

2003-2005
Post-Delisting Monitoring Report
for the
Douglas County Distinct Population Segment
of the Columbian White-tailed Deer
(Odocoileus virginianus leucurus)



Prepared by the U.S. Fish and Wildlife Service
Roseburg Field Office
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COLUMBIAN WHITE-TAILED DEER POST-DELISTING MONITORING REPORT 2003-2005

This Post-delisting Monitoring Report fulfills the requirement in the draft Post-delisting Monitoring Plan for the Douglas County Distinct Population Segment of the Columbian White-tailed Deer (deer) (2005). This report summarizes and presents the data (tables, spreadsheets and figures) collected from 2003-2005 for the deer. This report and subsequent annual reports (2006 and 2007) will be distributed to all cooperators and will be posted on the webpage of the U.S. Fish and Wildlife Service (Service), Roseburg Field Office.

The Post-delisting Monitoring Plan requires us to report on population trends, disease occurrence and habitat status during each year of the post-delisting monitoring period. In the report, we also provide updates on two other issues of interest to managers of the deer in Douglas County: Oregon Department of Fish and Wildlife, Roseburg District (ODFW) harvest program and the ODFW trap and transplant program. At the end of this report, we also briefly review the status of the population with respect to the five listing factors considered in section 4 of the Endangered Species Act.

I. Population trends

ODFW has provided the following information regarding the deer population:

Population estimates conducted by ODFW for the deer have demonstrated a long-term upward trend since management for the deer population began. This continues a strong, upward trend in the population. The deer population estimated through 2005 is 6,300 deer. This breaks down to approximately 1,000 bucks, 600 fawns and 4,700 does. The range of the deer has expanded to the north and west, and the population occupies an area of approximately 800 square kilometers (309 square miles). Spreadsheet 7 presents population estimates through 2005 (Appendix A). Figure 1 presents deer per mile through 2005 (Appendix B).

In 2005, the ODFW estimated that there were 5.5 deer per mile along their standard census routes in the core of the population's range, and 0.5 deer per mile on survey routes outside of the core zone. The addition of two survey routes in 2005 will provide for monitoring the increase of the deer that have been transplanted to historical but unoccupied habitat in these areas.

Since 1975, the ODFW has conducted spring and fall surveys to estimate population size, recruitment, and sex ratios. The ODFW has established standard routes for spotlight surveys along 210 kilometers (130 miles) of road within the known range of the population. Although annual counts fluctuate, the overall trend of the population is increasing; a regression analysis of the data collected from 1975 to 2005 in the core area shows a strong upward trend. Spreadsheets 1 through 6 (Appendix A) present 2003-2005 buck, doe and fawn counts and ratios; spring counts 1975-2005; fall counts of bucks per 100 does 1980-2005; counts of fawns per 100 does up to 2005. Figure 2, 3 and 4 (Appendix B) presents counts of bucks per 100 does up to 2005, deer per mile (spring) and bucks per 100 does (fall) respectively.

In summary, the population trend continues to be positive, and the deer are well distributed throughout their current range in Douglas County.

II. Disease Occurrence and Disease Outbreak Early Alert System

Two diseases (adenovirus hemorrhagic disease and deer hair-loss syndrome) are endemic in the population, and are monitored as part of ODFW's standard disease monitoring efforts. ODFW has provided the following information regarding the population:

1. Adenovirus hemorrhagic disease

Sampling by ODFW has found that adenovirus titers (evidence of past exposure) are present throughout the deer population. ODFW considers this disease to be endemic in the herd. Spreadsheet 8 (Appendix A) presents sera samples from deer in Oregon 2003-2004. Figure 5 (Appendix B) presents sera sampling sites on Oregon 2002-2004.

2. Deer hair loss syndrome

Deer that appear to be suffering from deer hair-loss syndrome are noted by ODFW on the twice annual population surveys. Deer hair-loss syndrome is not currently considered to be a threat to the population, but the post-delisting monitoring program is tracking the incidence of this condition. In 2004, when ODFW started monitoring occurrences of hair loss syndrome in the deer, 1.8 percent of the deer population had this syndrome and in 2005, 7.4 percent of the deer population had this syndrome.

3. Chronic wasting disease

Chronic wasting disease is included in the post-delisting monitoring program. However, the disease has not been detected anywhere in Oregon to date. This disease will continue to be monitored because should it ever be detected, the disease could pose a significant threat to the deer.

In summary, current data show no evidence of increased mortality due to adenovirus hemorrhagic disease or deer hair loss syndrome. Chronic wasting disease has not been detected in Oregon, and therefore is not currently a threat to the deer.

III. Habitat Status

The deer prefer to use habitat such as oak woodlands, riparian areas and emergent wetlands. Since the de-listing of the deer in 2003, several habitat restoration projects have been completed. Some projects focused on improving riparian and aquatic habitat for salmonids and water quality benefits. Due to the affinity deer exhibit for riparian areas and wetlands, these projects will directly and indirectly benefit the deer.

1. Secure areas

a. North Bank Habitat Management Area (NBHMA): The NBHMA is 6,581 acres in size and is the largest publicly administered parcel that provides secure suitable habitat for the deer. Management by the Bureau of Land Management, Roseburg District to improve deer habitat on the NBHMA has continued since 2001, after the signing of the Record of Decision (ROD) for the Final Environmental Impact Statement for the area. A Habitat Management Plan and

Monitoring Plan were included with the ROD to guide implementation of the preferred alternative as modified by the ROD.

Management Actions

General management actions that have been implemented since de-listing of the deer in 2003, include prescribed burning, seeding, forage plot development, noxious weed treatment, mowing, upland and riparian planting, and installation of water developments. Extensive work has been accomplished on stream headcuts and crossings associated with road improvements. Refer to Table 1 for detailed information on management actions accomplished from 2001-2005.

