

Clerk File Copy



Owyhee County Board of Commissioners

Courthouse P.O. Box 128 • Murphy, Idaho 83650-0128
Telephone (208) 495-2421

District 1 • Chris Salove • 6542 Cross View Lane • Marsing Idaho 83639 • (208) 896-4162
District 2 • Chairman - Harold Tolmie • PO Box 966 • Homedale, Idaho 83628 • (208) 337-3711
District 3 • Dick Reynolds • 28358 Mormon Blvd. • Bruneau, Idaho 83604 • (208) 845-2035

U.S. Fish and Wildlife Service
4000 Airport Parkway
Cheyenne, Wyoming 82001, and

Field Supervisor
Wyoming Ecological Services Office
4000 Airport Parkway
Cheyenne, Wyoming 82001

June 21, 2004

RE: 90 Day Finding for Petitions to List the Greater Sage grouse

NOTICE TO U.S. FISH AND WILDLIFE SERVICE: This document and the attached Report and Analysis constitutes the comment of Owyhee County, Idaho regarding the 90 day Finding for Petitions To List the Greater Sage grouse as Threatened or Endangered.

COMMENT: This comment includes as fully as though incorporated word for word herein the Review and Comment prepared for Owyhee County, Idaho by Owyhee Range Service (Dr. Chad Gibson) under date of June 14, 2004. The comment has been duly authorized by the Owyhee County, Idaho Board of County Commissioners, and the Board's Chair, Hal Tolmie has been authorized to sign the comment for the Board.

Owyhee County, Idaho is a rural western county in which the federal land management agencies manage the vast majority of included land base. The BLM is the primary management agency, and any action by US Fish and Wildlife regarding the Greater Sage grouse will weigh heavily in BLM management decisions. Owyhee County's governing board, the County Commissioners, is therefore vitally involved in the effort to assure that any "listing" finding or decision regarding this species is based upon information which has been reviewed, analyzed and purged by your agency pursuant to the standards set by Congress in the Data Quality Act.

Your agency is in fact well acquainted with the Data Quality Act and its mandate. It has issued guidelines for ensuring and maximizing quality and integrity of information disseminated by the agency and controlling reviews, findings and decisions disseminated

to the public. Moreover, information disseminated and relied upon by your agency has been challenged under the Data Quality Act in complaints filed by PEER involving 90 day Findings regarding the Trumpeter Swan and the Florida Panther.

The Review and Comment included in this Comment sets forth many specific reasons why the quality of information disseminated by your agency regarding the Greater Sage grouse does not meet the congressionally mandated standards incorporated in the Data Quality Act. It provides a sound analysis for the conclusion that your agency should cease disseminating the information included in the 90 day Finding, and should cease disseminating any findings or decisions based upon such information. For those specified reasons, your agency should interrupt the species review process regarding the Greater Sage grouse and undertake the quality assessments and purges required by the Data Quality Act.

The danger inherent in your agency's continued use of and dissemination of the information set forth in the 90 day Finding is the precise danger addressed by Congress in the Data Quality Act. Once a federal regulatory agency disseminates information and bases any action on it, the information takes on a level of presumed quality which is unjustified. When that information is disseminated without the assessments and purges required by the Data Quality Act, the public is denied the opportunity to assess whether there is reason to question the objectivity of the information disseminated and its sources. See 67 FR 8459 where your agency demonstrates an understanding of the importance of such assessment opportunity.

We urge that you immediately institute the process of data quality assessment now required by law and by your own agency guidelines. We urge that you cease dissemination of information, and of Findings and decisions regarding the Greater Sage grouse, to the public until that process has been completed.

We also urge that you take into consideration in that process, and in the species analysis process, the information contained in this Comment, and the information referred to in this Comment. The Gibson report which is included in this Comment should also be subjected to the data quality assessment. We stand sure that the information and analysis contained in that report and this Comment will meet the standards set by Congress in the Data Quality Act.

Please advise the Board of Owyhee County Commissioners, in writing, that you have received this Comment. Please respond to this Comment in writing. Please also advise the Board of Owyhee County Commissioners as to the name of the Information Quality Officer who has reviewed and assessed the quality of the information disseminated in, and relied on by, the 90 day Finding on the Greater Sage grouse.



Hal Tolmie, Chairman of the Board

Owyhee Range Service 

16770 Adate Lane, Wilder ID 83676. 208.337.4996

June 14, 2004

Prepared for Owyhee County Board of Commissioners

Review and Comment RE: Federal Register: April 21, 2004 (Volume 69, Number 77), 50 CFR Part 17, Endangered and Threatened Wildlife and Plants' 90-day Finding for Petitions to List the Greater Sage Grouse as Threatened or Endangered.

Information and Data Quality of the 90-day Finding:

The Fish and Wildlife Service (Service) states: *"We will ensure that the data used to make our determination as to the status of the species is consistent with the Endangered Species Act and the Information Quality Act."* The Service further states: *"We used information provided by the petitioners and available in our files to address these factors (listing factors pursuant to section 4 (a) of the Act)".* However, any reliance on information provided by the petitioners cannot meet the standards of the Information Quality Act because the petitions are grossly inadequate as a source of quality (accurate, unbiased and relevant) information.

The Service reliance on petitioner's information, failure to adequately analyze and interpret their own information and failure to discover and review all available literature on the subject cannot comply with the Information Quality Act nor does it meet the standards of the Endangered Species Act, for use of the best information available. The discussion presented in this 90-day finding (Finding) does not fully and accurately represent the current status of information relative to the greater sage grouse and/or their habitat. The Service has an obligation to obtain and analyze the "best information" and thus consider it in their evaluations. The Service must go beyond the information available in their files, information solicited from the public and information presented in petitions in order to assure the quality and adequacy of information used to arrive at their conclusions.

The Service states: Our standard for substantial information with regard to a 90-day petition finding is *"that amount of information that would lead a reasonable person to believe that the measure proposed in the petitions may be warranted."* However, the volume of information alone is not an adequate standard and must be considered in light of its relevance, accuracy and reliability, not just volume. While the Service admits there are discrepancies in the petition information, nowhere in the Finding has the Service provided a

comprehensive analysis of the petition information to document errors, inaccuracies, contradictions, misstatements, misrepresentations and relevance. These deficiencies are found throughout the petitions as documented in the commentary of the PAW (Petroleum Association of Wyoming) 2004. To the contrary, the Service frequently cites references attributed to the petitioners without providing corroborating evidence, presumably because the service did not independently obtain and analyze the cited documents but instead relied on petitioners to provide viable information.

