26 June 2002

Jack Troyer, Regional Forester
Intermountain Region (Region 4)
U.S. Department of Agriculture/Forest Service
Federal Building
324 25th Street
Ogden, UT 84401-2310

VIA POSTAL MAIL

RE: Administrative Procedures Act Petition to Develop Regionwide Drought Policy

Dear Regional Forester,

Notice is hereby given pursuant to section 553(e) and 555(e) of the Administrative Procedures Act, 5 U.S.C. §§ 553(e) et seq., that Forest Guardians, American Lands Alliance, Escalante Wilderness Project, and Western Watersheds Project, Inc. petition the Regional Forester for the Intermountain Region (Region 4) of the U.S. Forest Service (USFS) within the U.S. Department of Agriculture, for the issuance of a rule concerning a region-wide drought policy for management of livestock grazing and other Forest activities.

We believe that USFS development of a region-wide drought policy is in the interest of the public, the Forest Service, and native ecosystems on Forest Service lands. Rather than simply react to crisis, the Forest Service should engage in long-term planning that provides more certainty for public land users and safeguards the needs of native species. Planning on a regional scale will ensure fairness and certainty better than ad hoc decisions made by a number of different individual range managers to different individual permit holders. While site-specific conditions are relevant and important to take into consideration, establishing a drought policy region-wide will enable the region to set a floor for certain potentially damaging activities, while permitting local managers to be flexible to site-specific conditions. A region-wide policy will allow all parties to better plan for the inevitable.

In addition, we contend that the issuance of a rule concerning a USFS Region 4 drought policy is necessary for the Forest Service to fulfill its legal obligation to manage for viable populations of native species (36 C.F.R. § 219.19) and to manage for the diversity of plant and animal communities on Forest Service planning units (36 C.F.R. § 219.26).

In 2002 much of the Western United States is facing drought conditions of a severity that has not been witnessed in decades. Throughout the Intermountain Region, precipitation levels

have been exceptionally low, with potentially devastating consequences for native vegetation and wildlife. Given the severe nature of the drought this year, and the fact that this level of drought can be expected to exacerbate the effects of all land use activities on Forest Service lands—for example, livestock grazing permitted by the Forest Service—we are concerned that the Intermountain Region has no systematic policy in place for addressing inevitable drought situations.

Most wildlife and plant species are more stressed during drought, so the impacts of all human uses of USFS lands are likely to be higher than in times of normal precipitation. In addition, the general failure of the Forest Service to meet wildlife population monitoring requirements[1] make it incapable of observing declining trends and a region-wide drought policy is therefore doubly needed. To the extent that the current fire situation is pulling USFS staff away from their normal duties, we would expect that monitoring of wildlife populations and habitat conditions will suffer this year more than most.

Land uses that have the potential to exacerbate drought's impacts on native flora, fauna, and natural processes include, but are not limited to, livestock grazing, logging, motorized recreation, seismic surveys, prescribed fire, and oil, gas, and minerals extraction. Soils are more vulnerable to erosion during drought (Le Houérou 1996), particularly with declines in plant productivity (Holechek et al. 1999) and the consequent loss of vegetative protective cover. There is thus a strong potential for land uses on National Forests and Grasslands to contribute to heightened erosion and degradation of water quality in times of low precipitation. In this petition, we emphasize the impacts of livestock grazing, but other land uses are also likely to take their toll on wildlife and habitat health during drought. The drought policy we are requesting should apply to the full range of land use activities.

The Current USFS Response to Drought is Inadequate

According to information received by Forest Guardians from the Regional Office, the Forest Service's means of dealing with the current drought are inadequate. Drier regions experience more frequent droughts (Le Houérou 1996), and drought, fires, and native herbivory drive prairie grassland ecology (Knopf 1996; Weaver et al. 1996). Drought is therefore inevitable in the U.S. Forest Service's Intermountain Region. We regard the lack of a region-wide drought policy as a significant oversight, particularly given the increased susceptibility of the land and vegetation to human abuse during drier times (Thomas 1997; Holechek et al. 1999; Galt et al. 1999).

