APPENDIX VIa FINAL-JULY 1990

Wyoming Chapter of the Wildlife Society

Report on

Standardized Definitions for Seasonal Wildlife Ranges

The Wyoming Chapter of The Wildlife Society (TWS) formed a committee to review, discuss and address the current Standardized Definitions for Seasonal Wildlife Ranges developed by the Chapter between 1984 and 1986 and subsequently adopted for Wyoming by the Soil Conservation Service (SCS), Bureau of Land Management (BLM), Forest Service (FS), United States Fish and Wildlife Service (USFWS) and the Wyoming Game and Fish Department (WGFD). The request, received from the WGFD and BLM, was to review the current standards, address criteria for quantifying the seasonal range definitions, develop necessary modifications and make recommendations.

Criteria for quantifying the seasonal ranges were discussed at great length. Among the criteria discussed were animal densities, percentage of a population occupying a designated seasonal range, frequency of observations, and indices of use among others. Attention was also directed at improving communication, cooperation, and data sharing among and between agency biologists, agency administrators, and interested publics.

Based upon our discussions and review along with input from TWS members, the committee finds and recommends the following:

1. The standardized definitions developed by TWS between 1984 and 1986 are still applicable and with, minor refinement, their use should be continued.

2. Two new seasonal wildlife range definitions have been included in Appendix A.

3. Additional quantification of these definitions, while an admirable goal, seems impractical on a statewide basis due to inherent variability among herd units in terms of habitat type and condition, population structure, habituation to existing disturbance, climate, land ownership, and inherent differences between big game species when coupled with existing wildlife staff levels and budgets.

4. Seasonal wildlife ranges should be quantified based on documented frequency of animal use over time. Documentation, in most instances, would be recorded observation of animals, however indications of animal use or potential use such as vegetation use, animal droppings, tracks, forage type, forage availability, and forage distribution in relation to cover should also be considered particularly for herds expanding their range or for transplanted animals.

5. The primary problem did not appear to be the current definitions or criteria, but the application of the information and communication among and between agency biologists, agency administrators and interested publics.

6. Each agency should agree to cooperate in data collection, data sharing and data transmission, in establishing and/or refining seasonal range boundaries and sharing in the collection of information. Agency biologists/conservationists having responsibility within a given herd unit or population of animals should jointly develop seasonal ranges with sign-off provisions for

concurrence with the final boundary delineations and any refinements made thereafter. Said concurrence must be developed at the field level with concurrence at the regional and state level as necessary.

7. Final seasonal wildlife range maps should be reviewed and approved by each agency before it is made available to other interested parties; and

8. Seasonal range maps should be reviewed at least annually. Proposed revisions based on new data or knowledge should be documented and agreed upon. Revisions should probably not be formalized until sufficient data is available to establish a trend differing from historical baseline information. This may require 3 to 5 years.

Recommended changes to the current Standardized Definitions for Seasonal Wildlife Ranges are included in Appendix A and a discussion of the Application and Use of Standardized Wildlife Range Designators is included in Appendix B for your review and consideration. We have also included an informational summary for big game species relative to species behavioral habits, habituation to disturbance, geographic variability in terms of habitat types, land ownership patterns, climatic conditions, migratory patterns, etc.

It is our recommendation that each agency review the attached changes and committee recommendations, adopt them following review and input, and develop appropriate agreements and procedures to cooperatively establish seasonal wildlife range boundaries and share in the collection of information.

Note: In early 2004, WGFD adopted standardized, statewide beginning and ending dates for use of WIN, WYL and SSF *seasonal ranges. Those date ranges are listed in italics at the end of the applicable seasonal range definitions in Appendix A.*

APPENDIX A

Recommended Changes to the Current
Standardized Definitions for Seasonal
Wildlife Ranges

These recommended changes to the current standardized definitions for seasonal wildlife ranges are directed primarily at big game and threatened and endangered species. The term 'documented' is construed as generally referring to recorded observation of animals, however evidence of their use based on such factors as forage utilization and fecal excretion in relation to forage type; forage availability and the spatial relationships of forage to cover among others may also be used to refine seasonal distribution boundaries or to delineate seasonal ranges for transplanted species or herds expanding their range.

