



# SAGE SENSE

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## INTRODUCTION

### PHASE I DELIVERED FOR REVIEW AND “90 DAY FINDING” RELEASED

Dwight Bunnell

The first draft of the Conservation Assessment Phase I: Conservation Assessment of Greater Sage-Grouse and Sagebrush Habitats is complete and undergoing review. Hats off to the four primary authors and editors, Jack Connelly, Steve Knick, Mike Schroeder, and San Stiver for their expertise, experience and dedication to sage-grouse and sagebrush conservation which is amply demonstrated in the draft. Besides the primary authors, twenty additional authors contributed materials for Phase I. The staff at the USGS, Snake River Field Station and Celia Bunnell, the sage-grouse teams administrative assistant, provided critical support during the final rush to complete the document. Despite the daunting task they faced and the equally challenging schedule, the authors were able to complete the draft and mail review copies on April 7, 2004. The street smart consensus was that it couldn't be done within the allotted time. Without the commitment of all involved in the process, including the WAFWA directors, state biologists, the Sage-Grouse Team, all of the authors, and many support personnel, assembling and producing this important document would have been impossible. **Thanks to all.** The review draft was copyrighted by WAFWA and delivered only to reviewers. Everyone involved in sage-grouse conservation is anxious to get a look at what the assessment tells us. As soon as reviews are dealt with by the authors and final copies are delivered to the Fish and Wildlife Services, the assessment will become a public document.

A few particulars on the draft may be of interest. All together the draft contains 701 pages (1.5 line spacing for reviewers convenience) divided into thirteen chapters plus an Executive Summary. One chapter has forty-three figures, another chapter has thirty-one tables and another almost one hundred total pages. Just reviewing the draft will be a big job. Three reviews are now in progress: The Ecological Society of America is brokering a double blind science peer review; Sage-Grouse Conservation Planning Framework Team members are conducting a general oversight review, and each of the sage-grouse states is also reviewing the draft. Reviews are due back to the authors no later than May 14, 2004.

The second draft of phase I will be delivered to the United States Fish and Wildlife Service (FWS) on Monday, May 17, 2004. The final copy of phase I will be delivered to FWS as soon as possible after May 17, 2004.

As predicted by many individuals, the USFWS released a positive 90 day finding for greater sage-grouse last week. Details of that finding and what it means are included in the FWS press release.

Lets all clear our minds, decompress a little and remind ourselves of what we are working to conserve by getting up very early one morning and carefully observing a Lek to watch sage-grouse strut their stuff.

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## U.S. FISH AND WILDLIFE SERVICE TO INITIATE A STATUS REVIEW OF THE GREATER SAGE-GROUSE

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Pat Deibert (307) 772-2374 {for sage-grouse biology questions}

The U.S. Fish and Wildlife Service has determined that substantial biological information exists to warrant a more in-depth examination of the status of greater sage-grouse. This finding will commence with a full status review of the species, and once the review is complete, the Service will determine whether to propose listing the species as either threatened or endangered.

The Service has completed its evaluation of three petitions to list the greater sage-grouse range-wide as either threatened or endangered. The Service has determined that the petitions and other available information provide substantial biological information indicating that further review of the status of the species is warranted.

The information details loss, fragmentation, and degradation of sage-grouse habitat due to wildfire, invasion of non-native plants, livestock management, agricultural conversion, herbicide treatment and mining and energy development, among other causes.

The Service's decision, commonly known as a "90-Day Finding", is based on scientific information about the species provided in three petitions requesting listing of the species under the Act.

The finding is being sent to the Federal Register.

"It is important to note that our finding regarding these petitions does not mean that the Service has decided it is appropriate to list the greater sage-grouse," explained Ralph Morgenweck, the Service's Director of the Mountain-Prairie Region. "Rather, this finding is the first step in a long process that triggers a more thorough review of all the biological information available. This process which includes a request for input from the public should be completed within 12 months of receiving the petitions."

This status review will determine whether the greater sage-grouse warrants listing as a threatened or endangered species.



"To ensure this status review is comprehensive, we are soliciting information from State and Federal natural resource agencies and all interested parties regarding the greater sage-grouse and its sagebrush habitat," Morgenweck added.