Given the propensity in the petitions to misrepresent, misquote and distort cited sources, the Service has a duty to investigate whether such references provide valid, applicable and accurate information. Clearly, the Finding citations listing various authors "as cited in Webb 2002 or as cited in Dremann 2002", shows that the Service did not confirm the accuracy of those references by direct evaluation of the citations or evaluating other supporting evidence. The Service reliance on petition information raises a significant question as to the accuracy and validity of the Finding. All of the petition source information must be evaluated and corrected before the Service can comply with the Information Quality Act and assure that their conclusions are rational and valid.

In addition, the Service itself presents information independent of the petitioners that is incomplete, contradictory, irrelevant, misleading and/or grossly speculative. The Information Quality Act demands that the Service review all of the cited petition information that was directly or otherwise used in the Finding and review their own information and make all necessary additions, deletions and corrections.

Sage Grouse Population Estimates:

The Finding reports that sage grouse numbers may have declined between 69 and 99% from historic to recent times based on population estimates that in turn are based on estimates of potential suitable habitat and further estimates of possible bird density. Any conclusions using estimates based on estimates are entirely speculative and cannot be used to arrive at any valid conclusion.

The 99% decline figure proposed by the Service is based on the highest estimate of historic populations and lowest estimate of current populations. The high (16 million bird) historic estimate is based on an incredible assumption of 10 birds per km² (25 birds per square mile) and an associated estimate of the area of low to high quality habitat.

The Lewis and Clark expedition only encountered "mountain cock" (later purported to be sage grouse) on one occasion east of the Rocky Mountains near the mouth of the Marias River in June of 1805, Ambrose, 1996. They did not again encounter the sage

grouse, until approaching the confluence of the Columbia and Yakima Rivers on October 17, 1805. Notes from the second sighting indicate, "This bird we have seen nowhere except on this river". The journal of Patrick Gass dated October 17, 1805 notes "In the plains are a great many hares and a number of fowls, between the size of a pheasant and turkey, called heath hens or grouse." MacGregor, 1997. These records indicate that an estimate of 25 birds per square mile in 1800 is absurd, particularly as it may relate to the entire range of the sage grouse.

The Finding makes an equally extraordinary density assumption of 1 bird per km² or 100,000 birds in 2000. Idaho Fish and Game check stations and hunter survey data for Owyhee County Idaho show the hunter take was 1,240 birds in 2001, 1,498 birds in 2002 and 1,835 birds in 2003, Rachael, IDFG pc, (2004). Using a standard assumed range of take between 5 and 10% of the population for 2001, the nearest year to the service estimate, the IDFG information suggests a population in Owyhee County alone of 12,400 to 24,800 birds. It is incredible that between 12 and 24% of the sage grouse population estimated by the service would have resided in Owyhee County in 2001. Furthermore, population estimates for Owyhee County, based on a 5% take rate, would be over 29,900 birds in 2002 and 36,700 in 2003.

Estimates of the number of km² of historic habitat should consider a number of factors affecting habitat area and conditions prior to settlement. The gross acreage of sagebrush-steppe is not indicative of total suitable and productive sage grouse habitat. Typical fire return intervals create a mosaic ranging from grassland to dense shrub land, with only the intervening succession states supporting sage grouse populations. This could render from 20 to 30% of the sagebrush-steppe unsuitable for sage grouse at any given time. Similarly, the sagebrush steppe occupies some steep topographic sites typically avoided by sage grouse. In addition, not all sagebrush species are equally useful for sage grouse habitat. The growth form of basin big sagebrush suggests it may only provide suitable habitat for a short recovery period following fire. Since the Service failed to disclose the sources, data and methods used for their estimates, the public cannot respond to all potential deficiencies in the population information.

The wide disparity in population change estimates reported in the Finding (69 to 99%) is highly dependent on substantially unsupported assumptions as to possible bird density and habitat area. By contrast, the decline from the 1800s could also be considered in terms of the WSSCSTGTC estimate of 1.1 million birds at that time and the Service estimate of as many as 500,000 birds in 2000, indicating a decline of 54%. Such a change could be explained largely by the conversion of once potential habitat to agricultural development, cities and towns and infrastructure to support those land uses. There is no information presented to suggest that sage grouse population changes (based primarily on

lek count data) during recent years of frequent west-wide drought are anything more than biological population fluctuations.

In addition, the populations estimated in the Finding are now several years old and are based on point-in-time information. Since sage grouse populations fluctuate over long cycles (8-10 years or more), point-in-time estimates are unreliable as an indicator of current population status. The population information reported by the Service is based largely on lek count data and while such data may be indicative of population fluctuations, they do not provide direct reliable census data. For example, sage grouse populations in the Cow Creek Area of Owyhee County were identified as having a significant decline. The lek count data showed an average of 25 birds from 1991-95 and only 6 birds in 1996. The Idaho Sage Grouse Management Plan established a target level of 25 birds. Upon further investigation new lek sites were discovered and new counts show that numbers in the Cow Creek area now exceed the target level. Clearly, the lek count data was interpreted as evidence of a significantly declining sage grouse population, which in reality was not the case. (See Attachment A. Review of Sage Grouse Population Data for Owyhee County)

The Service should not dwell on pre-settlement population change resulting from habitat loss to towns, cities, agricultural development and infrastructure because that habitat loss cannot be recovered. Unless the population changes have enough impact on the general sage grouse population to put the remaining population at risk due to size, which has not been established, historic population change and habitat change are not relevant to survival of the species today. The Service should instead focus on current sage grouse populations and habitat condition changes.

There is a critical need to analyze all current information (generally good information is not available prior to the 1960s) that can provide valid indicators of population change and distinguish long term population trends from fluctuations due to normal climatic and biologic influences. Because of the normal 10 year population cycle, 5-year rolling averages relative to lek count data, reproductive rate data (wing data) and hunter take and success rate data combined may provide information as to long term population trend. The same data over shorter time frames may be useful for identifying population fluctuations but cannot provide reliable census data. The Finding failed to provide, analyze and consider such data in any meaningful manner.

Population change information must be viewed critically because lek count data if regularly and consistently obtained may be suitable as a possible indicator of population fluctuation and long-term trends. However, it is not reliable census information and no other source of contemporary census information is available. (See Attachment A) The wide range of population estimates presented by the Service is neither informative nor useful. The gross

decline from the 1800s, even if it were known, should not be a factor in a listing decision. The real issue is whether there is any current valid threat(s) to the continued existence of the current population of sage grouse over their remaining habitat range.