Note: In early 2004, WGFD adopted standardized, statewide beginning and ending dates for use of WIN, WYL and SSF seasonal ranges. Those date ranges are listed in italics at the end of the applicable seasonal range definitions below.

Symbol	**Term**	**Definition**
CRU	Crucial	Crucial range can describe any particular seasonal range or habitat component (often winter or winter/yearlong range in Wyoming) but describes that component which has been documented as the determining factor in a population's ability to maintain itself at a certain level (theoretically at or above the WGFD population objective) over the long term.
		Example: The total crucial winter range for an elk herd unit should be available, relatively intact and allow a population at the objective to the objective to survive the winter in adequate body condition to maintain average reproductive rates 8 out of 10 years.
CRT	Critical Habitat*	Those areas designated as critical by the Secretary of the Interior or Commerce, for the survival and recovery of listed Threatened and Endangered Species (50 CFR, Parts 17 and 226**)**. Because use of the term has legal implications, its use is limited to only those habitats officially determined as critical by the Secretary.
ESS	Essential Habitat*	Those areas possessing the same characteristics as critical habitat for Threatened and Endangered but not species declared critical habitat by the Secretary of the Interior or Commerce.
PAR	Parturition Areas (calving areas, fawning areas, lambing grounds)	Documented birthing areas commonly used between 5/15 and 6/30 by the female segment members of a population. These areas may also be used as "nursery

areas" by some species.

* Pertain to threatened and endangered species only.

SSF	Summer or Spring-Summer-Fall	A population or portion of a population of animals use the documented habitats within this range annually only (from the previous winter) to the onset of persistent winter conditions (variable, but commonly this period is between 5/1 and 11/30 or shorter in Wyoming). *(5/1 – 11/14, adopted by WGFD in 2004)*
SWR	Severe Winter Relief	A documented survival range which may or may not be considered a crucial range area as defined above. It is used to a great extent, only in occasionally extremely severe winters (e.g., 2 years out of 10). It may lack habitat characteristics which would make it attractive or capable of supporting major portions of the population during normal years but is used by and allows at least a significant portion of the population to survive the occasional extremely severe winter.
WIN	Winter	A population or portion of a population of animals use the documented suitable habitat within this range annually, in substantial numbers only during the winter (variable, but commonly between 12/1 and 4/30). *(11/15 – 4/30, adopted by WGFD in 2004)*
WYL	Winter/Yearlong	A population or a portion of a population of animals makes general use of the documented suitable habitat within this range on a year-round basis. But during the winter months (commonly between 12/1 and 4/30), there is a significant influx of additional animals into the area from other seasonal ranges. *(11/15 – 4/30, adopted by WGFD in 2004)*
YRL	Yearlong	A population or portion of a population of animals makes general use of the suitable documented habitat within the range on a year-round basis. Exception - occasionally, under severe conditions (extremely severe winters, drought) animals may leave the area.

Proposed new seasonal range definition follows:

UND	Undetermined/ Undocumented	Areas or habitats, which are expected to or do support a population or portion of a population of animals. The distribution and importance of the area to the population has not been sufficiently documented to designate seasonal range

		occupancy. The term is applicable to areas where animals have recently been or will be reintroduced; where animals have migrated into and are establishing a population; where a population is expanding its range; or where management actions or activities have been implemented which will accommodate a population to expand their range.
HIS	Historical Habitat	Areas or habitats which historically supported a population or portion of a population of animals. These areas may indicate potential reintroduction sites.

Other seasonal range designations commonly used by the WGFD and the BLM but not specifically addressed by this committee are included for your information. These appear to meet the criteria desired and should be retained and adopted as part of the standardized definitions for seasonal wildlife ranges

Symbol	Term	Definition
OUT	Out	Areas which do not contain enough animals to be important habitat, or habitats of limited importance to a species.
MR	Migration Routes	Definable routes followed during seasonal movements year after year.
→ →	General area of movements	
→ → →	Specific movement corridors	
Varies	Raptor Nests	Nesting areas for hawks, owls, and eagles. Examples Include: ◯ prairie falcon, ◉ merlin, □ goshawk, ⊕ and great horned owl.
	Concentrated Wetland Area	
	Areas of scattered wetlands important to wildlife because of numerous playas, flooded meadows, beaver ponds, or impoundments.	
POT	Potential	Habitats identified for reintroduction of Threatened, Endangered, and Priority species (e.g., potential habitats for trumpeter swans and peregrine falcons).
BRE	Breeding Area	Documented courtship, nesting, and/or brood rearing areas, e.g.:
	◯ Censused lek, strutting or dancing ground	
	◫ Uncounted lek, strutting or dancing ground	
	⊗ Abandoned lek, strutting or dancing ground	
STA	Staging Area	Documented migration or pre/post-migration concentration areas.