Table 1. North Bank Habitat Management Area Management Actions 2001-2005

Management Activity	Unit of Measure	2001	2002	2003	2004	2005
Prescribed Burning	Acres	490	586	640	730	570
Seeding						
<i>Aerial</i>	Acres			5	50	400
<i>Firetrails</i>	Miles	10	10	10	10	10
Forage Plots	Acres					17
Water Developments	Each		1	3	1	1
Weed Treatment (thistles, Scotch broom, hawthorn, Himalayan blackberry)						
<i>Upland</i>	Acres			64	70	112
<i>Streamside</i>	Miles			1	1.3	1.5
Planting (white oak, willow, snowberry, spirea, elderberry, ninebark, ash, maple, white alder, redstem ceanothus, buckbrush, dogwood)						
<i>Upland</i>	Acres		15	25	15	
<i>Streamside</i>	Miles			1	1.3	0.3
Mowing	Acres	45	30	45	45	30
Stream Restoration						
<i>Headcuts</i>	Each			4	3	
<i>Associated road work</i>	Miles			2	2	
Stream Channel and Greenline Surveys	Each				8	
Vegetation Monitoring						
<i>Permanent transects</i>	Each			11	12	10

Monitoring

Stream and riparian monitoring has been implemented with the establishment of baseline stream channel and greenline surveys. Monitoring of vegetation condition has been implemented with the establishment of permanent photo plots and transects within different habitat types. Plots and transects have been re-visited as various management actions have taken place across the area. Annual monitoring of Special Status plant sites has also been implemented.

b. Mildred Kanipe Memorial Park: Mildred Kanipe Memorial Park is 1,100 acres, managed by Douglas County in cooperation with Douglas Soil and Water Conservation District

(DSWCD). This is the second largest parcel of publicly owned land that provides secure suitable habitat for the deer.

- As of June 2005, an oak savanna restoration project restored 63 acres of oak savanna and oak woodland in the park. Treatments targeted non-native and invasive species (English hawthorn, Himalayan blackberry and Scotch broom) through cutting, spraying and burning.
- Oak woodlands were also thinned by cutting trees less than 6 inches diameter to reduce stand densities and improve forage and habitat quality for many species including the deer.
- Other projects in the future will restore 215 acres of oak woodland and savanna, 50 acres of riparian forest and replacement of two culverts.

c. Whistler's Bend County Park: Whistler's Bend County Park is administered by Douglas County (175 acres) and the Park provides secure suitable habitat for the deer. At this time, deer habitat management has not occurred in the Park

2. Private lands

a. Oerding Preserve at Popcorn Swale: Oerding Preserve at Popcorn Swale is 30 acres. This land was received as a gift from the Oerding family to The Nature Conservancy. The deer are known to utilize this site. From fall of 2003 through 2005, work accomplished includes:

- Removal of 1,350 pear trees, ash and English hawthorn on five acres.
- Removal of 200-300 pear trees on two acres.
- Removal of pear trees from an ash stand on 0.25 acre.
- Seven acres of teasel cut annually.
- Two acres of blackberry removed.
- Approximately 700 square yards of reed canarygrass (non-native) covered with landscape fabric.
- 35 pounds of native seed gathered and used to reseed 0.35 acres.
- Annual vegetation monitoring to evaluate species cover and diversity.
- Annual photo-point monitoring to visually document changes.

b. Marilyn Gill Oak Restoration Project: Marilyn Gill oak restoration project occurred September 2004 through July 2005. A Service private stewardship grant was used to conduct treatments through the McKenzie River Trust and in cooperation with DSWCD.

- Treatments were completed on 61 acres to control noxious weeds (English hawthorn, Himalayan blackberry, Scotch broom, and exotic rose).
- Machine and hand thinning removal of conifers, dense oaks and brush to release oaks on 132 acres.
- Machine removal of Himalayan blackberry in a riparian area on 11 acres.
- Installed trial plots using an herbicide and native grass seeding to re-establish native bunchgrass.
- Installed trial using herbicide vs. hand cutting to thin oak seedlings in native bunchgrass.
- A perpetual conservation easement is in place on 202 acres to protect and enhance deer habitat.

c. Jobs-in-the-Woods Program: Funding for projects on private lands of four landowners was provided through the Service's Jobs-in-the-Woods program and in cooperation with DSWCD. Projects from 2003-2005 include:

- Invasive species removal (hawthorn, poison oak, blackberry, and Scotch broom) on 14 acres and replanted with conifers.
- Invasive species removal (hawthorn, blackberry, and Scotch broom) occurred on 58 acres and replanted with conifers on 39 acres out of 58 acres.
- Riparian planting with hardwoods and conifers on 12 acres, and fencing to exclude cattle.
- Removal of invasive species and conifer planting on 10 acres. Wetland enhancement work on 15 acres included backfill, enlarging a wetland area, planting hardwoods, conifers and shrubs.

d. Environmental Quality Incentives Program: The Natural Resources Conservation Service worked with seven landowners through the Environmental Quality Incentives Program to implement projects from 2003-2005.

- Tree planting, riparian development, wildlife habitat development, pasture management, and grazing management on approximately 2,700 acres.

e. Umpqua Basin Watershed Council: The Umpqua Basin Watershed Council worked with eight landowners to implement projects from 2003-2004.

- Riparian planting with conifers and hardwoods on 28.5 acres.
- Riparian fencing on 7.2 acres.

f. Conservation Reserve Program (CRP), Continuous Conservation Reserve Program (CCRP) and Conservation Reserve Enhancement Program (CREP): The Farm Services Agency worked with 17 landowners enrolled in CRP, CCRP and CREP to implement projects through 2003-2005.