Based on the status review, the Service will make one of three possible determinations:

- 1) Listing is not warranted, in which case no further action will be taken.
- 2) Listing as threatened or endangered is warranted. In this case, the Service will publish a proposal to list, solicit independent scientific peer review of the proposal, seek input from the public, and consider the input before a final decision about listing the species is made. Generally, there is a one-year period between the time a species is proposed and the final decision.
- 3) Listing is warranted but precluded by other, higher priority activities. This means the species is added to the Federal list of candidate species, and the proposal to list is deferred while the Service works on listing proposals for other species that are at greater risk. A warranted but precluded finding requires subsequent annual reviews of the finding until such time as either a listing proposal is published, or a not warranted finding is made based on new information.

Concern about long-term declines in sage-grouse populations has prompted western State wildlife agencies and Federal agencies such as the Bureau of Land Management (BLM), U.S. Forest Service, and U.S. Fish and Wildlife Service to engage in a variety of cooperative efforts aimed at conserving and managing sagebrush habitat for the benefit of sage-grouse and other sagebrush-dependent species:

For example, over the past five years, the BLM has worked with several western states on cooperative sage-grouse conservation projects and has established partnerships with communities throughout the West to conserve and restore sage-grouse habitat. These locally-driven efforts are designed to head off continued loss of America's important sagebrush ecosystems, which support hundreds of plant and animal species, including sage-grouse.

Approximately one half of the sagebrush habitat in the United States is on land administered by the BLM. This year, BLM will continue to work on a variety of projects to map and monitor sage-grouse populations and habitat, develop cooperative conservation projects to conserve these game birds, and work with State and Federal partners on other conservation planning initiatives.

The Western Association of Fish and Wildlife Agencies is leading the preparation of a range wide conservation assessment of the sage-grouse and sagebrush habitat, with strong cooperation from the Federal agencies. The assessment, scheduled for completion in May of this year, will be a valuable source of information regarding sage-grouse ecology.

Western states that include portions of the current range of sage-grouse are developing conservation plans to address issues such as habitat loss, fragmentation, and degradation, and to identify opportunities for habitat restoration and enhancement. The goal is to find and implement local solutions for sage-grouse conservation.

Since 2001 the Service has provided Utah with \$2.4 million (1) and Washington with \$730,000 for the restoration of sagebrush habitat. Through its Landowner Incentive Program, the Service also provided \$1.4 million to Montana to improve the management of sagebrush habitat on private lands there.



The Shoshone and Arapaho tribes, on the Wind River Reservation in Wyoming, will use part of a recently awarded \$190,000 Tribal Wildlife Grant to monitor sage-grouse populations, develop a management plan for the grouse and its habitat, and enhance the sagebrush ecosystem.

Sage-grouse depend almost entirely on sagebrush for food and protection from predators. In the summer, the birds depend on the grass and plants that grow under the sagebrush to provide nesting material, as well as high-protein insects that are critical to the diet of chicks in their first month of life. In winter, more than 99 percent of their diet is sagebrush leaves and buds.

Greater sage-grouse are found in Washington, Oregon, Idaho, Montana, North Dakota, eastern California, Nevada, Utah, western Colorado, South Dakota, and Wyoming. They are also found in the Canadian province of Alberta. (2)

The greater sage-grouse is found at elevations ranging from 4,000 to over 9,000 feet. First described by Lewis and Clark during their expedition that began in 1804, it is an inhabitant of the open sagebrush plains. It is a large, rounded-winged, ground-dwelling bird, up to 30 inches in length and two feet tall, weighing from two to seven pounds. It has a long, pointed tail with legs feathered to the base of the toes. Females are a mottled brown, black, and white color. Males are larger and have a large white ruff around their neck and bright yellow air sacs on their breasts, which they inflate during their mating display.

Anyone wishing to submit information regarding the greater sage-grouse may do so by writing to the Field Supervisor, Wyoming Ecological Services Office, 4000 Airport Parkway, Cheyenne, Wyoming 82001 or by electronic mail to: [fw6\\_sagegrouse@fws.gov](mailto:fw6_sagegrouse@fws.gov). Comments must be received by (60 days from publication.)

