United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
4000 Airport Parkway
Cheyenne, Wyoming 82001

In Reply Refer To:
ES-61411/W.02/WY9431c

July 15, 2005

Memorandum

To: Robert Bennett, State Director, Bureau of Land Management, Cheyenne State Office, Cheyenne, Wyoming

From: Brian T. Kelly, Field Supervisor, U.S. Fish and Wildlife Service, Wyoming Field Office, Cheyenne, Wyoming /s/ Jodi L. Bush *for*

Subject: Consultation for the Impacts from the Wyoming Bureau of Land Management's Rawlins Resource Management Plan to the Wyoming Toad (*Bufo baxteri*)

This correspondence is in response to the U.S. Bureau of Land Management's (Bureau) request for consultation for the impacts from the Bureau's Wyoming Resource Management Plans (RMP) to the Wyoming toad (*Bufo baxteri*) in Wyoming. The U.S. Fish and Wildlife Service (Service) has reviewed the biological information submitted by your office describing the effects of the Bureau's Rawlins RMP (BLM 1990) and proposed Bureau-committed conservation measures on the Wyoming toad. Your April 15, 2005, request for consultation was received on April 18. This correspondence is provided in accordance with section 7(a)(2) of the Endangered Species Act of 1973 (Act), as amended (50 CFR §402.13).

This consultation addresses potential effects to the Wyoming toad from the described Bureau activities of all planned programs according to the Rawlins Wyoming Bureau Resource Management Plan as well as the Bureau's commitment to the Conservation Measures listed in the Bureau's Biological Assessment (BA). These programs are (1) ACEC Management, (2) Cultural Resources Management, (3) Paleontological Resources Management, (4) Fire Management, (5) Forest Management, (6) Lands Program Management, (7) Livestock Grazing Management, (8) Minerals Management, (9) Recreation Management, (10) Sensitive Plants Management, (11) Soil, Water, and Air Management, (12) Visual Resource Management, (13) Wild Horse Management, and (14) Wildlife and Fisheries Management. For individual summaries of these programs, see Attachment 1. The Rawlins RMP is the only RMP covered in this consultation as no other RMPs contain habitat for the Wyoming toad.

This consultation is based primarily on our review of your BA and the Bureau-committed Conservation Measures (Attachment 2) as described in your BA (BLM 2005). A revised BA was submitted on June 30, 2005. That document has been incorporated into this consultation.

A complete administrative record of all documents and correspondence concerning this consultation are on file in the Wyoming Ecological Services Field Office.

Consultation History

The Service and the Bureau began informal consultation on impacts of Bureau activities to the Wyoming toad on October 23, 2001. From October 2001 through April 2005, Service personnel met informally with Bureau personnel to assist in the completion of the Programmatic Wyoming toad BA and reviewed drafts of the BA. The Service received the Bureau's Final Programmatic Wyoming Toad BA and request for consultation on April 18, 2005. The Service provided the Bureau with a draft concurrence letter on May 13, 2005. On June 30, 2005, the Service received comments from the Bureau regarding the draft concurrence letter. On that date, the Service also received from the Bureau a modified version of the Wyoming Toad BA with effects determinations for Minerals Management and Soils Management changed from "no effect (NE)" to "not likely to adversely affect (NLAA)" and additional information. After reviewing these documents received from the Bureau, the Service finalized this consultation.

The Bureau's Wyoming toad BA made “NLAA” or "NE" determinations for the effect of all programs on the Wyoming toad in the Rawlins Bureau resource area. These are displayed in Table 1.

Table 1. Wyoming toad "not likely to adversely affect (NLAA)" and "no effect (NE)" determinations made by the Bureau.

Resources Management Plan (RMP) / Management Action	Rawlins
Management of Areas of Critical Environmental Concern	NE
Cultural Resources Management	NLAA
Paleontological Resources Management	NLAA
Fire Management	NLAA
Forest Management	NE
Lands Program Management	NLAA
Livestock Grazing	NLAA
Minerals Management	NLAA
Recreation Management	NLAA
Sensitive Plants Management	NE
Soil, Water, and Air Management	--------
- Soil	NLAA
- Water Quality	NE
- Air Quality	NE
Visual Resource Management	NLAA
Wild Horse Management	NE
Wildlife and Fisheries Management	NLAA

The Service concurs with your determination that activities described in the Bureau's Rawlins RMP mentioned above will not likely adversely affect or have no effect on the Wyoming toad because (1) the Bureau has committed to implementing conservation measures and has adopted best management practices (see Attachment 2) that will aid in the recovery of this species or sufficiently minimize impacts to this species, and (2) the Wyoming toad is not known to occur on lands administered by the Bureau. With the exception of recent experimental research populations released on private lands within the Laramie Basin only one population of Wyoming toad (the Mortenson Lake Population--existing on a Service-administered National Wildlife Refuge) is known to exist in the wild (USFWS 1984, 1991, 1993).

This concludes consultation pursuant to the regulations implementing the Endangered Species Act, 50 C.F.R. § 402.13. This action should be re-analyzed if new information reveals effects of the action that may affect listed or proposed species or designated or proposed critical habitat in a manner or to an extent not considered in this consultation; if the action is subsequently modified in a manner that causes an effect to a listed or proposed species or designated or proposed critical habitat that was not considered in this consultation; and/or, if a new species is listed or critical habitat is designated that may be affected by this action.

