OREGON DEPARTMENT OF FISH AND WILDLIFE
CERVID RULE ADVISORY GROUP
ACTION ITEM STATUS REPORT
JUNE 20, 2007

Action Item

1. Clarification of last sentence, paragraph 2 of Section I of Operating Principles.

    a. Responsibility – Bruce Eddy
    b. Timeframe – Two weeks
    c. Status – Completed; Statement that increasing the number of commercial elk facilities would not be considered as part of the CRAG effort removed from draft Operating Principles.

2. Develop information on commercial elk ranching in Oregon including map of licensed facilities, how many animals are held, acres under license and commercial use of ranched elk.

    a. Responsibility – Department
    b. Timeframe – Two weeks
    c. Status –Completed: Materials emailed May 2, 2007.

3. Provide template for fiscal impact associated with potential OAR revisions

    a. Responsibility – William Cook
    b. Timeframe – Two weeks
    c. Status – Completed: Materials emailed May 2, 2007.

4. Define the meaning of non-indigenous and indigenous as used in OAR

    a. Responsibility – Department
    b. Timeframe – Two weeks
    c. Status – Completed: Materials emailed May 9, 2007

5. Provide comments on department implementation of current program.

    a. Responsibility – Department
    b. Timeframe – Two weeks
    c. Status – Completed: Materials distributed at May 30, 2007 meeting.
    d. Additional request – Information on cost of OSP implementation
    e. Responsibility – Dave Cleary
    f. Status - Incomplete

6. Department economist to provide information on state of elk ranching in Oregon to assist Group during required economic analysis.

a. Responsibility - Bruce Eddy
b. Timeframe – May 30 meeting
c. Status – Completed: DOJ and department economists attended May 30 meeting to discuss how economic analysis is done. Information on the on the economics of elk ranching in Oregon is not available to the Department of Fish and Wildlife. It is considered proprietary by the elk ranching community and is not needed by the department as part of its decision making.

7. Define following genetic terms: genetic diversity, genetic drift, line-breeding, in-breeding, genetically select, genetic bottleneck. Also define term fence-to-fence.

    a. Responsibility – Department
    b. Timeframe – May 30 meeting
    c. Status – Completed: Wikipedia definitions emailed May 25, 2007.

8. Define the genetic risk ranched elk present to wild elk, particularly if selectively bred elk escape into wild population.

    a. Responsibility – Department
    b. Timeframe – May 30 meeting
    c. Status – Completed: Update provided at May 30 Meeting. Emailed additional materials June 14, 2007.

9. Provide Group with copy of The Wildlife Society study on confinement of cervids.

    a. Responsibility – Department
    b. Timeframe – May 30 meeting
    c. Status – Completed: Materials handed out at May 30 meeting.

10. Provide lists of current genetic tests available, including Wyoming Cervid Hybrid Test used by Simpson, and what each test determines. Answer questions about what testing is available, what testing can tell us, and what possibilities exist down the road for testing. Also determine if sika deer can breed with elk.

    a. Responsibility – Department and Simpson
    b. Timeframe – May 30 meeting.
    c. Status – Completed: Update provided at the May 30 meeting

11. Spreadsheet of big five diseases of concern to wild cervid populations to help Group determine level of risk. The following questions should be answered: is there a cure, vaccine and if yes its effectiveness, live test available, latency of disease, how disease is spread.

    a. Responsibility – Department
    b. Timeframe – May 30 meeting
    c. Status – Completed: Materials handed out at the May 30 meeting.

12. Provide definitive answer whether Hermann ranch in central Oregon had TB.

    a. Responsibility – Department and ODA
    b. Timeframe – By May 30.
    c. Status – Competed: ODA report distributed at May 30 meeting.

13. Provide information on burial standards and boneyards for cervid carcasses.

    a. Responsibility – ODA
    b. Timeframe – May 30 meeting.
    c. Status – Completed: ODA materials handed out at May 30 meeting.

14. Provide examples of standard disease reporting forms, including one in used in North Dakota that would improve consistency of disease reporting.

    a. Responsibility – Department and Simpson/Elk Breeders Association
    b. Timeframe – May 30 meeting.
    c. Status – Incomplete: Staff hasn't received response from North Dakota. Group suggested department also provide Utah's reporting forms at May 30 meeting,

15. Provide Group with e-friendly, read-only document to create fiscal impact analysis worksheet for the various recommendations.

    a. Responsibility – Department
    b. Timeframe – June 20 meeting
    c. Status – Completed: Emailed June 13, 2007

16. Determine if full testing of ranched elk was accomplished in 1993 and if the test was the same as Bova Can Labs example that could identify red deer protein markers.

    a. Responsibility – Department
    b. Timeframe – June 20 meeting
    c. Status – Incomplete: Headquarters staff reviewing dated portions of Division 49. Materials will be mailed when available

17. Discuss with DOJ how to include language about joint agency disease testing list being developed in an open, public process.

    a. Responsibility – Department
    b. Timeframe – June 20 meeting
    c. Status – Completed: Departments of Fish and Wildlife, and Agriculture can jointly develop disease testing list. List can be presented to Fish and Wildlife Commission for rulemaking similar to that used setting hunting and fishing regulations.

18. Provide information on cost to department of advisory group.

    a. Responsibility – Department
    b. Timeframe – June 20 meeting

c. Status – Completed: Emailed June 16, 2007

OREGON DEPARTMENT OF FISH AND WILDLIFE
CERVID RULE ADVISORY GROUP
ACTION ITEM 1

From: Bruce Eddy
Sent: Monday, May 07, 2007 2:59 PM
To: Alan Ross (alan.ross@hp.com); Bill Richardson (wildlife@peak.org); Brian Dick (bldick@fs.fed.us); Bruce Eddy; Charles Meslow (meslowc@aol.com); Clay Woodward (ckwoodward@aol.com); Don Hansen (dhansen@oda.state.or.us); Jan Wilson (jswilson@efn.org); Joe Ricker (jricker1@ix.netcom.com); Kathy Simpson (elkbasin@aol.com); Katie Fast (katie@oregonfb.org); Kelly Peterson (kpeterson@hsus.org); Kelly Smith (kls1998@msn.com); Sharon Livingston
Cc: Al Kakovich (alkakovich@msn.com); Bill Wilber (bpwilber@centurytel.net); Bob Webber (webber@blackchapman.com); Dave Wiley; Tim Dernsek (tim@oregonfb.org); Colin Gillin; Jon Paustian; Larry Cooper; Michelle Dennehy; Timothy Walters
Subject: CRAG April 18, 2007 Meeting Summary Action Item 1

Folks

In the course of adopting the Cervid Rule Advisory Group (Group) Operating Principles a number of individuals raised objection to the last line in the second paragraph of Section 1 (Background). Specifically, concern was raised about the statement:

> *"Increasing the number of licenses for commercial elk facilities would not be considered as part of this revision."*

After Group discussion about their concerns I promised to get clarification on this statement. This promise was noted in Action Item 1 of the April 18 Meeting Summary and the statement was highlighted in the adopted Operating Principles.

I've looked into this statement and have come to the following conclusion.

While this statement accurately reflects the proposal outlined by the department to the Fish and Wildlife Commission in February 2007, it wasn't a subject specifically addressed by the Commission. As a result I propose this statement be removed from the Operating Principles.

I would be happy to discuss this proposal with you at our meeting May 14 in Bend.