- Converting crops to native cover on 245 acres.
- Riparian planting of trees and shrubs on 410 acres.

g. DSWCD: Many projects were completed or are on-going from 2003-2005 in cooperation with DSWCD and others to implement projects and provide funding on private lands with landowners (Oregon Watershed Enhancement Board, Oregon State Weed Board, Douglas County, Title II). Projects include:

- Noxious weed control with 65 landowners on 1,661 acres.
- Conifer, wetland and riparian planting on 218 acres.
- Pond installation, pond upgrades and spring development.
- Riparian fencing along 9,800 feet of streams.
- Seven troughs installed

3. Douglas County Land Use

There has been a change in the Douglas County land use restrictions in terms of the removal of the deer habitat overlay by the county. Originally, this was a building setback of 100 feet in Roseburg city limits and 50 foot setback in the rest of Douglas County. Vegetation removal could occur in the riparian areas and habitat was not protected. Currently, with this rule change, there is still a 50 foot setback in the entire county from a riparian area for building a structure

and vegetation removal can still occur down to the creek or river. Therefore, removal of the overlay has no effect on deer populations (Cat Brown, USFWS, pers. comm.).

Residential developments within City of Sutherlin include:

- Mont Claire-18.6 acres, development started in 2004 and continues to the present.
- Forest Heights-25.6 acres, development started in 2004 and continues to the present.
- Cooper Creek Estates-11 acres, development started in 2004 and continues to the present.
- Megan Estates-2.2 acres, development occurred in 2005.
- 6th Street Heights-5.2 acres, development started in 2005 and continues to the present.
- Quail Run-6.5 acres, development planned for 2006.
- North of Sutherlin-217 acres added to the Urban Growth Boundary (UGB), proposed residential development planned.

Proposed additions for the city of Roseburg UGB include:

- Ramp Canyon-680 acres
- Charter Oaks-350 acres
- Page Road-100 acres
- Dixonville-350 acres

Ramp Canyon currently has good deer habitat with housing developments planned for the future. Charter Oaks, Newton Creek and Page Road have existing housing developments and will be annexed in to the city. Dixonville has very little habitat. This should not affect the overall population of deer. Deer population numbers are still high (6,300). The deer are present in the city limits and will be in the future, but carrying capacity will be reduced. With 197,000 acres occupied by the deer in Douglas County, the above acres affect 0.8 % of the total habitat (Cat Brown, USFWS, pers. comm.).

In summary, important habitats for the deer are being managed at key sites (NBHMA, Mildred Kanipe Memorial Park and private lands throughout the county). Some losses or changes in habitat status have been noted, but are not expected to have an effect on the deer population.

IV. Controlled Hunt

In 2005, a controlled hunt, targeting buck deer, was conducted. The hunt occurred during October 1-12, 2005. A total of 96 hunters participated with 51 buck deer harvested. Six black-tailed deer were harvested during this hunt as well. All hunting occurred on private land. This was the first hunt on the deer population since 1978. Out of the current deer population estimate of 6,300 deer, 51 deer harvested affects 0.8 percent of the population. This should not affect the overall population of the deer. Spreadsheet 9 (Appendix A) presents a summary of the 2005 controlled hunt.

V. Deer Transplant

Currently, ODFW is transplanting deer from Douglas County into historical but unoccupied habitat west of Roseburg near the communities of Melrose, Winston and Rice Valley. Local populations are being established on additional acreage which results in a net increase of occupied habitat. From 2004-2005, a total of 59 deer were captured with 49 of those deer relocated to unoccupied habitat in Douglas County. From 2005-2006, 79 deer were captured

with 76 of those deer relocated to unoccupied habitat in the county. Table 2 contains deer transplant data (Tod Lum, ODFW, pers. comm.).

Table 2. 2004-2005 and 2005-2006 Deer Transplant Program

2004-2005						
Species	Captured	Released	Died	Euthanized	Relocated	
Columbian white-tailed deer	59	3	6	1	Bucks 18	Does 31
Black-tailed deer	4	4				
2005-2006						
Species	Captured	Released	Died	Euthanized	Relocated	
Columbian white-tailed deer	79	3		0	Bucks 32	Does 44
Black-tailed deer	3	3				

VI. Status of the deer based on the five factors considered when a species is proposed for listing

Section 4 of the Endangered Species Act specifies five factors to be considered in determining if a species is threatened or endangered; these same five factors were reviewed in determining that the Douglas County population of the deer merited removal from the list. In this section, we briefly review the status of the five factors.

1. The present or threatened destruction, modification, or curtailment of habitat or range.

In Section I. Population Trends and Section V. Deer Transplant, deer population numbers are showing a strong upward trend through 2005. The current deer population estimate is 6,351. Section III Habitat Status and Section V Deer Transplant show that habitat continues to be managed for the benefit of the deer, and that new habitats are being made available through the transplant program. No new threats to habitat or range are apparent.

2. Overutilization for commercial, recreational, scientific, or educational purposes.

In Section IV. Controlled Hunt, ODFW allowed the harvest of 51 buck deer (0.80 percent) of the population in 2005. This number of bucks harvest is unlikely to affect the health of the population.

3. Disease or predation.

In Section II. Disease Occurrence and Disease Outbreak Early Alert System, we reported that adenovirus hemorrhagic disease and deer hair-loss syndrome disease are not currently threatening to the deer population. Chronic wasting disease has not been detected in Oregon, and poses no threat at this time.

4. Inadequacy of existing regulatory mechanisms.

No threats associated with this factor are apparent. Existing regulatory mechanisms are in place to manage a controlled deer harvest. Land use planning regulations are in place in Douglas County.

5. Other natural or manmade factors affecting its continued existence.

At this time, no other factors are identified as a concern to the deer population.