Standardized Raptor Nesting Terminology for Wyoming
(BLM, 1987)

Nest Status	Symbol	Definition
Active Verified	AV	A nest/scrape in which a breeding attempt was made as indicated by: (1) eggs in nest; (2) young in nest or on cliff ledges or branches next to nest; (3) fledged young in proximity of nest/scrape which exhibits sign of nestling presence (extensive whitewash on nest/scrape, on cliff, branches, and/or ground beside and below nests or scrapes); (4) incubating/brooding adult.
Active Estimated	AE	1. A nest exhibiting one or more of the following: (1) fresh lining material greenery such as pine boughs, deciduous tree leaves, juniper leaves, etc.; most apparent on occupied nests of golden eagles, accipiters, and several buteos); (2) adult presence (one or more adults in immediate vicinity of nest); (3) recent and well-used perch sites-occurrence of well whitewashed perches in close proximity to nest. 2. A tended nest within the estimated bounds of a territory housing an 'active' nest. 3. An occupied nest built subsequent to the failure of an active nest. 4. A nest that is in good repair but was observed during the non-nesting season when the presence of adults would not be expected.
Inactive Verified	IV	1. A nest surveyed during the breeding season which exhibited no apparent recent use or adult presence. 2. A nest that has evolved to a state of ruin or decay due to weather, natural aging, and/or neglect.
Inactive Estimated	IE	A nest exhibiting no apparent recent use or adult presence that was surveyed during the non-breeding season.
Destroyed	DE	A nest that has been removed, destroyed, or does not exist at the present time.

TWS also reviewed some other definitions currently being used in Wyoming. The Shoshone National Forest has seasonal range designations for 'Crucial Preferred Winter Range' (CPWR) defined as an area within crucial winter range where concentrations of animals can be found each year during the period of 1/1 to 3/31. These areas are considered essential for the welfare and maintenance of the dependent populations and for 'Crucial Winter Range' (CWR) defined as an area where 75 percent of the individuals in a population can be expected to be found during periods of inclement weather from 1/1 through 6/30 each year (Shoshone National Forest FEIS). We recommend these definitions not be included in the final standardized definitions. They would not be applicable on a statewide basis.

APPENDIX B

Application and Use of Standardized Wildlife Range Designators in Wyoming

(Most of the information was prepared by John Emmerich)

HISTORICAL PERSPECTIVE

Prior to 1987 each agency, federal or state, sharing wildlife population or habitat management responsibilities in Wyoming were using their own set of wildlife seasonal range designators. This situation often led to confusion and made any exchange of information among agencies difficult. In addition, misunderstandings and mistrust among agencies and between the agencies, interested public and private landowners arose when discussions where held relative to seasonal ranges or providing comments on reviews on various activities or projects. As an example, the Wyoming Game and Fish Department (WGFD) used the term "critical", to designate seasonal ranges that were considered the determining factor in a populations ability to maintain and reproduce itself over the long term. The term was used to designate limiting habitat associated with generally all wildlife species with mapped seasonal ranges. The term "critical" as well as "essential" have a much more restrictive application, however, on a federal level, since they are only associated with those wildlife species federally listed as threatened or endangered. This example is only one of many that were obvious sources of confusion and made the process of exchanging or discussing information much more difficult than it needed to be.

In an effort to rectify and reduce the confusion, communication, and information exchange problems the Wyoming Chapter of The Wildlife Society (TWS) formed a committee charged with the task of developing a set of standardized wildlife seasonal range designators with definitions. These designators would serve as the core set of seasonal range types to be recognized and used by all agencies but could be added to by individual agencies for special needs.

