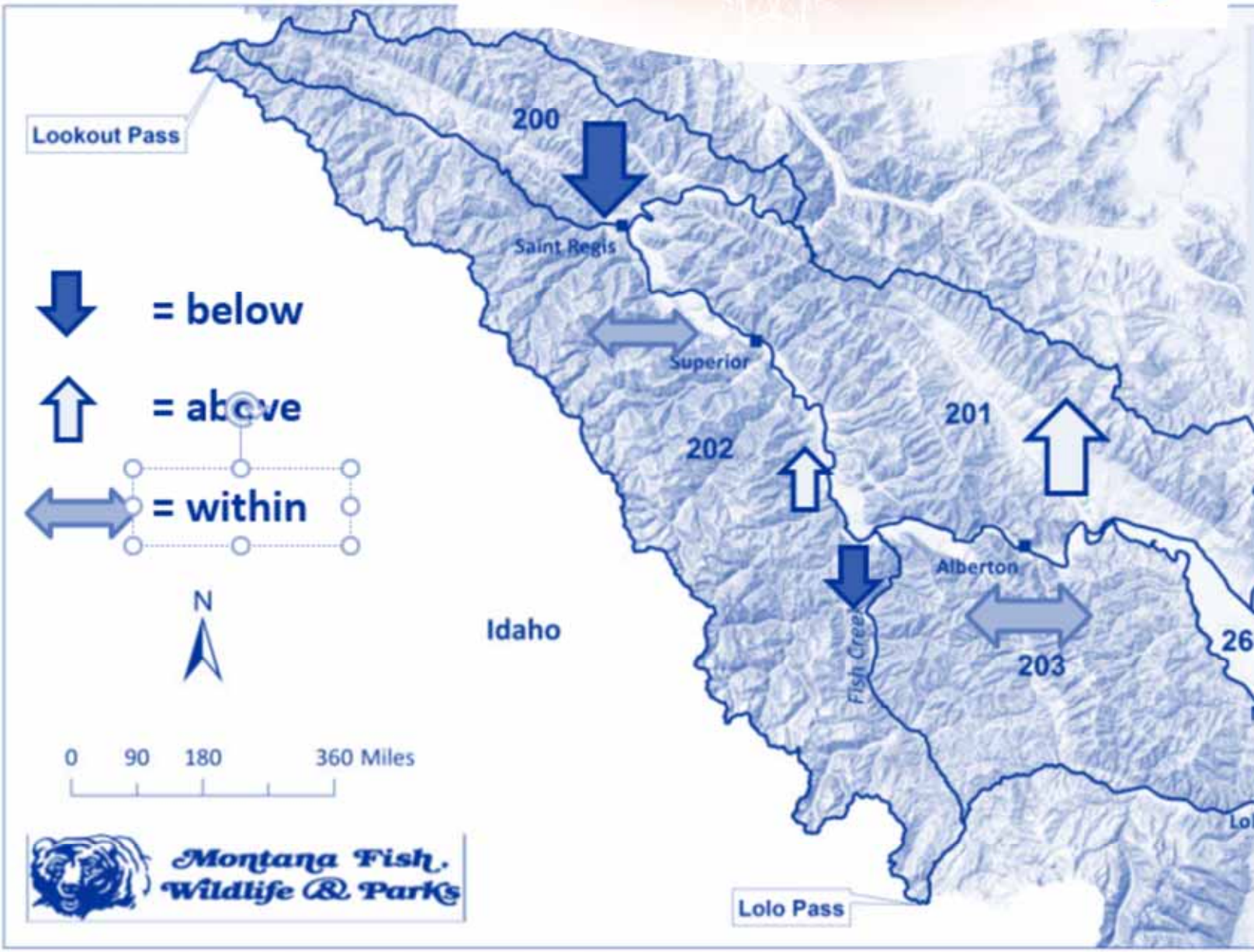
Elk Trend




Complete count—all in the same survey year
Incomplete count—total of survey units is reconstructed from counts in the current and recent past survey years.
3,054
2005
2007
2009
2011
2013
2015
2017

Lower Clark Fork 2017

Elk Objectives



Clark Fork Unit

Hunting Districts 200-203, 260 West, 283 West

Region 2 (R2), Montana Fish, Wildlife and Parks

Legend

The Lower Clark Fork portion of FWP Region 2 comprises about 2,069 square miles, generally west of Missoula, and includes all or portions of 6 elk hunting districts. (Hunting District 202, running between Interstate-90 and the Bitterroot Mountains, is the second-largest hunting district in Region 2.)

Objectives for elk population numbers are set in the Montana Statewide Elk Management Plan. The Lower Clark Fork is a patch-work of elk management challenges, with its districts and sub-districts almost evenly split between being "at," "below," or "above" the elk objective.