There is no data presented in the Finding that accurately and reliably distinguishes between long-term population change and population fluctuation over time relative to the past 30 to 40 years. Clearly, agricultural development, urbanization and civilization infrastructure has reduced the upper limit of potential population fluctuations, but that does not, by itself, pose any threat to the species. Information relative to sage grouse populations prior to 1960 becomes highly sporadic and speculative and cannot be used to provide reliable population data for comparison. More current data must be considered relative to the security of populations remaining on many millions of acres of the sagebrush-steppe.

While the Service is seeking public comment and information relative to the information presented in the Finding, they have failed to provide enough information as to how they arrived at various conclusions including population estimates to allow the public to provide fully informed comment.

Species Listing Factor (A). destruction, modification, or curtailment of habitat or range:

The Finding presents some information that is meaningless unless its relevance can be further defined. Such as, the (Braun 1998) citation that, "*In some states, more than 70% of sagebrush shrub-steppe habitats have been converted to agricultural crops*". What states does this refer to? How much actual sagebrush-steppe habitat is involved? What sagebrush species were involved? Even if the purported 70% loss of sagebrush shrub-steppe is factual, it is meaningless unless some portion of the loss has an identifiable and quantifiable connection with change in the amount of useful sage grouse habitat.

The Finding states that 99% of the basin big sagebrush habitat in the Snake River Plain has been converted to cropland, citing Hironaka et al. (1993) cited in Knick et. al. (2003). While the citation and conclusion of Dr. Hironaka is very likely accurate, the relevance of the loss needs to be considered because the very large growth form of this species does not ordinarily provide sage grouse habitat where other more suitable species such as Wyoming big sage is available. If the species does not provide sage grouse habitat, a total loss is not significant to the listing issue.

The Finding identifies a variety of chemical and mechanical treatment practices used to thin or eliminate sagebrush and cites the petitioners as the source. The Finding reports that millions of acres have been treated chemically and mechanically since the 1960s, citing

Shchroeder et al. (1999) and Braun (1998). However, identifying such treatments and quantifying the areas treated in the past is not relevant to the current ecological status of these sites for sage grouse habitat.

Areas treated to remove sagebrush or reduce density typically recover as fast or faster than burned areas where re-sprouting does not occur. Even burned areas of mountain big sagebrush generally recover a substantial sagebrush component within 10-12 years. At the upper precipitation zone for Wyoming big sagebrush recovery following fire can occur in 15 to 20 years and even at the lower precipitation zone recovery will be substantial in 40 years, Winward (1991). Areas of chemical or mechanical treatment within these time frames would at least have the same expectation for recovery as burned areas. Clearly, gross historic data relative to sagebrush reduction / elimination treatments are not indicative of either current site conditions or trend. The condition of sagebrush habitats today should not and cannot be based on historic treatments because those treatments do not represent current sage grouse habitat conditions. The only relevance of these practices is the extent to which they are being utilized today; however, the Finding did not evaluate current data or discuss current levels of treatment.

The Finding reports that sagebrush loss is also occurring as a result of natural and anthropogenic factors. The cited source, Utah Division of Wildlife Resources, admit that the cause of sagebrush die off is unknown. Furthermore they only speculate that the loss is related to drought, fire suppression (how fire suppression kills sagebrush is not explained) and livestock grazing. However, excessive livestock grazing has long been recognized as a factor in causing increased sagebrush density. In any case, the Service should not and cannot rely on speculative reports to arrive at listing conclusions if they intend to comply with the Information Quality Act.

The Finding notes that all petitioners claim livestock grazing as a primary cause of degraded sage grouse habitat and cites references in the petitions to support the claims. Again, the Service should not and cannot base any scientific conclusion on citations they have not investigated for relevance, accuracy and validity. The bias and distortion of fact in the Petitions clearly requires the Service to independently verify all citations.

While it is true that historic over grazing resulted in significant change in the sagebrush-steppe and can cause further change if continued, the real question the Service should be addressing is whether those effects are occurring today. The fact that historic grazing practices caused a given effect in the sagebrush-steppe does not support a hypothesis that all grazing under modern management practices has the same result. The very purpose of grazing research is to identify grazing effects and to develop proper grazing management practices that either utilize or avoid those effects in order to achieve management objectives.

Instead of focusing on the negative impacts of historic grazing the Service should be evaluating the application of and results of modern proper grazing management. Historic grazing and research reports of specific grazing practices are immaterial to the question of how modern grazing management practices affect sage grouse habitat. The Finding provides no evaluation of the current use and application of proper grazing management and therefore, did not identify and evaluate the information needed to arrive at an informed conclusion relative to livestock grazing.

A 1990 US-DOI Bureau of Land Management report shows that Good condition rangeland increased by 100% and poor condition rangeland decreased by 50% between 1936 and 1989. In the 15 years since, there has been extensive progress in the implementation of proper grazing management on Federal, State and private lands. Furthermore, it is more important and useful to consider rangeland trends rather than current condition. Regardless of current ecological status, rangelands that are in an upward ecological trend also have improving sage grouse habitat.

It is well established that *"In the 1960s and 1970s, Idaho had large numbers of sage grouse and extensive livestock grazing. This suggests that healthy sage grouse populations and livestock grazing are compatible. In short, livestock grazing that results in rangeland in good ecological condition also provides acceptable sage grouse nesting, chick rearing and winter habitat."* Idaho Sage Grouse Management Plan (1997). Clearly, historic grazing activity along with management agency fire suppression policy contributed to the alteration of the sagebrush-steppe; however, it is necessary to view these facts in the context of more recent change and trend and current effects on sage grouse habitats within the sagebrush-steppe.

The Findings admit that there is little evidence linking livestock grazing to sage grouse population trends, citing Braun (1989). The Finding then speculates that grazing can reduce grass height in nesting and brood rearing habitats and thereby reduce cover needed for predator avoidance. However, the Finding discussion under factor (C) reports that nest success and survival studies indicate that predation does not limit sage grouse numbers. It logically follows that livestock grazing effects on predator avoidance has no impact on sage grouse numbers. These two elements of the Finding are clearly contradictory where in one case they suggest grazing has an impact on predation that may affect bird populations and in the second case conclude that predation does not affect bird populations.

The Finding further reports that livestock can consume forbs of importance to sage grouse and goes on to describe the nutritional needs of grouse. However, the significance of these relationships is highly questionable as indicated by the conclusion in the Idaho Sage Grouse Management Plan cited above that intensive grazing and high sage grouse

populations are compatible. Since high sage grouse numbers and intensive grazing have been compatible in the past; it is difficult to conclude that the reduced grazing intensity of today is having a negative effect on sage grouse numbers or habitat. The question is not whether grazing use can impact sage grouse habitat but whether current application of proper grazing management is in fact resulting in any negative effect.