In the absence of a formal drought policy based on objective scientific recommendations, the agency has no means of ensuring that the health of soils, watersheds, riparian areas, threatened and endangered species, and fire ecology are protected in cases of extreme climatic conditions. In light of the fact that drought can have severe long-term effects on soil productivity, vegetative vigor, wildlife, and sensitive riparian systems, such a policy is needed to provide a systematic, coordinated, and scientifically valid means of ensuring that native ecosystems are protected in times of drought. At the regional and forest level, the failure of the

[1]NFMA requires that the Forest Service monitor populations of Management Indicator Species (36 C.F.R. § 219.19). Several lawsuits underscore that the Service is not fulfilling this requirement.

Intermountain Region of the Forest Service to have such a policy in place equates to a failure to provide necessary protections to native species and ecosystems.

According to information provided to Forest Guardians by the Region, the Acting Regional Forester issued guidance to Region 4 Forest Supervisors on February 4, 2002 (See Jack Troyer, memorandum to Forest Supervisors, February 4, 2002). This guidance, in our view, is inadequate. It provides only broad direction to "discuss with livestock permittees the possibilities of reduced grazing opportunities on their National Forest System allotments this summer." Although the memo underscores the need to protect rangeland productivity and the rangeland resource, it makes no mention of the requirements of native flora, fauna, and natural processes.

On the Dixie National Forest, the language is stronger and more specific, but is still inadequate. On the Dixie, Forest Supervisor Mary Wagner has stipulated a 20% reduction in permitted animal unit months (AUM) per allotment. In community allotments, if there is non-use on a portion of the allotment that constitutes a 20% reduction in AUMs, the remaining permittees may operate at unaltered stocking levels (See Mary Wagner, memorandum to District Rangers, April 22, 2002). While we applaud Mary Wagner's specification of a minimum reduction level, we are still concerned that 20% is far too low of a minimum reduction during the present drought, and that permittees in community allotments where 20% is in non-use may continue their operations without heed for the drought.

In addition, the Utah prairie dog (Cynomys parvidens), which is listed as Threatened under the federal Endangered Species Act (50 C.F.R. § 17.11), resides on the Dixie National Forest. Alarmingly, of fourteen Utah prairie dog complexes tracked on the Dixie, five have been extirpated in recent years (Bonzo and Day 2000, Appendices II-IV). As we discuss in the subsequent section, livestock grazing may be a partial cause of these disappearing complexes. A region-wide drought policy is urgently needed, to insure that the requirements of imperiled wildlife are met.

While some Forests, such as the Dixie, may make attempts to be proactive, in the absence of a systematic drought policy we have no assurance that there will be consistent and adequate protection of native species and ecosystems. We strongly caution against considering a rainfall or two as an adequate basis for returning livestock to the ground after a prolonged period of drought. A scientifically sound drought policy would give the agency and other concerned citizens some basis for trusting that livestock grazing and other land uses are only being reinitiated when soil, vegetation, watershed, imperiled and sensitive species habitat, and riparian conditions have recovered sufficiently from the drought to allow for these land uses without causing significant long-term damage.

We believe a Regional Drought Policy should employ the Standard Precipitation Index (SPI), as this is an objective standard based on measurements of external data. Such a methodology allows for a consistent means of addressing drought conditions through scientific analysis, and allows the agency to make important decisions about protecting native ecosystems in times of severe stress in an objective manner. All forests throughout the region should be using the SPI, as well as other objective tools such as the Palmer Drought Index, to provide sound scientific bases for management decisions regarding drought.

In the Southwestern Region, the Tonto National Forest's drought policy provides clear, conservative direction as to when livestock may be returned to the land after periods of drought. The policy provides that:

> Drought periods shall end when the SPI for the last 12 months becomes positive. Even though precipitation has returned to normal, rangeland plants normally need more time to recover. The Team shall establish standards for re-stocking allotments that will ensure the protection of rangelands until proper recovery is complete. Generally, after normal precipitation resumes, re-stocking shall not occur until after a minimum of one growing season of rest. In cases of prolonged or severe drought, two or more seasons of rest may be required prior to re-stocking.