Lower Clark Fork 2017

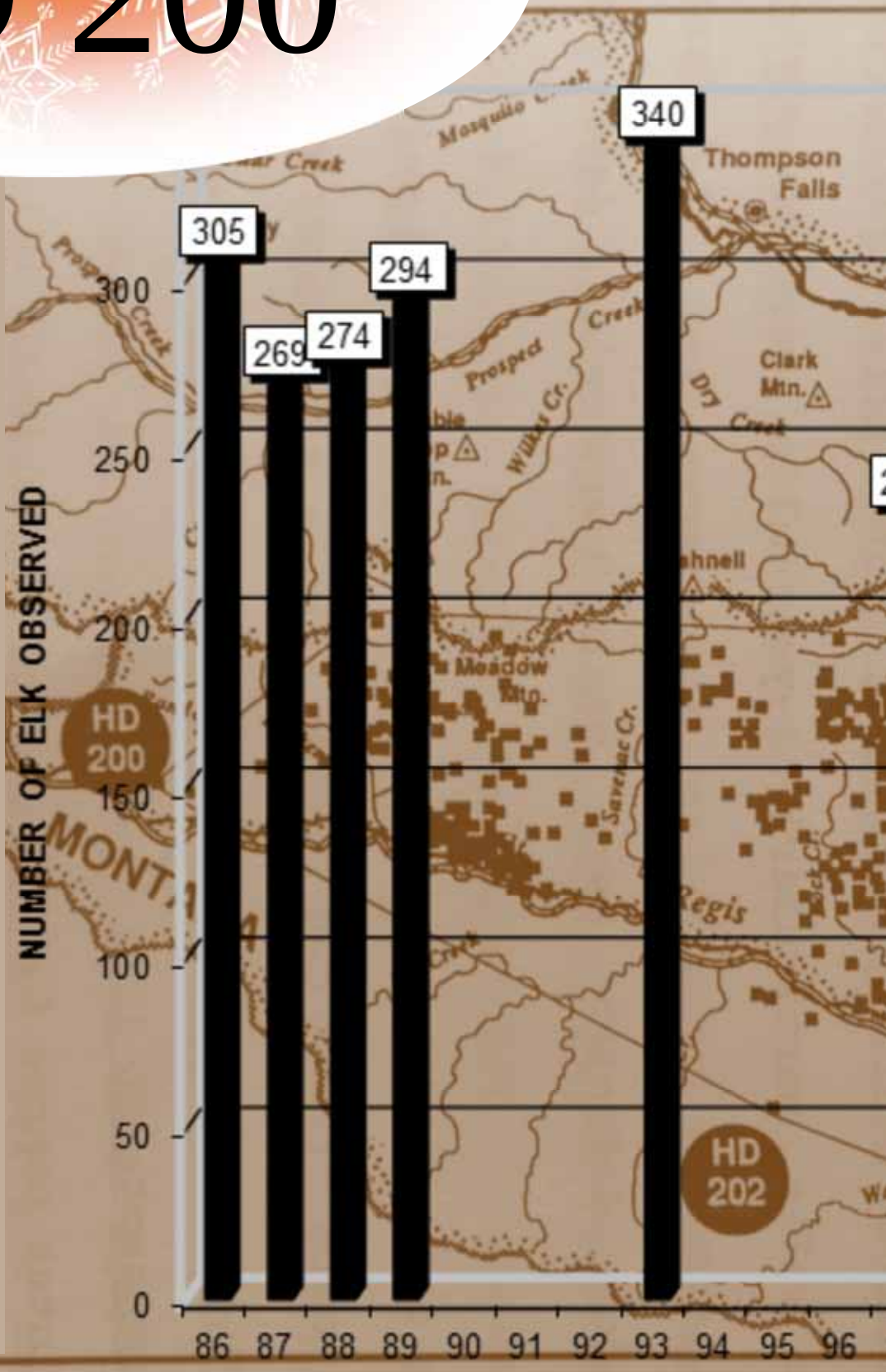
HD 200

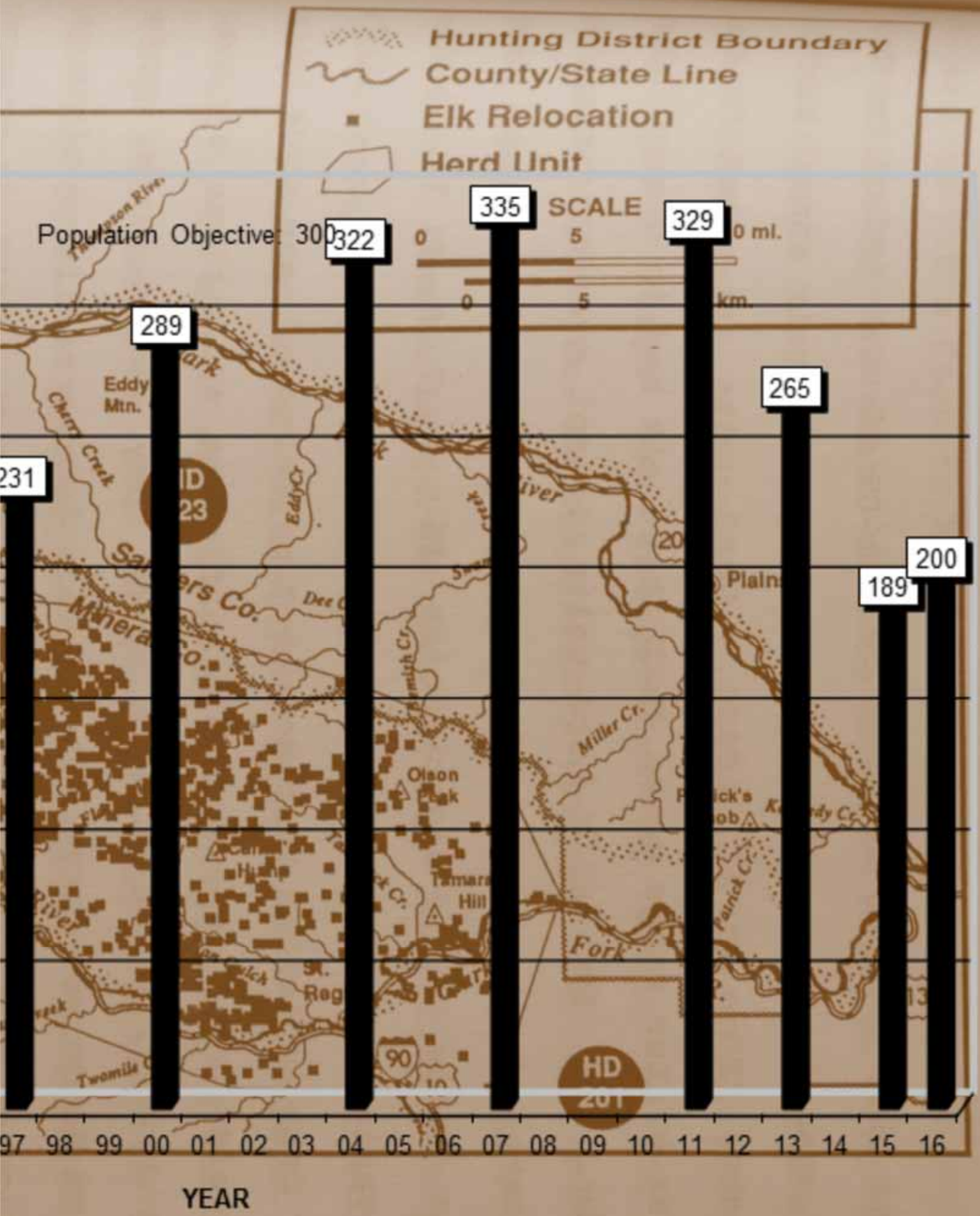
From 1985 to 1990, FWP studied the distribution and movements of elk in Hunting District 200. A final report was produced in 1993 (Henderson et al. 1993)..

Elk were captured and radio-collared, which resulted not only in data on seasonal migrations, but also contributed to an elk survey method that has been carried out to the present day. Instead of the fixed-wing aircraft that is used in most other elk surveys in Region 2, FWP learned that a helicopter is needed to