

**2006 IDAHO WILDLIFE  
BRUCELLOSIS WORK GROUP  
REPORT AND RECOMMENDATIONS  
TO THE GOVERNOR**



## **2006 IDAHO WILDLIFE BRUCELLOSIS WORK GROUP RECOMMENDATIONS**

1. We recommend that the Governor, ISDA, and IDFG forcefully work to require USDA and the U.S. Department of the Interior to address brucellosis in wild bison and elk in Yellowstone National Park, Grand Teton National Park, and the National Elk Refuge.
2. We recommend IDFG reevaluate elk management plans and population goals to determine their consistency with Commission Policy and winter range carrying capacity.
3. We recommend ISDA and IDFG develop and implement short-term strategies, to be evaluated each year, around each elk feed ground that will prevent the spread of brucellosis in Idaho elk herds and prevent the reintroduction of brucellosis to cattle herds. IDFG and ISDA will communicate locations of any and all elk feed sites to each other.
4. Brucellosis persists in elk where the elk are concentrated and/or artificially fed. The elimination of feed grounds and the enhancement of winter range for elk are keys to eliminating the threat of brucellosis. We recommend that the Governor formally request Idaho's congressional delegation to assist the USFS and BLM, in consultation with the ISDA and IDFG, in placing a high priority on enhancement of winter range for elk on public lands and request that the USDA increase efforts to enroll and manage Conservation Reserve Program on private lands in the Greater Yellowstone area for use as winter range for wildlife.
5. We recommend that ISDA aggressively enforce their rules prohibiting the private feeding of elk in situations where that feeding may be a brucellosis risk factor to elk or domestic livestock and, if necessary, seek authority to more effectively enforce this law.
6. We recommend that ISDA aggressively enforce its brucellosis vaccination rules.
7. We recommend ISDA develop and implement plans, in regards to brucellosis, that will sustain the current ability of the Idaho cattle industry to freely market cattle in intrastate, interstate, and international commerce.
8. We recommend that IDFG adhere strictly to the Commission policy on winter-feeding (i.e., that feeding is only done under emergency conditions after consultation with Winter Feeding Advisory Committees). In any areas where feeding is done in the same geographic area more frequently than three consecutive years, IDFG must develop a site plan to reduce and eliminate the need to feed, or take other measures to eliminate disease risks.
9. We recommend the IDFG Commission policy on feeding of elk be evaluated and changed to eliminate all feeding of elk where feeding leads to concentration of animal numbers that increase disease transmission in elk and/or domestic livestock. This will include, in current feed-ground areas, the elimination of all elk that cannot be broken of the supplemental feed habit that has developed over the years.
10. We recommend that IDFG and ISDA continue to seek funding to implement the projects necessary to eliminate brucellosis in elk and cattle, and to regain Brucellosis-free Status for Idaho. We recommend contacts be made through the Governor's office to seek funding from

federal agencies and private conservation groups for winter range enhancement plans, and to implement those plans.

11. We recommend that ISDA and IDFG continue to submit a joint annual report to the Governor regarding progress made toward the goal of brucellosis eradication. The report should be submitted by June 30 of each year. It would be useful to the state veterinarian in his report to other states. It should contain the results of monitoring both elk and livestock and a summary of actions taken to reduce the possibility of disease transmission. We further recommend that the Brucellosis Work Group reconvene annually to review progress during the past year and identify priority actions for the upcoming year.
12. We recommend that all state and federal agencies, the Idaho Cattle Association, and other industry organizations increase efforts to inform sportsmen, livestock operators, and the general public about disease transmission between wild and domestic animals. The state should provide advice on how to reduce disease risks and should prohibit the importation or transportation of wildlife where there is a significant risk of introducing or amplifying disease. The determination of risk should be made by the state animal health and wildlife veterinarians.
13. We recommend the full implementation of this plan when approved.

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## INTRODUCTION

Brucellosis-affected elk and susceptible livestock have co-existed in the Idaho portion of the Greater Yellowstone Area (GYA) for over thirty years. During the last four years, two cattle herds have been infected with brucellosis by affected wild elk. The mission of this work group was to develop a plan that will minimize the possibility that an infectious event might reoccur.

## BACKGROUND

Brucellosis is an infectious disease of cattle and other animals, involving several species of the genus *Brucella*, occurring in at least 120 countries. *Brucella abortus* is the *Brucella* species of concern in North American elk. The disease was contracted from infected cattle shipped from Europe, or secondarily from American bison that were initially infected by cattle. Brucellosis has been present in the Yellowstone ecosystem since the early 1900s and is associated with bison and feed-ground elk. Persistence and transmission of brucellosis in elk is strongly associated with and enhanced by feed grounds.

*Brucella* organisms concentrate in lymph glands associated with the uterus and udder. During pregnancy, the number of organisms increases dramatically in the uterus and in fetal fluid and tissue. Large numbers of *Brucella* organisms are expelled during abortion or calving of infected females. Transmission to a susceptible animal occurs principally through ingestion of products of an infected calving or abortion. The probability of transmission is enhanced when infected animals concentrate and commingle with susceptible animals on feed grounds.

Because of its potential to be transmitted to humans, brucellosis is one of the most regulated diseases of cattle in the United States. Cattle shipped interstate are tested routinely only for brucellosis and tuberculosis, although other diseases cause markedly more morbidity and mortality. The U.S. Department of Agriculture (USDA) established the national brucellosis eradication effort in 1934 to address public health concerns and the economic consequences to the cattle industry resulting from infected herds; that effort implemented the standards for testing, quarantine, and elimination that remain in place today. Since 1934, an estimated \$3.5 billion of federal, state, and private funds has been spent on brucellosis eradication in domestic livestock. The present National Brucellosis Program is run by the USDA Animal and Plant Health Inspection Service (APHIS), which has a goal of eradicating brucellosis from U.S. cattle and domestic bison herds.