For more information about the sage-grouse and this finding, please visit the Service's web site at <http://mountain-prairie.fws.gov/species/birds/sagegrouse/>

The U.S. Fish and Wildlife Service is the principal Federal agency responsible for conserving, protecting and enhancing fish, wildlife and plants and their habitats for the continuing benefit of the American people. The Service manages the 95-million-acre National Wildlife Refuge System, which encompasses 544 national wildlife refuges, thousands of small wetlands and other special management areas. It also operates 69 national fish hatcheries, 63 fishery resource offices and 81 ecological services field stations. The agency enforces Federal wildlife laws, administers the Endangered Species Act, manages migratory bird populations, restores nationally significant fisheries, conserves and restores wildlife habitat such as wetlands, and helps foreign governments with their conservation efforts. It also oversees the Federal Aid program that distributes hundreds of millions of dollars in excise taxes on fishing and hunting equipment to State fish and wildlife agencies.

(1) Utah applied for the Multi-state Grant for and in-behalf of seven western states ( CO, ID, MT NV, OR, UT and WY). The \$ 2.4 million was split evenly among the seven states and projects are ongoing in all states.

(2) Greater sage-grouse are also found in the province of Saskatchewan

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## **THE DAKOTAS TO COMPLETE THEIR SAGE-GROUSE PLANNING**

San Stiver

North and South Dakota have joined with the Framework team to complete their sage-grouse conservation planning. The partnership which also includes close cooperation with Montana Fish, Wildlife and Parks is scheduled to be completed this summer. Both states have limited sage-grouse distribution and numbers and consequently have not been able to allocate resources to complete their planning. In the spirit of the WAFWA memorandums that pledge inter-state cooperation for sage-grouse conservation, the Framework team developed the partnership.

The Framework team has contracted with John McCarthy of Augusta, Montana to coordinate and write the plan. John is retired from Montana Fish, Wildlife and Parks and was Montana's greater sage-grouse staff biologist for the latter part of his career. John was a cornerstone of the development of Montana's sage-grouse plan and is familiar with the sage-grouse resources in southeastern Montana and the Dakota's.

Sage-grouse have very limited distribution in the Dakota's. Birds are found in Slope and Bowman counties in southwestern North Dakota and in Butte, Harding of northwestern South Dakota and Fall River County in west-central South Dakota. It appears that most of the birds in North Dakota and the birds in Butte and Harding counties in South Dakota are shared with birds in southeastern Montana. A very limited population in Fall River County likely shares birds with Wyoming. As a result of this distribution the partnership plans on developing a North Dakota plan, a plan for Butte and Harding counties and a plan for Fall River County.

The partnership has developed a very aggressive timeline and plans to have a nearly complete draft completed by the summer WAFWA meeting. The final draft of the plan should be completed by the end of the summer.

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## **SAGE-GROUSE & WEST NILE VIRUS MONITORING**

### **In Wyoming and Montana for the 2004 Field Season**

Tom Rinkes

The following discussion is a brief summary of monitoring efforts for West Nile virus (WNV) and sage-grouse in Wyoming and Montana. These topics have been discussed at a meetings held in Sheridan, Wyoming at the Wyoming Game and Fish Department office and by a number of conference calls throughout early 2004. These monitoring and research efforts are subject to change at this time. The current monitoring and research efforts are centered in five major areas.

- A. Survivorship monitoring of radio marked sage-grouse at four study locations throughout Wyoming and Montana from April through mid October. The four study areas include: 1) Powder River Basin (PRB; WY and MT), 2) C. M. Russell National Wildlife Refuge (MT), 3) Lander (WY), and 4) Pinedale (WY). Sage-grouse studies are ongoing at these sites and were originally designed to evaluate the ecology of sage-grouse or the potential impacts of specific activities on sage-grouse. These studies are being conducted by the University of Montana or the University of Wyoming and five graduate students will be conducting the day-to-day research. All birds that die at study sites will undergo complete necropsies, including West Nile virus testing, at the Wyoming State Veterinary Laboratory, University