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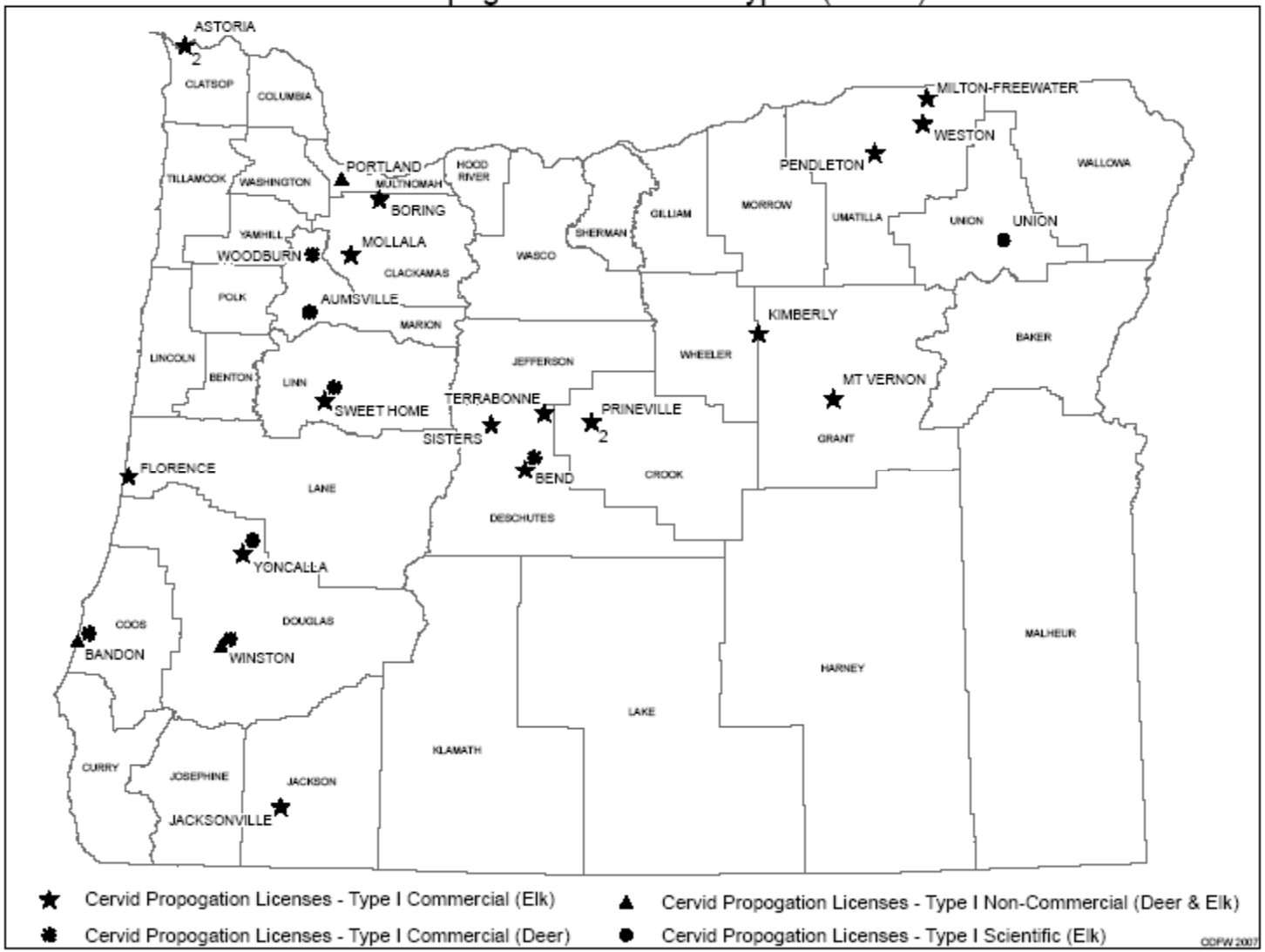
OREGON DEPARTMENT OF FISH AND WILDLIFE
CERVID RULE ADVISORY GROUP
ACTION ITEM 2

Active Type 1 Cervid Propagation Licenses in Oregon, April 2007					
License Holder	**Nearest City**	**Species**	**Number(s)**	**Acreage**	**Type***
Alan & Brenda Ross	Molalla	Elk- Roosevelt	90	40	C
Allen & Kay Woosley	Aumsville	Deer- Sika	7	1	C
Frank McCubbins	Sweet Home	Deer- Sika	12	184	C
Jeffrey King	Gold Hill	Elk- Roosevelt	1	40	C
John R. Kelly	Astoria	Elk	0	0	C
Karl Johnson	Bend	Deer- Sika	29	4	C
Donald & Marina Kelly	Astoria	Elk- Roosevelt	52	100	C
Lewis & Judith Parent	Milton-Freewater	Elk- Rocky Mountain	40	5	C
Lois Jordan	Yoncalla	Deer- White-Tailed Deer- Black-Tailed Elk- Roosevelt Deer- Muntjac	1 1 29 10	250	C C C C
Lonnie & Louise Woosley	Florence	Elk- Roosevelt	48	30	C
Mike & Cindy Kilpatrick	Mt. Vernon	Elk- Rocky Mountain	84	200	C
Ochoco Valley Ranch, LLC.	Bend	Elk- Rocky Mountain Elk- Roosevelt	92 9	100	C C
Pardwood LLC.	Prineville	Elk- Rocky Mountain	18	15	C
Richard Patterson	Sisters	Elk- Rocky Mountain	309	195	C
Sheldon & Carol Kirk	Weston	Elk- Rocky Mountain	88	21	C
Stanley G. Hermens	Kimberly	Elk- Rocky Mountain	53	0	C
Steve & Kathy Simpson	Terrebonne	Elk- Rocky Mountain	273	16	C
Terry Kieling	Woodburn	Deer- Sika	16	2	C
William McCamman	Clackamas	Elk- Roosevelt	74	9	C
Mark Rosenberg	Pendleton	Elk- Rocky Mountain	1	6	NC
Oregon Zoo	Portland	Elk- Roosevelt	3	1	NC
West Coast Game Park, LLC.	Bandon	Elk- Roosevelt Deer- Black-Tailed Deer- Muntjac	4 2 5	10	NC NC NC
Wildlife Safari	Winston	Elk- Roosevelt Deer- Sika	25 62	60	NC NC
USDA Forest Service Research Station	La Grande	Elk- Rocky Mountain	54	800	S

***Type** C= Commercial Deer and Elk, , NC= Non-Commercial Deer and Elk, S= Scientific

Source: Oregon Dept. of Fish and Wildlife

Cervid Propogation Licenses - Type I (Active)



OREGON DEPARTMENT OF FISH AND WILDLIFE
CERVID RULE ADVISORY GROUP
ACTION ITEM 3

FISCAL IMPACT ANALYSIS MATRIX
Provided by Oregon Department of Justice

Note: Throughout, be sure to assess the fiscal impact of the ***change*** to the rule, not the existing rule itself.

Will recommended rule change[1] have an economic effect (positive or negative) on state agencies? Describe.

Will recommended rule change have an economic effect (positive or negative) on local government? Describe.

Will recommended rule change have an economic effect (positive or negative) on members of the public? Describe.

Will recommended rule change have an economic effect (positive or negative) on business? Describe.

Will recommended rule change have an economic effect (positive or negative) on small business (50 or less employees)? Describe. Will that effect be "significant"?

What will be the cost of complying with the changed rule by small business?