Tonto National Forest Rangeland Drought Policy at 4. As should be the case throughout the Intermountain Region, the Tonto is acknowledging the severe stress that drought represents to vegetation, soils, and wildlife, and is erring on the side of caution when determining at what point one can defensibly add to this stress the additional impact of livestock grazing and other land uses. This use of the Precautionary Principle should be the basis for the entire Region's approach to drought management, and for a comprehensive region-wide drought policy.

For its part, livestock grazing has likely contributed to the extreme fire danger (and extensive fires) being witnessed in the Intermountain Region. Several scientific studies have shown that livestock grazing leads to a reduction of fine fuels, namely herbaceous vegetation, thereby reducing or altogether eliminating natural high frequency, low intensity fire regimes (Zimmermann and Neuenschwander 1984; Johnson 1996).[2]

This disruption in the natural fire regime, especially in ponderosa pine forests, has lead to dense tree stocking that is implicated in the causation of high intensity fires. In fact, a 1984 study of Douglas fir and ponderosa pine forests found that grazing caused an increase in the number of small trees. The study, published in the Journal of Range Management, concluded that,

> Continued livestock grazing without fuel management will cause reductions in the frequency of low intensity fires, but will promote conditions that favor the occurrence of infrequent, high intensity fires. (Zimmerman and Neuenschwander 1984.)

Drought is no new phenomenon in the Intermountain Region. The Forest should be aware of the devastating consequences that grazing and drought in combination may have on the land and should engage in long-term planning to safeguard native species, ecosystems, and natural processes. For example, in sagebrush grassland areas, two reports found that perennial grasses in areas grazed by livestock were at approximately 10% of their potential production (Carter et al. 2001; 2002). Moreover, the time it will take these dry regions to recover from the impacts of grazing is uncertain.

Whereas with grazing the Region has at least taken the small step of suggesting some drought management changes, we have no evidence that the Region has taken adequate measures

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[2]See, in general, research and links presented by Northern Arizona University researchers at <http://www.cpluhna.nau.edu/Biota/ponderosafire.htm><http://www.cpluhna.nau.edu/Contribs/johnson.htm>, visited 26 June 2002.

to adjust other land uses due to the impacts of drought. Other land uses which impact soil and water quality, such as motorized vehicle use, logging, oil and gas extraction, and others, need to be restricted in times of drought. For instance, off-road vehicle use can crush, break, trample, and reduce vegetative cover (see, for example, Bury et al. 1977; Weaver and Dale 1978; Cole and Bayfield 1993). Vegetation that is stressed by drought conditions may be more susceptible to such impacts. Moreover, vegetative cover decreases, as a result of the combined effects of off-road vehicle use and sustained drought, can increase the likelihood of soil erosion. Soils, especially sensitive soils, are susceptible to rapid erosion when stripped of vegetation (Sheridan 1979). Increased erosion can result in water quality declines (Miller 1970), which would presumably be exacerbated during times of drought due to decreased flows.

Impacts on Imperiled and Keystone Species

We are particularly concerned about the impacts of drought on prairie dogs (Cynomys spp.). Several species of prairie dogs inhabit USFS Region 4: the Utah prairie dog, white-tailed prairie dog (C. leucurus), and Gunnison's prairie dog (C. gunnisoni). Prairie dogs suffer from multiple and intersecting threats, including habitat destruction and degradation, shooting, poisoning, and sylvatic plague.

The Utah prairie dog is listed as a threatened species under the Endangered Species Act (ESA) (50 C.F.R. § 17.11). The most recent census data indicated only 5,114 adult Utah prairie dogs, down from 7,422 adult Utah prairie dogs in 1989 (Bonzo and Day 2000).