As part of its efforts to eradicate brucellosis, APHIS certifies states as brucellosis-free, class A, class B, or class C, depending on the rate of infection in all cattle herds in a state. No states carry class B or C status today—an indication of the success of eradication strategies. The state of Idaho went from brucellosis-free status to class A in 2006. A state's classification is important because if *B. abortus* is detected, numerous costs are incurred, such as those related to testing procedures, but perhaps the most important costs are those associated with the refusal of other states to accept a state's unvaccinated breeding cattle.

By authorizing USDA to regulate brucellosis transmission in cattle, the federal government has demonstrated concern that, although a low risk, brucellosis poses a potentially great-loss

situation in terms of economic consequences and possible human health effects. This plan is written with that federal recognition in mind.

The significance of brucellosis in wildlife populations is not well understood but it is important in that it can be transmitted to domestic livestock. Since 1970, surveillance efforts on the National Elk Refuge in Jackson, Wyoming report positive blood tests in 39% of female elk, but indicate that the associated abortion potential would only reduce the annual calf crop by about 7%. It is important to note that a positive serologic test does not necessarily mean an animal is infected or capable of transmitting the disease. Serologic test results only indicate the presence of antibodies to *Brucella* following exposure to the bacteria. *Brucella* can infect humans, resulting in a disease called Undulant (recurring) Fever, although the risk of human contraction of the disease appears to be very low.

The best strategy for prevention of brucellosis in eastern Idaho is to avoid concentration of elk on feed grounds. Idaho Department of Fish and Game (IDFG) Commission policy is clear on emergency big game feeding. Policy FW-10.00 states that "...big game populations should be maintained under natural conditions and by natural available forage." Policy further states as its intent that the Department will "...provide emergency feed for big game animals only during those periods of critical stress and not as a sustaining program that would carry larger game populations than the range can normally support."

IDFG continues to bring winter elk management into compliance with Commission Policy. While a reduction in congregations of feed conditioned elk will eventually result in a significant reduction in the incidence of the disease, sudden elimination of feed grounds would have undesirable side effects. Significant displacement of elk into subdivisions and haystacks as well as increased winter mortality would likely occur.

Winter-feeding of big game animals is not always related to a lack of available natural forage. Some well-intentioned members of the public believe simply because some animals become visible in winter along roads and in lowlands, they need to be fed. As a result, unnecessary feeding has put many elk and deer at risk for diseases, dependency, conditioning and other threats. Unauthorized feeding may lead to increased concentration and disease transmission.

In many areas, winter ranges have been replaced by subdivisions or converted to agriculture, and are no longer capable of supporting wintering big game at historical levels. In some areas elk attempting to migrate to available foraging areas may be interrupted by intentional or unintentional private feeding, or be attracted to livestock feed sites.

## **1998 GOALS AND RECOMMENDATIONS**

The goal of the 1998 Governor's Brucellosis Task Force was to develop a management plan that would properly address and solve brucellosis issues in livestock and wildlife in the Upper Snake and Southeast IDFG regions of Idaho, maintain Brucellosis-free Status for the state, and sustain the ability of Idaho livestock producers to freely market livestock in intrastate, interstate and international commerce. This was to be achieved by meeting the recommendations listed below.

## Recommendations

1. The Department of Fish and Game should develop and implement elk management plans, which set population goals for elk based on the carrying capacity of the range. Those plans should be revisited as often as necessary to assure that population goals are adjusted to realistic levels based on changes in the habitat and the status of populations.

This recommendation has been implemented in most elk management zones but not all.

2. The Departments of Agriculture and Fish and Game should develop and implement strategies that will prevent the further spread of brucellosis in Idaho elk herds and prevent the reintroduction of brucellosis to cattle herds.

This recommendation was partially implemented but was unsuccessful in preventing cattle herds from becoming infected on two occasions.

3. Brucellosis persists in elk only where the elk are concentrated and artificially fed. The elimination of feed grounds and the establishment of winter range for elk are the keys to eliminating the threat of brucellosis. We recommend that the Governor formally request the U.S. Forest Service (USFS) and Bureau of Land Management (BLM), in consultation with the Departments of Agriculture (Bureau of Vegetation Management) and Fish and Game, place a high priority on development of winter range for elk on public lands and request that the USDA increase efforts to enroll and manage Conservation Reserve Program on private lands in the Greater Yellowstone area for use as winter range for wildlife.

This recommendation was not implemented.

4. The Department of Agriculture should implement active and passive brucellosis surveillance plans that will identify any reintroduction of brucellosis to the cattle population of the state and take all other actions necessary to preserve the Brucellosis-free Status of the state of Idaho.

This recommendation was implemented.

5. We recommend that the Office of the Attorney General expeditiously review the authority of the Department of Agriculture to clarify whether existing laws and rules allow the State to prohibit the private feeding of wildlife in situations where that feeding may be a brucellosis risk factor to wildlife or domestic livestock. If that authority exists, it should be used judiciously and only when the Departments of Agriculture and Fish and Game concur as to whether the feeding is inappropriate.

This recommendation was implemented and authority to regulate intentional big game feeding by private individuals in eastern Idaho now rests with the Idaho State Department of Agriculture.

6. Authority to control private feeding is necessary to ensure that private feeding of elk does not increase the exposure of livestock and non-affected elk populations to brucellosis. If a

review of legal authority by the Attorney General's office determines that neither the Department of Fish and Game nor the Department of Agriculture has sufficient authority to control private feeding of elk, we recommend that such authority be developed through appropriate legislation. The legislative initiative should include authority to control feeding and authority to enter private lands to control, trap, and test or remove wildlife when the agencies concur on the need to reduce the potential for transmission of disease.

This recommendation was achieved, see #5 above.

7. The Department of Agriculture should develop and implement plans, in regards to brucellosis, that will sustain the current ability of the Idaho cattle industry to freely market cattle in intrastate, interstate and international commerce.