The influence of domestic livestock on plant community composition depends on the intensity (amount), timing (season), duration (frequency), level of selectivity and site characteristics, Miller et al. (1994). Identifying and applying appropriate grazing treatments over time is the basis of modern proper grazing management programs. The Service has not investigated and considered the relationship of modern proper grazing management and trends in sage grouse habitat and therefore lacks information required to formulate a rational conclusion.

The Finding reports that livestock grazing may result in trampling mortality of seedling sagebrush citing Connelly (2000), implying that livestock grazing may prevent sagebrush recruitment. While livestock may trample some sagebrush seedlings, there is extensive evidence that livestock grazing reduces fine fuels that carry fire in sagebrush habitats, which lengthens fire return intervals and in turn leads to increased sagebrush recruitment, thereby resulting in increased sagebrush density and development not a reduction.

Overly dense sagebrush stands have developed as result of historic heavy grazing practices and fire suppression. Winward (1991) reports that Wyoming big sagebrush cover has increased from less than 10% up to 20% and mountain big sagebrush cover from 20 up to 30 and 40%. Winward further states *"There are more acres of sagebrush-grass lands in the western United States being held in low ecological status the past decade due to abnormally high sagebrush cover and density than currently is occurring due to livestock grazing."* Dense sagebrush stands are a factor in the quality of sage grouse habitat because of their depleted herbaceous understory. This situation will not change without significant treatments to reduce shrub density. These facts are in conflict with the conclusion that chemical and mechanical treatments to reduce or thin sagebrush stands may be detrimental to sage grouse. Clearly, sagebrush treatments can improve sage grouse habitat.

The Finding (citing Braun 1998) reports that exclosure studies show livestock grazing reduces water infiltration, herbaceous plant cover and litter, compacts soils and increases soil erosion resulting in changes in shrub, grass and forb components and increased exotic plant invasion. However, the truth of these impacts can be found in the vegetation response of similar studies. There is no acknowledgment or discussion of conflicting research findings. It is clear that the Service failed to investigate these

conclusions and instead relied on the petitions, which failed to disclose differing research results. Miller et al. (1994) report that exclosure studies show, where proper grazing management was applied, desirable perennial herbaceous vegetation increased both with and without grazing. On sites with competing woody species or exotic annuals, desirable plant species changed very little or declined both inside and outside of exclosures. The results of exclosure studies clearly depend on site capability, ecological status and grazing management and are not generally applicable as an indication of effects from all livestock grazing. Again, the Service failed to fully investigate the reliability of the petitioners' information and thus failed to accurately report potential grazing effects.

The Finding states that developing springs and other water sources can artificially concentrate domestic and wild ungulates in important sage grouse habitat. Water sources at springs tend to concentrate domestic livestock and wildlife use regardless of whether they are developed or not. Development of such sites does not significantly change livestock use concentrations. When properly designed and implemented water development almost always produce a net positive effect. Excluding spring sources when providing water in tanks away from the source can enhance habitat, thereby mitigating previously negative impacts. While it is possible for water developments to result in negative effects on sage grouse habitat, our current knowledge and development practices mitigate direct impacts and facilitate proper grazing management over much larger areas, which also provide habitat for sage grouse.

The Service has failed to provide any information or evidence that current livestock grazing levels and practices are directly resulting in any of the purported negative impacts on sage grouse or their habitat. The Finding falsely implies that the information purporting negative impacts from livestock grazing are associated with all current livestock grazing use. However, the effects are in fact related to historic grazing activity and/or research results comparing short-term site-specific grazing applications. There is little long-term research information relative to grazing impacts associated with proper grazing management applications. Miller et al. (1994) noted, "*We know of only a few such studies [long-term comparison of grazing systems] in the sagebrush steppe.*"

While site-specific short-term grazing studies are useful for identifying potential grazing impacts, the results must be interpreted and applied relative to conditions and the grazing practices being studied. They further must be interpreted in terms of the site-specific conditions and management objectives for the area where the information will be applied. Short-term studies provide information relative to site-conditions and grazing applications that is used to implement proper grazing management with a high expectation of successfully avoiding negative impacts and creating positive responses toward management objectives. Historic impact and narrowly focused research studies cannot be validly used to predict or quantify the effects from all grazing use.

The Finding discussion of fire effects is most accurate where it states, "*Our knowledge of sage grouse response to fire is imperfect, but current information indicates that the species' response to fire varies depending on a variety of factors.*" Fires effects are highly variable whether due to wildfires or prescribed burns. The effects vary because of widely variable site conditions, season in which fire occurs, prescribed burn and wildfire management techniques and restoration and management programs that follow fire occurrences. Again, more recent knowledge of fire effects under different situations, and development of new fire restoration and management technology, significantly changes the effects of both wildfires and prescribed burn programs. Historic, impacts of wildfire cannot be directly attributed to the wildfire management and prescribed burn programs of today. The Finding should acknowledge that all fire impacts are not equal and that modern fire management strategies can significantly reduce negative impacts on sage grouse habitat.

The Finding correctly reports that several species (Basin, Mountain and Wyoming) big sagebrush are killed by fire and do not re-sprout after burning. However, the Finding goes on to erroneously report fire intervals of 30 to 50 years for these species. In fact, historic fire return intervals are very long in the more arid range of Wyoming big-sagebrush (perhaps > 50 years) and decrease as these areas become more mesic at higher elevations (< 30 years). The same is true of mountain big sagebrush where fire return intervals ranged from 15 to 25 years in southwest Idaho (in some instances as short as 3 to 7 years), Burkhardt and Tisdale (1976) and 12 to 15 years in south central Oregon, Miller and Rose (1999).

The Finding implies that prescribed fires are frequent or at least more frequent than natural fire intervals, and thus may be detrimental to sage grouse habitat. This information was apparently derived from the petitioners since the Service cited no empirical evidence that prescribed burning programs occur any more frequently than natural fire regimes. Even if they did, a clear negative response of sage grouse to all fire occurrences in sagebrush habitat has not been demonstrated.