survey the heavily forested elk range in Hunting District 200. A particular method of surveying was adopted as well.

The result is what you see on this graph. For a hunting district where virtually no elk data existed before the Lower Clark Fork Elk Study, we now have a baseline of elk counts for comparison.

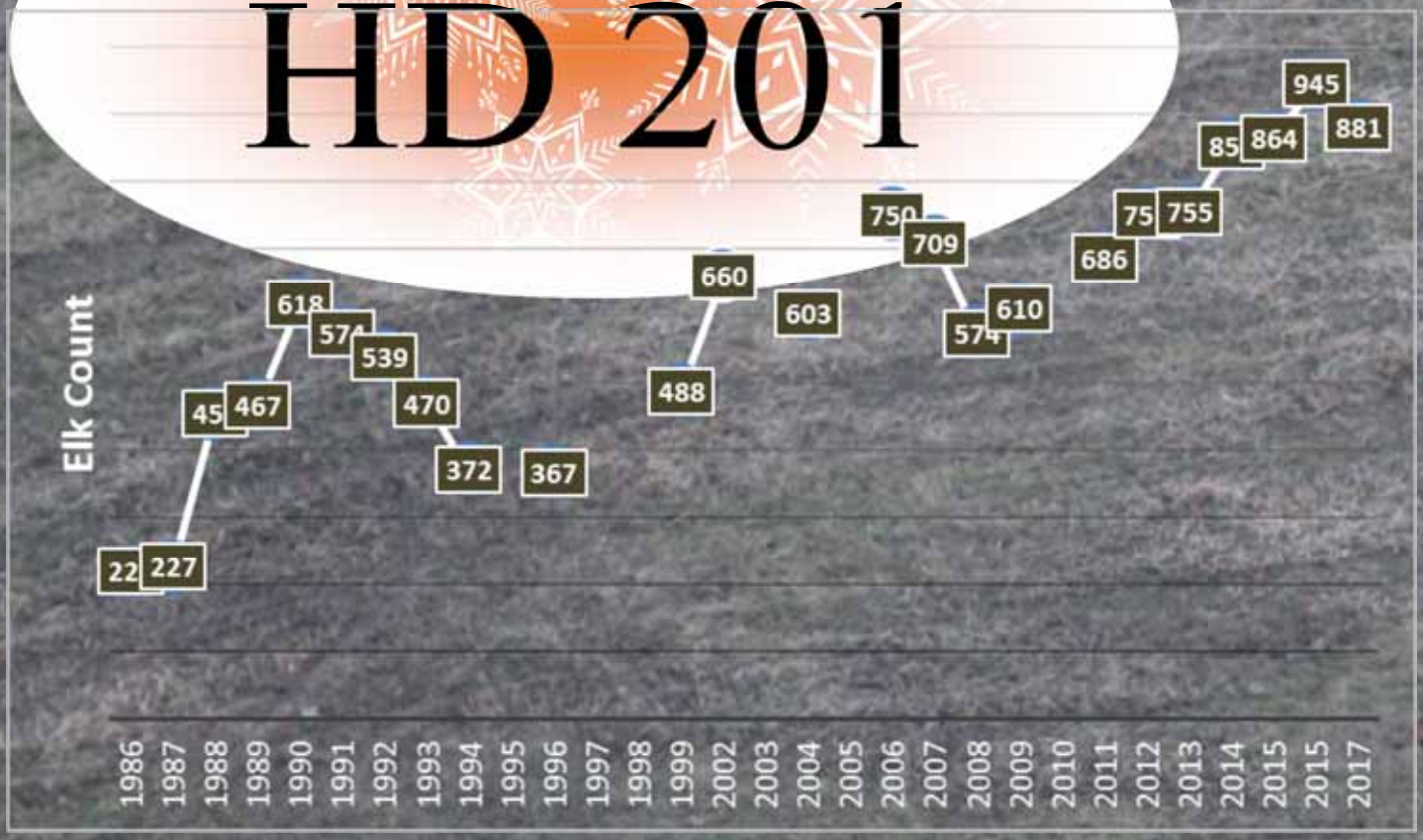
Due to the expense of helicopter surveys, they are not accomplished every year, and a survey was not conducted in 2017. The results of surveys in 2015 and 2016 were not encouraging and FWP hopes to survey HD 200 again in 2018.