This recommendation was and is being implemented on a continuous basis.

8. We recommend that the Fish and Game Department adhere strictly to the Commission policy on winter feeding (i.e., that feeding is only done under emergency conditions after consultation with Winter Feeding Advisory Committees). In any areas where feeding is done in the same geographic area more frequently than three consecutive years, the Department of Fish and Game must develop a site plan to reduce the need to feed, or take other measures to reduce disease risks.

This recommendation was mostly implemented; feeding has been eliminated in some areas, but feeding continues in other areas. Winter Feeding Advisory Committees are consulted and Department policy strictly adhered to when winter feeding of big game is considered. Rainey Creek is the Department's only elk feed site with a long history of routine use in eastern Idaho. Activities conducted at Rainey Creek have been guided by a collaborative plan between the Fish and Game Department and Department of Agriculture.

9. The funding to implement some of the Task Force recommendations has not been identified. We recommend contacts be made through the Governor's office to seek funding from USDA-APHIS to help with trapping, monitoring, and testing of both wildlife and cattle. In addition to USDA-APHIS, the Departments of Fish and Game and Agriculture should seek the involvement of other Federal agencies and private conservation groups to help fund GIS mapping and winter range development plans, and to implement those plans.

Funding was identified and obtained. Some GIS mapping, winter range development, and stack yard development has taken place.

10. We recommend that the Departments of Agriculture and Fish and Game submit a joint annual report to the Governor regarding progress made toward the goal of brucellosis eradication. The report should be submitted by June 30 each year. It would be useful to the state veterinarian in his report to other states. It should contain the results of monitoring both elk and livestock and a summary of actions taken to reduce the possibility of disease

transmission. We further recommend that the departments utilize the annual report to make appropriate amendments to the wildlife brucellosis plan to keep it on track with the goal.

This report has been written and submitted each year.

11. Finally, we recommend that all state and federal agencies and the Idaho Cattle Association and other industry organizations increase efforts to inform sportsmen, livestock operators, and the general public about the potential for disease transmission between wild and domestic animals. The State should provide advice on how to reduce disease risks and should prohibit the importation or transportation of wildlife where there is a significant risk of introducing or amplifying disease. The determination of risk should be made by the state animal health and wildlife veterinarians.

This recommendation was partially implemented. Wild elk have not been translocated outside the eastern Idaho Brucellosis Zone.

## **2006 GOALS AND OBJECTIVES**

The goal of the present 2006 Idaho Brucellosis Work Group was to update and, where needed, develop site-specific management plans that will address and solve brucellosis issues in livestock and wildlife in the Upper Snake and Southeast IDFG regions of Idaho, to regain Brucellosis-free Status for the state, and sustain the present ability of Idaho livestock producers to freely market livestock in intrastate, interstate, and international commerce. An additional goal is to sustain elk-based wildlife recreation and associated industries. This will be achieved by meeting the objectives listed under the following areas of focus.

- Prevention
- Surveillance
- Compliance
- Information and Education

### **Prevention Objectives**

Prevention of exposure is the backbone of our short-term efforts to assure that brucellosis will not spread from brucellosis-affected wild elk to cattle and non-affected elk. The ultimate long-term goal is the elimination of wildlife feed grounds and the eradication of brucellosis from elk and bison in the GYA. Brucellosis transmission cannot occur if there is no exposure of a susceptible animal to the *Brucella abortus* bacteria. Additionally, increasing the level of immunity of cattle to brucellosis can significantly reduce the potential for transmission. With this in mind, the following objectives have been identified:

- Reduce the potential for elk-livestock interaction during periods of high transmission risk through winter range improvement or enhancement; long-term habitat protection; use of physical barriers; hazing; hunting; and trap, test, and removal of seropositive elk on feed grounds.
- Manage wild elk to reduce brucellosis in Idaho wildlife.

- Prevent the reintroduction of brucellosis into the livestock population of Idaho.
- Enhance immunity to brucellosis through vaccination of at-risk and exposed cattle.
- Keep the area of risk to the smallest possible geographical area.
- Monitor Idaho elk herds to document the rate of brucellosis seroprevalence.

#### Actions to Meet Prevention Objectives

- 1) Idaho elk populations shall be stratified, as described below, to reflect the likelihood of brucellosis presence in each stratum. The geographic range of Idaho elk herds within the GYA will be defined through analysis of past, current, and future radio marking and tracking programs.
  - a. Strata 1. Elk in Big Game Management Units (Herd Units) not dependent on supplemental feed and not in areas of brucellosis risk will be tested incidental to other management activities (e.g., research or transplant captures).
  - b. Strata 2. For elk in Herd Units presently fed on a regular basis but not known or suspected to be interactive with populations presently known to harbor brucellosis, a 10% sample of fed animals will be tested for *Brucella* and other important infectious diseases within 5 years and within each succeeding 5-year period.
  - c. Strata 3. Brucellosis Risk Area. This area encompasses portions of the Upper Snake and Southeast regions along the Idaho and Wyoming border. Elk in Herd Units dependent on supplemental feed and known or suspected to interact with seropositive populations will be tested on a regular basis (i.e., a minimum sample size from pool samples and samples from trapped research animals that will allow a 95% confidence level able to detect a 2% incidence on annual sampling). Hunter test kits will be used for all controlled hunts in the risk area (on a rotating basis) to track seroprevalence changes.
- 2) Hunting-season blood collection kits will be provided to holders of elk controlled hunt permits in Strata 3 hunt units. IDFG will investigate several options for using hunter-gathered data in testing frequency of seropositivity in Strata 3 elk.
- 3) IDFG and the Idaho State Department of Agriculture (ISDA) can provide technical assistance, materials, and labor, if funds are available, to cooperating landowners (for brucellosis risk reduction) in order to exclude elk from stored hay, feed lines, and livestock, thereby reducing the attraction of livestock feeding operations to wintering elk. Strategic fencing of conflict areas such as cattle feed grounds and stack yards can eliminate elk cattle interaction.