The Service appreciates your efforts in conserving and protecting the endangered Wyoming toad. In future communications regarding this consultation, please refer to correspondence number WY9431. If we may be of further assistance, please contact Alex Schubert of my staff at (307) 772-2374, extension 38.

cc: BLM, Endangered Species Coordinator, State Office, Cheyenne, WY (J. Carroll)
BLM, Field Manager, Rawlins Field Office, Rawlins, WY (M. Storzer)
DOI Solicitor, Lakewood, CO (M. Zallen)
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FWS, ES Recovery, Regional Office, Denver, CO (P. Mehlhop)
WGFD, Non-Game Coordinator, Lander, WY (B. Oakleaf)
WGFD, Statewide Habitat Protection Coordinator, Cheyenne, WY (V. Stelter)
WGFD, Statewide Herpetological Coordinator, Laramie, WY (B. Turner)

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U.S. Fish and Wildlife Service. 1984. Endangered and Threatened Wildlife and Plants: Final Rule to List *Bufo hemiophrys Baxteri* (Wyoming Toad) as an Endangered Species. Federal Register 49(11):1992-1994.

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ATTACHMENT 1 - PROGRAM ACTIVITY DESCRIPTIONS SUMMARIZED FROM THE WYOMING TOAD BIOLOGICAL ASSESSMENT

These program descriptions are summarized from the Programmatic Wyoming Toad Biological Assessment (2005). It is expected that the activities described here will be implemented in the Rawlins RMP area over the life of the RMP (10-15 years).

Programs which the U.S. Bureau of Land Management (Bureau) will implement that may affect but are not likely to adversely affect or have no effect to the Wyoming toad are: (1) Areas of Critical Environmental Concern (ACEC) Management, (2) Cultural Resources Management, (3) Paleontological Resources Management, (4) Fire Management, (5) Forest Management, (6) Lands Program Management, (7) Livestock Grazing Management, (8) Minerals Management, (9) Recreation Management, (10) Sensitive Plants Management, (11) Soil, Water, and Air Management, (12) Visual Resource Management, (13) Wild Horse Management, and (14) Wildlife and Fisheries Management. Although considered highly unlikely, possible detrimental impacts to the Wyoming toad from these programs as identified by the Bureau include: disturbance to or elimination of potential habitat caused by surface disturbance, soil compaction, damage to vegetation, and increased sedimentation of suitable aquatic habitats. These effects are considered highly unlikely to occur because: (1) the Bureau has committed to implementing conservation measures and has adopted best management practices that will aid in the recovery of this species and minimize potential impacts, (2) Wyoming toads are not known to occur on lands where activities are administered by the Bureau in the Rawlins Bureau Resource Area (USFWS 1993), and (3) except for Mortensen Lake National Wildlife Refuge and a few other localized reintroduction sites, Wyoming toads are considered extirpated throughout their entire range in the wild.

Areas of Critical Environmental Concern (ACEC) Management

The objectives of special management areas, such as ACECs are to ensure continued public use and enjoyment of recreation activities, while protecting and enhancing natural and cultural values; improving opportunities for high quality outdoor recreation; and, improving visitor services related to safety, information, interpretation, and facility development and maintenance.

Under the Special Areas Management program, the Bureau closes areas where accelerated erosion is occurring; implements restrictions on logging and heavy equipment use; evaluates noxious weed and grasshopper control measures; applies restrictions on ground-disturbing activities; develops recreational trails; guides supervised tours; protects petroglyphs, artifacts, and cultural deposits from weathering and vandalism; and pursues land exchanges. Significant sites and segments along the Oregon/Mormon Pioneer Natural Historic Trails will be designated as ACECs.

Cultural Resources Management

The objective of cultural resource management is to protect, preserve, interpret, and manage significant cultural resources for their informational, educational, recreational, and scientific values. Site-specific inventories for cultural resources would be required before the start of surface-disturbing activities, or if Bureau-administered lands are proposed to be transferred out of federal ownership.

The Bureau performs inventory activities as well as land management activities. During inventory activities, the Bureau inventories, categorizes, and preserves cultural resources; conducts field activities; performs excavations; maps and collects surface materials; researches records; and photographs sites and cultural resources. Inventory data collection activities are used for documentation and development of mitigation plans before other resource program surface-disturbing activities. Inventory activities commonly entail the use of hand tools, power tools, or heavy machinery. Inventories are divided into Class I, Class II, and Class III inventories. The Bureau does cultural resource inventories normally in response to surface-disturbing projects. Intensity varies between inventories. Inventories may involve two-seven individuals and trucks, and may last from one day to several weeks.

Cultural resource land management activities involve managing sites for scientific, public, and sociocultural use; developing interpretive sites; restricting certain land uses; closing certain areas to exploration; prohibiting some surface-disturbing activities; preparing interpretive materials; and allowing the collection of certain invertebrate fossils. Archeological collections are authorized through a permit system. The cultural resource program may authorize installation of protective fencing of trail segments, stabilize deteriorating buildings, acquire access to sites when necessary, perform certain surface-disturbing activities, pursue land withdrawals, explore and develop locatable minerals, designate avoidance areas, pursue cooperative agreements, and identify and interpret historic trails. Cultural resource interpretive sites, such as historic trails or rock art sites, may be developed to provide public benefits such as scenic overlooks, signs, and walking trails.