Hunting District Boundary
County/State Line
Elk Relocation
Herd Unit
SCALE
0
5
0 ml.
0
5
km.
Population Objective: 300
231
289
322
335
329
265
189
200
Eddy Mtn.
Cherry Creek
HD 23
Eddy Cr
Sanders Co.
Mineral Co.
Plain
Miller Cr.
Olson Peak
Tamarack Hill
Fork
Twomile
90
HD 201
97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16
YEAR

Lower Clark Fork 2017

HD 201



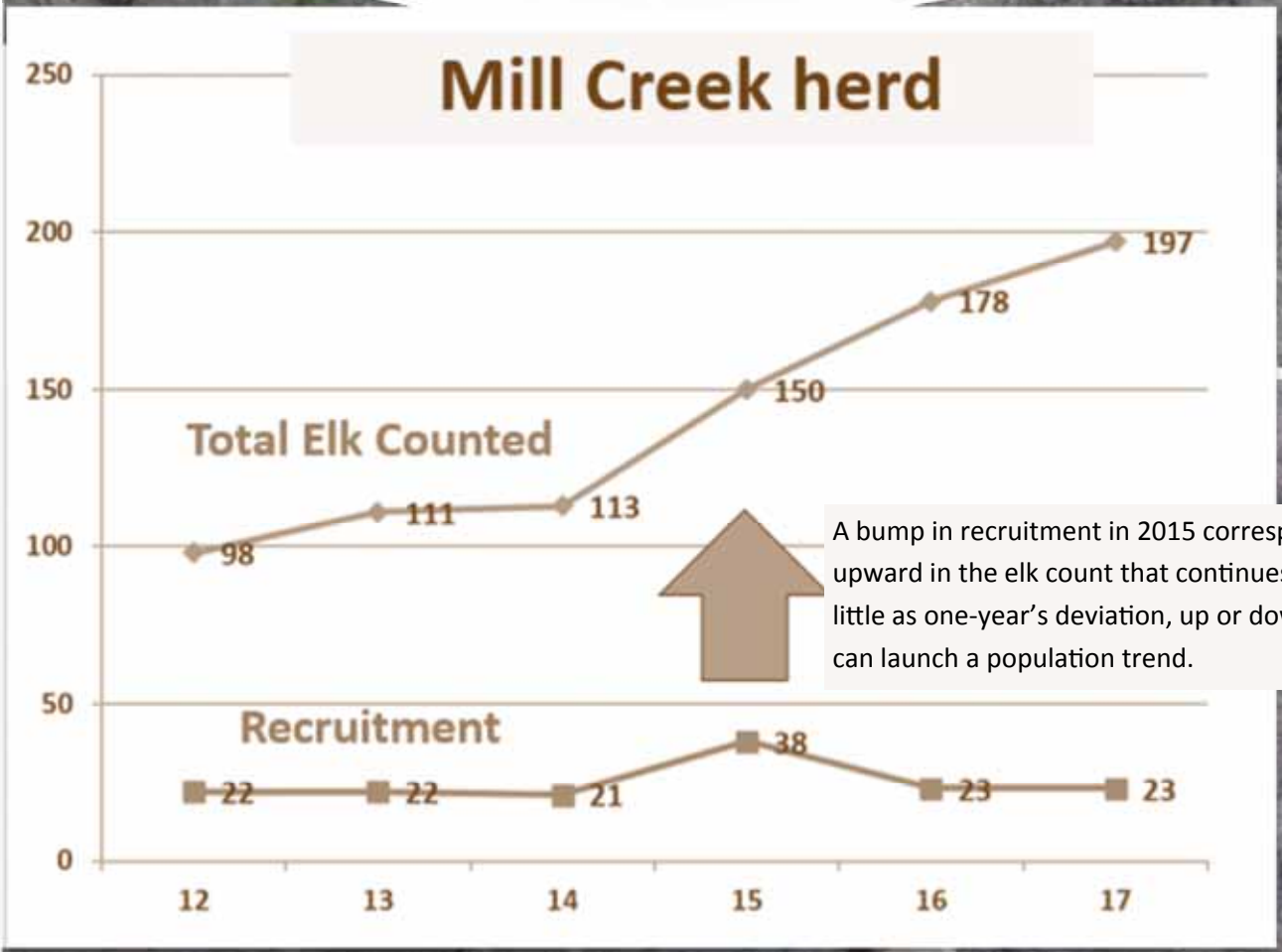
The count of 881 elk in 2017 was down slightly from the record high count of 945 elk obtained in 2016 for Hunting District 201.

The calf ratio of 25 calves per hundred cows is good for this area, and was slightly higher than in 2016. This is of interest considering the greater winter severity in 2017. The bull ratio of 16 bulls per hundred cows is also on par for expectations in this area.

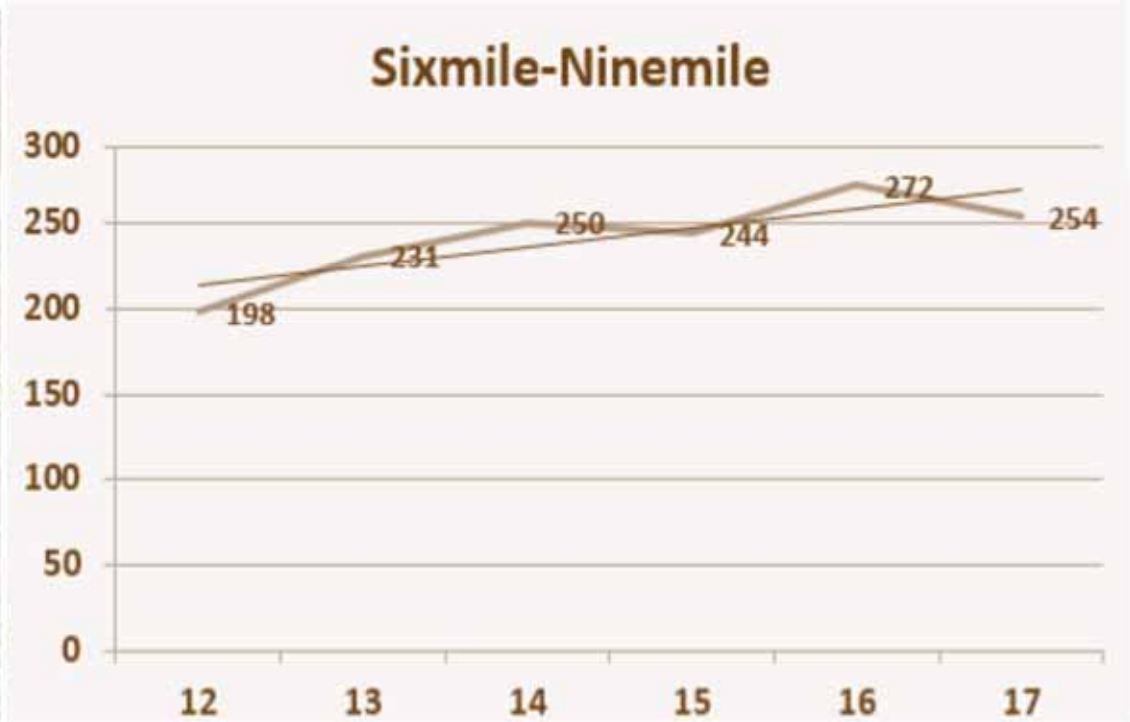
Elk counts are generally on a long-term, increasing trend across this large hunting district, though the pace certainly varies from St. Regis to Evaro.