- 4) Landowners must maintain stack yards and fenced feed areas to prevent entrance of elk. Landowners with elk/cattle interaction problems will be encouraged to allow improved hunter access to help resolve elk/cattle interaction problems.
- 5) In cooperation with all other state agencies, private landowners, and the USDA, BLM, and USFS, the IDFG and ISDA will develop a geographic-based summary of the status and availability of ungulate winter range on all lands in southeastern Idaho. Additionally, measures will be considered which will allow big game undisturbed access and use of wintering areas.
- 6) Control of, or mitigation for, developments on winter ranges will be sought to require fencing of haystacks and feed areas by new landowners, thus preventing the development of new elk feed sites.
- 7) With the help of other agencies and landowners, IDFG will work in earnest to enhance and protect winter/spring habitat in an effort to maintain healthy, huntable elk herds.
- 8) Monitoring of both elk and cattle for brucellosis will be used to gauge the progress in meeting objectives until all elk feed grounds are eliminated and brucellosis has been eliminated from the GYA. Elk that are fed in the high-risk area will be tested for brucellosis seroprevalence every year they are fed. Elk that are fed for three consecutive years or more in other areas of the state will be tested for brucellosis seroprevalence through either trapping and testing or hunter-sample testing.
- 9) The evaluation of mapping data and elk surveillance data will be used to identify areas of potential risk.
- 10) ISDA will aggressively enforce IDAPA 02.04.25 “Rules Governing Private Feeding of Big Game Animals” to bring about the elimination of private elk feed grounds.
- 11) Maintain elk populations within the IDFG elk management plan objectives taking into account biological, social, winter range carrying capacity, and habitat concerns.
- 12) In areas where elk continue to come to cattle feed lines during the high-risk period, despite other management actions, site-specific hunts will be developed and implemented at times when elk are present to eliminate elk/cattle interaction and modify behavior.
- 13) Work with producers to modify cattle feeding practices to discourage usage by elk.
- 14) Elk will be vaccinated when an efficacious oral vaccine and delivery method is developed, agreed upon by the Idaho State Veterinarian, the IDFG Wildlife Bureau Chief, and the wildlife veterinarian responsible for wildlife brucellosis in Idaho. The criteria for use will be predicated on safety and should be efficacious in preventing abortions and/or disease in elk both on and off feed grounds.

15) ISDA will strictly enforce Idaho's mandatory brucellosis vaccination law, and require adult booster vaccination of at-risk herds in the high-risk area.

### **Surveillance Objectives**

- Be aware of possibilities for brucellosis transmission to specific cattle herds and work to detect those instances.
- Determine the brucellosis seroprevalence rate in all Idaho elk populations.

### Actions to Meet Surveillance Objectives

Surveillance in cattle will take two forms: Active Surveillance and Passive Surveillance. Active surveillance is used on *exposed* cattle herds while passive surveillance is used to detect brucellosis in herds that are not *known* to be exposed.

#### Active Surveillance

When a herd is determined through an epidemiological investigation to have been exposed to Strata 3 elk, active surveillance will be used. The herd will be considered exposed if direct contact is made with affected elk on a feed line during the winter-feeding period.

The judicious application of the active surveillance system is the best way to identify and test exposed cattle.

- Conduct an epidemiological evaluation of elk surveillance data.
- Compile mapping data and use all available information to identify and monitor all cattle herds exposed, or at high risk of exposure to, affected elk.
- All brucellosis-exposed cattle herds will be either serologically tested or tested through a bimonthly Brucellosis Ring Test (BRT).
- If any cattle herd is found to be brucellosis-infected, it will be handled in accordance with IDAPA 02.04.20 "Rules Governing Brucellosis."

#### Passive Surveillance

Passive surveillance consists of the current Market Cattle Identification Program (MCI), testing of test-eligible cattle that are exported from Idaho, and BRT. These programs are designed to identify brucellosis infection in herds that have not been identified as exposed to brucellosis through active surveillance and are applied to all intact male and female cattle that are test-eligible at slaughter establishments, all dairy herds in the state, and all exports of test-eligible cattle.

- The MCI and BRT surveillance programs will be conducted on all cattle in the state.

- To assure complete coverage of the risk area, an internal review of MCI and BRT surveillance systems will be performed.
- Assure the appropriate handling of infected herds. All herds found to be infected with brucellosis will be quarantined and will be handled in accordance with the requirements of IDAPA 02.04.20 “Rules Governing Brucellosis.”

### **Compliance Objectives**

- Maintain eastern Idaho elk management in compliance with Commission policy and the criteria for emergency feeding established by the Southeast and Upper Snake regional Winter Feeding Advisory Committees.
- Eastern Idaho Winter Feeding Advisory Committees will review criteria for winter feeding to take into account brucellosis risk.
- Assure compliance with IDAPA 02.04.20 “Rules Governing Brucellosis”

### Actions to Meet Compliance Objectives

- 1) Conduct a thorough epidemiological evaluation of all risks to determine the appropriate action.
- 2) Assure the movement of exposed cattle, or suspects, is accomplished in accordance with IDAPA 02.04.20.
- 3) IDFG and ISDA will develop “Action Plans” for the specific sites where high-risk elk/cattle interactions occur within 6 months of the interaction, and this plan will be modified based on the need to eliminate elk/cattle interaction. ISDA and IDFG will work together with the producer to assist with hunter access in areas where elk behavior modification needs to occur for wildlife/livestock disease purposes.
- 4) The 1998-2010 Idaho Fish and Game Elk Plan and elk population objectives will be reviewed immediately, then annually thereafter.