White-tailed and Gunnison's prairie dogs are also imperiled species, although to a lesser magnitude than the Utah prairie dog. While they are not yet candidates for ESA listing, white-tailed and Gunnison's prairie dogs have smaller population and range sizes than the black-tailed prairie dog, which is a candidate for listing under the ESA (66 Federal Register 54817 (October 30, 2001)), and suffer from similar threats. White-tailed prairie dogs are estimated to currently inhabit 600,000 acres (Knowles 2001), compared with estimates that black-tailed prairie dogs occupy approximately 791,000 acres (Miller and Reading 2002). Gunnison's prairie dogs have also endured substantial acreage and population reductions and are estimated to currently occupy only 236,000 acres (Knowles 2001).

Drought can negatively impact prairie dogs. Drought was cited as one of the factors leading to the need to list the Utah prairie dog (USFWS 1991). In addition, drought was one of several suspected factors having caused white-tailed prairie dog decline in Shirley Basin, Wyoming (Van Fleet et al. 2001). Gunnison's prairie dogs depend on an herbaceous understory in grassland or shrubland habitat (Pizzimenti and Hoffman 1973; Fitzgerald and Lechleitner 1974). To the extent that drought impacts primary productivity, the species will be negatively affected.

However, prairie dogs have endured drought for millennia. Indeed, as indicated above, the arid and semi-arid areas that prairie dogs inhabit feature drought as a normal occurrence. Certainly black-tailed prairie dogs (C. ludovicianus) evolved with heavy ungulate grazing. Indeed, black-tailed prairie dogs and bison (Bison bison) have a mutually beneficial relationship. In more mesic areas, while bison reduce vegetation height, thus allowing prairie dog expansion into mixed- and tall-grass prairie, prairie dog clipping, grazing, and burrowing activities increase the succulence and nutritional value of forage. As a result, bison spend an inordinate amount of

time grazing and wallowing on prairie dog towns (Krueger 1986). Cows themselves appear to select for prairie dog towns and prairie dogs may select for cattle-grazed areas (Knowles 1986; Licht and Sanchez 1993).

The habitat and prairie dog species west of the Rocky Mountains are quite different than those in the Great Plains. Most importantly, for thousands of years prior to the American livestock industry, large ungulates existed at very low densities in the Intermountain Region (Mack and Thompson 1982; Belsky and Gelbard 2000). The current stresses of livestock grazing, particularly during drought, are therefore of utmost importance for the Forest Service to consider.

One major concern centers on how land management activities may exacerbate the impacts of drought on prairie dogs. Human disturbance, habitat degradation and fragmentation, and direct mortality all play a role in prairie dog imperilment. Activities such as energy development, off-road vehicle use and road construction, recreational target shooting, poisoning, and livestock grazing are all threats to prairie dog persistence. The increased stress on prairie dogs during drought may be exacerbated by the impacts of any of these activities. For example, livestock may negatively impact prairie dogs by causing brush encroachment and reducing available forage, particularly given their inordinate grazing on prairie dog towns. In addition, prairie dogs expand or contract in response to the previous year's precipitation. After a drier year, they generally expand in order to obtain sufficient forage (Dr. Richard Reading, pers. comm., Dr. Nicole Rosmarino, Jan. 2002). These colony expansions may generate increased hostility among ranchers. In times of drought, the scarcity of forage may encourage ranchers to lethally control prairie dogs in a futile attempt to prolong livestock grazing on a forage-depleted landscape. While the U.S. Forest Service has a standing policy prohibiting black-tailed prairie dog poisoning, this policy does not include the white-tailed or Gunnison's prairie dogs. Moreover, compliance with this policy is unclear. For all prairie dogs, there is a potential for declining populations as their colonies experience brush encroachment and forage depletion from livestock grazing.