Adverse effects on significant cultural resources are mitigated. Surface-disturbing activities are avoided near significant cultural and paleontological resource sites and within 0.25 mile or the visual horizon of significant segments of historic trails and canals. Sites listed on, or eligible for, the National Register for Historic Places (NRHP) are protected and would be managed for their local and national significance and in compliance with the National Historic Preservation Act, the Archaeological Resources Protection Act, the American Indians Religious Freedom Act, and the Native American Graves Protection and Repatriation Act, as appropriate.

Paleontological Resources Management

The objective of paleontological resources management is to manage paleontological resources that are part of the Bureau-administered public land surface estate for their informational, educational, scientific, public, and recreational uses.

Potential effects on paleontological resources on Bureau-administered public lands will be considered in site-specific environmental analyses before authorizing surface-disturbing activities. Site-specific inventories will be required where significant fossil resources are known or are anticipated to occur. Hobby collection of invertebrate fossils and petrified wood are allowed except in specified areas. The closing of Bureau-administered public lands or restricting uses to protect paleontological resources are evaluated case-by-case.

Fire Management

The objectives of fire management are to restore the natural role of fire in the ecosystem, and to protect life, property, and resource values from wildfire. The two major activities involved with the Bureau's fire management activities are prescribed burning and wildfire suppression.

Prescribed fire objectives are to restore natural fire regimes and enhance rangeland habitats for livestock and wildlife. The prescribed fire program authorizes fire plans, firebreaks, prescribed burns, and coordination with necessary parties on a case-by-case basis. Some prescribed fires are conducted to dispose of slash and residue from timber sales, improve wildlife habitat and grazing potential, or to reduce hazardous fuel loads.

Wildfires threatening higher resource values, including commercial timber areas, developed recreation sites, and areas of wildland/urban interface, or fires with potential to spread to private, state, or other federal lands are suppressed. Fire suppression activities vary with the intensity of the wildfire and are conducted on an emergency basis. Fire lines are constructed to contain the wildfire. Water is withdrawn from nearby sources to suppress fires. Chemical fire suppression agents containing chemical dyes may be used, if needed. The use of aerial fire retardant is restricted near water resources. After a fire is extinguished, the Bureau may use rehabilitation techniques to restore a burned or suppression area to its previous vegetative cover.

Activities authorized by this program include tree thinning, construction of roads and fire lines, application of fire-suppressing chemicals by hand and aerial application, and revegetation and mulching stream banks for rehabilitation. Activities often employ the use of off-road vehicles, hand tools, and heavy equipment such as bulldozers.

The fire damage restoration program proposes the Bureau use a technique called Analysis of Burned Area Emergency Rehabilitation (BAER) on all areas damaged by fire. This technique is used to evaluate the impact of restoration efforts on the ecosystems involved.

Forest Management

The objective of forest management is to maintain and enhance the health, productivity, and biological diversity of forest and woodland ecosystems and to provide a balance of natural resource benefits and uses, including opportunities for commercial forest production. Multiple uses are found in forests and the Bureau manages forests for recreation, livestock grazing, wildlife habitat, and prescribed burning.

The program allows the cutting and removal of diseased trees, disease treatment by spraying, and herbicidal spraying of grasses and shrubs, and pre-commercial thinning, chaining, and shearing. Clearcuts, slash disposal, logging, helicopter logging, and skidder-type and cable yarding are allowed during timber harvest. Non-commercial timber harvest involves collection and cutting of firewood, Christmas trees, posts, poles, and wildlings. The Bureau ensures that site regeneration and stand replacement follow timber harvest. Forest management activities may include conducting surveys, obtaining easements, pursuing legal access, allowing road development, and installing drain culverts and water bars.

Timber harvesting occurs on commercial forestlands with slopes less than 45 percent. Slash is to be lopped and scattered, roller chopped, or burned. Regeneration areas are often enclosed by fence to prevent wildlife and livestock from damaging seedlings. Private and state land may be accessed for forest management purposes through acquisition of easement.

Currently, cottonwood and willow trees are not harvested by the Bureau in Wyoming. Non-commercial woodlands (e.g., riparian areas) are managed to optimize cover and enhance habitat for wildlife and to protect the soil and watershed values.

Lands Program Management

The objective of the lands management program is to support multiple-use management goals of the Bureau resource programs; respond to public requests for land use authorizations, sales, and exchanges; and acquire and designate rights-of-way access to serve administrative and public needs.

Public land tracts not critical to current management objectives will be disposed of through the realty management program. Non-federal lands may be acquired through exchange in areas with potential for recreation development or in areas containing important wildlife, cultural, scenic, natural, open space, or other resource values. Protective withdrawals may be established to protect and preserve important resource values, but require extensive mineral investigations.

In this program, authorizations are made for occupancy of public lands for roads, power lines, pipelines, communication sites, and irrigation ditches authorized by granting a right-of-way. Rights-of-way management actions respond to public requests for access, land authorizations, sales, and exchanges. These rights-of-way may be temporary or extend two years or longer. If restricted types of rights of way are required in avoidance areas or when such areas cannot reasonably be avoided, the adverse effects of construction will be intensively mitigated in these areas.

The program pursues cooperative agreements, develops recreation site facilities, considers offsite mitigation, minimizes access in wildlife habitat, fences revegetation sites, blocks linear rights-of-way to vehicle use, considers temporary use permits, considers new withdrawals, and leases acres for landfills.