### **Information and Education Objectives**

Communicate our concerns and needs to (and achieve support from) ranchers, sportsmen, other interested citizens, elected officials, cooperating agencies, and regional and national groups.

### Actions to Meet Information and Education Objectives

- 1) Cooperatively conduct meetings with producers, sportsmen, and citizens concerned with the brucellosis issue in order to identify issues of concern, share information, and develop solutions.
- 2) Use public media to address the problem and distribute information.

- 3) Develop factual information regarding all aspects of the brucellosis problem.
- 4) Provide information regarding the need for elk winter range to manage brucellosis risk in eastern Idaho.

## **FEED SITE AND ELK/CATTLE INTERACTIONS SITE ACTION PLANS**

### **Upper Snake Region 6**

#### Rainey Creek

*Historical Summary:* In the late 1970s, a rancher near Irwin began feeding cattle near the mouth of Rainey Creek and along the U.S. forest boundary. Large areas of browse in the area were converted to farmland and snowmachine use increased. This all contributed to elk damaging nearby haystacks and using cattle feed lines. The rancher refused to adequately protect his hay, so the Department began baiting elk up Rainey Creek away from the haystacks and cattle. This baiting operation has continued since 1978 (no feeding occurred during the 1993-1994 winter due to mild conditions). Between 200-600 elk and 50-1,000 deer have been fed annually by the Department at this site.

*Brucellosis Testing:* *Brucella abortus* Biovar 1 and 4 have been isolated at this feed site.

#### 1998 Objectives:

- 1) Meet the Statewide goal of reducing the threat of brucellosis from wildlife.
- 2) Bring this site into full compliance with Commission winter-feeding policy by the winter of 2001-2002.

#### 1998 Recommendations:

- 1) Beginning winter 1998-1999, initiate a program to trap and test feed-ground elk. Seropositive females will be culled from the herd or transported to the Caldwell lab for research.
- 2) Maintain a sample of 20 radio-instrumented individuals to continue monitoring of movement and migration patterns.
- 3) Continue to focus on remaining supplemental feed-dependent elk in the Palisades Zone.
- 4) Pursue opportunities to acquire and/or enhance elk winter range in the Palisades Zone (Units 64 & 67) in historical winter range below Pine Creek.

*2006 Recommendations:* Use of these recommendations will be determined on a case-by-case basis.

- 1) Fence all stack yards.
- 2) Fence all cattle-feeding fields.
- 3) Enhance winter/spring habitat.
- 4) Minimize elk disturbance on areas where elk winter.
- 5) Issue kill permits.
- 6) Eliminate winter/spring elk feeding [not authorized by IDFG] through enforcement of ISDA Big Game Feeding Rules.
- 7) Increase hunter access to problem elk.
- 8) Encourage, by the most effective means, “problem” elk migration out of the area.
- 9) Conduct late season hunts on private and adjacent federal property to decrease problem elk.
- 10) Conduct targeted depredation hunts to change elk behavior.
- 11) Conduct targeted extra-tag elk hunts in December and January to modify elk behavior.
- 12) Collect blood samples for brucellosis surveillance.

### Victor

*Historical Summary:* A small herd of elk (50 animals) traditionally wintered in the foothills two miles east of Victor. About eight years ago, a landowner began feeding the elk. Each year, the herd has grown and is now estimated at 215 animals, of which most (180) were fed during the 1997-1998 winter.

The Department has rejected all requests to feed elk or establish a permanent feed ground at this site. Permanent stack yards, panels, and hazing have been used to deal with damage complaints. One damage claim was paid to a nursery owner in 1995. During the 1996-1997 winters, the Teton Valley Wildlife Association successfully pressured the Department into providing hay for most of the winter. During the 1997-1998 winter, emergency feeding criteria conditions were met and the Department provided 50 tons of hay for a feeding operation on private land two miles east of Victor.

Continued incidental feeding at this site is in direct conflict with Commission Policy and presents a brucellosis risk.

Brucellosis Testing: The presence of brucellosis was not confirmed in the 10% (20) of the elk from this site tested in 1998; however, we are proceeding on the presumption there is a high probability these elk commingle with infected elk from Wyoming feed grounds.

1998 Objectives:

- 1) Meet the statewide goal of eliminating the threat of brucellosis from wildlife.
- 2) Bring this site into full compliance with Commission winter-feeding policy by the winter of 2001-2002.

1998 Recommendations:

- 1) Implement a cooperative interagency approach, using primarily liberalized harvest, to bring this herd into balance with available winter range capacity.
- 2) Support efforts to enhance winter range carrying capacity through livestock management, planting, or controlled burns.
- 3) If environmental factors dictate emergency big game feeding based on the Upper Snake Region Winter Feeding Criteria, trap and test at this site, and cull all seropositive elk.

2006 Recommendations: Use of these recommendations will be determined on a case-by-case basis.

- 1) Fence all stack yards.
- 2) Fence all cattle-feeding fields.
- 3) Enhance winter/spring habitat.
- 4) Minimize elk disturbance on areas where elk winter.
- 5) Issue kill permits.
- 6) Eliminate winter/spring elk feeding [not authorized by IDFG] through enforcement of ISDA Big Game Feeding Rules.
- 7) Increase hunter access to “problem” elk.
- 8) Encourage, by the most effective means, “problem” elk migration out of the area.
- 9) Conduct late season hunts on private and adjacent federal property to decrease problem elk.
- 10) Conduct targeted depredation hunts to change elk behavior.

11) Conduct targeted extra-tag elk hunts in December and January to modify elk behavior.

12) Collect blood samples for brucellosis surveillance.

### Conant Creek

*Historical Summary:* In the late 1950s, a small herd of elk (20) wintered on upper Conant Creek. A private landowner began feeding these elk. In subsequent years, the Department provided this landowner hay to bait the elk away from haystacks and cattle. The numbers increased, so the Department attempted to work with the landowner to solve the depredation problem with options other than feeding. The landowner has refused to try any alternative options and continues to solicit the support of politicians and sportsmen to preserve the feeding operation. During the winter of 1997-1998 winter feeding criteria were met and the Department provided the landowner 45 tons of hay.

