

MEMORANDUM

TO: Warren Hansen, Regional Wildlife Manager

FROM: Adam Grove, Wildlife Biologist - Townsend

DATE: April 9, 2024

SUBJECT: HD 391 elk survey results – 2024

Aerial elk surveys were flown in HD 391 on the mornings of March 27 (Duck Creek to south boundary) and March 29, 2024 (Duck Creek to north boundary) in a FWP Supercub aircraft operated by FWP pilot TJ Reynolds out of Dillon. Survey time for the March 27 flight was approximately 3.3 hrs with a total flight time of 6.2 hrs (approximately 0.2 hrs ferry time plus 2.7 hrs pilot ferry time back and forth from Dillon to Townsend). Survey time for the March 29 flight was approximately 3.6 hours with a total flight time of 6.3 hrs (approximately 0.3 hrs ferry time plus 2.4 hrs pilot ferry time back and forth from Dillon to Townsend).

Survey conditions for the March 27 flight ranged from mostly cloudy to sunny with light winds (< 10 mph) on the ground initially that increased to around 11-15 mph by survey end. Winds aloft were considerably stronger than on the ground. Temperatures at the airport ranged from 32 to 46 degrees (F) during the survey. Conditions ranged from patchy snow cover to bare ground over the survey area. Between the warm weather, and the presence of nearly a full moon the night before, some bulls may have timbered up early and been missed during the survey. Elk groups observed later in the survey were generally bedded but out in the open. Overall survey run quality was rated as good for the survey.

Survey conditions for the March 29 flight were mostly cloudy with intermittent low cloud cover throughout the survey in areas. The flight was delayed approximately an hour due to fog/low cloud cover. Winds were light (<10 mph) and airport temperatures ranged from 31 to 49 degrees (F) during the survey. Conditions again ranged from patchy snow cover to bare ground. Areas well back into the mountains were already free of snow or had very little snow cover. Cooler temperatures at elevation appeared to keep bull groups out in the open through mid-morning. Elk groups observed later in the survey were again observed bedded but out in the open. Overall survey quality for the run was rated as good.

A total of **2,005** elk (43 brow-tined bulls, 82 yearling bulls, 1,440 cows, 33 calves, 108 unclassified) were observed during the survey in a total of 24 groups. This number represents the minimum known number of elk to be present in the survey area when the survey was flown. Four of the groups exceeded 230 elk with two groups on the south end of the HD exceeding 550 elk each. This year's survey result is believed to be reflective of trend. The 2005 elk observed this year in HD 391 is an approximate increase of 3% over the 1,953 elk observed last year in the HD.

This year's observed number of 2,005 elk is approximately 47% above the long-term average (03'-23') of 1,362 for the current survey area, and the number is approximately 34% above the top end of the current (2023 Elk Plan) population goal range of 1,000-1,500 for the HD.

Of the 2,005 observed elk, 853 elk (31 brow-tined bulls, 50 yearling bulls, 549 cows, 115 calves, 108 unclassified) were observed in the in the area between Duck Creek and the north boundary. This year's observed number is just slightly higher than the 847 elk observed in that area last year, and the number is approximately 22% higher than the current unofficial desired number of 700 elk for that portion of the HD. Although, some of the elk observed on the north end of that survey area could possibly spend at least a portion of the year in HD 392.

A total of 1,152 elk (12 brow-tined bulls, 32 yearlings, 891 cows, 217 calves) were observed on the south end of HD 391 (Duck Creek to south boundary) this year as compared to 1,106 in 2023, an approximate increase of 4%. As noted previously, we observed two separate groups of 550+ elk each on the south end of HD 391 this year. This year's observed south end (Duck Creek to south HD boundary) total of 1,151 is approximately **209%** of the current unofficial desired number of 550 elk for that portion of the HD.

While the availability of elk for harvest to the general public is an issue throughout the HD because of the large number of elk found on private land with little to no public hunting access during the hunting season, the issue is worse on the south end of the HD. What landowner conflicts with elk that exist in the HD currently occur primarily during the winter/early spring (especially during hard winters) on the south end of the HD (occasionally have issues on the north end as well) when elk leave the private properties where they are typically found during the hunting season.