Access management activities are generally in support of other resource management programs and are authorized under the Realty Management Program. The Bureau rehabilitates access roads that are no longer needed, proposes easement negotiations, pursues access across private lands, acquires rights-of-way or easements, and exchanges lands.

Cases are considered individually in mineral exchanges. Public lands can be considered for sale or disposal on a case-by-case basis when a definite need for the land is identified and the proposal meets the requirements of the Recreation and Public Purpose (R&PP) Act and local land use plans. Leasing public lands for landfills is allowed under the R&PP Act, and sanitary landfilling is a common method of solid waste disposal.

Livestock Grazing Management

The management objective of livestock grazing management is to maintain or improve forage production and range condition as a sustainable resource base for livestock grazing on the public lands while improving wildlife habitat and watershed condition.

Management actions on grazing allotments are prioritized by and classified into one of three management categories: maintain (M), improve (I), and custodial (C). Certain areas may be

closed to livestock grazing because of conflicts with other resource uses including, but not limited to, timber sale areas being re-harvested, crucial wildlife or endangered species habitat, developed recreation sites, or education areas. Range management activities include using prescribed fire, vegetation manipulation projects, changing the composition of existing vegetation, using noxious weed control, using mechanical or biological vegetative treatments to improve forage production, using heavy equipment, and the herbicidal spraying of sagebrush.

Fencing activities authorized by the livestock grazing management program may include fence construction and repair, designing and implementing grazing systems, and building livestock exclosures for important riparian habitat. Water management activities associated with range management may include the development of reservoirs, springs, pipelines, and wells, and providing access to these developments. Lease management activities include conducting monitoring studies, performing project work to enhance and improve riparian zones, designating stock trails, managing leases, developing management plans and agreements, and canceling or adjusting livestock driveways.

Permanent increases in available forage are considered for wildlife and watershed protection before additional livestock use is authorized. Livestock management includes converting to new types of livestock, authorizing livestock grazing, and adjusting season of use, distribution, kind, class, and number of livestock. Salt or mineral supplements may be provided.

Minerals Management

The lands administered by the Wyoming Bureau contain some of the most prolific oil, gas, coal and trona producing areas in the Rocky Mountain region. Mineral development is subject to leasing, location, or sale based on the Federal mineral law (such as the Mineral Leasing Acts and amendments) covering that particular commodity. Conditions under which the development of these minerals can occur are determined through land use planning. The planning area will be open to consideration for exploration, leasing, and development of leasable minerals including oil, gas, coal, oil shale, and geothermal.

The objective of minerals management actions is to make public lands and federal mineral estate available for orderly and efficient development of mineral resources. The Bureau's mineral program is divided into salable minerals, leasable minerals and locatable minerals.

Salable Minerals

Deposits of salable minerals are scattered throughout Wyoming. Salable minerals include common varieties of sand, gravel, sandstone, shale, limestone, dolomite, and granite rock. Historical use of these materials includes building materials, road surfaces, and tools. Today salable minerals are mainly used for maintaining roads on public lands and also for activities associated with the oil and gas industry.

The Bureau provides sand, gravel, and stone from federal mineral deposits as necessary to meet the need of federal, state, and local road construction and maintenance projects in the planning areas. Before issuing contracts or free use permits for salable minerals, the Bureau conducts the appropriate environmental analyses including special studies or inventories of cultural values, threatened or endangered plant and wildlife species, and other resources. Stipulations or conditions may be included in the terms of the contract to ensure protection of the natural

resources present and reclamation of the land following project completion. Sand and gravel, scoria, flagstone, moss rock, and other minerals are available for free use or sale but are subject to conditions and stipulations developed on a case by case basis.

Site reclamation is required following any surface disturbing activity by mining for salable minerals. Reclamation includes removing all surface debris, recontouring, reducing steep slopes, and planting vegetation. All reclamation proposals must conform to State agency requirements and must be approved by the Bureau.

Salable minerals are disposed of under the Materials Act of 1947, as amended, and are discretionary actions.

Leasable Minerals

Leasable minerals include fluid (oil, gas, geothermal) and solid minerals such as coal, trona, and phosphate. Bentonite and uranium are leasable on acquired lands.

Current use of coal is primarily for electric generation. Coal in Wyoming is most generally extracted using surface mining methods although in the past some coal was mined underground. Underground mining method is proposed for some future operations. Surface mining requires a federal coal lease from the Bureau, mining permits from the State, mine plans approved by OSM. Surface mining involves the use of large equipment such as draglines, shovels, haul trucks, etc. Small drill rigs are used for exploration to determine the location, thickness, and obtain cores (for determining quality). Extracting coal using surface mining methods often results in large areas of surface disturbance from road construction, removal of topsoil and overburden, and stock piling of these materials. Once an area is mined out, reclamation begins and includes recontouring as closely to the original landscape as possible the reconstruction of drainages, and reseeding and monitoring to assure the habitat is useable. Coal is leased under the Mineral Leasing Act of 1920 and the Federal Coal Leasing Amendments Act of 1976.

Current uses of trona include baking soda, in paints, glass, toothpaste, soaps, ceramic tiles, porcelain fixtures, paper, water softeners and pharmaceuticals. Wyoming is the largest producer of trona in this country and has the largest known reserve of trona in the world. Trona is generally mined underground with the long wall mining method. Surface facilities are generally processing plants, offices, and maintenance buildings along with associated roads.