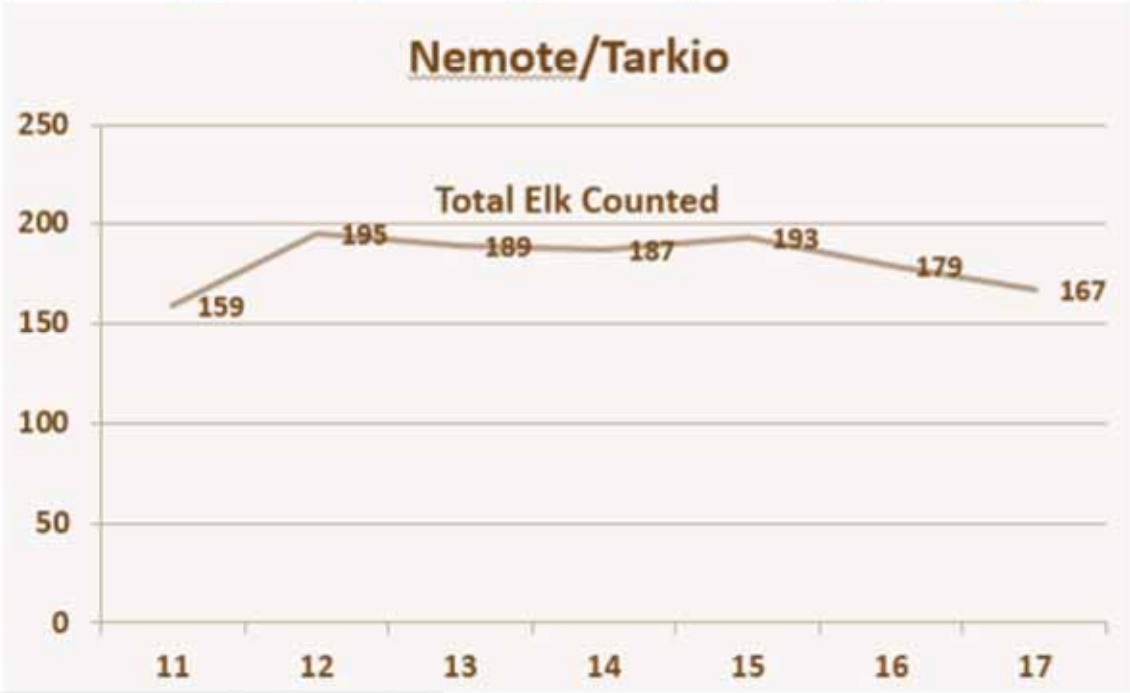
Lower Clark Fork 2017

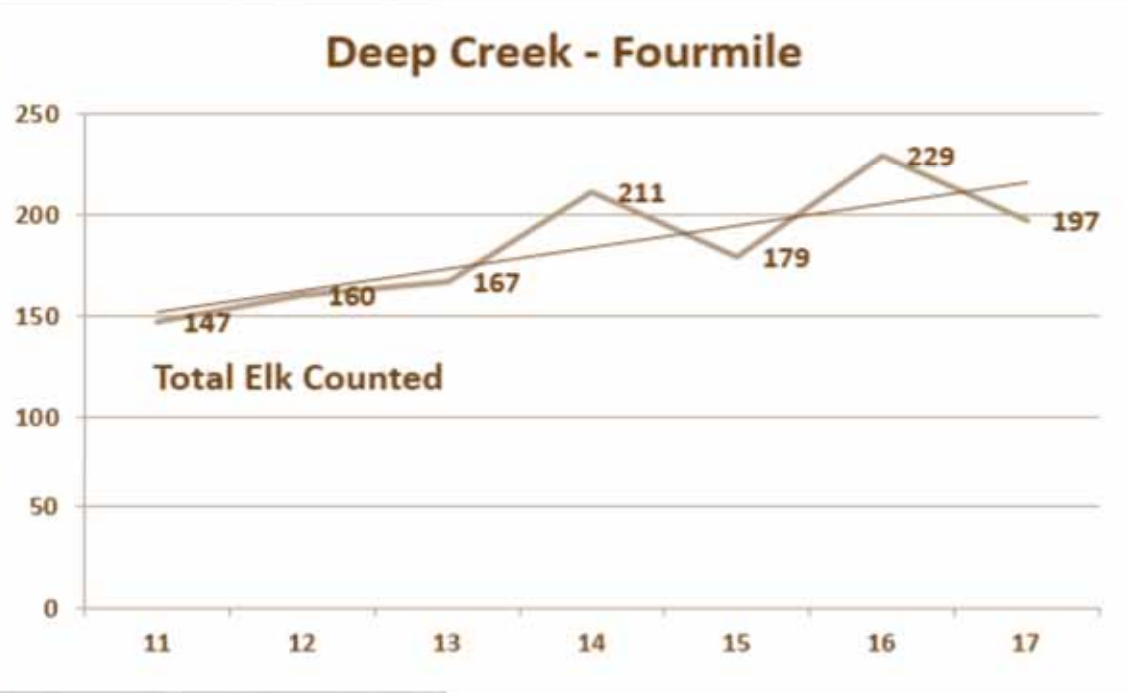
HD 201



A bump in recruitment in 2015 corresponded with a bump upward in the elk count that continues to 2017. Maybe as little as one-year's deviation, up or down, in recruitment can launch a population trend.


Sixmile-Ninemile
300
250
200
150
100
50
0
198
231
250
244
272
254
12
13
14
15
16
17


Nemote/Tarkio
250
200
150
100
50
0
Total Elk Counted
159
195
189
187
193
179
167
11
12
13
14
15
16
17


Deep Creek - Fourmile
250
200
150
100
50
0
147
160
167
211
179
229
197
Total Elk Counted
11
12
13
14
15
16
17