of Wyoming. Following the summer research period (April to August 21) birds will be monitored by agency personnel (except in the PWB where original research personnel will remain in place). Lastly, we also collaborated with a fifth ongoing study with radio-marked birds in southeast Alberta, Canada. In 2003, participants from these studies coordinated an integrated research approach that provided a rare opportunity to document unexpected impacts of WNV using their radio-marked birds. Coordinated through the University of Montana, these analyses show that WNV reduced late-summer survival of greater sage-grouse by 25%. Furthermore, serum collected from 111 sage-grouse after the outbreak show that none had virus neutralizing antibodies, suggesting that most sage grouse do not survive WNV infection. This is the dataset that suggests that spread of WNV represents a significant new cause of morbidity and mortality in sage-grouse. These same researchers now have plans to conduct sensitivity analyses to evaluate the impacts of WNV on population growth rate. They are awaiting data from 2004 so that models can be constructed using two rather than one years data.

- B. The Wyoming State Veterinary Laboratory, University of Wyoming in cooperation with the Wyoming Game and Fish Department, is conducting a study of the direct impacts of WNV on sage-grouse. During the spring of 2004 approximately 35 sage-grouse will be challenged with WNV in laboratory conditions to determine the incubation period, level and duration of viremia, potential for contact transmission, important clinical signs and lesions, and survival rate of sage-grouse exposed to WNV. This work is well underway, with wild birds that were captured this spring already in captivity.
- C. Specialists at Montana State University and the USDA-Agricultural Research Service, Arthropod-Borne Animal Diseases Research Laboratory in Laramie, WY, are monitoring mosquitoes in each of the various study locations in item A above. Mosquitoes will be trapped nightly during April through September 2004 with mosquito samples will be sent daily to the ARS lab in Laramie for analysis. A graduate student who is already on board at from Montana State University will be summarizing this data concerning mosquito vectors of West Nile virus. Land use and water as mapped using satellite imagery will be linked with occurrence, abundance and infection rates of mosquitoes to develop risk assessment maps that depict likely outbreak sites and could be used to deliver mosquito control. This work is labor intensive and large numbers of samples are expected to be analyzed throughout the summer and early fall. This work is being conducted with the assistance of the universities, WGFD, BLM, FWS, and WY Department of Health.
- D. Researchers at Montana State University and the Arthropod-Borne Animal Diseases Research Laboratory, Laramie are also placing sentinel birds (hen pheasants) at specific locations that correspond to their research design in Wyoming and Montana. The purpose of this project is to identify the transmission of WNV between the mosquito vector and the host (bird-pheasant). Placement of mosquito traps and sentinel birds is stratified by geographic area and water type identified using satellite imagery (in coordination with Randy McKinley, USGS EROS Data Center).
- E. The Wyoming State Vet Lab, University of Wyoming, in cooperation with a variety of other agencies, are continuing WNV surveillance to analyze blood and tissue samples obtained from a variety of species and sources throughout Wyoming and Montana for the presence of WNV. Samples from other states may also be analyzed at the lab if funding permits.



The above research and monitoring efforts are currently being conducted by the following cooperators with identified contacts:

University of Montana

Dave Naugle – principle investigator; Brett Walker, graduate student (PhD.); Kevin Doherty, graduate student (PhD.); Brendan Moynahan (PhD.); Roly Redmond—Montana Spatial Analysis Laboratory

University of Wyoming

Stan Anderson – principle investigator; Matt Holloran, graduate student (PhD.); Brian Jensen (M.S.); Rusty Kaiser (M.S.)

Montana State University

Greg Johnson – principle investigator; Melissa Kuckler, graduate student (M.S.)

University of Alberta

Cameron Aldridge

Wyoming State Veterinary Laboratory, University of Wyoming

Todd Cornish

Wyoming Department of Health

Terry Creekmore

Wyoming Game and Fish Department

Tom Christensen, Walt Cook

BLM – Wyoming and Montana

Tom Rinkes, Roxanne Falise

USDA-Agricultural Research Service, Arthropod-Borne Animal Diseases Research Laboratory

Dick Mayer, Ed Schmidtman, Cecilia Kato, David White

U.S. Fish and Wildlife Service, C. M. Russell National Wildlife Refuge

Randy Matchet

U.S. Geological Survey, EROS Data Center (Sheridan, WY)

Randy McKinley

Funding for monitoring and research has been funded for the 2004 field season with some exceptions. Following are some major exceptions and monitoring/research needs.