- **Estimate number of small businesses likely to be subject to the changed rule.**
- **What types of small businesses will be subject to the changed rule?**
- **Briefly describe any reporting, recordkeeping or other administrative activities small business would have to perform to comply with the changed rule? (Include any professional services the business would have to hire.)**
- **Identify the types of additional equipment, supplies and labor that would be required for a small business to comply with the changed rule.**

OREGON DEPARTMENT OF FISH AND WILDLIFE
CERVID RULE ADVISORY GROUP
ACTION ITEM 4

From: Bruce Eddy
Sent: Wednesday, May 09, 2007 11:43 AM
To: Alan Ross (alan.ross@hp.com); Bill Richardson (wildlife@peak.org); Brian Dick (bldick@fs.fed.us); Bruce Eddy; Charles Meslow (meslowc@aol.com); Clay Woodward (ckwoodward@aol.com); Don Hansen (dhansen@oda.state.or.us); Jan Wilson (jswilson@efn.org); Joe Ricker (jricker1@ix.netcom.com); Kathy Simpson (elkbasin@aol.com); Katie Fast (katie@oregonfb.org); Kelly Peterson (kpeterson@hsus.org); Kelly Smith (kls1998@msn.com); Sharon Livingston
Cc: Al Kakovich (alkakovich@msn.com); Bill Wilber (bpwilber@centurytel.net); Bob Webber (webber@blackchapman.com); Dave Wiley; Tim Dernsek (tim@oregonfb.org); Colin Gillin; Jon Paustian; Larry Cooper; Michelle Dennehy; Timothy Walters
Subject: CRAG April 18, 2007, Meeting Summary Action Item 4

Attachments: 45.pdf
Folks
Action Item 4 from our April 18, 2007, meeting asked for a definition of "non-indigenous and indigenous". I believe this request was directed at understanding the term "non-indigenous" as used in 635 049 0010 (2):

> "(2) The commercial use of nonindigenous cervid species if that activity poses a risk to native wildlife or wildlife habitat; and"

635 045 0002 (51) and (52) defines native and non-indigenous cervid as follows:
> "(51) "Native cervid" means mule deer, black-tailed deer, white-tailed deer, Roosevelt elk, Rocky Mountain elk and moose, including gamete or hybrid.
> (52) "Nonindigenous cervid" means any member of a cervid species, including gamete or hybrid, not classified as a native cervid species."

Under this definition ranched Roosevelt or Rocky Mountain elk are considered native cervids regardless of whether the license is for a commercial, non-commercial or scientific herd.

Attached is a copy of Division 45 for your records.

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OREGON DEPARTMENT OF FISH AND WILDLIFE
CERVID RULE ADVISORY GROUP
ACTION ITEM 5

OREGON DEPARTMENT OF FISH AND WILDLIFE
CERVID RULE ADVISORY GROUP
ACTION ITEM 5
Department implementation of current program

To: Cervid Rule Advisory Group
From: Pete Test, ODFW Deer and Elk Staff Biologist

The following information describes how ODFW currently implements Division 49 rules governing Type 1 cervid propagation licenses and identifies some challenges the department has experienced under the current rules.

Renewal of licenses
Under current rules, Type 1 license holders renew their licenses annually. By Sept. 1, ODFW sends each licensee a copy of last year's animal inventory and a renewal form by registered mail. The licensees are required to respond by Nov. 1 with $6.50 annual fee and a completed renewal form containing the following information: ID number of each animal, animal's sex and birth date, reason for any animal's death and the name of the veterinarian that performed the necropsy, records of sales of any animals including to whom the animal was sold, records of any births. (See attachment #1.)

License renewal data management: The current license database is not flexible. All data requires hand entry and specialized reports are difficult to generate. Information is only updated once a year.

Cost of program: In 2004, ODFW's cost of administering the program for Type 1cervid propagation licenses was $22,565. Type 1 license revenue to ODFW totaled $120. In 2004, ODFW's cost of administering Type 2 licenses was $30,333. Type 2 license revenue to ODFW totaled $215.

Diseases and deaths
CWD testing: CWD testing is done voluntarily by Type 1 license holders. However, the results are not reported to ODA or ODFW.

Disease/death reporting: Currently, ODFW only learns of an animal's death during the annual license renewal process. The department relies on ODA to keep it informed of any disease-caused deaths as license holders are not required to report testing results to ODFW.

Necropsies: The department seldom receives necropsy results, which under the current system are not required for most deaths.

OAR Compliance and Enforcement
Inspections: District wildlife biologists are responsible for conducting inspections. Current OARs do not state when inspections should take place. The department strives to have facilities inspected at least once annually. Inspections also occur when staff sees inconsistencies or problems with an elk rancher's annual renewal paperwork and/or specifically requests a district biologist to do an inspection. Inspections involve checking

fencing and handling facilities, animals and records. Inspections can be formal walk-through inspections or less formal visits.

Reporting Escapes: Current rules require the reporting of all escapes. Compliance is critical to enable prompt and appropriate response. Complete information on the resolution of the escape (how the animal(s) escaped, length of time out of facility, final disposition of the animal—was it captured and returned, killed, never found?) is currently not available in all cases.

OREGON DEPARTMENT OF FISH AND WILDLIFE
CERVID RULE ADVISORY GROUP
ACTION ITEM 6

OREGON DEPARTMENT OF FISH AND WILDLIFE
CERVID RULE ADVISORY GROUP
ACTION ITEM 7

From: Bruce Eddy
Sent: Friday, May 25, 2007 3:23 PM
To: Alan Ross (alan.ross@hp.com); Bill Richardson (wildlife@peak.org); Brian Dick (bldick@fs.fed.us); Bruce Eddy; Charles Meslow (meslowc@aol.com); Clay Woodward (ckwoodward@aol.com); Don Hansen (dhansen@oda.state.or.us); Jan Wilson (jswilson@efn.org); Joe Ricker (jricker1@ix.netcom.com); Kathy Simpson (elkbasin@aol.com); Katie Fast (katie@oregonfb.org); Kelly Peterson (kpeterson@hsus.org); Kelly Smith (kls1998@msn.com); Sharon Livingston
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Subject: CRAG May 14, 2007 Meeting Summary Action Item 7

Attachments: CRAG Genetic Definitions.doc
Folks

At the last meeting you asked for definitions to a number of genetic terms.

The attached is a "quick and dirty" list of definitions from Wikipedia. While Wikipedia may not be the best technical source and the definitions are not as direct as I would like, it is an independent source and I think the definitions might help us all focus on using the same phrases.

I will continue to look for more concise definitions and forward them when I find them.

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OREGON DEPARTMENT OF FISH AND WILDLIFE
CERVID RULE ADVISORY GROUP
ACTION ITEM 7
Genetic Terms

Note: Below are definitions for genetic terms requested by the Cervid Rule Advisory Group. All definitions are verbatim excerpts from Wikipedia (http://wikipedia.org). These excerpts are the introductory materials considered salient to defining a term. They are not the complete Wikipedia reference. In some cases editorial notations were included in the Wikipedia text and are reproduced here for completeness; however the corresponding footnote or reference is not to save space. The symbol "…" is use to note where material considered unnecessary to defining a term was excluded for simplicity For the complete reference please access Wikipedia online.

Genetic Diversity

Genetic diversity is a characteristic of ecosystems and gene pools that describes an attribute which is commonly held to be advantageous for survival -- that there are many different versions of otherwise similar organisms. For example, the Irish potato famine can be attributed in part to the fact that the genetic distance of all potatoes in the country was very low, making it easier for one virus to infect and kill much of the crop.