In the case of the Utah prairie dog, there is special cause for concern about negative impacts from livestock grazing. According to the species' recovery plan:

> Long-term overgrazing has caused a great reduction in the quality of prairie dog habitat. Such long-term overgrazing resulted in a brush invasion causing a vegetation shift from grass to shrub forage, reducing habitat quality for prairie dogs. Historically, prairie dog colonies were located in swale formations. Overgrazing led to erosion of the swales, thus transforming them into gullies. This, in turn, lowered the water table to channel bed level thereby reducing the amount of moisture available for the palatable grasses and forbs that supply summer food for the prairie dogs (Crocker-Bedford 1975).

An analysis of twenty years of the recovery program viewed the potential negative impact of livestock grazing in a similar way (McDonald 1993). While livestock grazing may initially help open up brush-encroached areas to prairie dog colonization, the transition to poor quality shrub habitat caused by continued livestock grazing is deleterious to Utah prairie dogs. In addition, livestock grazing results in a decrease in palatable, cool season grasses, which are vital to Utah prairie dogs emerging from hibernation. Livestock also cause gullying and subsequent

lowering of water tables, which dessicates the succulent vegetation around swales that Utah prairie dogs need to sustain themselves (USFWS 1991; McDonald 1993). A 1989 USFS Report described the process of livestock grazing causing channel incision, which resulted in the lowering of water tables and consequent drying of riparian vegetation (DeBano and Schmidt 1989).

In addition, fire suppression has contributed to the woody encroachment of Utah prairie dog habitat and is another factor responsible for the species' imperilment (USFWS 1991).

We underscore the importance of safeguarding prairie dogs in times of drought because of the keystone roles they play in their native ecosystems (Kotliar et al. 1999; Bangert and Slobodchikoff 2000; Kotliar 2000; Miller et al. 2000; Bonnie et al. 2001). A part of prairie dogs' keystone role is their hydrological functions. Prairie dogs increase water filtration on soils within their colonies, and there is increased soil moisture content due to prairie dog colonization (Day and Detling 1994). One author (Outwater 1996) asserts that prairie dogs' burrows act as megapores, channeling precipitation to the water table. Day and Detling (1994) also note the role of prairie dog burrows to facilitate water infiltration to greater depths.

We therefore request that, given prairie dogs' imperilment, the keystone role they perform, and their water conservation functions, a region-wide drought policy be developed which ensures that prairie dog populations be protected and recovered on USFS lands. Land management impacts on the prairie dog ecosystem must be carefully considered, and the drought policy should include specific, enforceable standards for limiting degradation of prairie dog habitat in times of drought.

Second, we are concerned about the negative impact of land uses on sage grouse (Centrocercus spp.) in times of drought. Drought periods seem to often exacerbate declines in sage grouse populations (Patterson 1952: 68-69; Connelly and Braun 1997). Drought is believed to reduce grass and forb cover, much as livestock grazing does, causing increased detection by predators, and decreased food availability both of forbs directly and of insects which eat and make use of the forb cover (Klebenow and Gray 1968; Peterson 1970; Drut, et al. 1994a, 1994b; Gregg, et al. 1994; Fischer, et al. 1996). Factors affecting populations interact, and if a major drought occurs at a time when habitat has been severely degraded by grazing and other effects, the impacts on sage grouse populations could be catastrophic. Drought is known to reduce forb cover at brooding sites and cause low production of young (Young 1994: 45).

Drought is perhaps the major climatic variable affecting sage grouse productivity and viability (Klebenow and Gray 1968; Peterson 1970; Drut, et al. 1994a, 1994b; Gregg, et al. 1994). Declines in sage grouse populations during the 1930s were strongly related to the drought in the continental interior at that time (Patterson 1952). Populations recovered in most states in the 1950s immediately after the period of abundant rainfall in the west during the World War II years (Malone and Etulain 1989: 111-112). Drought from the mid-1980s to the mid-1990s has also been suggested as a cause of sage grouse declines in Oregon and Idaho (Fischer 1994; Hanf, et al. 1994; Connelly and Braun 1997). Low precipitation strongly affects the food supply of both gravid females and maturing young sage grouse and probably affects cover providing concealment and radiative and wind buffering (Autenrieth 1981; Hanf, et al. 1994; Fischer, et al. 1996).