*Brucellosis Testing:* One of 13 elk from this area tested seropositive for exposure to brucellosis in 1998.

### 1998 Objectives:

- 1) Meet the statewide goal of reducing the threat of brucellosis from wildlife.
- 2) Bring this site into full compliance with Commission winter-feeding policy by the winter of 2001-2002.
- 3) End incidental feeding by the winter of 1999-2000, to encourage elk to reestablish traditional seasonal migration and foraging behavior.

### 1998 Recommendations:

- 1) Advise the landowner in writing of the negative ramifications of the practice of feeding elk and request that it be stopped beginning with the 1998-1999 winter.
- 2) Offer materials and technical assistance to protect hay and isolate livestock from elk if the landowner agrees to end incidental big game feeding.
- 3) If the landowner is willing, IDFG will trap, test, and remove, and/or harvest any animals that do not reestablish traditional movement to wintering areas. Investigate the possibility of trapping, testing, and moving calves onto historical wintering areas in an attempt to reestablish traditional migration patterns.
- 4) If environmental factors dictate emergency big game feeding based on the Upper Snake Region Winter Feeding Criteria, IDFG will trap and test at this site, and cull all seropositive elk.

2006 Recommendations: This problem has been solved.

## Felt

*Historical Summary:* A landowner on Tepee Creek has been feeding elk on private property for several years. The number of elk being fed has grown to about 140 animals. The Department has provided this landowner with panels to protect nearby haystacks. The landowner has not asked the Department for feed.

IDFG views this feed site as purely incidental and as such potentially detrimental to the health of this elk population. This situation has short-stopped elk from their traditional annual migration.

*Brucellosis Testing:* The landowner denied Department personnel access onto his property for the purpose of capture and testing of elk during the 1997-1998 winter.

*1998 Objective:* End incidental feeding, thereby encouraging elk to reestablish traditional seasonal migration and foraging behavior.

### 1998 Recommendations:

- 1) Advise the landowner in writing of the negative ramifications of the practice of feeding elk and request that it be stopped beginning with the 1998-1999 winter.
- 2) Offer materials and technical assistance to protect hay and isolate livestock from elk if the landowner agrees to end incidental big game feeding. If environmental factors dictate emergency big game feeding based on the Upper Snake Region Winter Feeding Criteria, remaining habituated elk will be trapped, tested, and seropositive animals culled.
- 3) IDFG will investigate the possibility of trapping, testing, and moving calves onto historical wintering areas in an attempt to reestablish traditional migration patterns.

*2006 Recommendations:* Use of these recommendations will be determined on a case-by-case basis.

- 1) Fence all stack yards.
- 2) Fence all horse feeding areas.
- 3) Enhance winter/spring habitat.
- 4) Minimize elk disturbance on areas where elk winter.
- 5) Issue kill permits.
- 6) Eliminate winter/spring elk feeding [not authorized by IDFG] through enforcement of ISDA Big Game Feeding Rules.
- 7) Increase hunter access to “problem” elk.

- 8) Encourage, by the most effective means, “problem” elk migration out of the area.
- 9) Conduct late season hunts on private and adjacent federal property to decrease problem elk.
- 10) Conduct targeted depredation hunts to change elk behavior
- 11) Conduct targeted extra-tag elk hunts in December and January to modify elk behavior.
- 12) Collect blood samples for brucellosis surveillance.
- 13) Work with Wyoming Game and Fish to maintain elk harvest at appropriate level.

#### Heise Elk Herd

*Historical Summary:* During the winter of 2005-2006, a small elk herd has been trying to come into a winter cow herd feed area. This is an area of traditional mule deer winter range.

*2006 Recommendations:* Use of these recommendations will be determined on a case-by-case basis.

- 1) Fence all stack yards.
- 2) Fence all cattle-feeding fields.
- 3) Enhance winter/spring habitat.
- 4) Minimize elk disturbance on areas where elk winter.
- 5) Issue kill permits.
- 6) Eliminate winter/spring elk feeding [not authorized by IDFG] through enforcement of ISDA Big Game Feeding Rules.
- 7) Increase hunter access to “problem” elk.
- 8) Encourage, by the most effective means, “problem” elk migration out of the area.
- 9) Conduct late season hunts on private and adjacent federal property to decrease problem elk.
- 10) Conduct targeted depredation hunts to change elk behavior.
- 11) Conduct targeted extra-tag elk hunts in December and January to modify elk behavior.

12) Collect blood samples for brucellosis surveillance.

## **Southeast Region 5**

### Banks Valley

*Historical Summary:* Elk herd started migrating south of Montpelier 3 years ago. Between 100-300 elk have been fed annually by the Department at this site.

*Brucellosis Testing:* Only a few depredation hunt samples have been conducted; all were negative.

### 2006 Recommendations:

- 1) Conduct targeted extra-tag elk hunts in December and January to modify elk behavior.
- 2) Conduct late season hunts on private and adjacent federal property to decrease problem elk.
- 3) Conduct targeted depredation hunts to change elk behavior.
- 4) Collect blood samples for brucellosis surveillance.
- 5) Any authorized winter feeding at this feed site will include trapping, testing, and removal of seropositive cow elk.
- 6) Enhance winter/spring habitat.
- 7) Educate public to the need for late season hunts and elimination of this feed ground.
- 8) Eliminate winter/spring elk feeding [not authorized by IDFG] through enforcement of ISDA Big Game Feeding Rules.
- 9) Increase hunter access to problem elk.
- 10) Encourage, by the most effective means, elk migration out of the area.

### Gentile Valley

*Historical Summary:* This area includes the Bancroft, Lund, Grace, and Lago areas.