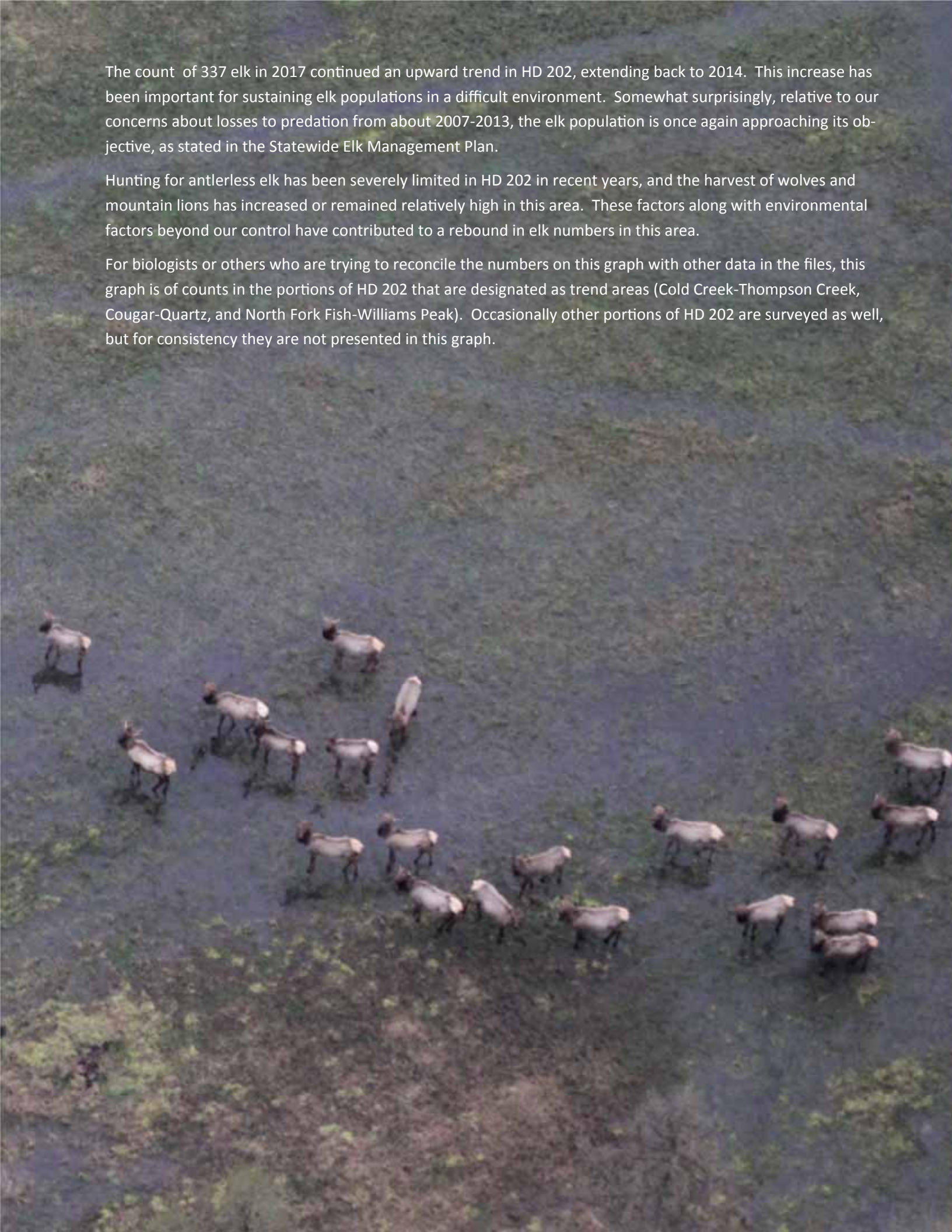
Lower Clark Fork 2017

HD 202

The count of 337 elk in 2017 continued an upward trend in HD 202, extending back to 2014. This increase has been important for sustaining elk populations in a difficult environment. Somewhat surprisingly, relative to our concerns about losses to predation from about 2007-2013, the elk population is once again approaching its objective, as stated in the Statewide Elk Management Plan.

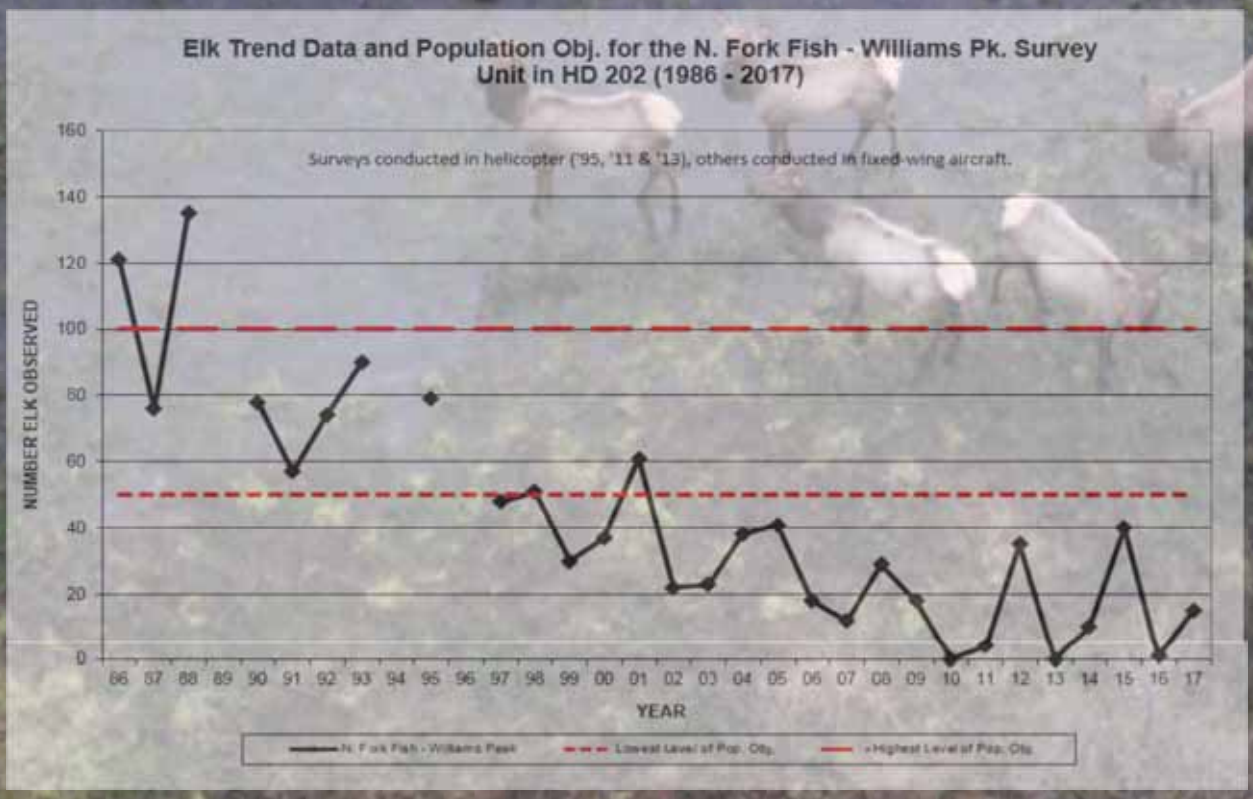
Hunting for antlerless elk has been severely limited in HD 202 in recent years, and the harvest of wolves and mountain lions has increased or remained relatively high in this area. These factors along with environmental factors beyond our control have contributed to a rebound in elk numbers in this area.

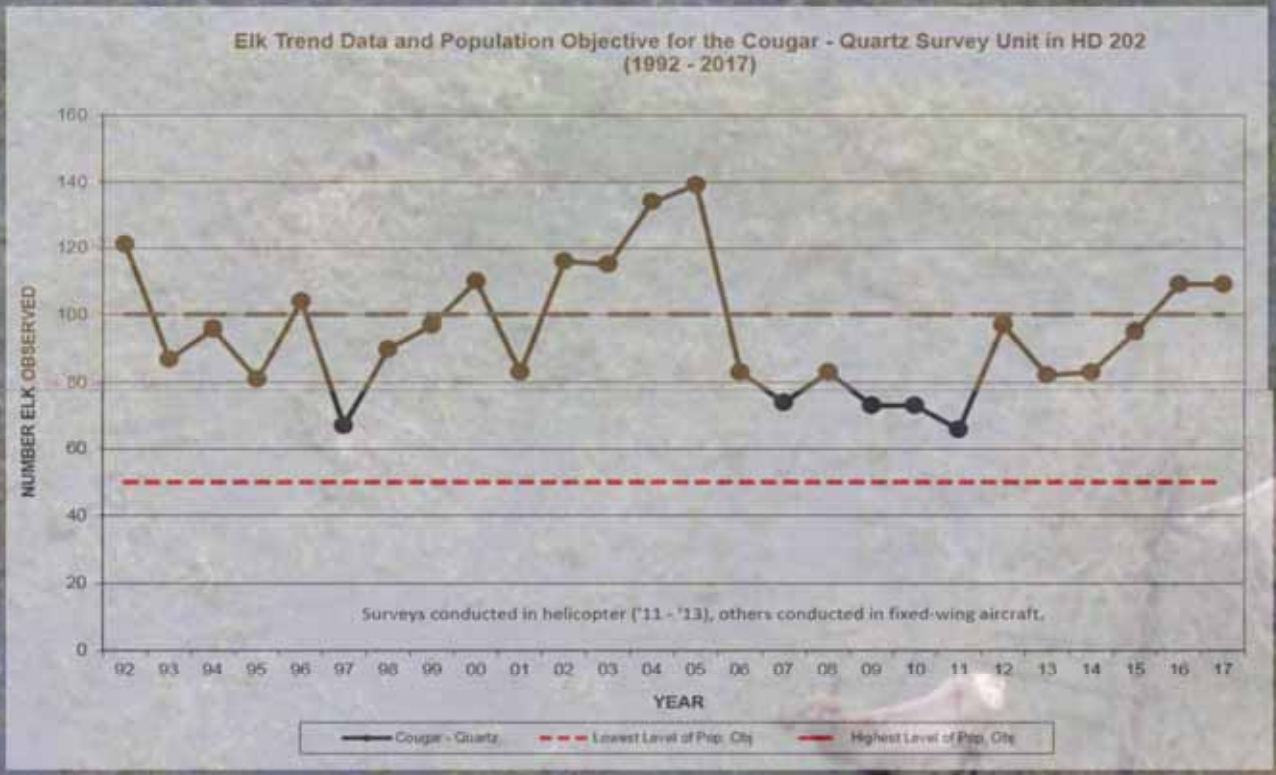
For biologists or others who are trying to reconcile the numbers on this graph with other data in the files, this graph is of counts in the portions of HD 202 that are designated as trend areas (Cold Creek-Thompson Creek, Cougar-Quartz, and North Fork Fish-Williams Peak). Occasionally other portions of HD 202 are surveyed as well, but for consistency they are not presented in this graph.

