

## MEMORANDUM

**TO:** Warren Hansen, Regional Wildlife Manager

**FROM:** Adam Grove, Wildlife Biologist – Townsend

**DATE:** April 18, 2024

**SUBJECT:** Upper Missouri River spring white-tailed deer survey

An aerial white-tailed deer survey was flown in the Toston/Townsend area in the late afternoon/evening (has traditionally been felt to be the best time to observe white-tailed deer in this area) of April 12, 2024, in an FWP Supercub aircraft operated by FWP state pilot TJ Reynolds out of Dillon. The pilot stopped in Townsend to do the survey on his way back from flying mule deer surveys in Region 6.

The area surveyed included both sides of the Canyon Ferry WMA (flown last due to heavy brush cover and deer tend to come out later in the day on the WMA) and areas nearby to the south and east, both sides of the Missouri River south to Toston and then west along the Crow Creek drainage to state Hwy 437 (survey started at Hwy 437. Survey time was approximately 2.1 hrs with a total flight time of 3.4 hrs (approximately 0.3 hrs of ferry time plus 1.0 hrs pilot ferry time).

Survey conditions ranged from partly cloudy at the start to mostly cloudy by the end of the survey. Light conditions were variable and weren't the greatest by the end of the survey (clouded up more than forecasted). Winds were initially around 11-15 mph on the ground (stronger aloft) but died down to less than 10 mph as the survey progressed. Temperatures at the airport ranged from 73 to 69 degrees which was warmer than ideal. Most of the deer observed were up and out of the brush (mostly willows), while others were observed bedded or standing in the brush. Green-up conditions were fairly far along in areas down around Toston and along the Missouri River. As usual, areas on the Canyon Ferry WMA (CFWMA) were less green in part due to the excessive amounts of old herbaceous vegetation (mostly reed canary grass) in many areas of the WMA. Overall survey run quality was rated as fair to good.

A total of 331 white-tailed deer (281 adults, 50 fawns) were observed in 51 groups during the survey. This year's fawns:100 adults ratio was 17.8 which was approximately 11% above last year's ratio of 16.0. This year's ratio, while slightly better than last year's, was probably a byproduct of the hard 2022-23 winter, and its effects on fawn production and early fawn survival in the late spring of 2023. This year's ratio of 17.8 is approximately 41% below the long-term spring average of 36.0 fawns:100 adults (some variation likely due to different observers pre and post 2014). Spring fawn recruitment has been below 30 fawns per 100 adults every year but one since 2014 in the survey area.

The number of deer observed during this year's spring survey (331) is approximately 30% lower than the number observed last spring (472), and the total is approximately 8% lower than the average number observed (507) in the spring since the survey area was expanded back in

2009/10. It should be noted that survey timing, i.e. the ability to catch deer up and feeding and out of brush areas, really influences observability during this survey particularly on the Canyon Ferry WMA portion of the survey, often resulting in considerable variation in the number of deer observed annually.

Breaking the survey results down by area (Table 3), a total of only 113 (98 adults, 15 fawns) were observed along the Missouri River and Crow Creek drainages this spring compared to 204 in 2022, while 218 (183 adults, 35 fawns) were observed either on or in the vicinity of the Canyon Ferry WMA this spring compared to 268 last year. Not sure what to make of the significant difference in numbers between last year and this year particularly in the Crow Creek-Missouri River stretch, most notably along Crow Creek. It could be that with the warm weather some deer remained bedded in the willows and were just missed during the survey (survey variability issue). I haven't received any reports to indicate that we had an EHD event last year or anything, and the winter and early spring were generally very mild weather. However, a lot of the observed groups were pretty small in size (5 or less deer).

In addition to white-tailed deer, three active bald eagle nests were also observed, and one calf moose was observed on Canyon Ferry WMA during the survey.

Table 1. Upper Missouri River white-tailed deer surveys, 2002 - 2024.

YEAR	POST-SEASON (Total Deer)	FAWNS:100 ADULTS (Post-Season)	SPRING	FAWNS:100 ADULTS (Spring Recruitment)	BUCKS:100 DOES
			(Total Deer)		
2024			331	17.8	
2023			472	16.0	
2022	-		459	28.6	
2021	-		302	22.3	-
2020 - 3/	-				
2018/19*	-	-	392	20.0	-
2017/18	686	23.4	506	10.2	12.8
2016/17	441	24.6	621	31.6	14.2
2015/16	586	32	382	20.1	15.3
2014/15	577	17.9	359	25.7	7.5
2013/14	533	41.8	392	21.7	20.5
2012/13 - 3/					
2011/12	704	46.4	625	54.3	22.1
2010/11	680	70.4	890	41.5	17.4
2009/10 4/	867	44.5	688	61.9	16.7
2008/09 - 3/					
2007/08	426	50.7	493	54.1	22.6
2006/07	506	58.1	471	65.8	12.3
2005/06	432	46.2	429	31.3	29.2
2004/05	489	41.7	370	68.2	10.9
2003/04	282	37.6	232	34.9	27.3
2002/03	133	33	306	40.4	29.9
<b>Average</b>	<b>524</b>	<b>41</b>	<b>466</b>	<b>36.0</b>	<b>18.5</b>
'02/03-23'					
3/ - Surveys not flown; 4/ - New survey segment added					
*Post-season survey not flown, due to a combination of timing, weather and pilot availability					
post-season survey was subsequently discontinued					

Table 2. White-tailed deer survey results for the Canyon Ferry WMA 2002/03 – 2024.