VII. Conclusion

Based on information presented in this monitoring report, we conclude that the threats to the deer discussed in this report do not cause concern, and we conclude that the deer in Douglas County remain secure, absent the protections provided by the Endangered Species Act. Therefore, the deer do not warrant listing at this time.

Literature cited

U.S. Fish and Wildlife Service. 2005. Draft Post-delisting Monitoring Plan for the Douglas County Distinct Population Segment of the Columbian White-tailed Deer (*Odocoileus virginianus leucurus*). Portland, Oregon. 21 pp.

Personal Communication

Cat Brown. U.S. Fish and Wildlife Service. Oregon Fish and Wildlife Office. 2006. E-mail to Lynn Gemlo from Cat Brown, Fish and Wildlife Biologist. Subject: Deer habitat information. April 5, 2006.

Tod Lum, Oregon Department of Fish and Wildlife. 2006. E-mail to Lynn Gemlo from Tod Lum, Douglas District Wildlife Biologist. Subject: Deer relocation data. May 5, 2006.

Appendix A. Spreadsheets

Spreadsheet 1: 2003 Deer Comparisons

2003 DEER COMP.

Yes Medford Data Included

UMPQUA WATERSHED
ROSEBURG DISTRICT
12/12/2003

UNIT	BY UNIT	TOTAL															
		UNIT						BUCK			CLASS	PER 100 DOES	PER 100 DOES	PER 100 ADULTS	UNC.	HAIRLOSS	
UNIT	SPECIES	NAME	1	2	3	4	5	TOTAL	DOES	FAWNS	TOTAL	BUCKS	FAWNS	FAWNS	DEER	NO. / %	
21	BTD	INDIGO	4	8	5	4		21	94	34	149	22.3	36.2	29.6	9	1/1	
	CWTD			1	1			2	19	3	24	10.5	15.8	14.3	-	0/0	
22	BTD	DIXON	9	18	16	10		53	222	73	348	23.9	32.9	26.5	55	0/0	
	CWTD			4	3			7	39	3	49	17.9	7.7	6.5	-	0/0	
23	BTD	MELROSE	4	17	8	4		33	266	71	370	12.4	26.7	23.7	66	9/2.4	
	CWTD		4	20	7	2		33	136	38	207	24.3	27.9	22.5	-	8/3.9	
24	BTD	TIOGA		2	1			3	36	10	49	8.3	27.8	25.6	4	0/0	
26	BTD	POWERS		1				1	24	2	27	4.1	8.3	8	2	5/19	

ALL	DISTRICT	TOTAL														
		UNIT						BUCK			CLASS	PER 100 DOES	PER 100 DOES	PER 100 ADULTS	UNC.	HAIRLOSS
UNIT	SPECIES	NAME	1	2	3	4	5	TOTAL	DOES	FAWNS	TOTAL	BUCKS	FAWNS	FAWNS	DEER	NO. / %
	BTD		17	46	30	18		111	642	190	943	17.3	29.6	25.2	136	15/1.6
	CWTD		4	25	11	2		42	194	44	280	21.6	22.7	18.6	-	8/2.9

Spreadsheet 2. 2004 Deer Comparisons

UMPQUA WATERSHED
ROSEBURG DISTRICT
12/15/2004

2004 DEER COMP.

Yes Medford Data
Included

UNIT BY UNIT TOTAL

		UNIT						BUCK			CLASS	PER 100 DOES	PER 100 DOES	PER 100 ADULTS	UNC.	HAIRLOSS
UNIT	SPECIES	NAME	1	2	3	4	5	TOTAL	DOES	FAWNS	TOTAL	BUCKS	FAWNS	FAWNS	DEER	NO. / %
21	BTD	INDIGO	1	11	4	1		17	70	36	123	24.3	51.4	41.4	5	3/2.4
	CWTD							0	6	5	11	-	83.3	83.3	-	0/0
22	BTD	DIXON	7	14	11	9		41	151	33	225	27.2	21.8	17.2	35	0/0
	CWTD							0	16	2	18	-	12.5	12.5	-	0/0
23	BTD	MELROSE	2	15	16	6		39	395	83	517	9.9	21	19.1	102	7/1.4
	CWTD		4	18	19	1		42	185	22	249	22.7	11.9	9.7	-	5/2
24	BTD	TIOGA	1	3		1		5	43	4	52	11.6	9.3	8.3	14	0/0
26	BTD	POWERS		3		1		4	18	4	26	22.2	22.2	18.2	0	0/0
26	BTD	Evans Cr.	Exchanged data with Rogue District													

ALL DISTRICT TOTAL

		UNIT						BUCK			CLASS	PER 100 DOES	PER 100 DOES	PER 100 ADULTS	UNC.	HAIRLOSS
UNIT	SPECIES	NAME	1	2	3	4	5	TOTAL	DOES	FAWNS	TOTAL	BUCKS	FAWNS	FAWNS	DEER	NO. / %
	BTD		11	46	31	18	0	106	677	160	943	15.7	23.6	20.4	156	10/1.1
	CWTD		4	18	19	1		42	207	29	278	20.3	14	11.6	-	5/1.8