Current uses of uranium are as a nuclear fuel for generation of electricity, nuclear explosive, in medicine, agriculture and industry as radiation for diagnostic tools, to detect welding problems, in the manufacture of steel products, or used to reduce the spoilage of certain foods. Uranium is generally categorized as a locatable but becomes leasable on acquired lands. Surface facilities include processing plants, equipment maintenance buildings and offices.

Leasable bentonite also occurs on acquired lands. Bentonite is surface-mined with shovels, haul trucks, etc. Drilling is used to locate the bentonite. Large areas of surface disturbance occur through removal of the overburden, overburden stockpiles, construction of surface facilities and roads. Surface facilities include processing plants, equipment maintenance buildings and offices.

Fluid leasable minerals include oil, gas, and geothermal steam. Leasing of oil and gas resources is under the authority of the Mineral Leasing Act of 1920 as amended. Leasing is administered

by the Bureau through a competitive and non-competitive system. The Bureau receives nominations of lands to be put up for sale at the bimonthly competitive oil and gas sales. These nominations gathered together into a parcel list and are sent to the respective field offices for the attachment of stipulations. These stipulations are derived from the Land Use Plan. The parcel list is returned to the state office and once verified are put together into the Notice of Competitive Oil and Gas Sale booklet. This Notice must be posted for the public 45 days before the lease sale is held. Once the parcel is sold, it is then issued into a lease.

Initial exploration for oil and gas resources is often conducted using geophysical methods. Geophysical exploration involves the use of off-highway vehicles (OHVs) to lay the geophones, drill the shot holes for charges, or as "thumpers" to create the sound wave instead of using charges and then the removal of the geophones and reclamation of shot holes if used. Exploration for oil and gas (including coal bed natural gas) may also include the drilling of one or more wells to test for the reservoir and its productive viability. During the exploration phase of drilling, surface disturbing activities include the construction of roads, well pads, reserve pits, and other facilities.

Development of oil and gas fields includes construction of the same types of facilities used during exploration, but in addition it may be necessary to obtain federal rights of ways for product pipelines and power lines. Other surface uses associated with oil and gas development include construction of storage tank batteries and facilities to separate oil, gas and water. Compressor engines (can be gas powered or electric) may be required to move gas to a pipeline, and diesel, gas, or electric pumps and other related equipment may be needed to lift the oil, gas, or water from the well to the surface. Generally, there are an average of 3 acres for each drill site, 1 mile of road and 1 mile of pipeline for each drill site. This can vary widely with each project. Directional drilling requires a bigger pad than one well. Size is dependent on the number of wells drilled from each pad.

Water is often produced concurrently with oil and gas production and disposal methods can range from subsurface re-injection to direct surface discharge to discharge into a containment pond or pit. Some fields may have large volumes of water or very little water. Water that cannot be discharged to the surface because of its chemical makeup may be treated before surface discharge or may be reinjected. Roads may be two track unimproved roads to crown and ditched roads designed by an engineer. One day to over a month may be required to drill the well depending on the type of well (vertical or directional), depth and types of rocks encountered. Reclamation involves reseeding and the recontouring of unneeded roads and unneeded portions of the well pads.

Geothermal resources are available for exploration, development, and production and are subject to the same surface disturbing and other restrictions applied to oil and gas exploration, development and production. Similar to oil and gas leasing, the Bureau administers geothermal leases through a competitive and non-competitive system. The Geothermal Steam Act of 1970 authorizes leasing.

Locatable Minerals

Locatable minerals include gypsum, silver, gold, platinum, cobalt and other precious and base minerals. Bentonite and uranium are also locatable except on acquired lands.

Minerals are locatable under the 1872 Mining Law. Most public lands are open to location with the exception of withdrawn lands. The Mining Law of 1872 sets the requirements for lode claims, placer claims, and mill sites as well as discovery, location, annual filings, assessment work, and mineral examinations to establish validity.

Recreation Management

The objective of recreation resources management is to offer outdoor recreational opportunities on lands administered by Bureau while providing for resource protection, visitor services, and the health and safety of public land visitors.

Categories of activities of the Bureau for recreation management include allowing recreational access and use by the public, developing recreational areas, imposing restrictions, acquiring recreational access, and assessing effects of recreational use to the environment. The Bureau monitors recreational use, develops management plans, and evaluates and updates recreational potential.

Recreational activities allowed by the Bureau include hiking, hunting, mountain biking, boating, and fishing, OHV use (including snowmobiles), horseback riding, and camping. Casual use of Bureau-administered public land for hiking, bicycling, hunting, fishing, and similar uses are allowed without charge. Large recreational events may include organized group hikes, motocross competitions, or horse endurance rides. The Bureau develops recreational and camping sites. Recreational site development includes maintaining or developing recreational sites and facilities, developing campgrounds, providing fishing and floating opportunities, maintaining developed and undeveloped recreation sites, adding developments as opportunities arise, adding interpretive markers, and constructing roads and interpretive sites.

The recreation program may place boundary signs, identify hazards on rivers, restrict recreational uses, limit motorized vehicles to existing trails, designate road use and recreation areas, require facilities to blend with the natural environment, and conduct field inventories.

Recreation areas may have specific restrictions to protect other important resources. Development and enforcement of stipulations and protective measures includes designating OHV use, enforcing recreation-oriented regulations, patrolling high-use areas, and contacting users in the field.