*Brucellosis Testing:* Unknown, but it's in the brucellosis risk area and elk/cattle interaction occurs.

*2006 Recommendations:* Use of these recommendations will be determined on a case-by-case basis.

- 1) Fence all stack yards.

- 2) Fence all cattle-feeding fields.
- 3) Enhance winter/spring habitat.
- 4) Minimize elk disturbance on areas where elk winter.
- 5) Issue kill permits.
- 6) Eliminate winter/spring elk feeding [not authorized by IDFG] through enforcement of ISDA Big Game Feeding Rules.
- 7) Increase hunter access to “problem” elk.
- 8) Encourage, by the most effective means, “problem” elk migration out of the area.
- 9) Conduct late season hunts on private and adjacent federal property to decrease problem elk.
- 10) Conduct targeted depredation hunts to change elk behavior.
- 11) Conduct targeted extra-tag elk hunts in December and January to modify elk behavior.
- 12) Collect blood samples for brucellosis surveillance.

#### Afton Area

*Historical Summary:* Includes the Smokey Canyon, Crow Creek, and Sage Valley areas.

*Brucellosis Testing:* Hunter surveillance shows some *Brucella* risk; it is in a brucellosis risk area of Wyoming feed grounds and elk/cattle interaction occurs.

*2006 Recommendations:* Use of these recommendations will be determined on a case-by-case basis.

- 1) Fence all stack yards.
- 2) Fence all cattle-feeding fields.
- 3) Enhance winter/spring habitat.
- 4) Minimize elk disturbance on areas where elk winter.
- 5) Issue kill permits.
- 6) Eliminate winter/spring elk feeding [not authorized by IDFG] through enforcement of ISDA Big Game Feeding Rules.

- 7) Increase hunter access to “problem” elk.
- 8) Encourage, by the most effective means, “problem” elk migration out of the area.
- 9) Conduct late season hunts on private and adjacent federal property to decrease problem elk.
- 10) Conduct targeted depredation hunts to change elk behavior.
- 11) Conduct targeted extra-tag elk hunts in December and January to modify elk behavior.
- 12) Collect blood samples for brucellosis surveillance.

#### Freedom Area

*Historical Summary:* This area includes the Tin Cup Creek, Diamond Creek, and Northern end of the Star Valley.

*Brucellosis Testing:* Hunter surveillance shows some *Brucella* risk; it is in a brucellosis risk area of Wyoming feed grounds and elk/cattle interaction occurs.

*2006 Recommendations:* Use of these recommendations will be determined on a case-by-case basis.

- 1) Fence all stack yards.
- 2) Fence all cattle-feeding fields.
- 3) Enhance winter/spring habitat.
- 4) Minimize elk disturbance on areas where elk winter.
- 5) Issue kill permits.
- 6) Eliminate winter/spring elk feeding [not authorized by IDFG] through enforcement of ISDA Big Game Feeding Rules.
- 7) Increase hunter access to “problem” elk.
- 8) Encourage, by the most effective means, “problem” elk migration out of the area.
- 9) Conduct late season hunts on private and adjacent federal property to decrease problem elk.
- 10) Conduct targeted depredation hunts to change elk behavior.

- 11) Conduct targeted extra-tag elk hunts in December and January to modify elk behavior.
- 12) Collect blood samples for brucellosis surveillance.

### Soda Springs

Brucellosis Testing: Hunter surveillance shows some *Brucella* risk; it is in a brucellosis risk area of Wyoming feed grounds and elk/cattle interaction occurs.

2006 Recommendations: Use of these recommendations will be determined on a case-by-case basis.

- 1) Fence all stack yards.
- 2) Fence all cattle-feeding fields.
- 3) Enhance winter/spring habitat.
- 4) Minimize elk disturbance on areas where elk winter.
- 5) Issue kill permits.
- 6) Eliminate winter/spring elk feeding [not authorized by IDFG] through enforcement of ISDA Big Game Feeding Rules.
- 7) Increase hunter access to “problem” elk.
- 8) Encourage, by the most effective means, “problem” elk migration out of the area.
- 9) Conduct late season hunts on private and adjacent federal property to decrease problem elk.
- 10) Conduct targeted depredation hunts to change elk behavior.
- 11) Conduct targeted extra-tag elk hunts in December and January to modify elk behavior.
- 12) Collect blood samples for brucellosis surveillance.

## GLOSSARY OF TERMS

**The following definitions of terms is not intended to fulfill scientific criteria for definitions, but is intended to serve as a layman's guide to the terms used in this document:**

**Affected Herd** - a herd of cattle, elk, bison or other brucellosis susceptible animals that contains one or more brucellosis infected animals.

***Brucella abortus*** – the species of *Brucella* that commonly causes Brucellosis in cattle and currently affects bison and elk populations in portions of the GYA.

**Brucellosis Uniform Methods and Rules** – national minimum standards for managing brucellosis in cattle and domestic bison, including minimum standards for classification of states in the national brucellosis program.

**Brucellosis** – an infectious disease caused by any of several species of bacteria from the genus *Brucella*. From the perspective of the Wildlife Brucellosis Plan, Brucellosis is referring to disease caused by *Brucella abortus*.

**Elk Herd Unit** – group of elk that share a common geographical habitat within a designated management area.

**Epidemiological Evaluation** – a complete evaluation of all test data, herd history, animal movement information, and any other information useful in determining the exposure to or potential transmission of disease.

**Exposed Animal or herd** – an animal that is part of an affected herd or an animal or herd that has been determined through epidemiological evaluation to have feed-line contact with an affected herd or an infected animal during the winter.

**Greater Yellowstone Area (GYA)** – the ecosystem encompassing Yellowstone National Park and contiguous habitat that includes portions of Idaho, Montana and Wyoming.