Spreadsheet 3. 2005 Deer Trends

SPECIES	DATE	UNIT	ROUTE	ADULTS	FAWNS	UN-CLASS	TOT	FAWNS/100 ADULTS	MI.	DEER/MILE	Deer with/HL	HL %
BTD	3/10/05	Melrose	TF/DR-Carnes Rd.	48	6	1	55	12.5	10	5.5	2	3.7
	3/1/05	TF/SM	Page/Sunshine	18	1	2	21	5.6	20	1.1	1	5.3
	3/9/05	TL/L	Oakhill	78	7	12	97	8.9	20	4.9	1	1.2
	3/17/05	MA/JR	Elkhead	38	18	1	57	47.4	20	2.9	0	0.0
	3/10/05	MA/AB	Scott Valley	33	15	3	51	45.5	10	5.1	0	0.0
	3/2/05	TF/DI	N. Bank	60	7	13	80	11.7	20	4.0	2	3.0
	3/6/05	MA/JR	Tyee Road	19	10	0	29	52.6	20	1.5	2	6.9
	3/15/05	TL/JH	Hayhurst Rd.	23	6	0	29	26.0	20	1.5	0	0.0
		Melrose	TOTAL	317	70	32	419	22	140	3.0	8	2.1
BTD	3/17/05	Indigo	MAJR-NonPareil	18	12	2	32	66.7	20	1.6	3	10.0
	3/21/05	MA/JR	Scott Mt.	3	0	0	3	0.0	20	0.2	0	0.0
	3/14/05	MA/AP	Ben More Mtn.	12	9	1	22	75.0	20	1.1	0	0.0
		Indigo	TOTAL	33	21	3	57	63.6	60	1.0	3	5.6
BTD	3/9/05	Dixon	TFTO-Myrtle Crs	86	14	2	102	16.3	20	5.1	5	5.0
	3/16/05	TL/AT	Buckhorn	86	10	17	113	11.6	20	5.7	1	1.0
	3/23/05	TL/SM	Calf/Limpy	18	2	6	26	11.0	20	1.3	0	0.0
		Dixon	TOTAL	190	26	25	241	13.7	60	4.0	6	2.8
	3/8/05	TL/S	Henderer Rd.	49	8	3	60	16.3	20	3.0	0	0.0
		Tioga	TOTAL	49	8	3	60	16.3	20	3.0	0	0.0
	3/13/05	TF/DP	Olalla Cr. Rd.	6	1	0	7	16.7	20	0.4	0	0.0
		Powers	TOTAL	6	1	0	7	16.7	20	0.4	0	0.0
BTD	ALL	UNITS	TOTAL	595	126	63	784	21.2	300	2.6	17	2.4
BTD	**New - Extra	Route**	Brockaway	49	20	23	92	40.8	20	4.6	2	2.9
CWTD	3/10/05	Melrose	TF/DR-Carnes Rd.	8	2	0	10	25.0	10	1.0	1	10.0
	3/1/05	TF/SM	Page/Sunshine	59	12	0	71	20.3	20	3.6	14	20.0
	3/9/05	TL/L	Oakhill	16	0	0	16	0.0	20	0.8	1	6.3
	3/17/05	MA/JR	Elkhead	0	0	0	0	0.0	20	0.0	0	0.0

	3/10/05	MA/AP	Scott Valley	0	0	0	0	0.0	10	0.0	0	0.0
	3/2/05	TF/DI	N. Bank	104	14	0	118	13.4	20	5.9	2	1.7
		Melrose	TOTAL	195	48	0	243	24.6	100	2.4	18	7.4
CWTD	3/17/05	Indigo	MAJR-NonPareil	11	12	0	23	109.0	20	1.2	0	0.0
	3/21/05	MA/JR	Scott Mtn.	1	1	0	2	100.0	20	0.2	0	0.0
		Indigo	TOTAL	12	13	0	25	108.3	40	0.6	0	0.0
CWTD		Dixon	Buckhorn	57	9	4	70	15.8	20	3.5	14	21.2
		Dixon	TOTAL	57	9	4	70	15.8	20	3.5	14	21.2
CWTD	ALL	UNITS	TOTAL	264	70	4	338	26.5	160	2.1	32	9.6
CWTD	**New - Extra	Route**	Brockaway	1	0	0	1	0.0	20	0.1	0	0

Spreadsheet 4. Spring Deer Count 1975-2005

CWTD spring spotlight counts - deer/mile

1975	1.7	1.43817
1976	1.9	1.64784
1977	1.95	1.85751
1978	2	2.06718
1979	2.3	2.27685
1980	2.3	2.48652
1981	2.2	2.69619
1982	2.1	2.90586
1983	2.5	3.11553
1984	2.7	3.3252
1985	2.6	3.53487
1986	2.2	3.74454
1987	4.1	3.95421
1988	5.6	4.16388
1989	5	4.37355
1990	6.6	4.58322
1991	7.7	4.79289
1992	5.6	5.00256
1993	6.6	5.21223
1994	5.3	5.4219
1995	4.3	5.63157
1996	4.3	5.84124
1997	5.5	6.05091
1998	4.6	6.26058
1999	7.7	6.47025
2000	5.4	6.67992
2001	6.9	6.88959
2002	8.6	7.09926
2003	7.9	7.30893
2004	6.2	7.5186
2005	7.1	5.45

Spreadsheet 5. Fall Buck to Doe Ratios 1980-2005**CWTD buck/100 does based on FALL compositional counts**

1980	10
1981	57
1982	0
1983	18
1984	24
1985	16
1986	22
1987	31
1988	19
1989	21
1990	28
1991	30
1992	29
1993	29
1994	26
1995	21
1996	22
1997	22
1998	17
1999	32
2000	30
2001	22
2002	24
2003	22
2004	22
2005	20

Spreadsheet 6. Fall Fawn to Doe Ratios 1980-2005**CWTD fawns/100 does based on FALL compositional counts**

1980	57
1981	48
1982	50
1983	30
1984	47
1985	71
1986	49
1987	42
1988	31
1989	31
1990	36
1991	36
1992	35
1993	44
1994	45
1995	44
1996	23
1997	33
1998	20
1999	35
2000	41
2001	34
2002	34
2003	25
2004	23
2005	14