Sensitive Plants Management

The objectives of sensitive plants management in the Rawlins resource area are to maintain or enhance the population of two plant species and one plant community within the Rawlins resource area. The protection goals apply to Gibben's beardtongue (*Penstemon gibbensii*), persistent sepal yellowcress (*Rorippa calycina*), and the Muddy Gap cushion plant community. Proposed surface-disturbing activities are examined on a case-by-case basis to determine the potential adverse effects. Any proposed developments, uses, and facilities are managed to avoid damage to sensitive plant species and communities.

Soil, Water, and Air Management

The objective for soil resources management is to maintain soil cover and productivity and provide for improvement in areas where soil productivity may be below potential on surface lands administered by the Bureau. Timber harvest activities are limited to slopes of 45 percent or less to protect the water quality and to keep soil from eroding. OHV travel is prohibited on wet soils and on slopes greater than 25 percent if unnecessary damage to vegetation, soils, or water quality would result. Roads and trails will be closed and reclaimed if they are heavily eroded, washed out, or if access roads in better condition are available.

The objective of air quality management is to maintain or enhance air quality, protect sensitive natural resources and public health and safety, and minimize emissions that cause acid rain or degraded visibility. Typical air quality management program activities include dust control, weather monitoring, and air quality data monitoring. The air quality management program may evaluate or restrict surface development activities. The Bureau ensures that operators cover conveyors at mine sites, restrict flaring of natural gas, limit emissions, and restrict spacing on projects.

Bureau-initiated actions or authorizations are planned in accordance with Wyoming and national air quality standards. This is accomplished through the coordination of activities with the Wyoming Department of Environmental Quality (WDEQ) and the U.S. Environmental Protection Agency. Laws controlling air pollutants in the United States are the Clean Air Act of 1970 and its amendments, and the 1999 Regional Haze Regulations. The concentrations of air contaminants in the planning area need to be within limits of Wyoming ambient air quality standards (WAAQS) and national ambient air quality standards (NAAQS). Both WAAQS and NAAQS are legally enforceable standards for particulate matter (PM_{10}), nitrogen dioxide (NO_2), ozone, sulfur dioxide (SO_2), and carbon monoxide (CO).

In addition to NAAQS and WAAQS, major new sources of pollutants or modifications to sources must comply with the New Source Performance Standards and Prevention of Significant Deterioration (PSD). The PSD increments measure PM_{10}, SO_2, and NO_2. The PSD program is used to measure air quality to ensure that areas with clean air do not significantly deteriorate while maintaining a margin for industrial growth.

The objective of water resources management is to maintain or improve surface and groundwater quality consistent with existing and anticipated uses and applicable state and federal water quality standards, to provide for availability of water to facilitate authorized uses, and to minimize harmful consequences of erosion and surface runoff from Bureau-administered public land. Passing of the Water Resources Research Act, Water Resources Planning Act, and the Water Quality Act of 1965 allowed the Bureau to expand its water resources program and increased cooperation with soil conservation districts.

Activities authorized under water resources management may include implementation of watershed plans, identification of heavy sediment loads, monitoring and treating soil erosion, evaluating and restricting surface development activities, and monitoring water quality.

Pollution prevention plans are developed for actions that qualify under the Wyoming Storm Water Discharge Program to reduce the amount of non-point pollution entering waterways. The

rights to water-related projects on public lands will be filed with the Wyoming state engineer's office in order to obtain valid water rights.

Visual Resource Management

The objective of visual resources management is to maintain or improve scenic values and visual quality, and establish visual resources management priorities in conjunction with other resource values. Visual resources are managed in accordance with objectives for visual resources management (VRM) classes that have been assigned to each Bureau Field Office. Visual resource classification inventories have been developed for some, but not all, of the areas in Wyoming. To improve visual resources, the Bureau designs facilities to blend in with the surroundings, reclaims watershed projects and water wells, regulates discharge of produced water, and restricts activities that might degrade visual resources.

No activity or occupancy is allowed within 200 feet of the edge of state and federal highways. Facilities or structures such as power lines, oil wells, and storage tanks are required to be screened, painted, and designed to blend with the surrounding landscape, except where safety indicates otherwise. Any facilities or structures proposed in or near wilderness study areas will be designed so as not to impair wilderness suitability.

Wild Horse Management

The management objective of wild horse management is to maintain a viable herd that will preserve the free-roaming nature of wild horses in a thriving ecological balance and to provide opportunity for the public to view them. The Federal Land Policy and Management Act of 1976 amended the Wild and Free Roaming Horse and Burro Act to authorize the use of helicopters in horse and burro roundups. Wild horse and burro populations have more than tripled since passage of the Wild and Free Roaming Horse and Burro Act in 1971, and horse numbers on Bureau lands in the West were estimated at more than 60,000 as compared to 17,000 in the late 1960's.

Under its Wild Horse Program, Bureau personnel herd, corral, transport, monitor, and rounds up wild horses which occur on the land administered by the Bureau. Herds are monitored by airplane census and counted each year. Helicopters may also be used to round up wild horses.

During land use planning, the Bureau decides how many horses to allow on a certain area. This is termed the Approximate Management Level and the Bureau can adjust horse numbers as needed. Issues taken into consideration include carrying capacity, trends in utilization, and public input. The Bureau's wild horse management specialists coordinate with wildlife biologists and archaeologists to ensure that wild horse management will not cause adverse impacts to biological or cultural resources.