Sage grouse are highly susceptible to variation in precipitation. Rich (1985) found that about 65% of the variation in juvenile/adult ratios was explained by the amount of precipitation in July and August. Moreover, eight of nine monthly weather variables that were significantly correlated with lek counts in Idaho were precipitation measures (Rich 1985). At higher elevations, temperature may be more important (Rich 1985: 12). Drought and grazing pressure interact to exacerbate negative effects on sage grouse productivity (Blake 1970). During low precipitation years (less than 15 cm), meadows are critical habitats for sage grouse. Unfortunately, they are heavily used by grazing cattle (Oakleaf 1971; Klebenow 1982, 1985; Evans 1986). Episodic summer drought also reduces insect populations needed by juveniles, and juvenile mortality over the summer period may be even more variable than mortality over the winter (Rich 1985: 13).

Third, we are concerned about impacts on beavers (Castor canadensis). Livestock grazing degrades riparian areas (e.g., Fleischner 1994; Muldavin et al. 1998; Belsky et al. 1999; Bock and Bock 2000), thereby negatively impacting riparian flora and fauna, including beavers. Riparian areas are very valuable for wildlife in the western U.S. (Fleischner 1994; Muldavin et al. 1998). The primary method by which livestock cause this damage is through destruction of riparian vegetation, which leads to the erosion of streambanks and lowering of the water table, conversion of stable, gently-flowing perennial streams to ephemeral streams characterized by flash flooding, and transformation of ephemeral streams to dry washes (Muldavin et al. 1998; Bock and Bock 2000). Other land uses that affect water quality and alter hydrology may negatively impact beaver.

Willows (Salix spp.) are important streamside vegetation and are associated with beavers (Olson and Hubert 1994). Livestock damage to willows and hydrological disruption may render habitat unsuitable to beaver dam- and lodge-building and foraging behavior (Olson and Hubert 1994). Beaver play an important role in creating and maintaining riparian areas (Muldavin et al. 1998) and are described as a keystone species that creates habitat for native flora and fauna by modifying local hydrology, stream geomorphology, and habitat conditions.[3] Among the consequences of beaver activities are: the creation and expansion of wetlands, elevated water tables in riparian areas, enhanced forage and cover for wildlife, improved watershed stability, reduction in high flows and downstream flooding, more constant summer flows, the retention of sediment and organic matter, increased aquatic invertebrate production, and increased total aquatic productivity. In particular, an elevated water table in areas adjacent to ponds and canals enhances riparian plant growth and stabilizes banks (Olson and Hubert 1994). All of these beaver-induced effects on riparian areas are vital for sustaining wildlife in times of drought.

In addition, beaver may play a role in counteracting non-native salt-cedar (Tamarix spp.), which is increasingly imperiling some western riparian areas. Salt-cedar can outcompete native cottonwoods and willows (Muldavin et al. 1998) and is particularly hardy in times of drought (Stevens 2002). Beaver can reduce salt cedar or tamarisk through their felling and flooding activities (Glausiusz 1996). Conversely, livestock don't tend to eat salt cedar, but do graze on cottonwood and willow saplings and thus provide a competitive advantage to salt cedar (Muldavin et al. 1998). Livestock grazing may therefore prevent, or erode, the capacity for beavers to offer themselves, other wildlife, and native vegetation a hedge against drought.

[3]See Southwestern Willow Flycatcher Recovery Plan. Draft of April 2001. Appendix K.