This year's observed calves per 100 cows ratio was 23.1. The ratio was down approximately 29% from last year's ratio of 32.7. This year's ratio was down approximately 17% from the long-term average ratio of 28.6 for the area that constitutes the current HD. Some of the difference over the years may be attributable to a difference in observers over the years.

This year's bulls per 100 cows ratio of 8.7 is down approximately 19% from last year's observed ratio of 10.8 bulls per 100 cows. Some of that may be because we likely missed some bulls in the timber on the south end of the HD given the survey timing and conditions. The low ratio is also just a product somewhat of the very high number of cow elk observed this year. This year's ratio is approximately 61% of the long-term average of 14.3 and is approximately 13% below the population goal of 10 bulls per 100 cows in the HD (2023 Elk Plan). Bulls comprised 6.2% of the total number of observed elk this year which is approximately 78% of the long-term average of 8.0%. The number of brow-tined bulls observed this year (43) was approximately 172% of the long-term average of 25. The number of classified yearling bulls observed this year (82) was down from last year's total of 103 and approximately 5% below the long-term average of 86.

Table 1. HD 391 elk survey summary.

ELK AERIAL TREND COUNT SUMMARY FORM														
HUNTING DISTRICT 391 (data is for 'new' HD 391 effective 2016, result of major boundary change)														
DATE	BTBs	YRLG	COWS	CALVES	ANTL-	UNCL.	TOTAL	Bulls/ 100 Cow s	Bulls/ 100 Antlerless	% Bulls of Total	% BTB of Total	% BTB of Bulls	Calves/ 100 Cows	Calves/ 100 Adults
2024	43	82	1,440	332		108	2,005	8.7	7.1	6.2%	2.1%	34.4%	23.1	21.2
2023	44	103	1,361	445			1,953	10.8	8.1	7.5%	2.3%	29.9%	32.7	29.5
2022	37	49	857	290			1,233	10.0	7.5	7.0%	3.0%	43.0%	33.8	30.8
2021	102	75	507	202		364	1,250	34.9	25.0	14.2%	8.2%	57.6%	39.8	29.5
2020 - NS														
2019*	27	85	538	125		407	1,182	20.8	16.9	9.5%	2.3%	24.1%	23.2	19.2
2018	31	115	1032	361			1,539	14.1	10.5	9.5%	2.0%	21.2%	35.0	30.6
2017	61	166	1046	380		191	1,844	21.7	15.9	12.3%	3.3%	26.9%	36.3	29.9
2016\$*	43	123	612	197		404	1,379	27.1	20.5	12.0%	3.1%	25.9%	32.2	25.3
2015	13	96	1,091	351		501	2,052	10.0	7.6	5.3%	0.6%	11.9%	32.2	29.3
2014*														
2013*														
2012	13	121	1,177	337		15	1,663	11.4	8.9	8.1%	0.8%	9.7%	28.6	25.7
2011	18	131	1,242	302			1,693	12.0	9.7	8.8%	1.1%	12.1%	24.3	21.7
2010*	2	63				1070	1,135			5.7%	0.2%	3.1%		
2009	7	63				1,477	1,547			4.5%	0.5%	10.0%		
2008	6	81	777	123		262	1,249	11.2	9.7	7.0%	0.5%	6.9%	15.8	14.2
2007	9	73	885	199			1,166	9.3	7.6	7.0%	0.8%	11.0%	22.5	20.6
2006	2	37	683	157		23	902	5.7	4.6	4.3%	0.2%	5.1%	23.0	21.7
2005	10	56	657	207			930	10.0	7.6	7.1%	1.1%	15.2%	31.5	28.6
2004	6	57	921	136			1,120	6.8	6.0	5.6%	0.5%	9.5%	14.8	13.8
2003	12	49	469	151			681	13.0	9.8	9.0%	1.8%	19.7%	32.2	28.5
Ave	25	86	866	248		471	1362	14.3	11.0	8.0%	1.8%	19.0%	28.6	24.9
('03 - '23)														
* - Surveys not felt to be reliable indicator of trend or complete survey of current district not flown														
\$- Major hunting district boundary change in 2016														
HD 391 Population Goal: 1,000-1,500														