Wildlife and Fisheries Management

The objectives of wildlife habitat management are to maintain the biological diversity of plant and animal species; support the strategic plan population objective levels of the Wyoming Game & Fish Department (WGFD) to the extent practical and to the extent consistent with Bureau multiple-use management requirements; maintain and, where possible, improve forage production and quality of rangelands, fisheries, and wildlife habitat; and, to the extent possible,

provide habitat for threatened and endangered and special status plant and animal species on all public lands in compliance with the Endangered Species Act and approved recovery plans.

Approximately 90 percent of wildlife program activities are in support of other resource programs such as fuels reductions, density of timber stands in deer and elk winter habitats, oil and gas exploration, timber harvest, or prescribed fires. Specific management goals and actions are for several wildlife groups and habitats including big game ranges, wetland and riparian areas, elk habitat, raptor and grouse breeding areas, and animal and insect damage control. Wildlife management maintains and, where possible, improves forage productions and quality of rangelands, fisheries, and wildlife habitat, and provides habitat for threatened, endangered, and special status animal and plant species on Bureau-administered public land surface in compliance with the Endangered Species Act and approved recovery plans.

Big game and fisheries management levels identified in the WGFD 1990-1995 strategic plan are supported by the Bureau. The Bureau cooperates with the WGFD in introducing or reintroducing native and acceptable non-native wildlife and fish where potential habitat exists. Wildlife habitat is monitored and population adjustments and habitat improvements are recommended to the WGFD, as appropriate. The Bureau works with the U.S. Fish and Wildlife Service and the WGFD in evaluating and designating critical habitat for threatened and endangered species on Bureau-administered public lands.

Wildlife program projects may include surveying, monitoring, habitat improvement activities such as developing habitat management plans, and creating cooperative management areas. The categories of wildlife management activity for the Bureau include developing stipulations and protective measures, acquiring land, conducting inventories, performing livestock or forestry-related activities, and wildlife and fisheries habitat improvement projects.

The Bureau develops stipulations and protective measures to enhance wildlife and fisheries habitat. These include authorizing withdrawals of some areas from mineral entry; limiting access of four-wheel drives, snowmobiles, horseback, and pedestrians; prohibiting surface development; and imposing road closures. The Bureau may acquire riverfront land or easements, and conducts inventories of potential habitat and occurrences of threatened, endangered, and sensitive species.

Livestock-related wildlife management activities include the development of water sources, construction and maintenance of fences, the management of other resource activities to conserve forage and protect habitat, the improvement of forage production and quality of rangelands, and the improvement of range with mechanical treatment. Forestry-related wildlife management activities include the management of timber and the promotion of cutting, thinning, planting, seeding, and pitting.

Other wildlife management activities for terrestrial species include introducing species, monitoring habitat, fencing modifications for antelope passage, implementing public use closures for wintering elk, development of water areas for waterfowl and waterbirds, recommending habitat improvement projects, treatment to control exotic plants, prescribed burns, meadow restoration, cabling of junipers, changing types of grazing and season of grazing, prescribed burning, developing islands, allowing farming, managing accesses, authorizing agricultural entry and disposal, and using surface protection mitigations.

Other wildlife management activities for aquatic species include establishing a baseline fisheries inventory, fish habitat improvement, bank stabilization, development of watering sources, modification of barrier fences, exotic fish removal, construction of instream barriers to protect species from non-native invaders, installation of revetments and fish passage structures, installation of log overpours, macroinvertebrate sampling and analysis, installing gabion baskets, and placement of large boulders for instream fish habitat.

REFERENCES

U.S. Bureau of Land Management. 2005. Statewide Programmatic Biological Assessment for the Wyoming Toad. Cheyenne Bureau of Land Management Office. April 2005. 26 pp. + Maps.

U.S. Fish and Wildlife Service. 1993. Environmenal Assessment for the Removal of Some Adult Wyoming Toads from the Wild for Placement in the Captive Breeding Program at Mortenson Lake National Wildlife Refuge, Albany County, Wyoming. U.S. Fish and Wildlife Service. Denver, Colorado. 19 pp.

ATTACHMENT 2 - CONSERVATION STRATEGY TAKEN FROM THE PROGRAMMATIC WYOMING TOAD BIOLOGICAL ASSESSMENT

This conservation strategy was taken from the Programmatic Wyoming Toad Biological Assessment (2005). Implementation of the following is intended to aid in the recovery of the Wyoming toad and minimize potential adverse impacts that could result from implementation of the management actions provided in the Resource Management Plan (RMP). The U.S. Bureau of Land Management (Bureau) has committed to implement conservation measures 1 through 12. The Bureau will also consider implementing best management practices (BMPs). The BMPs will considered on a case-by-case basis at the project level, and are intended to further protect the species, its habitat, and aid in its recovery.

Conservation Measures

1. Rawlins Bureau Biologists will conduct or oversee surveys (following established protocol), or assume species presence, for all likely affected Wyoming toad habitat, or potential habitat prior to authorizing surface disturbing activities. Proposed projects will be designed and locations selected to minimize disturbances to species and habitat and if the avoidance of adverse effects is not possible, the Bureau will re-initiate consultation with the Service. Projects will not be authorized during critical time periods to reduce impacts to this species.

2. When project proposals are received, Bureau will initiate coordination with the Service at the earliest possible date so that both agencies can advise on project design. This should minimize the need to redesign projects at a later date to include Wyoming toad conservation measures, determined as appropriate by the Service.