Spreadsheet 7. Deer Population Trends 1975-2005

YEAR	YEAR2	COUNT	lower-cc	cal-count	upper-cc	cnt-rescale	lower-est	Pop-est	upper-est
1975	1	1.7	0.6199682	1.571371	2.5227737	1700	508	1287	2067
1976	2	1.9	0.7666371	1.7672581	2.767879	1900	628	1448	2267
1977	3	1.95	0.913306	1.9631452	3.0129843	1950	748	1608	2468
1978	4	2	1.0599749	2.1590323	3.2580896	2000	868	1769	2669
1979	5	2.3	1.2066438	2.3549194	3.5031949	2300	988	1929	2870
1980	6	2.3	1.3533127	2.5508065	3.7483002	2300	1109	2090	3070
1981	7	2.2	1.4999816	2.7466935	3.9934055	2200	1229	2250	3271
1982	8	2.1	1.6466505	2.9425806	4.2385108	2100	1349	2410	3472
1983	9	2.5	1.7933194	3.1384677	4.4836161	2500	1469	2571	3673
1984	10	2.7	1.9399883	3.3343548	4.7287214	2700	1589	2731	3874
1985	11	2.6	2.0866572	3.5302419	4.9738267	2600	1709	2892	4074
1986	12	2.2	2.2333261	3.726129	5.218932	2200	1829	3052	4275
1987	13	4.1	2.379995	3.9220161	5.4640373	4100	1950	3213	4476
1988	14	5.6	2.5266639	4.1179032	5.7091426	5600	2070	3373	4677
1989	15	5	2.6733328	4.3137903	5.9542479	5000	2190	3534	4878
1990	16	6.6	2.8200017	4.5096774	6.1993532	6600	2310	3694	5078
1991	17	7.7	2.9666706	4.7055645	6.4444585	7700	2430	3855	5279
1992	18	5.6	3.1133395	4.9014516	6.6895638	5600	2550	4015	5480
1993	19	6.6	3.2600084	5.0973387	6.9346691	6600	2670	4176	5681
1994	20	5.3	3.4066773	5.2932258	7.1797744	5300	2791	4336	5881
1995	21	4.3	3.5533462	5.4891129	7.4248797	4300	2911	4496	6082
1996	22	4.3	3.7000151	5.685	7.6699849	4300	3031	4657	6283
1997	23	5.5	3.8466839	5.8808871	7.9150902	5500	3151	4817	6484
1998	24	4.6	3.9933528	6.0767742	8.1601955	4600	3271	4978	6685
1999	25	7.7	4.1400217	6.2726613	8.4053008	7700	3391	5138	6885
2000	26	5.4	4.2866906	6.4685484	8.6504061	5400	3512	5299	7086
2001	27	6.9	4.4333595	6.6644355	8.8955114	6900	3632	5459	7287
2002	28	8.6	4.5800284	6.8603226	9.1406167	8600	3752	5620	7488
2003	29	7.9	4.7266973	7.0562097	9.385722	7900	3872	5780	7688
2004	30	6.2	4.8733662	7.2520968	9.6308273	6200	3992	5941	7889
2005	31	5.45	5.0200351	7.4479839	9.8759326	5450	4112	6101	8090

**Spreadsheet
7 Cont.**

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.834006
R Square	0.695567
Adjusted R Square	0.685069
Standard Error	1.198421
Observations	31

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	95.16195	95.16195	66.25899	5.63E-09
Residual	29	41.65015	1.436212		
Total	30	136.8121			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	1.375484	0.441116	3.118189	0.004086	0.473299	2.277668	0.473299	2.277668
X Variable 1	0.195887	0.024065	8.139963	5.63E-09	0.146669	0.245105	0.146669	0.245105

Spreadsheet 8. 2003-2005 AHD Summary by Unit**Sera samples submitted from deer within Oregon for Adenovirus testing, 2003-05**

Information based on samples received at Wildlife Population Lab

Unit Number	Unit Name	# Deer Sampled
10	Saddle Mtn	2
11	Scappoose	7
12	Wilson	0
14	Trask	14
15	Willamette	14
16	Santiam	3
17	Stott Mtn	5
18	Alsea	20
19	McKenzie	4
20	Siuslaw	3
21	Indigo	5
22	Dixon	8
23	Melrose	106
24	Tioga	8
25	Sixes	3
26	Powers	0
27	Chetco	1
28	Applegate	15
29	Evans Creek	8
30	Rogue	9
31	Keno	1
32	Klamath Falls	2
33	Sprague	0
34	Upper Deschutes	8
35	Paulina	1
36	Maury	0
37	Ochoco	2
38	Grizzly	0
39	Metolius	2
40	Maupin	0
41	White River	35
42	Hood	1
43	Biggs	10
44	Columbia Basin	3

Unit Number	Unit Name	# Deer Sampled
45	Fossil	1
46	Murderers Creek	7
47	Northside	8
48	Heppner	1
49	Ukiah	0
50	Desolation	0
51	Sumpter	11
52	Starkey	3
53	Catherine Creek	0
54	Mt Emily	6
55	Walla Walla	3
56	Wenaha	1
57	Sled Springs	0
58	Chesnimnus	0
59	Snake River	0
60	Minam	0
61	Imnaha	0
62	Pine Creek	0
63	Keating	0
64	Lookout Mtn	0
65	Beulah	9
66	Malheur River	1
67	Owyhee	1
68	Whitehorse	0
69	Steens Mtn	0
70	Beatys Butte	0
71	Juniper	0
72	Silvies	1
73	Wagontire	2
74	Warner	0
75	Interstate	1
76	Silver Lake	0
77	Fort Rock	2
GRAND TOTAL		357