The original committee was made up of one representative from the U. S. Forest Service (USFS) (Dave Reeder), Bureau of Land Management (BLM) (Jack Welch) and the WGFD (John Emmerich). From late 1984 to late 1986 a set of wildlife seasonal range designators with definitions were developed. The final set adopted reflected considerable input and review from biologists representing each of the USFS occurring in Wyoming, from BLM resource area and state office biologists, and from personnel with the Soil Conservation Service (SCS), U. S. Fish and Wildlife service (USFS), WGFD and the state Land Board (SLB).

The current Standardized Definitions for Seasonal Wildlife Ranges were subsequently adopted by Forest service Regions 2 and 4 for Wyoming and by the WGFD in 1986 and the BLM in 1987. They were also recognized by the SCS, USFWS, and SLB. Since 1987 nearly all agencies with wildlife or habitat management responsibilities in Wyoming have either updated all of their seasonal range overlays using the standardized designators or have committed to do so as their scheduled overlay updates take place. The only exception appears to be the Shoshone National Forest.

In 1989 the WGFD and BLM requested the Wyoming Chapter of The Wildlife Society review the current definitions with particular attention to crucial and parturition habitat and additional quantification of definitions. TWS, under Chapter President Tom Ryder, formed a committee made up of representatives from USFS (Ihor Mereszczak, Tina Lanier), BLM (Jack Welsh, Bob McCarty), WGFD (Bill Gerhart, John Emmerich) and SCS (Dick Rintamaki) to address the request. Final recommendations from TWS were forwarded to participating agencies for review in early 1990.

APPLICATION AND USE

For the most part the definitions for each of the standardized seasonal ranges include sufficient criteria for determining when to apply a specific range designation. In nearly every case the frequency of use by animals is the criteria used to determine an areas importance as winter range, parturition range, or some other range designation. The number of animals using the area may be important but it is not a determining factor. An area were several cow elk with calves are seen once every five years would not warrant the status of parturition area, but an area where as few as five cows (a portion of the female members of a "population") are seen nearly every spring with calves would be considered a parturition area. The definitions were intentionally written without the use of a set number of animals as criteria for applying the range designation, since numbers of animals can vary annually and certainly vary with different herd units having different population objectives. However, phrases like "commonly used" or "used eight years out of ten" were included intentionally in the definitions to emphasize the importance of frequency of use of an area as a criteria for applying a range designator.

The most difficult part of designating range types, in particular for big game species, is determining the location and extent of crucial range. These areas are absolutely necessary for the long term maintenance of a population of animals so they need to be accurately identified for protection and management purposes. Accurate identification is also important because land management agencies typically restrict the type and timing of activities that occur in these areas, restriction; that have significant effects on other users of the land.

The first step in determining the location of crucial habitat is an assessment of what habitat component, or components, are most limiting, in other words what habitat type is crucial. In Wyoming winter range is generally the most limiting habitat component because snow cover often makes forage less available than during summer months and restricts animal movements. In very dry areas good quality summer forage could be a limiting range type, especially if snow accumulation is typically light in the area. Good escape cover could be limiting for a big game species like bighorn sheep.

Once the range type or types considered limiting have been identified the next step is determining the location and extent of the range. The most accurate and reasonable process to delineate seasonal range boundaries is simply to get as many different observations as possible over time and under as many different kinds of situations as possible. For example, on crucial winter range or winter range as many observations as possible should be collected during early, mid, and late winter for several winters to document the extent of these ranges. Normally all agencies with wildlife population or habitat management responsibilities should pool their resources (i.e. personnel, flight time, etc.) to determine the distribution of animals during the season of the year when the range is considered limiting. This distribution information should be documented in a stored data format so several years of information can be compiled and evaluated to adequately identify those areas which are used most years (eight years out of ten) when conditions or time of the year cause animals to use the limiting or crucial habitat i.e. harsh winters if documenting crucial winter range. Input from landowners can also be added to this database. Sharing resources among agency personnel and joint

data collection and analysis gives all parties involved an opportunity to become involved and have a stake in determining the distribution patterns documented and the designation of crucial habitat locations. Differences in opinion as to location or extent of crucial habitat or other seasonal range designations should be resolved by the local biologists with on the ground analysis of distribution patterns. This analysis should include flight data, ground observations, and vegetation utilization data.