The academic field of population genetics includes several hypotheses regarding genetic diversity. The neutral theory of evolution proposes that diversity is the result of the accumulation of neutral substitutions. Diversifying selection is the hypothesis that two subpopulations of a species live in different environments that select for different alleles at a particular locus. This may occur, for instance, if a species has a large range relative to the mobility of individuals within it. Frequency-dependent selection is the hypothesis that as alleles become more common, they become less fit. This is often invoked in host-pathogen interactions, where a high frequency of a defensive allele among the host means that it is more likely that a pathogen will spread if it is able to overcome that allele. …

Genetic Drift

In population genetics, genetic drift is the statistical effect that results from the influence that chance has on the survival of alleles (variants of a gene). The effect may cause an allele and the biological trait that it confers to become more common or more rare over successive generations. Ultimately, the drift may either remove the allele from the gene pool or remove all other alleles. Whereas natural selection is the tendency of beneficial alleles to become more common over time (and detrimental ones less common), genetic drift is the fundamental tendency of any allele to vary randomly in frequency over time due to statistical variation alone, so long as it does not comprise all or none of the distribution.

Chance affects the commonality or rarity of an allele, because no trait guarantees survival of a given number of offspring. This is because survival depends on non-genetic factors (such as the possibility of being in the wrong place at the wrong time). In other words, even when individuals face the same odds, they will differ in their success. A rare succession of chance

events — rather than natural selection — can thus bring a trait to predominance, causing a population or species to evolve.

An important aspect of genetic drift is that its rate is expected to depend strongly on population size. This is a consequence of the law of large numbers. When many individuals carry a particular allele, and all face equal odds, the number of offspring they collectively produce will rarely differ from the expected value, which is the expected average per individual times the number of individuals. But with a small number of individuals, a lucky break for one or two causes a disproportionately greater deviation from the expected result. Therefore small populations drift more rapidly than large ones. This is the basis for the founder effect, a proposed mechanism of speciation. …

Linebreeding

Linebreeding, a specific form of inbreeding, is accomplished through breedings of cousins, aunt to nephew, half brother to half sister. This was used to isolate breeds within the companion and livestock industry. For instance an animal with a desirable color is bred back within the lines with identified selection traits whether it be milk production or adherence to breed standard of appearance or behavior. Breeders must then cull unfit individuals, and in some cases the breeders will then outbreed to increase the level of genetic diversity. …

Outcrossing is where two unrelated individuals have been crossed to produce progeny. In outcrossing, unless there is verifiable genetic information, one may find that all individuals are distantly related to an ancient progenitor. If the trait carries throughout a population, all individuals can have this trait. This is called the founder's effect. …

In-Breeding

Inbreeding is breeding between close relatives, whether plant or animal. If practiced repeatedly, it often leads to a reduction in genetic diversity, and the increased gene expression of negative recessive traits, resulting in inbreeding depression. This may result in inbred individuals exhibiting reduced health and fitness and lower levels of fertility.

Livestock breeders often practice inbreeding to "fix" desirable characteristics within a population. However, they must then cull unfit offspring, especially when trying to establish the new and desirable trait in their stock. …

Breeding in domestic animals is assortative breeding primarily (see selective breeding). Without the sorting of individuals by trait, a breed could not be established, nor could poor genetic material be removed.

Inbreeding is used by breeders of domestic animals to fix desirable genetic traits within a population or to attempt to remove deleterious traits by allowing them to manifest phenotypically from the genotypes. Inbreeding is defined as the use of close relations for breeding such as mother to son, father to daughter, brother to sister. …

Genetic Selection

Artificial selection is the intentional breeding of certain traits, or combinations of traits, over others. It was originally defined by Charles Darwin in contrast to the process of natural selection, in which the differential reproduction of organisms with certain traits is attributed to improved survival and reproductive ability in the natural habitat of the organism. Artificial selection that produces an undesirable outcome from a human perspective is sometimes called negative selection (but note that this term has a better-established meaning as a type of natural selection). …

Contrast to natural selection The difference between natural and artificial selection centers on the difference in environment among organisms subject to the two processes. Essentially, in artificial selection, the fitness, which is the amount of offspring an individual contributes to a population relative to other individuals in that same population of an organism, is defined in part by its display of the traits being selected for by human beings. Because humans either intentionally or unintentionally exert control over which organisms in a population reproduce or how many offspring they produce, the distribution of traits in the organisms' population will change.

It should be emphasized that there is no real difference in the genetic processes underlying artificial and natural selection, and that the concept of artificial selection was first introduced as an illustration of the wider process of natural selection. The selection process is termed "artificial" when human preferences or influences have a significant effect on the evolution of a particular population or species. Indeed, many evolutionary biologists view domestication as a type of natural selection and adaptive change that occurs as organisms are brought under the control of human beings. …

Genetic Bottleneck

A population bottleneck (or genetic bottleneck) is an evolutionary event in which a significant percentage of a population or species is killed or otherwise prevented from reproducing, and the population is reduced by 50% or more, often by several orders of magnitude.

Population bottlenecks increase genetic drift, as the rate of drift is inversely proportional to the population size. They also increase inbreeding due to the reduced pool of possible mates (see small population size).

A slightly different sort of genetic bottleneck can occur if a small group becomes reproductively separated from the main population. This is called a founder effect. …

OREGON DEPARTMENT OF FISH AND WILDLIFE
CERVID RULE ADVISORY GROUP
ACTION ITEM 8

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Sent: Thursday, June 14, 2007 9:56 AM
To: Alan Ross (alan.ross@hp.com); Bill Richardson (wildlife@peak.org); Brian Dick (bldick@fs.fed.us); Bruce Eddy; Charles Meslow (meslowc@aol.com); Clay Woodward (ckwoodward@aol.com); Don Hansen (dhansen@oda.state.or.us); Jan Wilson (jswilson@efn.org); Joe Ricker (jricker1@ix.netcom.com); Kathy Simpson (elkbasin@aol.com); Katie Fast (katie@oregonfb.org); Kelly Peterson (kpeterson@hsus.org); Kelly Smith (kls1998@msn.com); Sharon Livingston
Cc: Al Kakovich (alkakovich@msn.com); Bill Wilber (bpwilber@centurytel.net); Bob Webber (webber@blackchapman.com); Dave Wiley; Tiffany Zinter (tiffanyzinter@hotmail.com); Tim Dernsek (tim@oregonfb.org); CLEARY Dave (Dave.Cleary@state.or.us); Colin Gillin; Jon Paustian; Larry Cooper; Michelle Dennehy; Timothy Walters
Subject: CRAG Action item 8

Attachments: RRWO1026.pdf; Haigh Affidavit.htm
Folks
Attached are two items discussing perspectives on the genetic risk issue.

The first is a State of Michigan research report. See page 34 for discussion of genetic issues.

The second is an affidavit posted on wapitit.net by Dr. Jeremy Haigh for the elk industry. See the third section.

In addition to these items I followed on Dr. Meslow's suggestion that I discuss the genetic risk issue with Dr Susan Haig (OSU Department of Fisheries and Wildlife). While Dr. Haig thought you could analyze the potential risk of a ranched elk escaping, breeding with wild elk and a genetic problem resulting, she thought it would be difficult. She referred me to a Duke University scientist who I have not contacted yet.

I think materials provided to date provide as complete a review of this Action Item as exists at this time.

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Hand insert Farming Captive Cervids in Michigan

Elk Industry Defense Affidavit

I, Dr. Jeremy C. Haigh, swear and/or affirm the following is a true statement.

I am a veterinarian, qualified with a Bachelor of Veterinary Medicine & Surgery at the University of Glasgow, Scotland in 1965. I subsequently obtained a Master of Science degree at the University of Saskatchewan in 1982, with a thesis titled "Reproductive Seasonality of Male Wapiti." I became a member of the American College of Zoological Medicine (a college of specialist who deals with wildlife and zoo animal medicine) in 1984. In 1992 I was elected as a fellow of the Royal College of Veterinary Surgeons (UK) "for meritorious contributions to learning". I have been employed on the faculty of the Western College of Veterinary Medicine at the University of Saskatchewan since 1975.