A. An additional \$44,000 is needed by the Arthropod-Borne Animal Diseases Research Laboratory in Laramie for two seasonal technicians to process mosquito samples that are collected in the field and the reagents for the analysis of these samples. It is estimated that \$16,000 is needed to hire the temporary technicians and \$24,000 for the reagents to conduct the PCR and RNA tests for WNV. Overhead charges are \$4,000.

B. Completion of landscape level mapping efforts to identify sage-grouse habitats, fragmentation factors, and water sources (including habitat change) in the Powder River Basin by the EROS Data Center, USGS was not funded (\$70,000). Better, more complete habitat coverages are needed if sage-grouse locations and vital rates (e.g., nest success) are to be linked with spatial models. Such models will be the basis for evaluating potential relationships between different types of water sources, vector abundance and infection rates, and sage-grouse survival. Overhead charges are not included.

C. Additional funding of \$10,000 is needed by the Wyoming State Vet Lab for costs associated with necropsies and WNV testing of sage-grouse and other bird species sent to the lab from locations in Wyoming and other states by cooperators.

D. Additional vector (mosquito) sampling in existing and additional study locations throughout



Wyoming/Montana and other locations in other states to monitor sage-grouse populations and the affects of WNV is needed. This includes additional traps, personnel, and monies for increased sample sizes using compatible techniques. This monitoring and research is currently unfunded. This aspect of data collection is vital to understanding broad-scale impacts of WNV. Without multiple years of base-line data on vector abundance and their infection rates, it will be difficult to understand the ecology behind outbreaks.

E. A recently developing portion of the WNV monitoring effort in Wyoming/Montana is currently being evaluated. An important variable in determining the vectorial capacity of mosquitoes for arthropod-borne infections is the degree of contact of the vector and the vertebrate host reservoir. Research in the eastern U. S. indicates that vector species for WNV may preferentially feed upon certain avian or mammalian hosts. To determine if this is the case with vectors (*Culex* spp.) and hosts (birds/small mammals, e.g. sage-grouse) in the western U. S., further research is required. Techniques for sampling mosquitoes and estimating vector-feeding habitats of hosts have been developed (to species-level) by researchers at the University of Alabama – Birmingham. These techniques utilize serological or PCR techniques for determining presence of the virus and genetic analysis for blood meal identification. Additional sampling of hosts needs to be conducted to determine host abundance in addition to vector sampling and testing. Although relationships exist between researchers at the Universities of Montana and Alabama, this research is currently unfunded.

F. The USDA-Agricultural Research Service, Arthropod-Borne Animal Diseases Research Laboratory in Laramie, WY discovered during the 2003 field season that *Culicoides sonorensis*, a biting midge is also a potential vector for WNV in the west. This biting midge is also the same species that has been identified as the primary transmission vector of blue tongue in wild ungulates and domestic livestock. Additional research concerning alternate vectors is needed.

Questions concerning this update can be directed to Tom Rinkes, BLM at 307-332-8404.

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## **WESTERN AGENCIES SAGE AND COLUMBIAN SHARP-TAILED GROUSE WORKSHOP**

**Wenatchee, Washington**

**June 28 - July 1, 2004**



### ***GENERAL INFORMATION***

Two hundred years ago Lewis and Clark led an expedition up the Missouri River, through the Rocky Mountains, down the Columbia River, and back again. Their journals included the first written descriptions of the sage grouse and Columbian sharp-tailed grouse. Fifty years ago the Western Association of Fish and Wildlife Agencies sanctioned a technical committee to address the management needs of these grouse species. In the intervening years, interest in the biology, behavior, status, and management of sage and sharp-tailed grouse has increased dramatically.

On June 28 - July 1, 2004, the state of Washington will host the 24<sup>th</sup> biennial Western Agencies Sage and Columbian Sharp-tailed Grouse Workshop in Wenatchee, Washington. The purpose of

current information. The workshop also will include a day-long fieldtrip to key sage and sharp-tailed grouse areas in north-central Washington.