Pocket gophers (Family Geomyidae) are also keystone species (Sherrod 1999; Sherrod and Seastedt 2001). There are several different pocket gopher species in the Intermountain Region, including the northern pocket gopher (Thomomys talpoides), Botta's pocket gopher (T. bottae), Townsend's pocket gopher (T. townsendii), and Idaho pocket gopher (T. idahoensis). One study concluded "the activities of pocket gophers cascade through the trophic web" (Huntly and Inouye 1988: 792). Pocket gophers play important roles in soil formation and movement (Armstrong 1987; Huntly and Inouye 1988; CDOW 2000) and consequent plant diversity (Huntly and Inouye 1988); as a prey base for avian, mammalian, and reptilian predators (CDOW 2000); and their burrows provide habitat for other species (Vaughan 1961; Chase et al. 1982; CDOW 2000). Like other rodents, pocket gophers' digging activities aerate the soil and increase their ability to absorb precipitation (Muldavin et al. 1998). Where land management activities reduce pocket gopher populations and distribution (e.g., habitat degradation through road construction, livestock grazing, off-road vehicle use, or lethal control of pocket gophers), pocket gophers' assistance in water conservation will be compromised.

Ecosystem Protection and Natural Processes

We emphasized keystone and umbrella species in the preceding section due to the potential for keystone and umbrella species protection to afford collateral protection to other native flora and fauna within the same ecosystem (Miller 1998/1999) and due to the USFS's obligation to manage for viable populations of native species (36 C.F.R. § 219.19). However, broad ecosystem impacts and the integrity of natural processes must also be considered in a region-wide drought policy, particularly given the USFS's obligation to manage for the diversity of plant and animal communities on Forest Service planning units (36 C.F.R. § 219.26).

We are very concerned that continued livestock grazing, fire suppression, and other management practices have altered natural fire ecology in the Intermountain Region, thereby worsening the impacts of drought on forest and rangeland health. For instance, as mentioned above, scientific research indicates that livestock grazing can result in fine fuel reduction, which suppresses fire occurrence and unnaturally increases forest densities, thereby creating the potential for catastrophic fires rather than high frequency, low intensity fires (Zimmerman and Neuenschwander 1984). In addition, livestock have been implicated in the spread of noxious weeds (Fleischner 1994; Muldavin et al. 1998; Belsky and Gelbard 2000; LeJeune and Seastedt 2001), which alter fire ecology and hydrology in native ecosystems.

The Need for a Region-wide Drought Policy

Based on the evidence we have presented on the potential for land uses on USFS lands to exacerbate the impacts of drought on native flora, fauna, and natural processes, the Forest Service should adopt a region-wide drought policy that will minimize these negative impacts. Sensible application of the Precautionary Principle now is preferable to permanent watershed and riparian degradation, the destruction of native plant communities in favor of exotics, and the possible extinction of numerous species as a result of the devastating consequences of these land uses in times of scarcity.

The need for a Region 4 drought policy is clear, as drought will arrive again to the Intermountain Region. Unfortunately, humans are typified by their short memories, tending to believe that favorable weather is "normal" (Le Houérou 1996). As Bock and Bock (2000: 26)

quote from a rancher neighbor during a wet summer, "You know, I've lived in this country for twenty-five years, and this is about the first typical summer we've had." The tendency to stock rangelands and engage in land uses at levels determined in wetter year can result in severe, unanticipated impacts, such as overgrazing effects during drought (Muldavin et al. 1998). Alternatively, precipitation levels and variability should be integrated into the determination of appropriate livestock stocking rates (Holechek et al. 1998). Fortunately, these impacts can be anticipated and managed, but only through adequate region-wide drought planning.

To ensure that this and subsequent droughts are addressed in a systematic, cautious, and consistent manner, we call upon the Forest Service to adopt a region-wide drought policy based on a sound scientific methodology for determining objective measures to protect resources in time of drought. This policy should utilize the Palmer Drought Index and/or the Standard Precipitation Index to determine those areas that are afflicted with drought, and should use conservative, scientific methodology for determining responsive measures such as restrictions on motorized recreation and reductions on livestock use of USFS lands.

Thank you for taking the time to read and respond to this petition. I look forward to the Forest's response, and am available at (719) 523-4123 to discuss this matter.

Sincerely,

Nicole J. Rosmarino, Ph.D.
Endangered Species Coordinator
Forest Guardians
for

Kirsten Stade
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