I have been president of the American Association of Zoo Veterinarians (1988-89) and the American College of Zoological Medicine (1989-91). I have served on the boards of the Saskatchewan Game Farmers Association, the Saskatoon Regional Zoological Society (founding secretary 1976-1980, president 1981-84). I was a founding member of the Saskatchewan Game Farmers Association and helped formulate codes of conduct and regulations related to the industry in this province. As a board member of president of these associations I have been actively engaged in the development of by-laws, constitutions and mission statements.

I have provided expert opinion on the subject of wapiti (elk) and deer ranching, either in writing, or in personal appearances in court or state committee hearings, in the states of "Colorado, Minnesota, Montana, Nebraska, Nevada, Oregon, and Washington and as well as in Canada, particularly to the Expert Committee on Animal Welfare.

I have published over 300 scientific papers, book chapters, technical and magazine articles. More than half of these are related to the farming and ranching of deer species. I was co-editor a book titled "Chemical Immobilization of North American Wildlife in 1983" and senior author of the book "Farming Wapiti and Red Deer" published in 1993 by Mosby Year Book Inc. I have made numerous presentations related to wildlife medicine and game farming & ranching at international meetings on five continents. A copy of my curriculum vitae is enclosed.

I have carried out consultative research into deer science in Canada, New Zealand and Australia and was the pioneer of the techniques used today in the artificial breeding (AI) of wapiti, red deer and white-tailed deer. In 1980 and 1981 I was responsible for the gathering, quarantine and air shipment of a herd of elk to New Zealand. This was the first export of elk to New Zealand since the shipment of a group of animals donated by President Roosevelt in 1905.

For ten years I practiced veterinary medicine in Kenya. For the last five years of these I was in private practice and developed an expertise in wildlife and game ranching. Together with my wife I am an equal partner in an elk farming enterprise. This is Marimba Farm Inc., which we started in 1985. We own about one hundred of elk and for ten years also owned a small group (10-15) of white-tail and mule deer. Numbers fluctuated with sales and births.

Concerning Fencing and Animal Escapes and Ingress

With proper fencing farmers and ranchers can control both escapes and ingress of wild (and publicly owned) deer. In Michigan this is an important issue for livestock owners in light of the current problems with tuberculosis (TB). I have discussed the matter of the regulation of fencing standards below.

With respect to the ranching and farming of cervid (deer) species, based upon extensive experience with red deer, wapiti, white-tailed and mule deer, caribou and reindeer and axis deer I believe that with proper fencing and management, and a lack of vandalism, escape of animals is virtually impossible.

Escapes have indeed been documented, but are rare. They can be made even rarer if proper fencing standards are employed. Furthermore, once animals have become established in a farm situation they usually consider the farm as their home range & can almost always be led back inside the fence with a bucket of feed.

I have consulted professionally about escapes on a few (less than six) occasions. In each instance I have advised that a conservative approach be used so that animals can be enticed to return with grain. I have never had to use drugs of darting equipment to catch an escaped elk or deer.

On a personal level, at no time in the almost 15 years that I have been farming elk and deer have we had an escape of animals that jumped over the fence of broken through it. On two occasions I mistakenly left the gates open. Both times elk walked out on neighboring land. In the first instance the animals returned without baiting within 15 minutes. On the other occasion we led the animals back in from a field of green oats by using a bucket of grain.

Elk and deer farmers in Saskatchewan and Alberta use either pressure treated wooden post or metal (often used drill stem) for fence, brace and corner construction. Most of our own perimeter fencing is constructed of a six foot three inch (6'3") woven topped off with two strands of high tensile (HT) wire to a height of seven feet (7'). When fencing materials of 7'6" and 8' heights became available we used these for fencing new land. Our white-tailed and mule deer were held behind the seven-foot fence. However, we have occasionally had to deal with the inconvenience of ingress of white-tailed deer over the 7' perimeter and the industry standard for this species in most of Canada is an 8' fence topped off to 9' or even 10' with HT wire.

In one area of our farm there is a potential for snow drifting. Banks sometimes reach a height of five feet. We have ensured that vegetation is cleared from these areas and no animals have ever attempted to leave the property.

Along several fences we have cleared trees in order to prevent and deadfall from lying across the fence and creating possible exit sites.

Concerning Genetic Pollution Following Escapes

If farming and ranching of deer is restricted to wapiti and white-tailed deer in Michigan, then there is no issue. Both species are native.

Other deer that might escape (axis, caribou etc.) are unable to hybridize with native deer in Michigan, with the two exceptions. These are mule deer and the European red deer. Mule deer can hybridize with white-tailed deer. Mule deer are also highly susceptible to meningeal worm infection, and are unlikely to do well in the state. If they are farmed special techniques (which do exist) would be required to prevent this disease.

The question of so-called genetic pollution of wild wapiti following possible escapes of farmed red deer is controversial.

An often quoted model from Colorado is derived from a white paper prepared several years ago by a group that was openly against game ranching. Computer models are only as good as the data entered into them.

Three facts need to be considered. They relate to dominance, escapes & survival.

The first is that the statement that "red deer stags are generally considered dominant over elks bulls." This statement derives form observations at the Invermay Agricultural Research Station in New Zealand. In "Farming Wapiti Red Deer" we (Haigh and Hudson 1993) cite the experience at the Invermay in New Zealand. Animals were maintained in small (5-20 acre) paddocks & it was noticed that red deer stags in this situation could dominate wapiti & successfully compete for mating opportunities. The exact opposite has been observed in the wild in New Zealand, with wapiti stags being dominate (Anderson 1996). The latter scenario is the more likely if a red deer were to escape.

When Dr. V. Geist (a well-known opponent of deer farming) quotes publications that state that "bull elk will be the chief perpetrators of any hybridization...." He is in fact stating that the Colorado model is incorrect. That model was based upon breeding by red deer stags to the exclusion of wapiti. If NZ experience of free-ranging animals is correct the number of hybrids will be greatly reduced, as each female can only produce a limited number of offspring, in contrast to the potential for a male to serve many females. Furthermore, if the hypothetical matings were to occur as elk bulls over red hinds, there would be a reduced calf survival simply due to the larger calves that have the potential to create physical problems at parturition, killing not only the calves, but their red deer dams.

The harsh winter conditions in Michigan place a premium on body size for survival. The classic North American examples are the moose and the white-tailed deer. Both species fit Bergman's rule which states that the further north an animal lives, the larger it must be. The reason is that body mass & surface area are related in such a way that relative heat loss is less in the larger animal as it has a proportionally smaller surface area. The wapiti & red deer are examples of an animal of the same species in which the red deer would have a tough time in the extremes of winter, if it had to forage in the wild as opposed to being fed on farm, because it would lose more heat. Not only would the red deer lose more heat because of its body mass/surface area ratio but it has much shorter legs than the wapiti. It would therefore have more difficulty traveling in deep snow & be less able to forage for winter food. If this sort of information were factored into the computer model it would no doubt substantially change the outcome.

Concerning Animal Identification

There are published concerns about the ability to properly identify privately owned wildlife. These appear to be voiced because of an alleged potential increase in poaching. I believe that these fears have been unfounded and that there is no evidence to support the notion of an increase in poaching related to the private ownership of cervids. Based upon experience in Canada I believe that it is possible to identify animals in several ways to deter poaching.