Note: 39 other sera samples could not be tested due to serum toxicity

Spreadsheet 9. 123 Harvest Summary 2005

1/9/2006														
			Summary of 123 Umpqua Harvest for 2005											
Season:	Oct 1-12, 2005													
Bag Limit:	One white-tailed (CWTD) or black-tailed buck (BTD) having not less than a forked antler													
Open area:	Units 21, 22, 23, 24 within Douglas Co.													
Tags Issued:	23 tags for the entire open area								96 Hunters hunted					
	110 tags for Landowner Preference (LOP)								57 deer were harvested					
	133 total tags issued								59% Success Rate					
Results														
Entire area tags sold	23				CWTD			BTD						
Did not hunt	4	<u>Unit</u>	<u>2pt</u>	<u>3pt</u>	<u>4pt+</u>	<u>2pt</u>	<u>3pt</u>	<u>4pt+</u>	<u>Tot. Deer</u>	<u>Days</u>	<u>Hunters</u>	<u>Days/Hunter</u>	<u>Days/Deer</u>	
Opted for W. Oregon Buck Hunt	1	21							0	2	1	2.0		
No contact	4	22		1					1	2	1	2.0	2.0	
		23		4	1		1		6	65	12	5.4	6.8	
		Total	0	5	1	0	1	0	7	69	14	4.9	9.9	
LOP tags	110				CWTD			BTD						
Did not hunt	17	<u>Unit</u>	<u>2pt</u>	<u>3pt</u>	<u>4pt+</u>	<u>2pt</u>	<u>3pt</u>	<u>4pt+</u>	<u>Tot. Deer</u>	<u>Days</u>	<u>Hunters</u>	<u>Days/Hunter</u>	<u>Days/Deer</u>	
Opted for W. Oregon Buck Hunt	4	21		1	1			2	4	23	5	4.6	5.8	
No contact	7	22	1	6	4	1		2	14	114	27	4.2	8.1	
		23	6	19	7				32	126	50	2.5	3.9	
		Total	7	26	12	1	0	4	50	263	82	3.2	5.3	
Combined Harvest Results					CWTD			BTD						
Entire area + LOP tags		<u>Unit</u>	<u>2pt</u>	<u>3pt</u>	<u>4pt+</u>	<u>2pt</u>	<u>3pt</u>	<u>4pt+</u>	<u>Tot. Deer</u>	<u>Days</u>	<u>Hunters</u>	<u>Days/Hunter</u>	<u>Days/Deer</u>	
		21	0	1	1	0	0	2	4	25	6	4.2	6.3	
		22	1	7	4	1	0	2	15	116	28	4.1	7.7	
		23	6	23	8	0	1	0	38	191	62	3.1	5.0	
		Total	7	31	13	1	1	4	57	332	96	3.5	5.8	