The Finding acknowledges that reduced fire return intervals allow western juniper (*Juniperus occidentalis*) to expand and eliminate sage grouse habitat, but does not quantify the impact. Investigators report that more than 8 million acres of sagebrush-steppe are in various stages of juniper encroachment in the semi-arid Intermountain Northwest, Miller et al. (1999). This information should have been considered but was not even reported in the Finding discussion. The Service should also have presented information relating to the restoration of these lands. Human intervention is the only realistic way to restore and prevent the loss of more sage grouse habitat to juniper invasion. The Owyhee Field Office of the Idaho BLM is initiating a large-scale restoration project in the Juniper Mountain area of Owyhee County to maintain and restore the native shrub steppe and aspen communities

which are gradually being lost to Western juniper expansion, Whitlock, (2004). In addition, the BLM Owyhee RMP establishes a target level of 7,500 acres annually for restoration of juniper and sagebrush dominated rangeland. USDI-BLM, (1999).

The Finding further failed to acknowledge that the absence of fire allows sagebrush to maintain or increase dominance regardless of the presence or absence of grazing. Where historic excessive grazing occurred, sagebrush density has increased significantly. Most sagebrush stands now approach 60+ years in age indicating fire intervals may be twice their normal occurrences, Winward, (1991). Over the past 50 years, extended fire return intervals have largely resulted from management agency wildfire suppression policy. More recently the USFS and Bureau of Land Management have modified those policies to allow fire to play a more natural role in plant succession where fire has been absent for long periods and to increase fire prevention and suppression efforts where present day fire return intervals have become very short. Prescribed burn program have also significantly increased as a tool to restore native habitats as evidenced in the BLM Owyhee RMP.

The Finding presents a significant amount of data as to the amounts of sagebrush habitat "destroyed" by fire in recent years in Idaho and Nevada. However, that information provides little insight as to the actual effect on sage grouse habitat. Using the term "destroyed" is not a factual representation of fire effects, which are actually temporary. In most cases, wildfire temporarily removes the sagebrush component, which recovers either as a result of rehabilitation efforts or natural processes. The acreage burned in any one year is not a direct indication of negative impacts on sage grouse habitat. Some areas burn frequently, particularly the dryer Wyoming sagebrush sites occupied by Cheatgrass, and even if such areas did not burn again for many years they would not provide sage grouse habitat without significant human effort toward restoration. Wildfire on these sites destroys neither sagebrush nor sage grouse habitat. Lumping these burn acreages in with gross figures is a false representation of fire impact on sage grouse habitat.

At the same time, some wildfires occur in areas that have not been burned for upwards of 40, 50 or more years. These sites typically are heavily dominated by big sagebrush and have significantly depleted herbaceous understory production, which reduces nesting cover and forbs important for early brood rearing. In these cases, wildfire is more likely to result in improved sage grouse habitat as these sites recover. Reporting the gross acreage of wildfire as "destroyed" sage grouse habitat does not represent the factual impact of fire on sage grouse or their habitat.

The Service states that they are required to, "*base the findings on all information available to us at the time we make the finding.*" Presumably all scientific information relative to sage grouse and sagebrush habitats is available to the Service just as it is to

anyone else. The fact that any particular information is not in the Service file does not mean it is not available to them or that they are not obligated to consider it. The ESA and Information Quality Act obligate the Service to investigate all commercial and research information that will contribute to a rational and proper decision. The Service needs to do more than simply invite the public, as in this Finding, to provide information to them, particularly with the very short 60-day time frame for public review and comment. The extensive array of issues presented in the Finding demands that more time be allowed for public review and comment.

In spite of the need for review of all pertinent research, information and data, the information presented in the Finding relies heavily on the petitions, which have been documented to contain an abundance of inaccuracies, contradictions, misstatements and misrepresentations, WPA, (2004). Further, the Service presents other information that is incomplete, contradictory, irrelevant, misleading and/or grossly speculative. Based on the information presented in the Finding for factor A and the absence of other pertinent scientific data and information, the Service cannot rationally conclude that there may be a threat to the continued existence of the greater sage grouse relative to factor A.

Species Listing Factor (B), over utilization for commercial, recreational, scientific, or educational purposes:

The Finding reports that the Service believes there is sufficient information to indicate that "*if properly managed*" utilization of sage grouse does not threaten the continued existence of the species. The conclusion is apparently based on a review of management goals, objectives, standards and policies of agencies responsible for management of utilization factors. While this is likely a proper conclusion, it is curious in light of the finding under listing factor A, that there may be a threat to continued existence. The Service failed to investigate current management goals, objectives, standards and policies relative to grazing, wildfire, prescribed burning, recreational vehicle use, and management of other issues relative to factor A. By avoiding such an investigation and analysis, the Service precluded the option for making the same "*if properly managed*" assumption relative to factor A.

The above situation indicates the Service has a bias relative to listing factor A or they simply failed to put forth the effort necessary to fully consider all available information. In any case, the Service must conduct an investigation of current management before they can arrive at a rational and fully informed conclusion relative to all of the issues raised under factor A.

As to the conclusion that factor B does not pose a threat to the species, the Service could have concluded that "unless properly managed" utilization of the species may pose a threat. The conclusion as to factor B seems to be a convenient way to avoid a utilization issue relative to hunting take if the Service decides to list the Greater sage grouse.

Species Listing Factor (C). disease or predation:

The Finding reports that based on the discussion, the Service does not believe there is substantial information available to implicate disease or predation as factors that threaten the continued existence of the species. However, that discussion clearly documents numerous impacts on sage grouse populations from predation on sage grouse nests, juveniles and adult birds by a variety of ground and avian predator species.

The Finding reports that nest success and survival studies conclude that predation does not limit sage grouse numbers. It then goes on to report that where habitat has been altered, nest and chick predation can become more significant. Nothing is presented to quantify the habitat conditions that are purported to increase the significance of predation and nothing to identify the significance those conditions to sage grouse habitat throughout their range. Furthermore, the discussion concludes that regardless of habitat conditions, predation does not affect sage grouse populations in general. Connelly et al. (2000), cited ten studies of sage grouse survival and nesting success but only two that suggested habitat was a factor for nest predation and only one suggesting habitat affected chick predation.

However, the Finding discussed only one side of this equation. Leopold in 1933 first presented the concept that increasing ratios of predator to prey increases predator influence on prey populations. That concept is still valid and can result from either increasing predator populations or decreasing prey populations. In this case, the primary sage grouse predators have increased and some new predator species (such as red fox) have been introduced into sage grouse habitat areas. In Idaho, raven populations have increased at 5% annually since 1959, coyote populations are significantly higher as indicated by the change in rate of take during aerial control efforts and red fox populations are such that there is a year-long take season, Collinge, (1999). Ravens in particular have been implicated as one of the most frequent offenders in predation of sage grouse nests, Batterson and Morse (1948) Authenrieth (1981) Klebenow et al. (1990) and their numbers have continued to increase since they were first identified as significant nest predators over 40 years ago.