In most jurisdictions in Canada and the USA owners of cervids are required to keep accurate records inventories and to provide annual census figures to government departments concerned with such livestock. In Saskatchewan, Alberta, and Manitoba the departments of agriculture are the agencies that govern the issuing of licenses and ear tags for individual animal identification. These records include data on births, deaths, sales and purchases. Animals are identified as to sex and year birth, and each farm carries a unique registration code that is marked on the tags. This means that every animal is uniquely identified for its entire like. If an animal is moved to a new owner or property this unique tag is not altered. Government inspectors have power to

examine records upon request. The unique tags also provide positive identification in the event that an animal goes to slaughter or to a diagnostic laboratory for necropsy.

The North American Elk Breeders Association and North American Deer Farmers Association (white-tailed registry) and others have registration programs in place that involve the use of DNA technology for the identification of individual animals and parentage confirmation.

Concerning Domestication

The enclosed scientific article titled "Exploitation and Domestication of Deer" was published in the international journal "Anthrozoos". It provides three definitions of what constitutes a domestic animal. The most telling, and internationally recognized of these, was developed by the General Assembly of the International Union for the Conservation of Nature in 1994. It reads as follows:

A domesticated population is: a population that is adapted to life in close association with and to the advantage of humans, and whose entire life cycle is carried out under human management...

Animals in large preserves, such as fenced national parks, lie somewhere between the so-called free-ranging situation and the domestic one. Generally, animals in preserves are under no sort of handling control, and are allowed to breed freely, with little or no selection of breeding groups by managers. Such preserves may not have more than a single perimeter fence. The model by Hudson, referred to in the article on Exploitation and Domestication of Deer, shows how the continuum is structured.

Concerning Regulations

I have been informed that in 1994 captive cervidae were defined as LIVESTOCK in the Animal Industry Act of the State of Michigan. As such, there appears to be no logic in having the DNR involved in any part of regulations concerning this industry.

I believe that it is unnecessary and somewhat illogical to regulate captive cervidae production operations differently from other livestock operations, except insofar as fine details are concerned. Fencing requirements for deer, or milk hygiene needs for dairy farmers would be examples of such details.

It is my belief that departments of agriculture (including The Michigan Department of Agriculture - MDA), are better suited to regulate this industry rather than are Natural Resources departments because they deal with livestock, not wildlife, behind fences. It is a recognized fact that some DNR departments in North America, have difficulty accepting the concept that farmed cervids are indeed livestock.

Departments of Agriculture, because they have a long-standing relationship with farmers and ranchers, are better placed to apply rules and regulations, and may in fact be much better guardians of the interest of the government in matters relating to the industry and the public than are DNRs, whose focus is very different.

Concerning Poaching

I believe that published predictions of increased poaching made be enforcement agencies and persons opposed to the private ownership of cervids have not been borne out by actual events. Poaching of wild cervids in the public domain remains a problem but no evidence has been published that would suggest that farming or ranching of deer in any way effects this fact. I believe that it is likely that increased awareness and the presence of deer farms on the

landscape, increases vigilance, especially among the cervid owners themselves, and can act as a deterrent to poachers. The accurate tracking of commercially produced carcasses means that farmed venison can be identified.

Concerning Health and Disease

As with all livestock there are diseases of concern. I have been actively engaged in the dissemination of information concerning diseases in several forums. Audiences have included practicing veterinarians, farmers, and ranchers, and state and federal officials. I was instrumental in alerting federal veterinarians on the shortcomings of tuberculosis testing of cervids as carried out by the USDA and Agriculture Canada up until 1990 and 1988 respectively.

I have emphasized, both in writing and at many seminars and meetings, that good management, good record keeping and a herd health approach can go a long way to preventing disease and improving health in farmed cervids.

There is no published evidence to suggest that farmed deer are in any way more susceptible to disease than their wild counterparts, when maintained at similar population densities, although poor management by farmers (or wildlife managers) can lead to disease.

If a disease is discovered in any form of animal, then its control is most likely to be possible in a farm/ranch situation where fencing and handling facilities are routinely available. Testing, treatment and/or eradication are all possible under such circumstances, where they may be difficult, exceeding costly in time and money, or almost impossible in wild populations or large preserves where individual animal handling is not practical. An important issue facing all residents of Michigan at present is the matter of bovine tuberculosis (TB) that exists in the wild white-tailed deer population in the state. This has been already spilled over into cattle herds, and also at least one captive cervid herd. Faced with this problem the Michigan DNR have implemented a long-term plan to attempt to control the situation and eradicate the disease. The most optimistic projection is that control may be achieved by about ten years from now.

Control of TB in captive cervids, where repeated testing under the jurisdiction of the USDA/APHIS and the State Veterinarian is possible in a controlled environment, where suitable handling systems and fencing are in use, should be possible in a shorter time than that.

Testing, treatment and/or eradication of diseases are all currently controlled by the MDA for other species, and they have mechanisms in place which can be applied to farmed cervids.

It is self-evident that a cooperative approach between livestock owners and MDA is more likely to be successful under these circumstances than a confrontational approach involving law enforcement investigations conducted by DNR.

Concerning a Link Between Captive Cervids and the Management of Free-Ranging Deer

There are links between what are two segments of a continuum. Much research on free-ranging cervids has benefited captive herds, and vise-versa. In a well-known study by Dr. Harry Jacobson of white-tailed deer in Mississippi it was determined that the practice of culling "spike" bucks because of smaller antler size was unjustified. He showed that small antlers in the first year of life were linked to date of birth rather than inferior genetic make-up. Work on contraception in captive deer has shown that in some circumstances it has the potential to benefit the management of overabundant wild deer populations. Studies of reproduction in wapiti have shown that spike bulls are fertile, and have shown for how long a period animals of either sex may be able to breed successfully. Many techniques for capture of animals were developed in captive situations and have since been applied to wild stock.

One of the major areas of benefit to wild deer populations has occurred in respect to endangered deer species. The flagship example is the rehabilitation of the Pere David's deer in China. These animals were once extinct in the wild. After almost a century of captivity in parks and zoos, mainly in the United Kingdom, they have recently been returned in China where they are allowed to roam free. Detailed work on reproductive systems, which has gone as far as reproductive technology including artificial insemination and embryo transfer, has been applied between species and used, for instance, in the endangered Eld's deer of Southeast Asia. The Smithsonian Institute has been involved in this work.

In New Zealand there is a problem with tuberculosis (TB) in both wild and captive deer. The disease is spread by other wild animals, principally the brush-tailed possum, and is exceedingly difficult to control. There is more than one active research program in which captive deer are used to aid in investigations of the disease as it affects wild populations.

A captive herd of elk has been maintained at Sybille, Wyoming, for many years. One of the principal studies concerned the disease brucellosis, which affects the free-ranging herd in Jackson Hole.

Concerning the Cervid Industry as a Business

There is no doubt that the global cervid industry has grown markedly in the last 25 years. Most of the early resurgence of this industry in the late 20th century occurred in New Zealand and the UK, but in the last 15 years there has been a rapid expansion in North America. D. E. Lantz of the US Biological Survey recorded 15 or so ranches in 1908 and 1910. Accurate census figures from December 1997 indicate that there were 1667 cervid farms, farming 98,651 deer in Canada alone (Haigh & Thorleifson, 1998, see paper for details). Thorleifson, former executive director of the Canadian Venison Council, estimates that this number had grown to an estimated 1850 farms as of March 2000. The total dollar value (Canadian dollars) of the combined livestock and facilities for this industry is approximately $800 million (at an exchange of 1.4, this amounts to $571 million US).