Appendix B. Figures

Figure 1: Deer Population Estimate 1975-2005

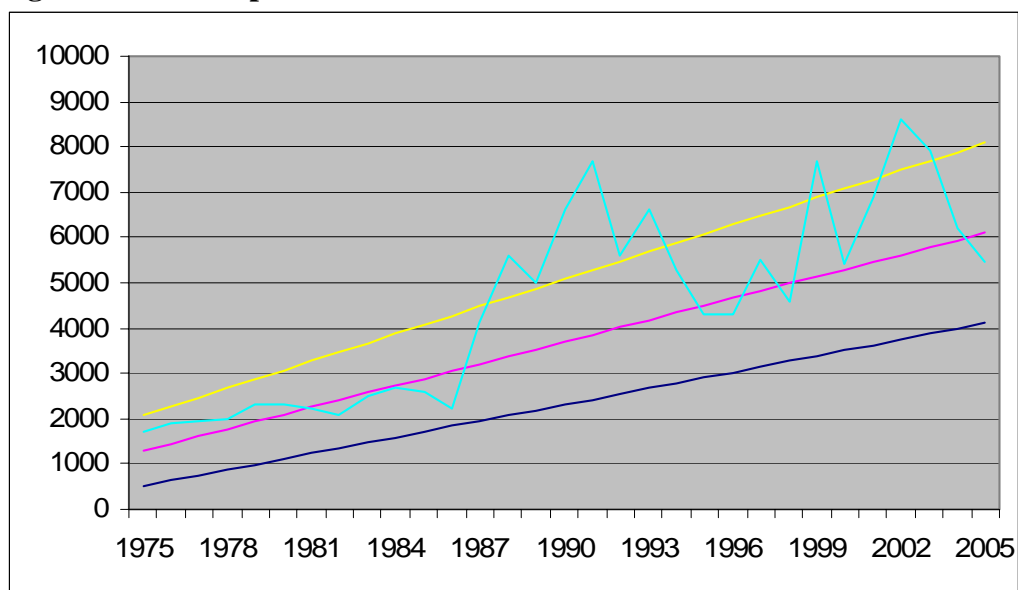


Figure 2: Deer Fawn per 100 Does 1980-2005

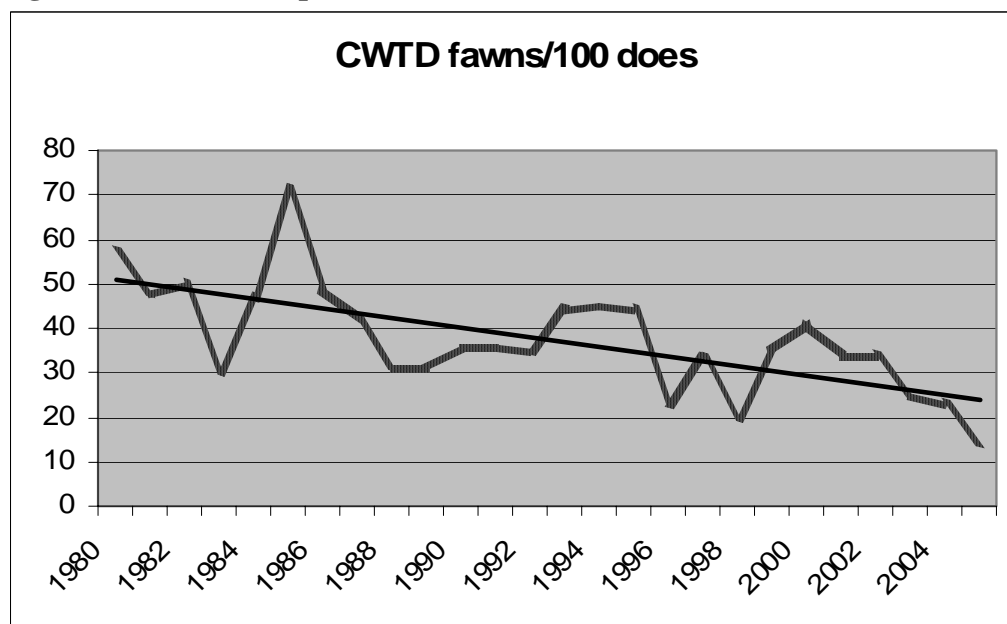
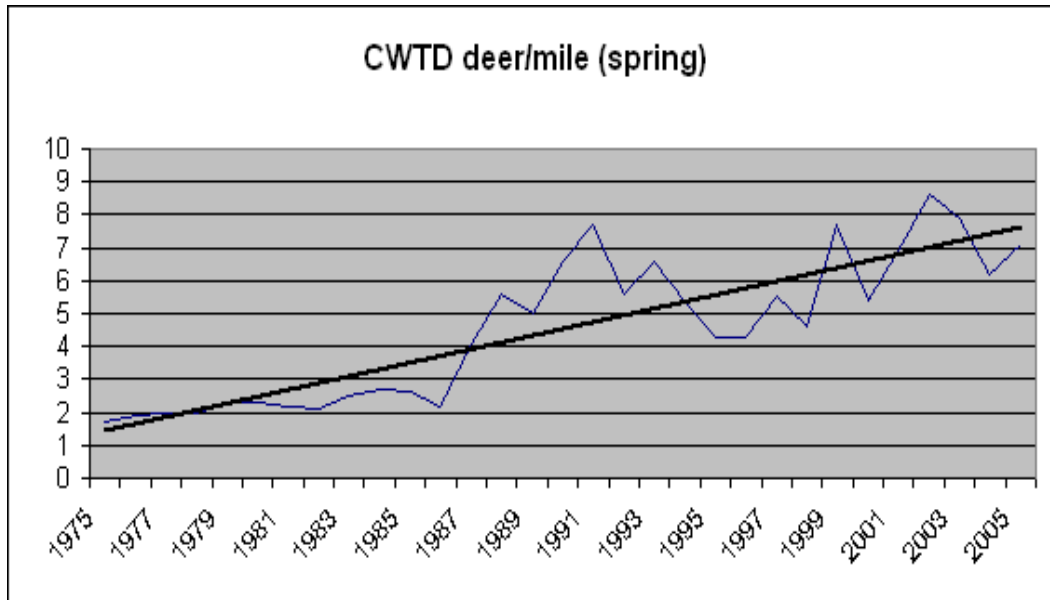


Figure 3. Spring Count Deer per Mile, 1975-2005*

*This data set is derived from total CWTD counted in the district divided by 47.5 miles (core route mileage)

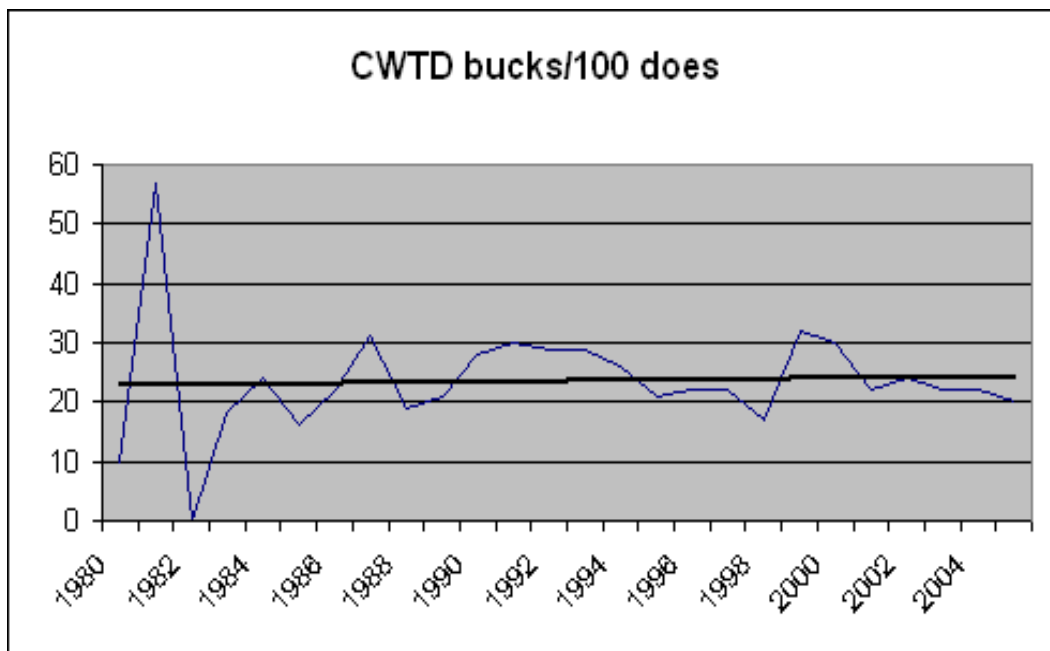
Figure 4. Fall Counts Buck Deer per 100 Does

Figure 5: Serological sampling sites for adenoviral hemorrhagic disease of black-tailed deer, white-tailed deer, mule deer and elk in Oregon 2002-04. Titers are indicated by plus sign (positive titer) and circles (negative titers).