The Finding failed to even consider increasing predator populations and their potential effect on sage grouse populations. Even though the Finding contends that predation impacts are solely related to habitat condition, there is no information to suggest that habitat conditions alone will compensate for excessively high predator populations.

Predator management should not be disregarded as a tool to assure sage grouse species survival. The Service should have concluded that "if properly managed" predation is not considered a potential threat to the species.

Species Listing Factor (D). inadequacy of existing regulatory mechanisms:

The Service reports that their information suggests existing Federal, State, Provincial and local regulatory mechanisms (particularly Federal) may be inadequate to address threats to the species. However, this conclusion is not supported by the discussion. The discussion specifically identifies a significant number of required regulatory mechanisms within the Bureau of Land Management and the USFS that clearly will be applied in ways that fully address potential threats to the species and/or their habitat.

The Finding states, "*At present, there are no regulations requiring that BLM land use plans specifically address the conservation needs of special status species*" and cites a BLM 2003b source. However, if other BLM regulations and policy require them to address sage grouse and their habitat in the course of business, whether sage grouse are addressed in a land use plan is immaterial. The National Environmental Policy Act and CEQ regulations require BLM to address all factors affecting the human environment, including potential impacts on special status species, in virtually every action they propose. It is inconceivable that BLM would take any action affecting or related to sage grouse habitat without fully addressing the impact in an EIS or EA regardless of the content of any land use plan.

The Finding reports that some sage grouse habitat occurs on lands administered by the Service as well as other Federal agencies and cite conservation plans for the Yakima Training Center and Seedskaadee National Wildlife Refuge. The discussion indicates the Service is unaware of any other agency efforts to conserve sage grouse habitat. It is not clear as to whether the Service is saying there are no other conservation efforts or simply saying that they are not aware of any. Apparently, the Service did not investigate whether other agencies that administer lands with sage grouse habitat have conservation programs in place. It should be assumed that any wildlife refuge with sage grouse and/or sage grouse habitat would by definition be taking actions to conserve the species and their habitat. However, it should also be assumed that the Service would have contacted all such agencies and factually determine whether they manage sage grouse habitat and whether any conservation measures are in place, which they apparently did not do.

The Finding states that the Service is not aware of any State regulations that conserve greater sage grouse habitat or encourage habitat conservation efforts on private lands. While the State of Idaho Habitat Improvement Program is not specific to sage grouse, it is certainly available for that purpose and does encourage conservation on private land. It

is inconceivable that the Service would not be aware of this program. The Service should not assume that unless there is a regulation or program specifically targeting sage grouse, there are no conservation measures in place or ability to implement conservation measures that benefit sage grouse along with other species or resource values.

Species Listing Factor (E). other manmade or natural factors affecting its continued existence:

The Finding concludes that there are no natural or manmade factors other than issues discussed under factor (A) that threaten the species. This conclusion, as discussed above under species listing factor (A) is not supported by the Finding document.

General Comment:

Despite the extensive discussion of sage grouse populations in the Finding, the Service does not provide any credible empirical evidence that sage grouse populations have declined or are declining as a result of any recent and ongoing human activity.

The Service admits that petition deficiencies pointed out by the Petroleum Association of Wyoming (PAW) commentary are valid but dismiss them as "some minor errors". They also contend that they confirmed the information they used through their own review of scientific peer reviewed literature in their files and through communications with species experts.

However, it is clear that the Service did rely heavily on some information presented in the petitions as they failed to provide any independently obtained corroborating evidence. As pointed out in the comment above the Service clearly relied on erroneous information and either repeated petition errors or failed to accurately interpret other scientific information presented in the Finding.

Given the thorough review and documentation in the PAW commentary that the petitions are irreparably flawed; those flaws cannot be dismissed as "some minor errors". In addition, there is evidence in the petitions that some information was knowingly misrepresented. For example, the petition includes the following five statements in the Idaho Population Assessment heading, citing the source as "Owyhee County Local Sage Grouse Working Group. 1998. *Minutes. Owyhee County Local Sage Grouse Working Group meeting October 20, 1998, Marsing ID. 3 pages.*"

"Likewise, counts of birds at leks have plummeted from 1600 in 1987 to only 400 birds in 1998" (Owyhee County Local Sage Grouse Working Group 1998).

"Chicks per hen has decreased from 2.3 to 1.7, below the replacement rate needed for populations to grow or remain stable, 'suggesting a problem with chick survival'" (Owyhee County Local Sage Grouse Working Group 1998).

"The acreage converted to other uses is 'among the most productive and best habitat, thus magnifying the impact'" (Owyhee County Local Sage Grouse Working Group 1998)

"Surprisingly, 5 times as much acreage of sagebrush is being destroyed in prescribed burns as opposed to wildfires" (Owyhee County Local Sage Grouse Working Group 1998).

"In the 1990s, an average of 6,000 acres were burned each year; and during the 1980s, about 57,000 acres were burned" (Owyhee County Local Sage Grouse Working Group 1998).

The petition clearly presents these statements as official information from the OCLWG. However, an examination of the Minutes of the OCLWG meeting of October 20, 1998 shows the citations to be a false representation. The October 20, 1998 minutes consist only of a compilation of audience notes taken from a presentation made by Mr. Kerry Reece. The minutes make it clear that Mr. Reece did not confirm accuracy of the notes, and the OCLWG did not endorse any of the information. The petitioners had to know that the information did not represent OCLWG findings or even confirmed statements by Mr. Reece and thus petitioners were aware of the misrepresentation of fact in this instance.

The PAW commentary and the above example show that all references in the petition should have been carefully checked for accuracy and reliability before referencing or using any of the petition information in this Finding. It further shows that the Service must thoroughly investigate all petition reference before relying on any information in the petitions during the continued listing process.

The Information Quality Act demands that the Service thoroughly evaluate and assure that all of the information they present to the public is accurate, unbiased and reliable. That is not the case with this 90-day Finding.

The conclusion by the Service that *"there is substantial information to indicate that listing the greater sage grouse may be warranted"* is not supported because the information presented in the Finding is entirely inadequate. Furthermore, the information presented in the Finding does not comply with the ESA and fails to meet the standards of the Information Quality Act.