Figures supplied to me by Barbara Ramsey-Fox, executive director of the North American Deer Farmers Association (NADeFA) indicate that among the membership of that organization, the total number of deer, of six main species, and a few others, is 82,868 animals. The estimated value of these stock, excluding facilities, is $75,532,250. In addition she estimates that there are possibly 8000 more properties in the USA in which white-tailed deer are privately held.

There is one other national organization that deals with farmed and ranched cervids. This is the North American Elk Breeders Association (NAEBA). They are unable to supply accurate census figures, as the degree of inventory control varies widely among various states in the USA. They estimate that the total North American captive elk (wapiti) herd is about 170,000 animals. Of this number, the estimate for Canada is 60,000. The estimate for the United States is 110,000. As of March of 2000, NAEBA had over 55,000 elk in its registry system.

Concerning Industry Makeup

The cervid industry can be artificially broken down into several segments, but all are part of a continuum. They can be broadly categorized as Tourism, Farming, and Ranching (either for velvet or meat), and the Hunt Ranch industry. Several farmers of my acquaintance may use two, or even more, as part of their businesses enterprise.

In New Zealand, the United Kingdom and Canada there are properties where deer can be viewed close up and where admission fees are charged. These operations, or part of operations, are

educational and entertaining, and are one arm of the tourism industry. I have seen a joint farming and tourism operation in Montana.

In the same three foreign countries there are farms and ranches that cater to either or both the venison and velvet trades, as well as hunt ranching. Some are adjacent to, and some physically separate from, the farm where fee hunting takes place. Often hunt farms offer accommodation, and can therefore be classified as a specialized form of holiday farm.

Conclusion

I submit this affidavit on behalf of The Michigan Deer and Elk Farmers Association.

I am available to answer your questions concerning this affidavit and about the industry.

Signed: Dr. J. C. Haigh BVMS, MSc, FRCVS.,
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OREGON DEPARTMENT OF FISH AND WILDLIFE
CERVID RULE ADVISORY GROUP
Action Item 9

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Action Item 10

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CERVID RULE ADVISORY GROUP
Action Item 11

Diseases of Wild and Farmed Cervids - CRAG Action Item 11

	CWD	Brucellosis	Bovine TB	Johne's Disease	Meningeal Worm
Treatment Available	No	No	Not recommended and not believed to be 100% effective in captive or free-ranging wildlife	No	Variable success with anthelmentics, anti-inflammatory agents and steroids in lightly infected animals
Vaccine Available	No	Yes	In development (BCG vaccine)	Yes	No
If Yes, Effectiveness of Vaccine	NA	Limited efficacy in elk (Strain 19) to prevent abortions and no protection with RB51	NA	Not tested in non-doemestic ruminants; Results in domestic species mixed	NA
Live Test Available	Yes, unvalidated tonsilar and retal lymphoid tissue biopsy. Other tissue tests (biopsy of superficial lymph nodes, spleen and blood testing) still under investigation	Yes, many tests including serological and bacterial culture	Yes, Comparative cervical test approved for use in cervids and rapid blood test used in free-ranging deer (50% efficacy, low sensitivity)	Yes, serum screening test or fecal culture (3-12 weeks for culture results)	Yes; PCR on infected feces in development
Incubation Period: Time between infection and appearance of clinical signs	18-24 months between infection and clinical signs. Time from onset of clinical disease until death – weeks to months.	Variable can be as rapid as 2 weeks. Reproductive maturity in female elk has been associated with increased levels of infection. Cervids remain infected for life and shed the organism from reproductive secretions	All ages have shown infection. Disease can be clinical or sub-clinical. Animals may show clinical signs as early as 6 months after infection or may go for years with a sub-clinical infection	Infection occurs in young animals < 1 year. Disease may not express itself for months to years after infection. Clinical manifestation of the disease is chronic weight loss with or without diarrhea. This may result in death of the animal.	Neurologic signs have been seen as early as 35 days post infection
Transmission Mode	Prions shed in a variety of fluids (saliva, feces, etc.). Spread by direct contact between animals and through infected material in the environment.	Spread through contact with infected body secretions. High numbers of organisms are shed in birth fluids, aborted fetus or an infected calf or fawn.	Disease primarily spread through direct contact from respiratory secretions or ingestion of contaminated material	Fecal - oral transmission, bacteria is also shed in milk and in-utero transmission may occur	Ingestion of intermediate host: terrestrial snails and slugs

Diseases of Wild and Farmed Cervids - CRAG Action Item 11

	CWD	Brucellosis	Bovine TB	Johne's Disease	Meningeal Worm
		Ingestion of birth fluids, or licking of the fetus, calf or genital area of a doe that has recently aborted or given birth.			
Species Affected	Elk, mule deer, white-tailed deer, moose	All North American cervids and domestic and exotic bovids; all ruminant species	All mammals; all cervid species are highly susceptible to infection	All ruminant species; North American cervid species and domestic cattle, sheep, and goats are highly susceptible .	White-tailed deer is unaffected definitive host - abberant hosts include all other cervids and domestic goats, llamas, alpacas
Percent Mortality	100% fatal	High fetal mortality; low adult mortality except in moose	High (<100%) following chronic infection; Mortality from infection may not always occur if infection is confined to internal lymph node and spread to other organs does not occur	100% mortality following clinical signs and chronic wasting	Variable; High (90-100%) in some abberant hosts - native wild cervids, llamas, alpacas
Environmental Contamination	Yes - 3-5 years or longer	Yes, Brucella can survive in the environment in cool, damp conditions and animals may contact the organism through infected feed or feeders	Yes, Feed areas can become contaminated	Disease is persistant within the environment (soil, feces and water) for a year.	Requires intermediate host - terrestrial snail or slug ingests parasite lavae passed in feces
Zoonotic Disease	No, but no definitive research. Recommendation to not consume cervids that are exhibiting clinical signs compatible with CWD or those that have tested positive. Recommendation includes not consuming tissues demonstrating high prion levels (i.e. lymphoid	Yes	Yes, report of human infection from free-ranging deer (MI)	Controversial hypothesis that Johne's may be linked with Crohn's disease in humans.	No

Diseases of Wild and Farmed Cervids - CRAG Action Item 11

	CWD	Brucellosis	Bovine TB	Johne's Disease	Meningeal Worm
	tissue and nervous tissue).				
Affect Domestic Livestock	No documentation of natural transmission to non-cervid species. Clinical trial to naturally infect cattle with oral inoculation of CWD did not result in infection.	Yes. Primarily cattle.	Yes	Cattle, sheep and goats	Sheep and cattle relatively resistant; alpacas and llamas highly susceptible

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Action Item 15

From: Bruce Eddy
Sent: Wednesday, June 13, 2007 4:50 PM
To: Alan Ross (alan.ross@hp.com); Bill Richardson (wildlife@peak.org); Brian Dick (bldick@fs.fed.us); Bruce Eddy; Charles Meslow (meslowc@aol.com); Clay Woodward (ckwoodward@aol.com); Don Hansen (dhansen@oda.state.or.us); Jan Wilson (jswilson@efn.org); Joe Ricker (jricker1@ix.netcom.com); Kathy Simpson (elkbasin@aol.com); Katie Fast (katie@oregonfb.org); Kelly Peterson (kpeterson@hsus.org); Kelly Smith (kls1998@msn.com); Sharon Livingston
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Subject: CRAG Fiscal Analysis Form and Revised Potential OAR Changes Document

Attachments: CRAG Fiscal Analysis Form.DOC; 07164 CRAG Potential Rule Changes.doc

Folks

At our May 30 meeting I agreed to provide you an electronic version of the Department of Justices' Fiscal Analysis Form and revise the Potential Oregon Administrative Rule Changes (OAR, Proposed Changes) document. Attached are these two items.