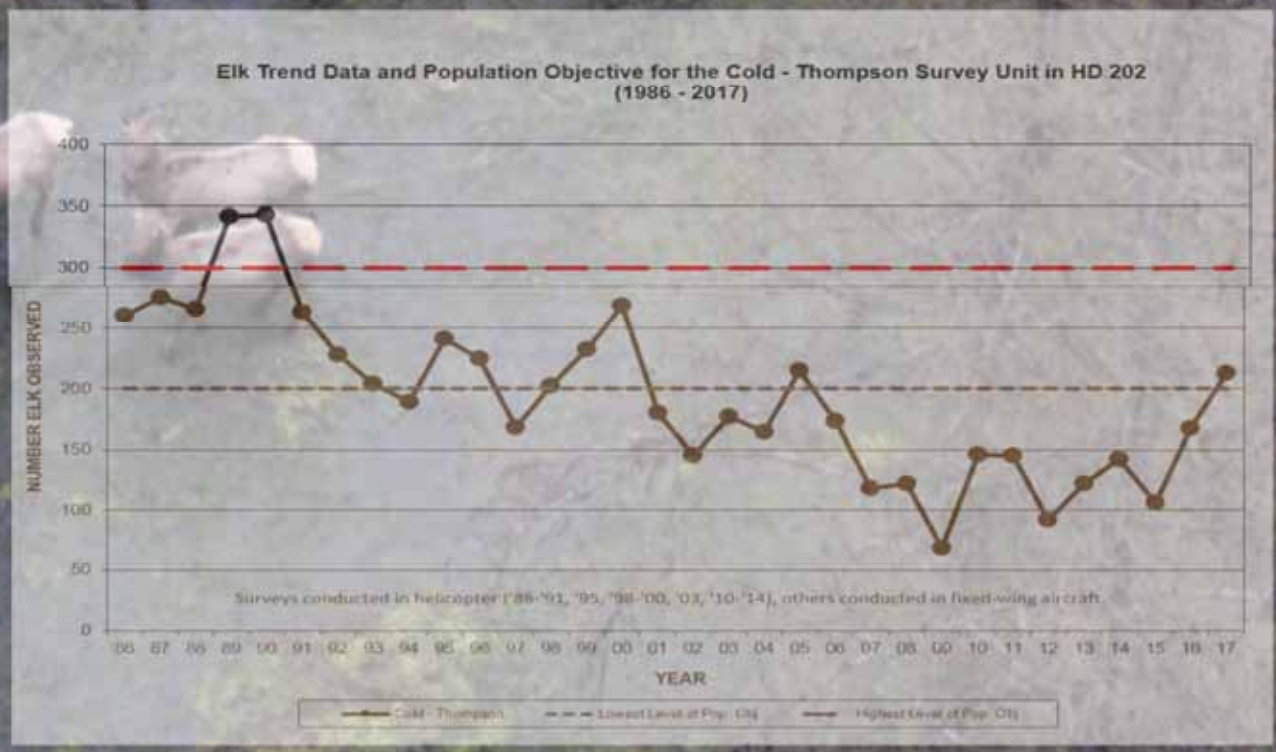


Lower Clark Fork 2017

HD 202

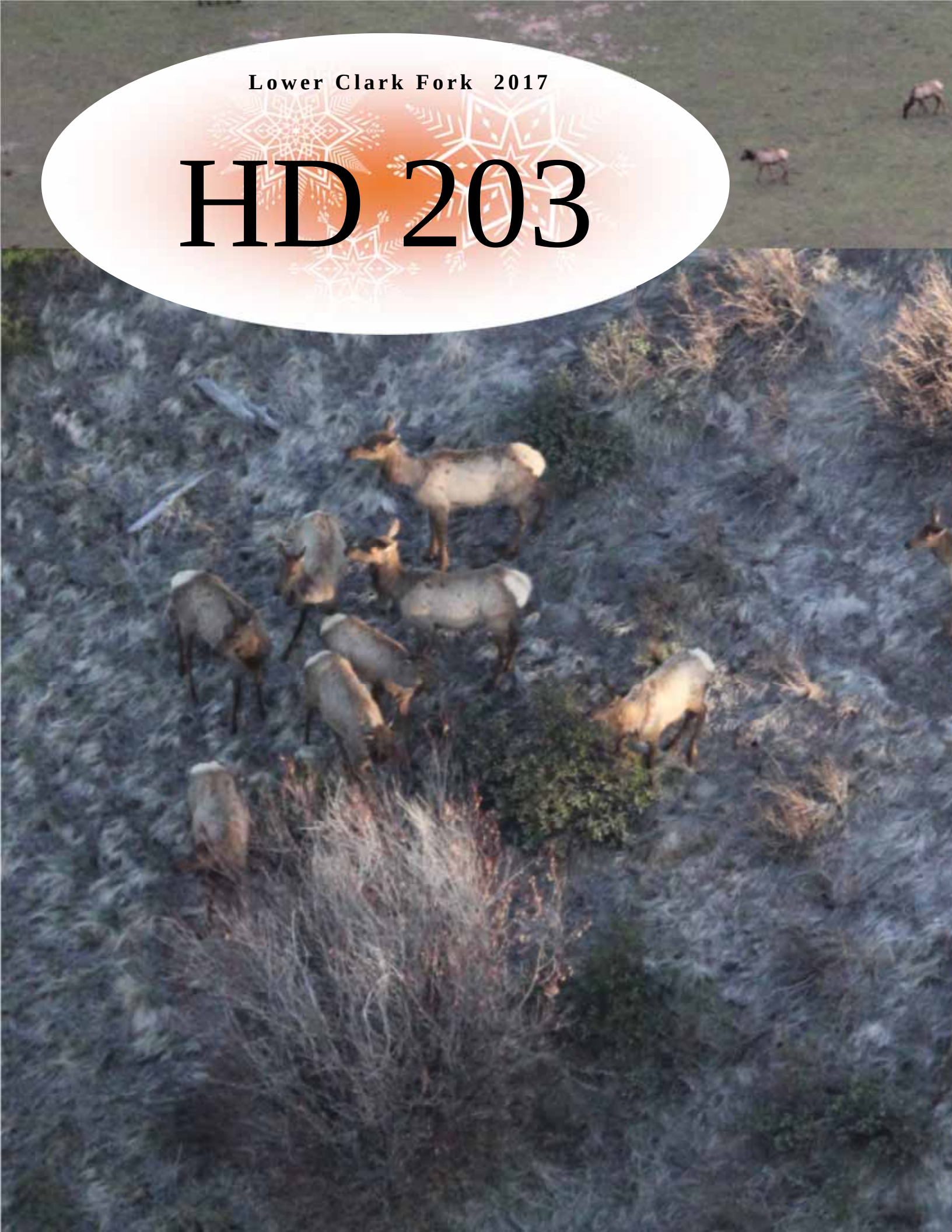


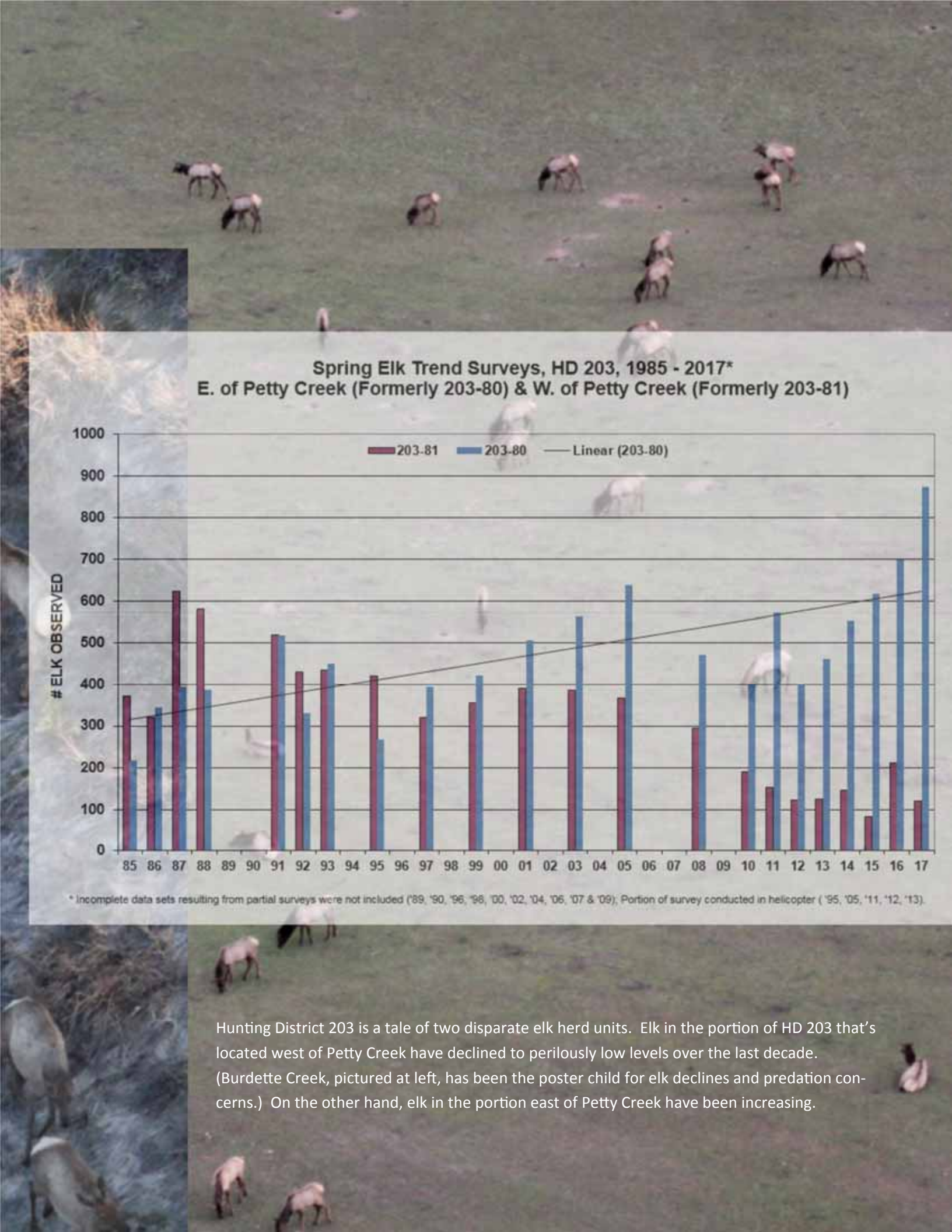

Elk Trend Data and Population Objective for the Cougar - Quartz Survey Unit in HD 202
(1992 - 2017)
NUMBER ELK OBSERVED
160
140
120
100
80
60
40
20
0
Surveys conducted in helicopter ('11 - '13), others conducted in fixed-wing aircraft.
92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17
YEAR
Cougar - Quartz
Lowest Level of Pop. Obj
Highest Level of Pop. Obj


Elk Trend Data and Population Objective for the Cold - Thompson Survey Unit in HD 202
(1986 - 2017)
NUMBER ELK OBSERVED
400
350
300
250
200
150
100
50
0
Surveys conducted in helicopter ('86-'91, '95, '98-'00, '03, '10-'14), others conducted in fixed-wing aircraft.
86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17
YEAR
Cold - Thompson
Lowest Level of Pop. Obj
Highest Level of Pop. Obj