Dr. Chad Gibson

References

- Ambrose, Stephen E. 1996. *Undaunted Courage, Meriwether Lewis, Thomas Jefferson and the Opening of the American West*. TOUCHSTONE
- Authenrieth, R. E. 1981. Sage grouse management in Idaho. *Idaho Wildl. Bull.* 9:39-46
- Batterson, W. M. and W. B. Morse. 1948. Restoration of sag grouse in Strawberry Valley, Utah, 1998-99 Report. Brigham Young Univ., Provo, UT. 13pp
- Burkhardt, J. Wayne and E. W. Tisdale. 1976. Causes of juniper invasion in southwestern Idaho. *Ecology* 76:472-484
- Collinge, Mark, 1999, Director Wildlife Services, Idaho. Unpublished document. Presented to the Owyhee County Sage Grouse LWG.
- Connelly, John W., Michael Schroeder, Alan Sands, Clait Braun. 2000. Guidelines for management of sage grouse populations and habitats.
- Idaho Sage Grouse Management Plan, August 1997 p4.
- Klebenow, D., G. Zunino, M. Stigar, and A. Altstatt. 1990. Sage grouse production and mortality studies. Job Final Report, Dept. of Wildlife, Reno NV.
- MacGregor, Carol Lynn, 1997. *The Journals of Patrick Gass*. Mountain Press Publishing Company.
- Miller, R. F., Tony Svejcar, and Neil West. 1994. Implications of Livestock Grazing in the Intermountain Sagebrush Region: Plant Composition, In *Ecological Implications of Livestock Herbivory in the West*. Society for Range Management, publisher. Vavra, M., William Laycock and Rex Piper. Editors.
- Miller, Richard F. Tony Svejcar and Jeffrey A. Rose. 1999. In: Monsen, Stephen B.; Stevens, Richard, Comps. *Proceedings: ecology and management of pinyon-juniper communities within the Interior West*. USDA-FS, Rocky Mountain Research Station.
- Miller, Richard F., and Jeffrey A. Rose. 1999. Fire history and western juniper encroachment in sagebrush steppe. *J. Range Management* 52:550-559
- PAW Commentary. 2004. Petroleum Association of Wyoming. Letter transmitting Commentary on the Petitions to list the Greater Sage Grouse pursuant to the ESA. Dated March 9, 2004.
- Rachael, Jon. 2004. Telephone conversation, June 9, 2004
- USDI-BLM, 1999. Owyhee Resource Management Plan, page 27.
- US-DOI Bureau of Land Management, 1990 – *State of the Public Rangelands, The Range of Our Vision*.
- Whitlock, Jenna. 2004. Letter dated May 10, 2004
- Winward, A. H., 1991 – *Management in the Sagebrush Steppe*. Agricultural Experiment Station, Oregon State University, Special Report 880.

June 2, 2004

Review of Sage Grouse Population Data for Owyhee County

In August of 1997 the State of Idaho developed the Idaho Sage Grouse Management Plan to address what was termed "record low populations" and "dramatic downward trends". The Idaho plan identified a number of local management areas and presented data purported to demonstrate the "dramatic downward trends" for each area including Owyhee County. In response, Owyhee County entered into a MOU with the Idaho Department of Fish and Game in 1998 to develop a Sage Grouse Management Plan. Two years later a plan was completed and many of the management actions have been implemented and more are in the various stages of completion.

One of the initial actions of the Owyhee County Local Work Group was to examine the existing data and determine where more or better data was needed. The existing population information relied heavily on lek counts, reproductive data obtained from wings counts and to some extent on hunter success rates and total take data. It became clear that the data purportedly showing population decline was entirely inadequate to quantify populations or trend and no direct census information was available.

The analysis of existing data could not justify a conclusion that populations were in decline or that the data differences over time were not just normal fluctuation. The standard lek count procedure is to count each lek three times each season; however, in reality some are counted only once or twice and in some years not all leks are counted or no leks are counted. This is a reflection of the remoteness of the sites, the difficulty of overland travel to reach the sites in early spring and untimely inclement weather. Not only have lek counts been somewhat sporadic there have been few surveys to identify when and where birds abandon a lek and develop another site. Thus, some counts are simply conducted in the wrong place because there were no surveys to determine when birds moved to a new lek area to assure that all lek sites for a lek route were counted.

The following figures and table show the results of more in depth evaluation of the available data as well as information gained from more recent data. Review of the existing and new data shows that sage grouse population trends in Owyhee County have not been down, at least for the past 24 years, and perhaps have increased or are increasing. The data is not conclusive; however, it does not support any contention that sage grouse populations in Owyhee County were or are in a downward trend. While it is acknowledged locally that grouse numbers were very high in the 50s and 60s, there is no information to suggest that those populations were the historic norm because they occurred during a time that predator control activities were extensive and effective.

The information presented in Figure 1 (page 3) clearly shows an upward trend in sage grouse reproduction over the past 24 years from 1980 to 2003. The numbers represent a 5-year rolling average of juveniles per 100 females, which is approximately half the normal population fluctuation cycle for sage grouse. Increasing reproductive rates also suggests that

breeding, nesting and brooding habitats are also in an upward trend. By contrast, the lek count data shows a stable to slightly upward change. When populations fail to increase in the face of increased reproductive rates, the situation can logically be attributed to loss of adult birds related to adult bird predation, hunting take and perhaps disease and/or inadequate winter habitat.

The information presented in Figure 2 (page 3) shows the statistical trend for lek count data. Since not all lek routes are counted each year and some are not fully counted, the total number of birds counted annually does not provide useful comparative information. While imperfect, the average number of birds counted per lek route provides an indication of potential changes in total population. In this case the statistical trend is relatively flat with a slight upward trend. The chart also shows the 5-year rolling average and a distinct 10-12 year population cycle. While counts have fluctuated over time, the data suggests there has been no significant change over the past 24 years and numbers are essentially stable to increasing. The missing data in 1990 is the highest average of 47 birds, in 1994 no data was collected and in 1996 the missing data is the lowest average of 15 birds.

Table 1 (page 4) provides another view of the lek count data for Owyhee County. Again, total numbers are difficult to equate to populations from lek survey data because different numbers of lek routes are counted in different years. However, Table 1 provides a comparison of total birds counted during years that the same lek routes in a group were counted.

Five lek routes were all counted each year from 1980 to 1999 with the exception of 1990-91 and 1994-96 and are shown as group 1 in the table. The total birds counted in different years does not show any significant variation except in 1997-98 when zero counts were recorded at the Cow Creek lek route. It has since been discovered that birds in this area changed lek sites and numbers have not actually changed from those indicated by the initial counts recorded in 1997-98. Data from this group of lek routes does not show change that could be viewed as anything more than normal population fluctuation.

Group 2 shown in Table 1, consists of four lek routes that were counted annually from 1995 to 2003. The total number of birds shows a dramatic increase over the nine years and the counts from recent years are well above the nine-year average for this site.