## WENATCHEE

Wenatchee is a city of approximately 30,000 situated on the beautiful Columbia River in north-central Washington. Because of its warm and dry climate during the summer, the region is renowned for its orchards. This workshop will be at the peak of the cherry harvest and fruit should be abundant. There are also many local activities including fishing, golf, wine tasting, and hiking. Wenatchee is easy driving distance to many spectacular tourist locations including Mount St. Helens National Volcanic Monument, Mount Rainier National Park, Olympic National Park, North Cascades National Park, Lake Chelan, Grand Coulee Dam, and Dry Falls. The meeting venue is the Red Lion Hotel at 1225 North Wenatchee Avenue (509-663-0711 or 800-RED-LION). More information can be obtained on websites for Wenatchee (<http://www.wenatcheevalley.org>) and Washington (<http://www.tourism.wa.gov/>).

## PRELIMINARY PROGRAM

Date	Event
Monday (June 28)	Registration and evening social (7:00 – 10:00 PM)
Tuesday (June 29)	Workshop presentations (8:00 AM – 5:00 PM), evening business meeting (6:30 – 9:00 PM)
Wednesday (June 30)	Fieldtrip to sage grouse range along Moses Coulee and sharp-tailed grouse range on the Colville Indian Reservation (8:00 AM – 9:00 PM)
Thursday (July 1)	Workshop presentations (8:00 AM – 5:00 PM), evening no-host bar and banquet (6:00 – 9:00 PM)
The final program (with abstracts) will be distributed at the conference registration desk.	

## WORKSHOP HOTEL

The **Red Lion Hotel** is the site of all workshop presentations. They have reserved a block of rooms for workshop attendees at the government rate of \$55.00 for single occupancy. Please contact the hotel directly and make reservations as soon as possible to guarantee your room. Mention that you are attending the *2004 Western Grouse Workshop* to insure the lower rate. These rooms will not be available at the lower rate after May 28. Additional accommodations are listed below.

Red Lion Hotel  
 1225 North Wenatchee Avenue  
 509-663-0711, 800-RED-LION or 800-733-5466  
 Rates \$55 (single), \$75 (double)

### Additional Accommodations

Best Western Chieftain Inn 1017 North Wenatchee Ave. 509-665-8585, 877-203-8585	Comfort Inn 815 North Wenatchee Ave. 509-662-1700, 800-228-5150	Travelodge 1004 North Wenatchee Ave. 509-662-8165, 800-235-8165
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Rate \$59 for single

Rate \$65 for single

Rate \$49 for single

### TRAVEL INFORMATION

Seattle-Tacoma International Airport is approximately 3 hours west of Wenatchee and Spokane International Airport is approximately 3 hours east of Wenatchee. Wenatchee also has a regional airport that is serviced by Alaska Airlines/Horizon Air out of Seattle-Tacoma International Airport. The Red Lion Hotel provides shuttle service to and from the Wenatchee airport. Wenatchee is located on U.S. Highways 2 and 97 with easy access to Interstate 90. The conference hotel is located on the east side of Wenatchee Avenue (the main road through town) on the north side of the city.

For further information and registration forms you can visit the following web site:

[http://www.wdfw.wa.gov/wlm/research/grouse/grouse\\_workshop04.htm](http://www.wdfw.wa.gov/wlm/research/grouse/grouse_workshop04.htm)

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### CALENDAR OF EVENTS

The Western Agencies Sage and Columbian Sharp-tailed Grouse Workshop  
June 28 – July 1 2004  
Wenatchee, Washington

Western Association of Fish and Wildlife Agencies 2004 Summer Meeting  
July 24 – July 29 2004  
Sun Valley, Idaho

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### SAGE-GROUSE CONSERVATION PLANNING FRAMEWORK TEAM

Tony Apa, Colorado Division of Wildlife  
Joe Bohne, Wyoming Game and Fish Department, Chair  
Jack Connelly, Idaho Department of Fish and Game  
Patricia Diebert, U.S. Fish & Wildlife Service  
Mark Hilliard, Bureau of Land Management, Vice Chair  
Clint McCarthy, U.S. Forest Service  
Scott Gardner, California Dept of Fish & Game

Terry Crawford, Nevada Division of Wildlife, Director  
Dwight Bunnell, Coordinator  
San Stiver, Wildlife Coordinator