**Infected Animal** – an animal that has been found through bacteriological, serological or other USDA approved test procedures to be harboring *Brucella abortus* bacteria in one or more body tissue or body fluid.

**Prevalence** – the percentage of a population that is infected with a disease.

**Reactor** – an animal that exhibits a strong response, as defined by the Brucellosis Uniform Methods and Rules, to a serologic brucellosis test.

**Risk Area** – the Idaho portion of the Greater Yellowstone Area that may contain brucellosis infected or exposed elk or bison from Yellowstone National Park, Grand Teton National Park, the National Elk Refuge or the Wyoming and Idaho feed ground areas.

**Serologic test** – test, performed on the serum portion of a whole blood sample, to detect the presence of specific disease antibodies in the blood.

**Seroprevalence** – the percentage of serum samples testing positive on a serologic test.

**Suspect** – an animal that exhibits a moderate response, as defined by the Brucellosis Uniform Methods and Rules, to a serologic brucellosis test.

**Undulant Fever** – common name for human Brucellosis, which is characterized by a chronic recurring disease syndrome of fever, flu like symptoms and joint infections.

**EASTERN IDAHO BRUCELLOSIS RISK AREA ELK WINTER STATUS AND  
POPULATION OBJECTIVES**

**Tex Creek Zone**

**Winter Status and Objectives**

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
66/69	2005	3243	887	407	2000-3000	425-625	250-350
<b>Zone Total</b>		<b>3243</b>	<b>887</b>	<b>407</b>	<b>2000-3000</b>	<b>425-625</b>	<b>250-350</b>
<b>Bulls Per 100 Cows</b>			<b>27</b>	<b>13</b>		<b>18-24</b>	<b>10-14</b>

**Palisades Zone**

**Winter Status and Objectives**

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
64/65w/67	2004	375	214	113	400-600	125-200	75-125
<b>Zone Total</b>		<b>375</b>	<b>214</b>	<b>113</b>	<b>400-600</b>	<b>125-200</b>	<b>75-125</b>
<b>Bulls Per 100 Cows</b>			<b>57</b>	<b>30</b>		<b>30-35</b>	<b>18-22</b>

**Teton Zone**

**Winter Status and Objectives**

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
62	2006	82	88	30	100-150	20-30	10-20
65	2006	91	37	10	50-100	15-25	5-15
<b>Zone Total</b>		<b>173</b>	<b>125</b>	<b>40</b>	<b>150-200</b>	<b>35-55</b>	<b>15-35</b>
<b>Bulls Per 100 Cows</b>			<b>73</b>	<b>23</b>		<b>18-24</b>	<b>10-14</b>

**Island Park Zone  
Winter Status and Objectives**

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
60	ND				0	0	0
60A	2006	1069	315	43	1200-1800	400-575	250-375
61	ND				0	0	0
62A	ND				0	0	0
<b>Zone Total</b>		<b>1069</b>	<b>315</b>	<b>43</b>	<b>1200-1800</b>	<b>400-575</b>	<b>250-375</b>
<b>Bulls Per 100 Cows</b>			<b>30</b>	<b>16</b>		<b>30-35</b>	<b>18-22</b>

**Bear River Zone  
Winter Status and Objectives**

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
75	2006	226	NA	NA	200-300	40-60	25-35
77	2006	41	NA	NA	100-150	20-30	10-20
78	2006	112	56	21	100-150	20-30	10-20
<b>Zone Total</b>		<b>379</b>	<b>NA</b>	<b>NA</b>	<b>400-600</b>	<b>80-120</b>	<b>45-75</b>
<b>Bulls Per 100 Cows</b>			<b>22</b>	<b>NA</b>		<b>18-24</b>	<b>10-14</b>

**Diamond Creek Zone  
Winter Status and Objectives**

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
66A		(50)	(25)	(20)	40-60	15-25	5-15
76	2005	2059	934	373	1260-1900	385-575	250-350
<b>Zone Total</b>		<b>2059</b>	<b>934</b>	<b>373</b>	<b>1300-1960</b>	<b>400-600</b>	<b>255-365</b>
<b>Bulls Per 100 Cows</b>			<b>45</b>	<b>18</b>		<b>30-35</b>	<b>18-24</b>

Note: Estimates within parentheses are based on information other than sightability surveys.

**Bannock Zone  
Winter Status and Objectives**

Unit	Survey Year	Current Status			Objective		
		Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
56		(125)	(75)	(50)	100-150	30-50	20-30
70		(100)	(40)	(25)	50-75	5-15	5-10
71		(50)	(20)	(20)	50-75	5-15	5-10
72		(300)	(100)	(60)	50-75	5-15	5-10
73		(150)	(50)	(30)	100-150	20-30	10-20
73A		(10)	(5)	(5)	10-20	1-5	1-5
74		(300)	(100)	(60)	150-200	25-35	15-25
<b>Zone Total</b>		<b>(1035)</b>	<b>(390)</b>	<b>(250)</b>	<b>510-745</b>	<b>125-165</b>	<b>61-110</b>
<b>Bulls Per 100 Cows</b>			<b>(38)</b>	<b>(24)</b>		<b>18-24</b>	<b>10-14</b>

Note: Estimates within parentheses are based on information other than sightability surveys.

**Snake River Zone  
Winter Status and Objectives**

Unit	Survey Year	Current Status			Objective		
		Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
63	2005	(456)	ND	ND	25-35	5-10	1-5
63A		ND	ND	ND	0	0	0
<b>Zone Total</b>		<b>(456)</b>	<b>ND</b>	<b>ND</b>	<b>25-35</b>	<b>5-10</b>	<b>1-5</b>
<b>Bulls Per 100 Cows</b>			<b>ND</b>	<b>ND</b>		<b>18-24</b>	<b>10-14</b>

Note: Estimates within parentheses are based on information other than sightability surveys. Line transect surveys conducted by Stoller Corporation for INL.