Group 3 includes all lek routes. There were only three years (1997-99) in which all of the lek routes were counted. While the period of recorded counts is only three years it does include all lek routes and again the total number of birds observed shows a significant increase.

The available data for Owyhee County suggest that sage grouse populations, at a minimum, have been stable over the past 24 years and are very likely increasing particularly in more recent years. Lek count data requires careful examination and caution when used to estimate populations or population change. The data in this case does not indicate anything more than normal biological population fluctuations.

DR. Chad C. Gibson

Figure 1.

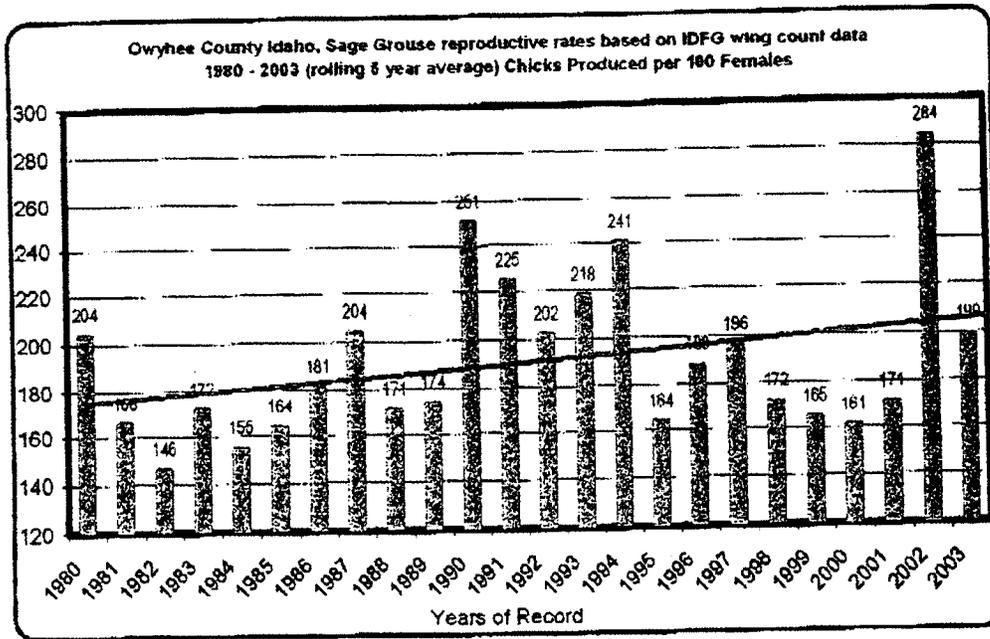


Figure 2

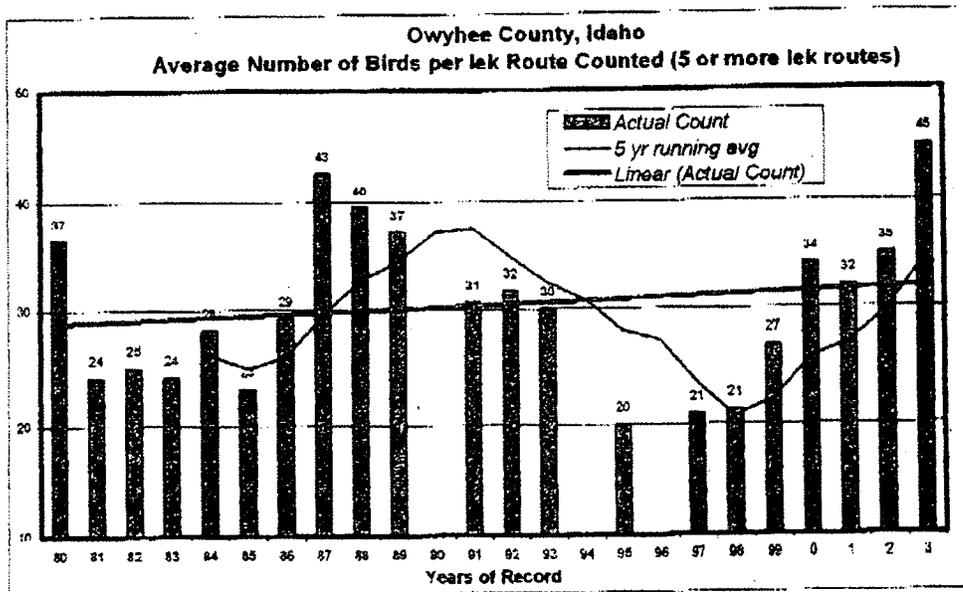


Table 1 - Total Bird Counts for Common Lek Routes Counted in Different Years - Owyhee County, Idaho.

| Years that all of a Lek route group was counted | Lek routes Counted | Total Birds Counted | |
|---|--|--|-----|
| 1980 | | 146 | |
| 1981 | | 121 | |
| 1982 | <i>Lek route group 1 is made up of the following routes:</i> Jackson Creek Cow Creek Goose Creek Bates Creek Rocky Knoll | 125 | |
| 1983 | | 121 | |
| 1984 | | 141 | |
| 1985 | | 116 | |
| 1986 | | 146 | |
| 1987 | | 207 | |
| 1988 | | 188 | |
| 1989 | | 179 | |
| 1990 | | Very low counts for Cow Creek from 1997 to 1999 may have been due to movement of lek sites. Recent counts of new lek sites indicate even greater numbers than in previous high counts. Total numbers for 1997 to 1999 are thus unreliable. | |
| 1991 | | | |
| 1992 | 146 | | |
| 1993 | 118 | | |
| 1994 | | | |
| 1995 | | | |
| 1996 | | | |
| 1997 | 88 | | |
| 1998 | 81 | | |
| 1999 | 115 | | |
| | Average | 136 | |
| 1995 | <i>Lek route group 2 is made up of the following routes:</i> Castle Creek Bates Creek Rocky Knoll Wickahoney | 80 | |
| 1996 | | 82 | |
| 1997 | | 78 | |
| 1998 | | 77 | |
| 1999 | | 112 | |
| 2000 | | 112 | |
| 2001 | | 140 | |
| 2002 | | 138 | |
| 2003 | | 197 | |
| | Average | 113 | |
| 1997 | <i>Lek route group 3 includes all lek routes:</i> Jackson Creek Cow Creek Goose Creek Bates Creek Rocky Knoll Castle Creek Raymond Spring Wickahoney | 167 | |
| 1998 | | 170 | |
| 1999 | | 214 | |
| | | Average | 184 |