In reviewing both the form and Proposed Changes document it seems to me that making fiscal impact comments on each potential change may be difficult. I'm exploring ways we might be able to make this task a simpler for you.

I'll let you know as soon as I can whether I've found a simpler approach. I would suggest you hold off on the fiscal analysis for the time being.

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OREGON DEPARTMENT OF FISH AND WILDLIFE
CERVID RULE ADVISORY GROUP
FISCAL IMPACT ANALYSIS MATRIX

Submitted by:

Date:

Recommended rule change:

Will recommended rule change[2] have an economic effect (positive or negative) on state agencies? Describe.

Will recommended rule change have an economic effect (positive or negative) on local government? Describe.

Will recommended rule change have an economic effect (positive or negative) on members of the public? Describe.

Will recommended rule change have an economic effect (positive or negative) on business? Describe.

[2] Throughout, be sure to assess the fiscal impact of the ***change*** to the rule, not the existing rule itself.

Will recommended rule change have an economic effect (positive or negative) on small business (50 or less employees)? Describe. Will that effect be "significant"?

What will be the cost of complying with the changed rule by small business?

- **Estimate number of small businesses likely to be subject to the changed rule:**

- **What types of small businesses will be subject to the changed rule?**

- **Briefly describe any reporting, recordkeeping or other administrative activities small business would have to perform to comply with the changed rule? (include any professional services the business would have to hire)**

- **Identify the types of additional equipment, supplies and labor that would be required for a small business to comply with the changed rule?**

OREGON DEPARTMENT OF FISH AND WILDLIFE
CERVID RULE ADVISORY GROUP
POTENTIAL OREGON ADMINISTRATIVE RULE (OAR) CHANGES
(Revised June 13, 2007)

635-049-All Sections

Consensus Changes

i Remove or revise dated OAR sections as appropriate.

Potential Consensus Changes

i Develop a standard reporting database. Database needs to be easy to implement for Oregon and cervid ranchers, and provide a useful resource for Oregon, other states, ranchers and others. Consider North Dakota or Utah as an example.

ii In association with a standardized database develop a cervid ranch certification program to ease export or within Oregon transfer of healthy stock of known pedigree.

635-049-0090 Requirements Upon the Death of Any Cervids Held

Consensus Changes

i Remove notation (a) in paragraph 0090(1); there is no (b)

ii Unexpected death of a ranched elk reported to responsible agency(ies) 48 hours of discovery; results of necropsy and disease testing reported within 14 days of discovery.

Potential Consensus Changes

i Consider replacing the phrase "obvious non-disease related causes" with obvious trauma in 635-049-0090(1). Define term in rule.

ii Cervid disease reporting to Department of Agriculture <u>or</u> Department of Fish and Wildlife not both. Rely on the agency notified to inform sister agency.

Potential Changes without Consensus

i All unexpected cervid deaths reported.

ii All cervids necropsied and disease tested upon death or slaughter (including personal use).

iii Reporting should be made to Department of Fish and Wildlife because they are responsible for elk.

iv Reporting should be made to Department of Agriculture because they are responsible for livestock disease management.

v Remove Division 49 disease requirements. Livestock (including cervids) disease management addressed in Department of Agriculture OARs and don't need to be addressed in Division 49 or managed by Department of Fish and Wildlife.

vi Establish rules to govern cervid carcass disposal. Purpose of rules would be to eliminate potential for disease transmission from bone piles to wild cervids.

Other Items

i How is ranched cervid death from non-disease related cause determined and documented?

635-049-0100 Requirements for Disease Testing of Cervids Held or Imported

Consensus Changes

i Specific cervid disease tests should not be noted in OAR. Departments of Fish and Wildlife and Agriculture should jointly develop cervid disease testing requirements (i.e. list of diseases tested for, testing standards, reporting format, etc.) periodically (see 635-049-0100 3).

Potential Consensus Changes

i Rewrite this section. Create two new sections; one for testing cervids held and a second for testing cervids imported.
ii Cervid disease reporting to Department of Agriculture or Department of Fish and Wildlife not both. Rely on the agency notified to inform sister agency.
iii Testing requirements jointly developed by Departments of Fish and Wildlife and Agriculture staffs should be subjected to the Fish and Wildlife Commission's public rulemaking process similar to that use for hunting and fishing regulations.

Potential Changes without Consensus

i Allow importation of live cervids, gametes and embryos.
ii Extend import ban to gametes and embryos.
iii Reporting should be made to Department of Fish and Wildlife because they are responsible for elk.
iv Reporting should be made to Department of Agriculture because they are responsible for livestock disease management.
v Remove Division 49 disease requirements. Livestock (including cervids) disease management addressed in Department of Agriculture OARs and don't need to be addressed in Division 49 or managed by Department of Fish and Wildlife.

Other Items

i None

635-049-0110 Requirements for Genetic Testing of Cervids Held or Imported

Consensus Changes

i Eliminate 635-049-0110 (2) because it's out of date.
ii Any cervid genetic tests or requirements need to be practical and feasible

Potential Consensus Changes

i Rewrite this section. Create two new sections; one for testing cervids held and a second for testing cervids imported.
ii Require tests for sika deer genetics if they can interbreed with native wildlife
iii Change the phrase "red deer genetic materials" to non-elk.
iv Redraft this section to deal with all cervids not just elk.

v Consider using the terms native elk/non-indigenous elk and cervid/non-indigenous cervid.
vi Replace this section with rules requiring development of a genetic profile or pedigree database for all ranched elk.
vii Licenses for wild Oregon elk not subject to genetic requirements.

Potential Changes without Consensus

i Edit section to reflect importation ban
ii Extend importation ban to gametes and embryos.
iii Allow importation of live cervids, gametes and embryos.
iv Replace this section with rules requiring development of a genetic profile or pedigree database for all ranched elk.

Other Items

i Breeding at an elk ranch is less important than keeping the effects of ranch breeding out of the native elk population.
ii Concern over genetic issues is exaggerated.
iii Concern over genetic issues is less than concern about disease or facility requirements.
iv If a genetic database was created who would maintain and manage it?

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CERVID RULE ADVISORY GROUP
Action Item 18

From: Bruce Eddy
Sent: Saturday, June 16, 2007 8:31 AM
To: Alan Ross (alan.ross@hp.com); Bill Richardson (wildlife@peak.org); Brian Dick (bldick@fs.fed.us); Bruce Eddy; Charles Meslow (meslowc@aol.com); Clay Woodward (ckwoodward@aol.com); Don Hansen (dhansen@oda.state.or.us); Jan Wilson (jswilson@efn.org); Joe Ricker (jricker1@ix.netcom.com); Kathy Simpson (elkbasin@aol.com); Katie Fast (katie@oregonfb.org); Kelly Peterson (kpeterson@hsus.org); Kelly Smith (kls1998@msn.com); Sharon Livingston
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Subject: CRAG Action Item 18

Folks

Action Item 18 asks how much it has cost the Department of Fish and Wildlife to support the Cervid Rule Advisory Group.

It's difficult to give an accurate figure because the Department timekeeping and accounting systems don't provide for documenting activities at this scale.

I estimate $20,000 to $30,000 in staff time and $2,000 to $3,000 in Services and Supplies.

These estimates are very rough based on staff perception of the percentage of their time spent and expenses made in support of the CRAG activities. The actual number could be higher or lower depending on your assumptions.

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