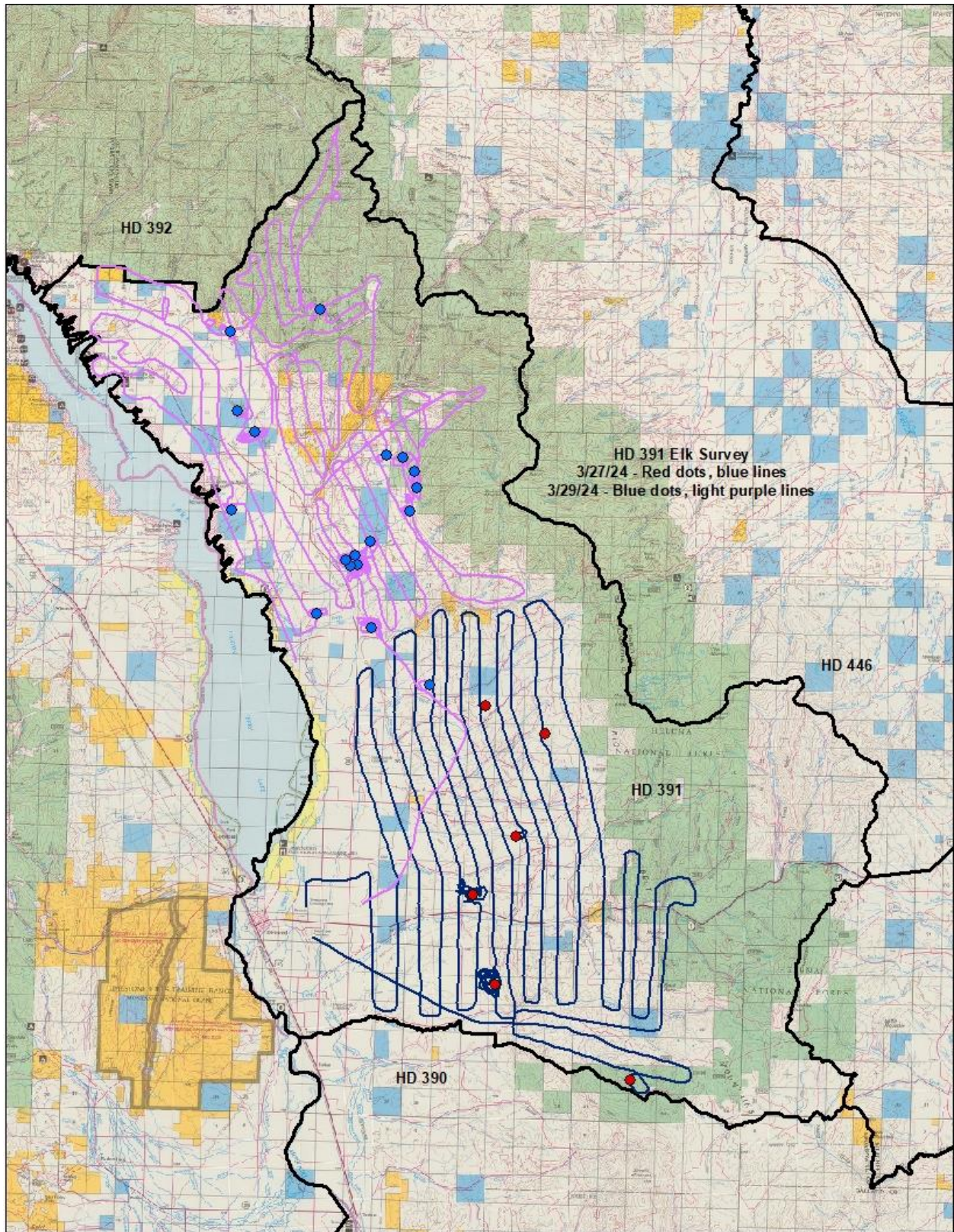


Figure 1. Waypoint locations and track routes for HD 391 elk survey.