Once the crucial habitat has been documented and mapped it should be constantly evaluated. There is nearly always potential for refinement, in fact it is imperative that every attempt be made to refine crucial habitat designations so only that acreage necessary to sustain long term population objectives are designated as crucial. Despite the constant evaluation and refinement process it is recommended that actual map updates be drafted no more frequently than once every three to five years. Shifts in animal distribution or location of additional range previously not documented that suggest a need for realignment of crucial range boundaries should be documented over a period of time before maps are updated. This ensures that maps will not be needlessly changed for transient fluctuations in animal distribution that will not stand the eight years out of ten frequency of use test.

Refining the location and extent of crucial range should involve some evaluation of the forage available for the wildlife species of concern in the area defined as crucial. In public land areas of the state forage production information is available from the BLM and USFS. In private land areas of the state the SCS can provide potential forage production information by range site and in some cases range condition class and actual production information. A rough analysis of forage production and crucial range acreage information will point out if sufficient acreage of crucial habitat has been identified for objective numbers of animals or if more acreage has been identified than is actually necessary to sustain the objective number of animals. Failure to correlate the crucial winter range or other boundary designations with the actual habitat sites being used, often leads to boundaries encompassing large acreages, much of which is not actually providing crucial habitat. This can obscure the real value of the area of actual crucial habitat.

Forage type and quantity in relation to the numbers of animals to be sustained in an area are but two factors, biologists must also consider the distribution of forage in relation to cover and the availability forage and cover. Snow depth and snow distribution have a significant effect on the availability of forage and cover. Wind can and does play an important role as it influences snow depth and distribution patterns thereby influencing forage availability. Information on wind conditions and whether or not areas are blown free of snow most of the time can be important in refining the delineated boundaries. Correlations on the ground with browse use patterns and fecal pellet group concentrations can be very helpful in delineating winter use and crucial winter range boundaries also. In either case the crucial habitat ranges should be refined to correct for the problems identified.

Some discussion of severe winter relief range is probably necessary to help people properly identify this habitat type. Severe winter relief range can be a core area within crucial winter range or an area removed from the crucial winter range that is not normally used, where animals try to survive when winter conditions are abnormally extreme. These areas will not sustain objective numbers of animals but may allow a portion of the population to survive. They are generally managed in the same manner as crucial winter range in terms of protection and forage reservation if they are a core area within crucial winter range and are also used during normal winters. If the severe winter relief range is an area removed from the normal crucial winter range and use is infrequent and unpredictable the area may be managed differently than crucial winter range. In this situation, it would not be practical to reserve forage every year for anticipated wildlife use since use normally

occurs only two years out of ten. These areas, however, need to be identified so they can be protected from range type conversions or development that will render the area unusable in severe winters.

In many parts of Wyoming big game species display distinct seasonal migration patterns. Animals move from higher elevation summer range where snow accumulation is substantial to lower elevation winter range in late fall and vice versa in early spring. In those areas of the state where this migration pattern occurs winter range is normally a distinct range readily delineated and used nearly every winter. Some movement occurs within this winter range area as the winter season progresses, snow conditions change, and animals search for food. Availability of forage within the winter range, which can be influenced by summer grazing/browsing patterns and weather conditions during the growing season, also affects the distribution of animals within the winter range. For elk, moose, mule deer, and bighorn sheep these winter time movements are fairly minor as long as winter conditions do not become abnormally extreme (causing movements to severe winter relief range). Antelope, however, tend to display a higher level of variance in the degree of movement that occurs within their winter range. In a sense their winter range is less fixed in space as compared to most other big game species. Although they normally use the same area each winter the overall range used may be large because of their nomadic nature. In other words antelope can be found during the winter months in one part of the winter range where they did not occur earlier and be absent later in the winter from that portion of the winter range where they did occur earlier. Other big game animal populations can normally be found within a mile or two of the same area throughout the winter. As a consequence in those portions of the state where distinct seasonal ranges do not occur crucial winter range generally cannot be delineated as tightly particularly for antelope.