3. The Bureau will participate with development of species specific recovery plans in coordination with the Service and other agencies. Populations and habitat on Bureau-administered lands will be monitored to determine if recovery objectives are being met.

4. The Bureau will place a No Surface Occupancy (NSO) stipulation on any new leases on sites where toads are released. These Wyoming toad release sites will be withdrawn from mineral claims and development under the new regulations developed under 43 CFR 3809.

5. Roads that have the potential to impact the Wyoming toad and are not required for routine operations and maintenance of developed and abandoned projects will be reclaimed as directed by the Bureau. As necessary, these roads will be permanently blocked, re-contoured, reclaimed, and re-vegetated to benefit habitat for the Wyoming toad.

6. Construction activities located within potential and/or known Wyoming toad habitat will be minimized through construction site management by using previously disturbed areas, using existing ROWs, and designating limited equipment/materials storage yards and staging areas.

7. Construction activities located within 500 feet of open water and/or 100 feet of intermittent or ephemeral channels in potential and/or known habitat for the Wyoming toad will be avoided. Stream crossings for roads and pipelines will be constructed during the period of lowest flow (i.e., late summer or fall) and perpendicular to flow. No surface water or shallow ground waters in connection with surface waters will be utilized for proposed projects. Proper erosion control techniques, such as water bars, netting, rip-rap, and mulch will be implemented.

8. Riparian habitats will be maintained, improved, or restored to provide wildlife habitat, improve water quality and enhance forage conditions. When planting or seeding vegetation in areas identified as Wyoming toad habitat, only native species will be selected.

9. Pesticide applications and biological control agents will be allowed within known Wyoming toad habitat on a case-by-case basis. Where possible, biological control of pests would be used rather than chemical control. Where needed, pesticide use will be applied by hand within 1/4-mile of habitat and only in cases where insect or weed outbreaks have the potential to degrade area ecological health. Outside the 1/4-mile buffer, aerial application of pesticides will be carefully planned to prevent drift. The Bureau will work with the Animal and Plant Health Inspection Service (APHIS) and the Service to select a pesticide and method of application that will most effectively manage the infestation and least affect the species.

10. The Rawlins Bureau Policy for OHV restrictions to existing/designated roads and vehicle routes, if required, will be implemented to protect Wyoming toad populations and habitat.

11. If a Wyoming toad is documented during project construction activities, project activities will cease until sufficient protection measures are developed by the Bureau and in coordination with the Service. In the event that a Wyoming toad is found, killed, or injured during project activities, or a dead individual is encountered, the Service's Wyoming Field Office (307-772-2374) and the Service's Law Enforcement Office (307-261-6365) will be notified within 24 hours of discovery.

12. Bureau-administered public lands that contain identified habitat for the Wyoming toad will not be exchanged or sold, unless it benefits the species.

Best Management Practices

BLM considers the following Best Management Practices (BMPs) to be non-binding conservation practices that will, if implemented, aid in the conservation of the Wyoming toad. BMPs for the Wyoming toad may be may be implemented on a case-by-case basis as appropriate.

13. Train enforcement personnel on protection of the Wyoming toad and its habitat, its status, and current threats to its existence.

14. Educate resource specialists, rangers, and fire crews about the Wyoming toad and its habitat, particularly for fire suppression projects planned for this general area.

15. Educate resource specialists and promote practices to minimize the spread of Wyoming toad diseases including chytridiomycosis.

16. Develop and prioritize management practices through a steering committee (in conjunction with a Wyoming toad recovery team) and assist the Service with research.

17. Establish monitoring, biological, ecological, and life history studies as funding and staffing allow, such as studies regarding monitoring the success of reintroduction efforts and occurrence of disease in new Wyoming toad populations.

18. Monitor primary and secondary Wyoming toad habitats for changes in water quality.

19. Linear crossings, such as pipelines or roads across the above areas, should be considered on a case-by-case basis with intensive management to protect habitat for the Wyoming toad. Intensive management may vary from year to year and includes the use of proper distance restrictions, seasonal or timing restrictions, rehabilitation standards, and use of BMPs.

20. Buffers should be established around water bodies and wetlands within the Laramie basin for pesticide use (taking into account their toxicity, intended use, and method of application) until areas are searched for two consecutive years and cleared (no toads present in either year).

21. The Bureau should work towards developing reintroduction sites in coordination with the Service and the Wyoming game and Fish Department (WGFD) and maintain the integrity of these sites for the survival of the toad.

22. Coordinate with the Service and private landowners to ensure that the toad and its habitat are adequately protected.

23. When applicable, pursue withdrawals in habitat where there is identified historic and/or current toad breeding locations, as well as in areas where toads have been released. In addition, implementing NSOs to these areas may be required to achieve toad recovery objectives.

24. Develop recreational activity restrictions in accessible areas located within or adjacent to primary or secondary Wyoming toad habitats.

25. Establish grazing restrictions within and adjacent to primary and secondary habitat as well as the Mortenson Lake NWR and Hutton Lake NWR.

REFERENCES

U.S. Bureau of Land Management. 1990. Record of Decision and Approved Resource Management Plan for Great Divide Resource Area. Great Divide Resource Area. Rawlins District. Bureau of Land Management, Rawlins. Wyoming.

-------. 2005. Statewide Programmatic Biological Assessment for the Wyoming Toad. Cheyenne Bureau of Land Management Office. April 2005. 26 pp. + Maps.