Year	Post Season	PS		Spring # Deer	Fawns/100 Adults
		Fawns:100 Does	Bucks:100 Does (PS)		
2024	NS			218	19.1
2023	NS			268	13.6
2022	NS			222	29.1
2021	NS			148	21.3
2020	NS			NS	
2018-19	NS			171	22.6
2017-18	366	25.6	8.4	294	10.1
2016-17	168	27.3	9.1	268	43.3
2015-16	323	33.8	10.1	174	19.2
2014-15	202	20.4	6	183	22.8
2013-14	251	52.2	25.2	177	19.3
2012-13	NS			NS	
2011-12	329	54.1	15.5	341	52.2
2010-11	440	74.8	16.5	585	38.4
2009-10	474	55.2	15.9	370	57.8
2008-09	NS			NS	
2007-08	172	67.4	24.7	236	58.4
2006-07	253	64.6	7.5	249	67.1
2005-06	260	65.2	23.7	229	44
2004-05	290	46.3	8	261	67.3
2003-04	164	49	18.4	117	36
2002-03	86	38.5	26.9	164	41.4
<b>Ave</b>	<b>270</b>	<b>48.2</b>	<b>15.4</b>	<b>248</b>	<b>36.9</b>

('02/03-'23)

NS - No survey flown

Table 3. White-tailed deer classification information by location.

Location	Does	Fawns	Unclass	Adult Bucks	Uncl Adults	Total	Fawns:100 Does	Fawns:100 Adults	Bucks:100 Does	% Bucks
Missouri River/Crow Cr.		15			98	113		15.3		
CFWMA		35			183	218		19.1		
<b>Total</b>		<b>50</b>			<b>281</b>	<b>331</b>		<b>17.8</b>		

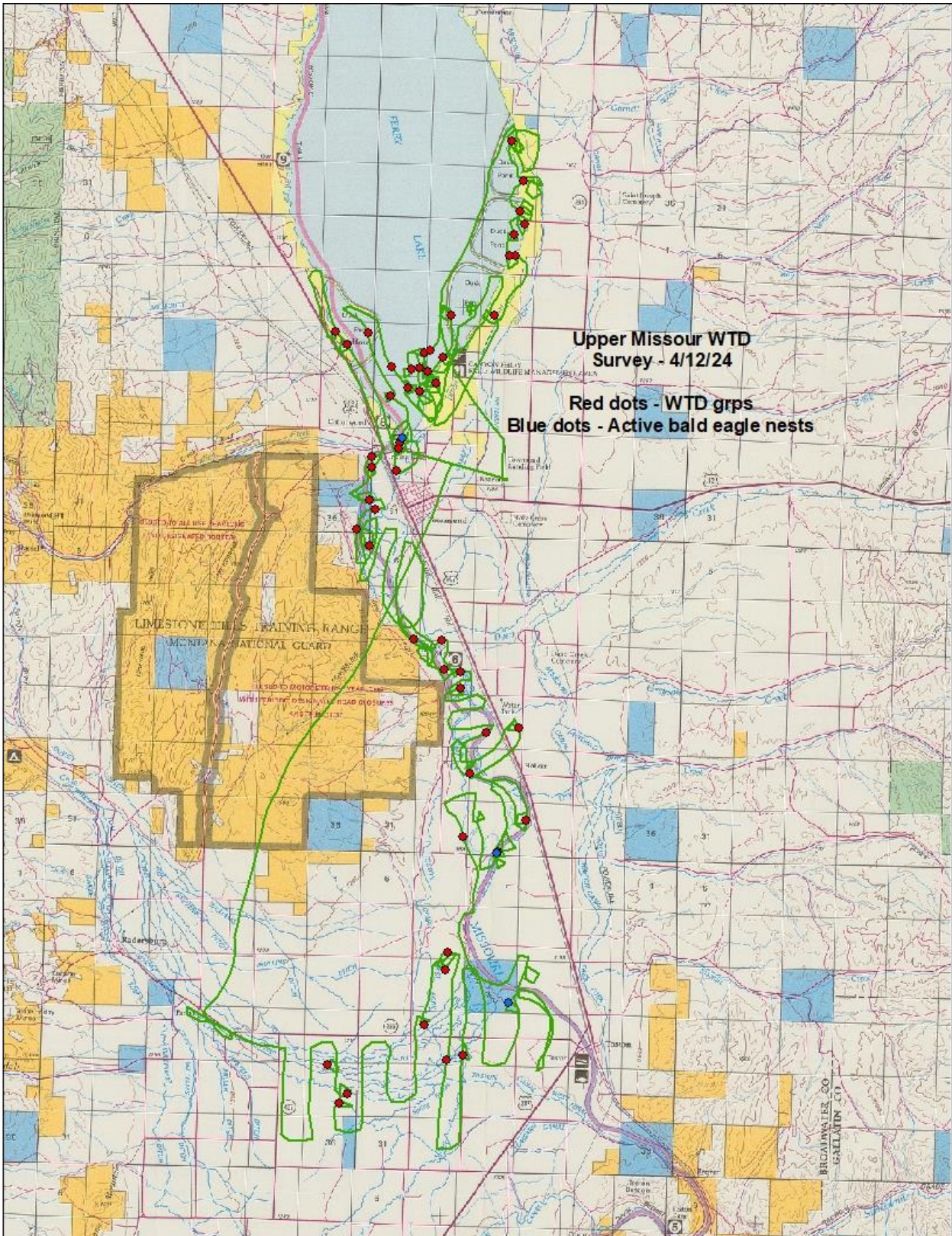


Figure 1. Waypoints and flight track for Upper Missouri River spring WTD survey 4/12/24.