Lower Clark Fork 2017

HD 203

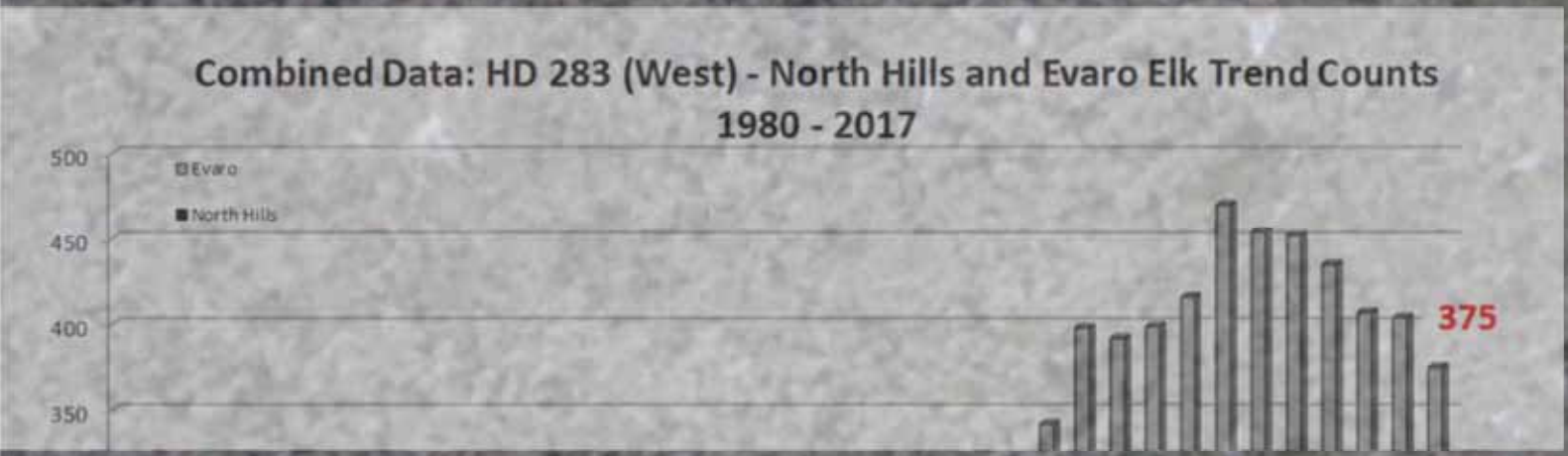




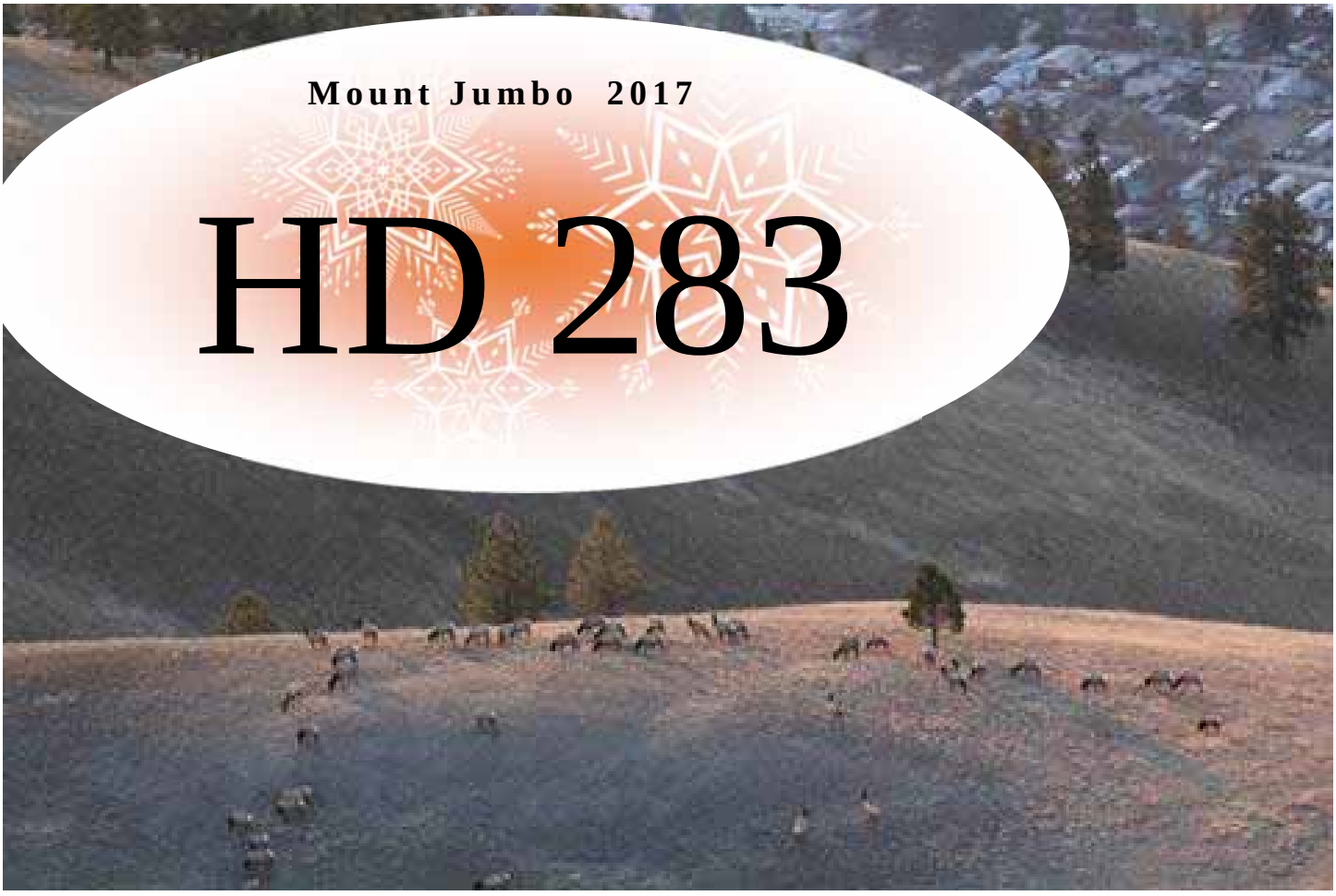
Hunting District 203 is a tale of two disparate elk herd units. Elk in the portion of HD 203 that's located west of Petty Creek have declined to perilously low levels over the last decade. (Burdette Creek, pictured at left, has been the poster child for elk declines and predation concerns.) On the other hand, elk in the portion east of Petty Creek have been increasing.

Lower Clark Fork 2017

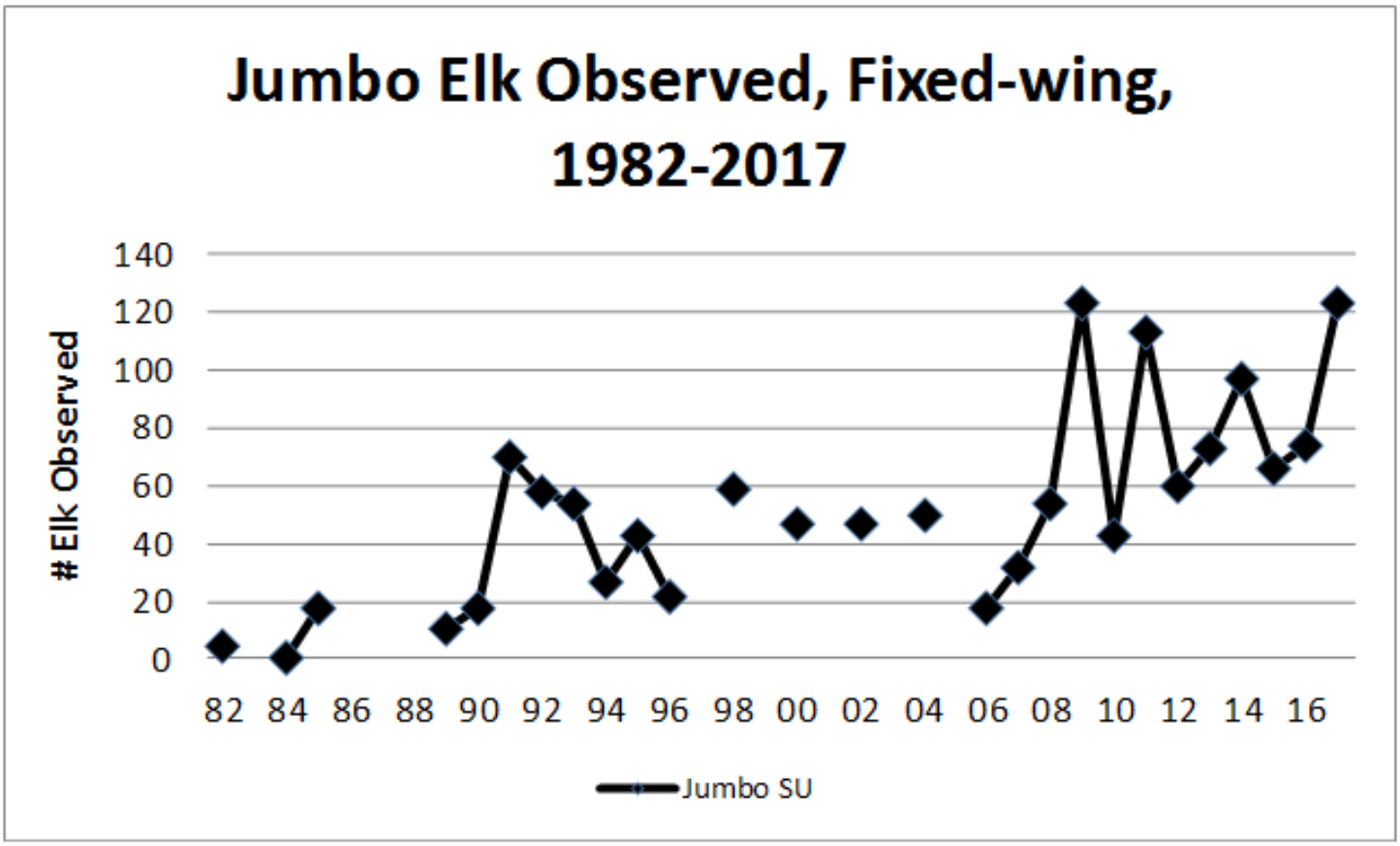
HD 283



Elk in the North Hills of the Missoula Valley are a public trust resource with the full participation and cooperation of almost every person on the spectrum of lifestyles: ranchers, homeowners, developers, hunters and wildlife appreciators. The persistence of elk as a wild resource under active management is testament to the possibilities brought about by communication and cooperation in a world where we don't hear those words as often as we'd like. We tolerate elk where it costs people money and we hunt elk where it's sometimes uncomfortable to hunt elk, and we do it for the common good. Elk sometimes bring out the best in people, though the best is sometimes catalyzed by conflict.



The Mount Jumbo herd was flown on April 1, 2017. Most of the Mount Jumbo elk were in the South and North Zones of Jumbo. Total count for the Jumbo herd = 123 elk with a calf:cow ratio of 22:100, bull ratio of 20:100. Total elk in the Johnson Creek survey unit = 42



compared to 80 in 2016. This herd may be connected to the Jumbo herd as the Jumbo count was up by about the same amount as the Johnson herd was down this year.